Pennsylvania School Bus Driver’s INSTRUCTOR’S MANUAL
FOREWORD

The Highway Safety Program of the National Highway Traffic Safety Administration, under the U.S. Department of Transportation’s Federal Standard 17, requires each state to develop plans to reduce, as much as possible, the danger of death or injury to school children while being transported to and from school. This manual and the associated training course are Pennsylvania’s response to this standard. This manual is intended as a means for certified instructors to deliver training courses effectively and uniformly to school bus drivers throughout Pennsylvania.

The course contained in this manual emphasizes fundamental concepts of school bus operation for the new driver and recertification (experienced) levels. This manual provides a basic foundation for new instructors, but also provides sufficient flexibility for enhancement and adaptation by the more knowledgeable and experienced instructors.

Organizations or individuals interested in pupil transportation and safety may freely use the contents of this manual in whole, or in part, provided the material used is properly cited.
ACKNOWLEDGEMENTS

The revision of this manual benefited from the help of many individuals. PennDOT’s Bureau of Driver Licensing staff Scott Shenk, Chris Miller, and Laura Krol directed the project’s technical aspects and served as lead reviewers. Additional support at PennDOT was provided by Troy Roadcap in the Bureau of Driver Licensing and Jacque Turk in the Bureau of Highway Safety and Traffic Engineering. Rebecca Lorah and Matthew Hedge of PennDOT’s Bureau of Planning and Research managed the contractual aspects of the project, and kept the project on schedule and on budget.

The project was completed by Pennoni Associates in conjunction with Rod Sams Consulting, Vance and Renz, LLC. Mark Hood P.E., Steve Thompson, and Rod Sams served as primary authors and were supported by Larry Bankert P.E. and Rosalind Murray. Robert Vance Ph.D. and Michael Renz led the crash data analysis efforts.

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Special thanks go to the following individuals for their outside review and comment on specific units or input into various legal or enforcement issues:

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COURSE GUIDE
MANUAL OVERVIEW

This manual contains the Pennsylvania School Bus Driver Training Course, a set of instructional materials for training school bus drivers throughout Pennsylvania in the safe and efficient transportation of students to and from school. The materials are arranged in three main sections:

1. Course Guide.
2. Instructor’s Guide.

COURSE GUIDE

This course guide provides information on the following topics:

- Overview of the Instructor’s Manual;
- Description of the different ‘types’ of instructors and the roles they play;
- Description of course materials;
- Overview of the classroom content of the Driver’s Course;
- Overview of the in-bus content of the Driver’s Course;
- Scheduling a School Bus Driver Training course; and
- Course delivery.

INSTRUCTOR’S GUIDE

The instructor’s guide offers suggestions about teaching adult learners. These suggestions are intended to assist instructors with understanding the purposes and goals of training resulting in teaching methods and techniques that contribute to producing good school bus drivers in Pennsylvania.

PENNSYLVANIA SCHOOL BUS DRIVING TRAINING COURSE

Structurally, the course has been developed on a modular or unit basis consistent with the organization of the Pennsylvania School Bus Driver’s Manual (PennDOT Publication 117). In this instructor’s manual, each unit has a lesson summary, study guide, and notes for the instructor.

Lesson Summary

The information presented in the lesson summary at the beginning of each unit is intended to aid you in preparing to teach the applicable unit. The following is a description of each of the items contained in the unit lesson summaries.

- Instructor’s Perspective - This section describes the major topical areas covered in the unit and what the instructor should focus on.
- Trainee Objectives - A set of specific objectives that should be met by each trainee by the completion of the lesson.
- Location - The place where the instruction is held (either classroom or in-bus).
- Delivery Mode - The basic mode of instruction is identified as lecture and discussion for most of the units. Since you will have a large amount of information to present in a relatively short time, the level of discussion and demonstration called for in the lecture plans depends on your ability to pace the presentation.
- Materials - The materials section lists classroom aids and handouts. This includes a list of the materials and equipment required to present the lesson as well as the title of each handout used in the lesson.
- Resource Personnel - A listing of instructors with special expertise who may be used to teach part or all of the unit and any resource personnel who may be used to assist you in your presentation of the unit. You, as the certified school bus instructor, must be present for the entire presentation given by a resource.
• **Summary and Review Questions** - This item provides you with helpful presentation hints for the subject matter of the unit. It contains suggestions for the presentation of the unit in new driver and recertification courses. It also provides a list of discussion-provoking questions for the trainees.

• **References** - A listing of the principal sources from which the lesson materials were extracted and sources of additional, more detailed, information. This section is broken down into websites, PennDOT publications, laws and regulations, and forms and certificates. Note that Web links to documents are provided whenever available.

• **Notes** - A space for you to include notes on the presentation of the lesson.

**Study Guide**

Following the lesson summary, each unit has a study guide. The study guide summarizes and highlights the more important principles contained in the lesson. It is meant as a handout for the trainees.

**Instructor’s Notes**

Each unit was designed to be actively used by the instructor when teaching. More experienced instructors may not need this, but it could help to remind them of key points of discussion. Using the instructor’s notes will ensure the content is fully covered and the program continues to meet its overall goals. Included in the instructor’s notes are several ‘prompt’ questions and notes corresponding to the text in the School Bus Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure your trainees are retaining key information. The underlined title corresponds with the section in the School Bus Driver’s Manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

The instructor’s notes section is designed in a two-page format: The School Bus Driver’s Manual is on the right side/page (what the trainees will see), and on the left are instructor’s notes. Having the two pages allows you to quickly see what the subject matter is, what is to be said or done with the subject matter, and will help you stay abreast of where the participants are without having to change back and forth between the instructor’s manual and the School Bus Driver’s Manual. There is extra space on most of the instructor’s notes pages to jot your own notes about presenting the material. Using your own words is much more effective than reading from the book.

**PERSPECTIVE**

This edition of the Manual provides a single detailed set of lesson plans for the Pennsylvania School Bus Driver Training Course that can be used for new driver and recertification courses. This allows flexibility in determining what content areas are to be emphasized in a particular training course. This flexibility is especially applicable to the teaching of recertification courses where experienced drivers can be called upon to discuss actual on-the-job experiences. The lesson summary found at the beginning of each unit provides you with helpful teaching suggestions for presenting the unit at either a new driver course or a recertification course.

While the lesson plans for the course are detailed in terms of instructions for you, the content is general in nature. The materials included in this course are limited to basic concepts and principles. In scope and depth, they cover the essentials of effective school bus operation:

1. How to operate school buses safely;
2. How to manage students on bus (e.g., discipline); and
3. How to handle student emergencies.

The lessons are designed for statewide use with most of the information being applicable to situations and conditions found throughout the state, helping to promote a desirable uniformity in school bus operations in Pennsylvania.
The conditions and problems faced by school bus drivers vary greatly from one locality to another. Important differences exist, for example, between urban and rural routes, not only in terms of actual driving techniques but also in student behavior, community relations, and many other areas of student transportation. Some school districts have established practices and regulations appropriate to their particular situations; others leave such matters to the expertise and common sense of the driver. Thus, the applicability of these materials to particular locals will vary.

For these reasons, you will need to adapt this course content to local conditions for either a new driver or recertification course. In considering the course as a whole and in preparing to teach each unit, you should thoroughly familiarize yourself with the materials provided and make appropriate additions, deletions, or changes in emphasis to suit local requirements. Local regulations that exist in connection with any of the materials covered should be given preference. Where local conditions warrant the omission of some of the materials or the addition of new materials, such changes should be made at your discretion.

If experience indicates that increased time should be spent on one or another aspect of the course, provisions should be made to carry this out. New driver and recertification courses should be taught with sufficient flexibility to assure that trainees maintain interest, understand the principles involved, and leave the program as effective school bus drivers.

It is strongly recommended that newly certified instructors work with experienced instructors before teaching a full course by themselves. Here is an example process:

1. Instructor candidate successfully completes 20-hour Instructor Training class.
2. New instructor observes a live class presentation.
3. New instructor “team teaches” a class with an experienced instructor in the room. The teaching team will determine the process to “team teach.” The observing instructor will assist the new instructor as needed to answer questions or clarify course materials.
4. New instructor solo teaches the course with an experienced instructor in the room. The process should allow for variability in instructor presentation based on personal experiences and presentation styles.
5. Upon completion of the above steps, a new instructor should be ready to teach the course.

As another example, a new instructor could, do much of the course administration work (e.g., scheduling, obtaining use of facilities, arranging for support personnel, paperwork) and teach several unit lessons under the guidance of an experienced instructor before taking total responsibility for a course. If this arrangement is not possible, a new instructor should at least try to contact one or more experienced instructors and ask for tips on teaching the course and discuss any areas of the course with which the new instructor is not comfortable. Instructor coordinators are a source of this type of assistance and should be utilized by new instructors.

Several valuable tools are provided in this manual to ensure the continued improvement of the course and the driver’s and instructor’s manuals. One item is the Course/Instructor Evaluation Form that is included in the Course Summary Unit. You should make use of the form as a valuable means of feedback for the contents of the course and for your performance as course instructor. This will enable you to continually improve your course.
INSTRUCTOR TYPES AND ROLES

You are most likely reading this manual because you have been selected to be or volunteered to be a school bus driver instructor. This is an important role with many responsibilities and rewarding opportunities, in addition to those of your normal duties. While you are probably an excellent school bus operator and have many years of experience working in the field, being a school bus driver instructor can be a new challenge for many. Here are a few points to keep in mind as you take on the role of an instructor.

Classroom Instruction
You should become familiar with adult learning principles as outlined in the instructor’s guide because adult learning and adult instruction can require unique skills and styles. This guide will help you prepare to become an instructor, with a focus on classroom instruction.

In-bus Instruction
Special techniques for carrying out in-bus instruction are given in detail in the In-Bus Unit. Here especially, you should feel free to modify or supplement the suggestions to ensure they are applicable to local conditions.

Careful planning is vitally important to the success of this kind of instruction, including the choice of supporting instructors to assist in the operation. Arrangements should be made to adequately brief these supporting instructors before in-bus sessions begin, including rehearsal, if appropriate.

Coordination
It is essential that the classroom and in-bus aspects of the course be carefully coordinated to achieve maximum instructional benefits for trainees. This is easier to achieve when the classroom instructor also is responsible for the in-bus portion of the course. However, when different instructors are used for the classroom and in-bus parts of the course, there is the possibility of a lack of communication between the instructors that may result in trainees not being able to handle the responsibility of operating a school bus. This is especially critical for the new driver course.

If neither the classroom instructor nor the in-bus instructor is the employer of the trainees, it is recommended that both instructors talk to the employer and decide what local criteria constitutes “readiness to operate a school bus.” These criteria should include mastery of required knowledge and concern for safety. After training, the instructor must assume the responsibility for informing the employer(s) of those students whose knowledge, skills or attitudes are questionable.

There also is a need for communication between in-bus and classroom instructors, if the classroom instructor is not involved in the in-bus portion of the course. By communication with each other, classroom and in-bus instructors can avoid inconsistencies between what is being taught in the classroom and what is being demonstrated and practiced in the in-bus session.

The Driver In-Bus Evaluation Form included in the In-Bus Unit is a means of establishing communication between instructors and employers, and between classroom and in-bus instructors. It is recommended that this form or a local version of it be used for the new driver and recertification courses.

Summary
To summarize, some local school districts may require you to instruct both in the classroom and in the bus to be a fully effective instructor. Others may allow you to choose your medium of transferring information to new school bus drivers: classroom or in-bus. Obviously different instructors will have different strengths, and having separate instructors for in-bus training and classroom training can maximize the capabilities of both. Know what your strengths are, your goals are, your local policies and procedures are for becoming an instructor, and work with your local school district and instructor coordinator to clearly define your role.
You could divide instructors into three (3) categories applicable to both in-bus and classroom instructors:

1. Those who are technically smart, but can’t convey it, losing the attendees’ attention or boring them to death.
2. Those who are dynamic in presenting, but fail to get anything across. Attendees love them, but forget what they learned.
3. Those who are technically sharp and dynamic presenters.

As a school bus instructor, you should strive to be in the third category.

**DESCRIPTION OF COURSE MATERIALS**

The course materials for the Pennsylvania School Bus Driver Training Course that follow this course guide are designed for use in the new driver and recertification courses for school bus drivers.

The complete course, as presented in this manual, is designed for use as a new driver course that will provide inexperienced candidates with exposure to the knowledge, skills and attitudes necessary to become professional school bus drivers. It is set up to provide a minimum of 14 hours of discussion and demonstration materials to be delivered in a conventional classroom setting and a minimum of six (6) hours to be used for the demonstration and practice of in-bus operations. These times do not include any additional specialized instruction time for transportation of students with disabilities (Unit D). Please note that all in-bus instruction is to be **ONE-ON-ONE**: one instructor monitoring one driver.

The same materials are designed for use in a 10-hour recertification course consisting of a minimum of seven (7) hours of classroom and a minimum of three (3) hours of in-bus instruction. Since the background and level of experience of trainees will vary with every recertification class, you are left with a wide degree of flexibility in choosing to what extent topics will be covered in the course. Determining the needs of trainees for a recertification course is an important part of your role as an instructor. You should try to find out as much as possible about your trainees before the class starts and should be flexible enough to be able to change course emphases as needs are identified during the presentation of the course. Again, all in-bus instruction is to be **ONE-ON-ONE**.

**COURSE CONTENT: CLASSROOM**

The training materials contained in the classroom portion of the new driver course are based upon the contents of the most recent edition of the Pennsylvania School Bus Driver's Manual, (PennDOT's Publication 117). A brief description of the coverage of each of the units follows. Discussion of course format and scheduling is provided later.

**INTRODUCTION**

This initial unit is necessary for introductions of trainer and trainees, short history/reasons for course, and overview of course topics. A pretest of general and school bus driving procedures is recommended here.

**UNIT A: THE SCHOOL BUS DRIVER: ROLE, RESPONSIBILITIES AND REQUIREMENTS**

This Unit describes school bus driver roles and responsibilities, and the endorsement process. The trainee learns how to understand the driver’s role in the school system, and to exercise his or her responsibilities to student passengers, the school system, and the community. Additionally, the trainee gains familiarity with state qualifications for selection and certification. Instruction includes training requirements and procedures for a school bus driver, as well as documents to be carried while operating a school bus.
UNIT B: STUDENT MANAGEMENT AND DISCIPLINE
Desirable driver-student interactions and methods of controlling student behavior are presented here. Assertive discipline is presented as one structured method of handling behavior problems.

UNIT C: STUDENT LOADING AND UNLOADING
This unit presents procedures for maintaining safety during the loading and unloading process. A structured, step-by-step approach is included along with a discussion of the potential dangers in the loading and unloading area. Enforcing the school bus stopping law is also presented.

UNIT D: TRANSPORTATION OF STUDENTS WITH DISABILITIES
This unit provides guidelines for managing students with disabilities while they are being transported, and unique transportation procedures used for these students. This includes desirable driver characteristics, additional loading and unloading procedures, guidelines for behavior management, and familiarization with special equipment. The level of detail provided when presenting this unit will vary widely depending on your audience.

UNIT E: PREVENTIVE MAINTENANCE
Routine pre-trip, on-the-road monitoring, and post-trip procedures are provided, including techniques required to keep a bus in a safe, efficient manner.

UNIT F: SAFE DRIVING
This unit presents important fundamental safe driving skills and applies these skills to normal and unusual conditions an operator will face while driving a school bus. Methods of anticipating and reacting to traffic hazards are presented, including recognition of potential hazards and proper driving defenses and reactions. Trainees learn how to evaluate mental and physical conditions to drive, and special emphasis is placed on techniques to maintain one's attention during routine driving. Overall, it focuses on safe driving techniques for school bus operators geared towards reducing the number of crashes.

UNIT G: FUNDAMENTALS OF DRIVING A SCHOOL BUS
This unit covers additional safe driving skills required to operate a school bus. Unique situations involving backing, turning around, stopping, highway railroad grade crossings, highway positioning, and steep hills and downgrades are discussed.

UNIT H: CRASH AND EMERGENCY PROCEDURES
Techniques to handle emergency conditions such as skids, tire blowouts, and loss of brakes are presented in this unit. Procedures are provided for crashes or other emergencies, such as mechanical breakdowns, to prevent further damage or injury. Important post-crash procedures include bus evacuation, reporting requirements, and the location and operation of emergency equipment, such as portable emergency warning devices and fire extinguishers.

UNIT I: STUDENT EMERGENCIES
In this unit, the trainee learns how, following a crash, to make proper evaluations for establishing treatment priorities based on the condition at the scene, type of injuries, and need for immediate treatment. The Good Samaritan Act is emphasized, along with the concept of liability. Emphasis is placed on administering immediate, temporary care until professional medical assistance is available. Local school policy may require further information to be presented in this unit.
PARKED BUS (PB)
The Parked Bus Unit is not part of the in-bus portion of training; it is considered classroom training. This instruction may be delivered to small groups of students, as a “classroom on a bus.” The unit is divided into five (5) sessions as follows:

1. Vehicle and Equipment Familiarization (units E and G). An introduction to each type of bus the trainee may have to drive, including similarities and differences between autos and buses, safety features, and mechanical equipment features.
2. Pre-Trip Inspection and Preventive Maintenance Procedures (unit E). Using a checklist, supervised practice on conducting a pre-trip inspection is completed.
3. Fire Extinguisher Procedures (unit H). A demonstration and hands-on practice are provided to the trainees.
4. Roadside Emergency Procedures (unit H). Proper procedures for safely parking the bus on a roadside are demonstrated. These include placement of portable emergency warning devices.
5. Bus Evacuation Procedures (unit H). Front and rear door evacuations are demonstrated, using the trainees as passengers. Discussion includes setting up of evacuation drills for students.

Typically, this unit is presented immediately after the classroom portion of Unit E, because of the focus and majority of time is spent on the pre-trip inspection. However, there are several exercises related to Unit H, and also information related to Unit G. Therefore, the instructor may choose to complete this entire unit after Unit E and allow for some skills to precede their presentation in Units G and H. Or, the instructor may, choose to split this unit and conduct the first two sessions after Unit E and the remaining three after Unit H.

SUMMARY AND CLOSING
A short course review is provided. The trainee also takes a post-test and fills out course and instructor evaluation forms, and may be presented with a Certificate of Completion Card.

COURSE CONTENT: IN-BUS

The in-bus portion of the school bus driver course consists of two sessions packaged as one unit as discussed under scheduling recommendations later in this section. The scheduling of these in-bus sessions is left to the instructor, but it is preferable to cover each in-bus portion immediately following its introductory classroom-based section. This ensures that trainees can immediately practice newly learned skills. The total time devoted to in-bus instruction is at least six hours with a suggested allocation below. All in-bus times are per trainee and one-on-one instruction.

IN-BUS: CLOSED PRACTICE COURSE
The two parts of this session of in-bus portion will take approximately 120 minutes (2 hours) per trainee and should be conducted following classroom instruction of units F and G.

Please Note: A trainee must have a School Bus Learner’s Permit to operate a school bus.

Bus Familiarization and Driving Basics
In a closed parking lot or other closed course, the trainee should operate the bus over a specified course to gain a feel for tracking and turning response. Each trainee must demonstrate reasonable familiarity with these skills. Using pylons, cones or other obstacles, each trainee will complete four (4) exercises to practice low-speed maneuvering in low-tolerance situations. Practiced skills include starting, shifting, steering, backing, and stopping.
Driving Maneuvers
Under normal traffic conditions, the trainee will be called upon occasionally to execute maneuvers that require both tight clearance judgments and smooth vehicle handling. Still in a closed parking lot or other closed course, the trainees will complete seven (7) exercises that require them to negotiate a planned driving course incorporating skill tests similar to those required in school bus safety competitions or other safety competitions.

IN-BUS: ON-THE-ROAD DRIVING
The on-the-road driving session is conducted on the open road and is scheduled for at least 240 minutes (four hours) per trainee. This amount of time is necessary to ensure the development of needed road skills, and means an instructor must directly monitor a trainee’s driving ability on a one-to-one basis. This in-bus practice normally should immediately follow units F and G, when trainees have gained classroom-based knowledge of all routine school bus transportation information. It should also follow the Closed Practice Course session described above.

Skills to be demonstrated by each trainee during this time include:

- **Routine bus handling** including starting, shifting, turning, and stopping in traffic. Maintenance of proper following distance and speed control should be demonstrated.
- **Efficient monitoring** of interior and exterior school bus conditions.
- **Simulated loading and unloading** at a designated bus stop. The driver should assume “simulated” students are entering or leaving the bus.
- **Railroad grade crossing**, which is either simulated or practiced at typical crossings in the area.

As trainees develop and master the above skills, they can move to more advanced situations. These include bus handling in more challenging situations such as heavier traffic, hills, downgrades, curves, and wet conditions.

Skills such as loading/unloading, monitoring procedures, highway railroad grade crossings, and routine stopping and starting should be emphasized through the entire session.

COURSE SCHEDULING
Course scheduling, at the discretion of the instructor, is flexible using the course modules. A sample curriculum for a three-day course is shown in the table at the end of this section. This 20-hour new driver (10-hour recertification) course design has several inherent advantages:

- Knowledge and skills instruction moving from routine to more specialized student transportation topics.
- Gradual layering of necessary skills through practice.
- In-bus skills practice immediately following classroom-based explanations.
- Logical breaks between morning and afternoon sessions.
- Opportunity to introduce additional topics on shorter third day (e.g., transportation of students with disabilities, additional First Aid, or Commercial Driver’s License).

The lesson plans and activities included in this course have been designed for delivery within the suggested time periods and reflect the relative importance or complexity of the materials in a given unit to the entire function of the school bus driver. Materials relating to driving skills are covered in the classroom and the in-bus portion of the course, and thus, while the suggested delivery times may seem low, it actually receives the greatest emphasis.
The suggested delivery times are just that — only suggestions. There are numerous conditions that may dictate a given unit receives greater or lesser coverage. Such conditions may include:

- The use of locally produced visual aids such as Power Point slides, charts, or videos.
- The need for additional time to instruct students in the procedures for completing local reporting forms.
- The use of resource personnel for special topics (e.g., transporting students with disabilities, student emergencies) for which the lesson plans may need to be modified.
- Local weather, driving or equipment conditions that may require additional emphasis.
- In-bus suggested times are per bus driver trainee and assume the trainee is spending this entire time behind the wheel. Drivers with significant skill deficiencies as judged by the certified instructor may require additional time beyond these suggestions.

The suggested delivery times are for instruction, and do not include time for administrative requirements, breaks, lunch, or transition time between classroom and closed course. It is important to keep this in mind when preparing a course schedule.

From beginning to completion, the new driver course can be presented in three (3) working days and the recertification course in 1 1/2 days. However, in the anticipation of the fact that some school districts cannot or will not deliver the entire course at one time, the course has been organized in a modular format to allow units to be delivered individually in a series of shorter sessions. While some content overlap between units is unavoidable, care was taken in developing the lesson plans to allow each Unit to stand alone with a minimum of cross-referencing to other units. This is not to say that the units do not build on one another. It is recommended that the suggested sequence for the new driver course be followed rather closely, especially for the units on vehicle operation. For example, when material is covered in the classroom and in a section of the In-bus Unit, the classroom presentation should be delivered first, as it offers the detailed explanations required before the demonstration and practice of an operation.

While the same general considerations apply to the recertification course, there is greater scheduling flexibility here. This is a refresher course, and the drivers will already have been exposed to the material through the new driver course. However, remember that even experienced drivers should be given a thorough review of important procedures such as loading and unloading and pre-trip/post-trip inspections but remember that all units must be covered. In-bus training is especially important as this will be your opportunity as an instructor to correct any deficiencies you notice in the experienced driver’s actions.

**COURSE DELIVERY**

The bulk of this manual consists of the Pennsylvania School Bus Driving Training Course. Each unit is presented for the instructor to be able to transfer the information to their trainees. In order to do this, each unit in this manual has three (3) instructional aides that the trainees will not have in Publication 117 as described earlier.

**PREPARATION**

The first step in any successful course delivery is careful preparation. This will include not only being familiar with the materials to be delivered, but coordinating all other aspects of the instructional program as well.

It is strongly suggested that a course schedule detailing the time, place, topic, and instructor for all classroom and in-bus sessions be developed. This should be done as far in advance as possible to ensure the availability of supporting staff, resource personnel, and necessary materials, equipment, and facilities.

**SUPPORTING INSTRUCTORS AND RESOURCE PERSONNEL**

When the content has been defined in terms of sequence and tentative delivery time, staff requirements should be addressed. If it seems desirable for the course material to be spread out over time (e.g., scheduling the 20-hour new driver course for delivery in blocks of an hour or more over two to three weeks), then you might consider delivering the entire classroom portion alone. On the other hand, for a compact schedule (e.g., delivery
of the 20-hour program in three days), consideration should be given to using supporting instructors. In either case, in-bus sessions require additional personnel to assist in in-bus instruction, demonstrations, setting up the closed course, resetting road cones during maneuvering practice, and other tasks.

In addition to support staff, it may prove worthwhile to make use of other resource personnel in the course delivery to answer questions, define responsibilities, present instruction, and point out public relations. Possible examples might include:

- A school psychologist for Unit B on student management and discipline.
- The head mechanic for Unit E on preventive maintenance.
- An Intermediate Unit's Director of Special Education or Special Education Supervisor for Unit D on transporting students with disabilities.
- State or local police for Unit H on accident and emergency procedures.
- Emergency medical personnel for Unit I on student emergencies.

In addition to these examples, each Unit lesson summary contains a listing of suggested support and resource personnel for that particular unit. You should review the lesson summary for each unit before developing the course schedule. Please remember that a certified school bus instructor must be present at all times when a resource is addressing a class.

INSTRUCTIONAL MATERIALS
The lesson summary in each unit details the instructional and resource materials needed to deliver the unit. Most of these materials are provided with the course; however, in certain cases they are to be furnished locally.

In addition to their instructional role, staff or resource personnel may be able to obtain or construct valuable training aids such as movies, slides, charts, and handouts. You may make use of these materials, as well as those from other outside sources (e.g., school administration, National Safety Council, audio visual libraries). Such materials may be used either to supplement or to replace handouts provided with the course.

Whatever the source, you should ensure all training aids are identified and available in sufficient quantity prior to initiating the course.

FACILITIES AND EQUIPMENT
Classroom
Facilities and equipment for the classroom portion of the course should be readily available, but you should review the section of the instructor’s guide on preparing the learning environment before scheduling facilities and equipment. You also should review the section of the instructor’s guide that covers use of various types of audiovisual equipment before using them in course delivery.

In-bus
The facilities and equipment needed for the in-bus instruction are detailed in the In-Bus Unit. Use the type of bus the trainees will eventually be driving for their one-on-one training.

Schedule Preparation
Having considered all aspects of the instructional program, content, sequence, delivery time, personnel, material, facilities, and equipment, a course schedule detailing times, places, topics, and instructors should be drawn up and distributed in advance to all involved personnel, your instructor coordinator, and administrative office. The same schedule should be given to trainees.

Records Maintenance
Attendance records shall be maintained by you, with trainees identified by name and the driver number that appears on their Pennsylvania driver’s licenses. The date of each trainee’s completion of the course and your name also should be recorded. Fully complete the DL-714 “School Bus Drivers Training Report Form” and be sure the trainees sign them.
## Topical Coverage of Pennsylvania School Bus Driver Training Curriculum

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<td><strong>Total Time</strong></td>
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*The time spent on this unit will vary significantly based on trainee responsibilities.

**Suggested times are per trainee and assume one-on-one monitoring of performance.
INTRODUCTION

The purpose of this Instructor’s Guide is to offer suggestions to school bus driver instructors about teaching adult learners. These suggestions are intended to assist instructors with understanding the purposes and goals of training resulting in teaching methods and techniques that contribute to producing good school bus drivers in Pennsylvania.

The four decades following the 1960s have seen much theoretical work done by educational scholars toward better understanding adult education. This work reached a point during the 1980s when specific teaching methods and techniques were expressed in models focused on the teacher or trainer. Since that time, scholarly effort has shifted its focus from trying to understand what teachers need to be great teachers to what learners need to learn well (Sheal, 1989, as cited in Sims, 1993). This instructor’s guide focuses on those ideas, methods, and techniques from this literature that are useful to the task at hand – assisting school bus driver instructors with developing good school bus drivers.

School bus drivers manage many responsibilities in the commission of their work. They are responsible to the parents of their student passengers for the well-being of those children, to the school districts they serve, to the transportation companies for which they work, to the state for the laws and regulations they must obey, and to the communities through which they travel. Each of these responsibilities carries with it a set of guidelines and regulations that must be learned and practiced. All this is in addition to actually operating the bus, and managing student passengers.

For the school bus driver trainee, these skills and responsibilities are to be established in no less than 20 hours of instruction; 14 hours of classroom training, and six (6) hours of in-bus training. A daunting task, but manageable given an appropriate focus on trainees as learners, and their training as the establishment of foundational skills upon which a long and safe career can be built.

For school bus driver instructors, such instructional components as classroom facilities and schedules may be determined by others. Even the motivations of trainees may be beyond the instructor’s consideration, as trainees have presented themselves for the training. Whether voluntarily choosing to become school bus drivers, or submitting to recertification training as required by regulation, trainees do not have to be persuaded to come to the training. The stage is set, and the trainees arrive; what remains for instructors is the challenge and opportunity to focus on the specific needs of school bus driver trainees, and deliver those needs such that trainees capture the material effectively.

PREPARING THE LEARNING ENVIRONMENT

As much as possible, given that schedules and facilities for school bus driver training may have been determined prior to their involvement, instructors should prepare the facility available to aid learning for their trainees and to make efficient use of training time. The following guidelines are intended as an aid to Instructors for preparing the learning environment for trainees (Heinich, et al., 1985; California State Department of Education, 1981; Houck, et al., 1978, as cited in the Pennsylvania School Bus Drivers Training Manual, 2008):

• Select a facility with easy access to parking, and the area to be used for in-bus instruction.
• Be sure the room is large enough for trainees, staff, guests, demonstrations, reference materials, and audiovisual equipment.
• Provide enough lighting for trainees to read, write and observe demonstrations. Be sure the room can be darkened for the use of such media as slides and video.
• Check heating, cooling and ventilation equipment, so it operates properly without excessive noise. If you must, open windows. The room should not be located near busy streets or noisy areas.
• Try out all audiovisual equipment to make sure it works and you know how to operate it.
• Make sure that electrical outlets and extension cords are available.
Check to see whether a lecture/demonstration table or a lectern is available.

Make sure there are enough comfortable chairs for trainees. Provide each person with adequate room for manuals, notebooks, and forms. Seating at tables is preferable to chairs with writing arms.

Check all seating locations, so trainees can see and hear properly. A classroom style seating arrangement works better for viewing audio-visual material, while a U-shape arrangement where trainees can see each other easily is better for class discussions.

Be sure all handout material is printed and organized before each class.

Be sure any flip charts or props you intend to use are located conveniently and function properly.

Prepare a display table for any material or equipment to be examined by trainees.

Post or distribute a schedule identifying how much time will be devoted to each topic. The schedule should also include time for breaks. Be flexible with this.

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**SCHOOL BUS DRIVER TRAINEES AS ADULT LEARNERS**

Adult education literature is replete with definitions of learning. However, there are three aspects of learning upon, which theorists tend to agree (Sheal, 1989, as cited in Sims 1993):

- Learning is active, in that learners participate in their learning; they do not just passively receive it (Sims, 1993).
- Learning leads to, or results in, “a relatively permanent change in behavior.” (Sims, 1993, p.244). Gagne (1985) suggests that learning leads to some new capability or performance.
- Learning results in the possession of additional information, skills or attitudes (Sims, 1993).

That school bus driver trainees will learn new skills, such as bus operation, and retain new information, such as school district policies, is expected. The aspect listed above that is most pertinent to this discussion is the idea of active learning. The amount of material school bus driver trainees must effectively retain is great, and doing so is probably not likely if they are expected to passively receive it, no matter how motivated the instructor. Adults learn best when actively engaging the learning process. Instructors need to develop classroom activities that encourage and assist their trainees’ engagement in learning.

Educational psychologist John Dewey suggested that people learn when their engagement of a problem includes these elements:

- Perception of a problem;
- Clarification of the nature of the problem, based upon prior knowledge;
- Formulation of a hypothesis (imagining what the answer might be);
- Testing and retesting the hypothesis until the problem is solved.

Dewey suggests that learning has occurred when the problem is solved (Dewey, 1938, as cited in Sims, 1993).

Dewey’s suggestion reinforces the idea that adult learners need to be engaged in their learning and their instructors need to develop teaching strategies and techniques that give trainees opportunities to wrestle with the problems they might encounter in their new work. Further, the engagement of problems needs to be related to what trainees already know. The process of engagement begins with clarifying problems based upon knowledge learners already possess, before progressing to the work of solving those problems.

An example of how an instructor might employ this process could be a presentation of the problem of road users not respecting the red flashing lights and side stop arm used by school buses when loading and unloading students. As motorists, the trainees have probably witnessed other drivers passing stopped buses loading or unloading passengers. Having clarified the problem within their experience, an instructor could then present the question of how school bus drivers might enhance the safety of their student passengers who have just left the
bus and are walking along or crossing the street. Working through potential answers to the problem may help trainees come to own such concepts as the danger zone around the bus, or the need for drivers to refrain from managing student behavior on the bus during loading or unloading, so they can focus on the traffic around the bus.

Expanding upon this idea of connecting new knowledge with experience, Clark and Rossiter (2008) suggest people make sense of their experiences by constructing narratives that make connections between their various experiences, binding them into a coherent whole. They further suggest the process of developing new narratives that connect their existing experience to new encounters is learning (Clark & Rossiter, 2008). This idea makes the inclusion of narratives – storytelling – particularly valuable to adult learning. Narratives engage the experiences of learners, and allow them to more easily make connections to new ideas, facilitating learning. While it may take some class time, the instructor telling a story about the time when he or she encountered a particular challenge can be immensely useful for trainees because trainees will be able to remove the concepts of the story from the classroom to a particular place and time. Even more useful is allowing a trainee with appropriate experience to tell the story of their experience. Other members of the class will relate well to the experience of a peer, making it their own. This is one advantage to having experienced drivers completing recertification training requirements in the same classroom as new bus drivers.

More recently, Westover (2009) suggests 10 characteristics of adult learning, derived from Goad (1982) and Hanson (1981). Knowledge of these characteristics is useful for the instructors of adult learners as they develop a classroom environment that helps trainees learn. Notice the reinforcement of Dewey’s thinking in this list:

1. Learning is a process – as opposed to a series of finite, unrelated steps – that lasts throughout the entire lifespan of most people.
2. For optimum transfer of learning, the learner must be actively involved in the learning experience, not a passive recipient of information.
3. Each learner must be responsible for his/her own learning.
4. The learning process has an affective (emotional) as well as an intellectual component.
5. Adults learn by doing; they want to be involved. Regardless of the benefits of coaching, one should never merely demonstrate how to do something if an adult learner can actually perform the task, even if it takes longer that way.
6. Problems and examples must be realistic and relevant to the learners.
7. Adults relate their learning to what they already know. It is wise to learn something about the backgrounds of the learners and to provide examples they can understand in their own frames of reference.
8. An informal environment works best. Trying to intimidate adults causes resentment and tension, and these inhibit learning.
9. Variety stimulates. It is a good idea to try to appeal to all five of the learners’ senses, particularly to those aspects identified by neurolinguistic programming: the visual, the kinesthetic, and the auditory. A change of pace and a variety of learning techniques help to mitigate boredom and fatigue.
10. Learning flourishes in a win win, non-judgmental environment. The norms of the training setting are violated by tests and grading procedures. Checking learning objectives is far more effective.” (Westover, 2009, pp. 435, 436).

For example, school bus driver training provides an overview of bus operation, including such issues as managing the size of a bus and operating a diesel engine. However, the instructor does not have to begin with teaching everything a school bus driver needs to know about operating a bus, as though that knowledge existed in a vacuum. The instructor could reasonably begin with the assumption the school bus driver trainees already know how to drive automobiles; this is the experiential knowledge upon which the differences between driving automobiles and buses can be built.

When teaching that the weight of a bus requires increased stopping distances over the stopping distances required for automobiles, the instructor could try to show the physics involved with diagrams and calculations. However, the mathematical calculations about coefficient of friction and inertia are probably not within the typical
experiences of most people, so that approach is less useful because it does not connect with trainees’ experiences. A better approach is for the Instructor to begin the discussion by asking the class if any have noticed that their car seems to be more difficult to stop when loaded with people. This establishes a connection to experiential narratives upon which can be built new knowledge – imagine how much longer a bus filled with students is going to take to stop.

Similarly, the process of starting a diesel engine has a step or two more than starting a gasoline engine. Begin with the procedure for starting a gasoline engine, which is probably familiar to most trainees, and then explain the need for the additional step or two. The same is useful for teaching reference point driving as a concept. Most trainees probably have established reference points for driving their cars – just build upon that concept with the new knowledge that because the bus is bigger and the seating position is higher the reference points will be different and accommodate greater measurements – but the concept is still reference point driving. This approach of connecting new learning to the experiences of the learners is useful both in the classroom and for in-bus training. Make a conceptual connection in the classroom and an experiential connection in the bus.

ADULT LEARNERS ARE NOT ALL THE SAME

Complicating the work of instructors facilitating their trainees’ learning are the differing ways in which learners learn. Dewey’s, Westover’s, and others’ suggestions offered above give an overview of the learning process with a focus on the necessary connections between new ideas and experience, but individual learners approach the process differently. Effective instructors accommodate these differences in their learners by varying how they present the necessary material.

LEARNING PREFERENCES

Dunn and Dunn (1992, as cited in Pitts, 2009) suggest there are two classifications of learning styles: analytical and global. Their research revealed that some people, whom they describe as analytical learners, prefer learning in sequential, cumulative patterns toward a complete conceptual understanding, while global learners prefer to understand a concept first, and then fill in the details.

However, the differences in these learning classifications extend beyond their orientation to the “whole” of a concept. On one hand, analytical learners tend to:

- Prefer quiet, well-illuminated, formal settings;
- Have a strong emotional need to complete tasks;
- Prefer to learn alone or with a teacher;
- Prefer highly structured assignments;
- Rarely eat, drink, smoke, or chew on objects while learning (Dunn & Dunn, 1992, as cited in Pitts, 2009).

On the other hand, global learners tend to:

- Work well and concentrate better with distractions such as:
  - Sound;
  - Soft lighting;
  - Informal seating;
  - Eating and/or drinking;
- Take frequent breaks;
- Work on several learning tasks simultaneously;
- Study with peers; and
- Structure learning tasks in their own way (Dunn & Dunn, 1992, as cited in Pitts, 2009).
Clearly, the prospect of a room full of students who prefer to learn in distinctly different ways presents a challenge to their instructor, particularly given the amount of material to be learned by school bus driver trainees in the amount of time allotted for this training. The best approach for school bus driver instructors is to be aware that trainees will bring different learning styles to the classroom, and to present material in different ways to reach the broadest range of learning styles.

Recognizing that students have different learning styles (Sims, 1993), the best ways for an instructor to assist their adult learners are:

- Recognize the instructor’s own learning preference. Instructors often tailor their presentation styles consistent with their own learning styles, potentially neglecting a portion of their classes (Sims, 1993). For example, a global learner may need to make a conscious effort to develop lesson presentations that sequentially and cumulatively develop concepts for their students that are analytical learners.

- Develop a teaching style that accommodates, as much as possible, students’ different learning preferences (Sims, 1993). For example, a lesson presentation that develops concepts sequentially and cumulatively for analytical learners may need to be followed by a group discussion on the same material to accommodate global learners.

- Recognize that when students struggle, an adjustment of presentation style may be helpful to them (Sims, 1993).

OLDER ADULT LEARNERS

With the aging of the Baby Boom generation, the number of older people in the U.S. is increasing, and when combined with increasing costs of retirement and health care, is resulting in many of these older persons remaining in the work force. At the same time, the number of younger people entering the work force is decreasing, supporting a demand for older workers (National Institute on Aging, 1991, as cited in Baldi, 1997). An implication of these trends is that older persons may choose to drive school buses as a second or “retirement” job.

Baldi’s research used age 65 as the threshold for “older” workers, which is useful for making the point that economic and social conditions are motivating retirees to remain in the workforce in some capacity. However, as this discussion of learning capabilities unfolds, keep in mind that aging occurs over time, not at a given age, and that changes in abilities demonstrated among workers over age 65 began years earlier.

The ages of school bus drivers in Pennsylvania tend to be high, with 39.7 percent of school bus drivers between the ages of 45 and 59, and 26.5 percent of school bus drivers between the ages of 60 and 74 (PennDOT statistics, as of 9/11/2009). Further, in September 2009, more than 1,200 school bus drivers in Pennsylvania were over the age of 74.

Stagner (1985) found that employers hold stereotypes about older workers, specifically, older workers are: less capable, less efficient, less productive, more irritable, and poorer in health than younger workers. However, Stagner’s review of studies comparing the performance of older workers and younger workers revealed that older adults typically perform better than 30 percent of younger adults (Stagner, 1985, as cited in Baldi, 1997). Unfortunately, the negative stereotype that older workers are resistant to changes in the workplace is reinforced by some older workers (Baldi, 1997). Fortunately, the older adults who present themselves for school bus driver training should be aware of the training requirements for the work and are accepting of that training.

Baldi (1997) studied the responses of older adults to computer training in preparation for continued or new employment. While training older adults to use computers for business applications is different from training adults to drive school buses, Baldi’s research reveals several characteristics about older learners that may be sufficiently generalizable for consideration here. When training older learners, Baldi suggests:

- Be aware of attitudes. Older learners’ desire to learn may be masked by a fear of failure that prevents learning (Bandura, 1977, as cited in Baldi, 1997).

- New concepts should be relevant and build upon existing knowledge and experience (Sterns, 1986; Willis, 1985, as cited in Baldi, 1997).
Older learners are capable of performing comparably to younger learners, but need to be allowed sufficient time for their training and work at an appropriate pace (Zandri & Charness, 1989, as cited in Baldi, 1997).

Even though they may need more time for training, they need to engage training in shorter increments to avoid fatigue (Elias, et al., 1987, as cited in Baldi, 1997).

Essentially, Baldi’s research suggests that older learners are as capable of learning new skills as younger learners, but their chances of success may be improved with a few considerations. Older learners may need extra time and attention from the instructor. Baldi (1997) found that older learners often struggle more than younger learners when presented with new problems to solve, but given time and attention, are able to perform as well as their younger counterparts by the end of a training program.

The greatest asset older learners bring to a training program is their experience. As mentioned above for adult learners generally, building new concepts upon learners’ experience keeps the new material relevant to the learner, and assists with the problem-solving process by clarifying the nature of the problem, leading to the development of problem solving hypotheses for testing, and leading ultimately to learning. This is one advantage to having experienced drivers completing recertification training requirements in the same classroom as new bus drivers.

THE TRAINING PROCESS

A complete training process includes components outside of actual classroom activities, including (Westover, 2009):

- Needs assessment;
- Learner motivation;
- Reinforcement;
- Retention;
- Transference; and
- Program evaluation.

Several of these components, namely needs assessment, learner motivation, and program evaluation, fall outside the purview of a school bus driver instructor and are really sponsoring agency concerns. An exception to this may be the motivation of trainees in recertification classes. In particular, these trainees may view the recertification process as retraining for work they already know how to do, and likely a waste of time. Instructors may need to help these trainees understand the value of discussing their work in a classroom setting. Otherwise, as a potential school bus driver has undertaken the steps to enter training and presented themselves as trainees, the instructor is most concerned with reinforcement, retention and transference.

REINFORCEMENT

In its basic form, reinforcement is the learner receiving a reward for correctly performing some learned action or activity. However, in practice, reinforcement is more complex. Thorndike’s Law of Effect states that “if a consequence is pleasant, the preceding behavior will become more frequent, and if a consequence is unpleasant, the behavior becomes less likely to occur” (Kodat, 2002, as cited in Westover, 2009). Michalak and Yager (1979) suggest that positive reinforcement is the most important tool managers have to maintain the behavior of newly trained employees after they return to their jobs. Praise, reward, and satisfaction are the most common forms of positive reinforcement on the job.

The power of positive reinforcement is diminished if used inappropriately or without apparent consistency (Westover, 2009). An example of inappropriate reinforcement would be rewarding an employee for doing menial work, because that reward may not encourage that employee to improve (Jenson, et al, 2004). Another example is rewarding an employee for doing a lot of work, when in fact, that employee had done little (Westover, 2009). Instructor’s praise in the classroom should be commensurate with the insight or educational benefit offered by students’ contributions and responses.
Likewise, inconsistent reinforcement can affect learners’ optimism, ultimately affecting their moods and academic success (Westover, 2009). An example of inconsistent reinforcement is illustrated through a study by Gunter and others (1993) during which an instructor’s praise was offered randomly, without consideration of student behavior. That instructor’s behavior confused students, misleading them about appropriate behavior.

On those occasions when a student offers a response to a question or a comment that clearly misses the mark, rather than the instructor praising the student, the instructor should take the time to better understand the student’s response and gently guide that student back to the point at hand. The instructor will positively reinforce the student’s willingness to respond with the attention given, contribute to the learning for all students, and not leave the class with the impression that any response, even a careless one, is praiseworthy.

RETENTION
Training is useless, if employees fail to retain the new knowledge presented to them. There are several techniques instructors may use to enhance the likelihood their trainees will retain new knowledge (Berman, 2001):

• Building on established knowledge;
• Repeating information; and
• Practicing new skills.

Building upon learners’ established knowledge helps them not only with understanding new concepts, but retaining those concepts too (Berman, 2001, as cited in Westover, 2009). The use of teaching tools that build upon existing knowledge such as group discussions, demonstrations and group projects allow trainees to draw from their experiential knowledge and apply that knowledge to problem-solving (Kennedy, 2003).

As an illustration of this point, consider the presentation of the unit on disciplining student passengers. Many, if not most, school bus driver trainees will come to the training with experience in disciplining children. Their experiences are a starting point for group discussion around hypothetical discipline scenarios. The instructor need only present a problem and allow the class to work through the implications and consequences of suggested actions. Unit B of the School Bus Instructor’s Manual lists several discipline problem scenarios for instructors to use in just this way.

Most people are unable to remember something after being told one time. Repetition is vital to assist trainees with retaining new knowledge. This is particularly important for older learners, as the ability to retain information declines with age. Toward assisting their trainees with retaining new knowledge, instructors should practice the rule of three, which states that a person retains something after it has been said three or more times (Berman, 2001). Repeat important information as many times as seems necessary.

Repetition is also important in skills development. The rule of seven states that a person needs to practice a new skill seven or more times to master it (Berman, 2001). Repeating an activity slows the process of learning, allowing more time for problem-solving for those who may not understand concepts quickly. Repetition also reinforces knowledge for those who already have a particular concept. Training sessions should include as many opportunities to practice new skills as the schedule will afford, thereby contributing to trainees’ abilities to retain new knowledge and skills (Kennedy, 2003, Berman, 2001). During in-bus training, time should be scheduled for trainees to practice the demonstrated skills several times. Demonstrating a skill and then allowing a trainee to perform the skill one or two times may not be sufficient for trainees to retain the skill.
TRANSFERENCE

Transference is the ability of a trainee to use their new knowledge on the job. Positive transference occurs when a trainee actually uses new skills correctly. Negative transference occurs when a trainee avoids behaviors they were taught to avoid (Westover, 2009). These kinds of transference have positive outcomes; trainees do what they were trained to do, and do not do what they were trained not to do. There are several factors that affect the likelihood transference will occur (Lieb, 1991, as cited in Westover, 2009):

- Association;
- Similarity;
- Degree of original learning;
- Critical attribute element; and
- Reinforcement.

Association occurs when learners are able to associate new information with something they already know, such as steering a bus when compared to steering their own car. Similarity is when the new information is similar to information in the learner's experience, such as starting the bus compared to starting their own car. Degree of original learning refers to how much the learner participated in gaining the new knowledge, such as participating in a problem-solving discussion or practicing loading and unloading. Critical attribute element refers to the importance of the new information to actual work processes; critical steps are more likely to be retained from training and transferred to work. Reinforcement not only contributes to learning and retainage, as discussed above, but also contributes to the usability of the new information (Lieb, 1991, as cited in Westover, 2009).

TEACHING SKILLS

Thus far this instructors’ guide has focused primarily on adult learners and how they learn. At this point the focus will shift to instructors, and the skills and tools they need to facilitate their trainees’ learning. The instructor is the leader in the classroom. This means that when questions of process or procedure arise, the instructor is expected to know, or at least manage, the situation or circumstance. The instructor sets the tone for the class and manages the classroom environment, hopefully toward an environment that allows trainees to learn. As already discussed, the learning styles of trainees vary within any given cohort, so the instructor needs to work toward an atmosphere that accommodates the various learning styles of the class.

Whether the instructor intends to lecture, facilitate class discussion, use small groups, or use audio-visual aids and demonstrations, at some point, the instructor is in front of the class delivering information to the group. The attitude and verbal communication skills of the instructor are important; these characteristics help establish and maintain rapport with the trainees.


INSTRUCTOR ATTITUDE

- Be natural; do not try to be someone you are not.
- Be enthusiastic, and demonstrate your desire to teach.
- Establish and maintain a light, relaxed atmosphere.
- Be pleasant, smile frequently, and show a sense of humor. However, be careful not to be offensive.
- Relate to trainees as mature adults; put them at ease, get to know them, and be fair.
- Maintain control of the class, enforcing boundaries with firmness and kindness.
- Be courteous, tactful and self-controlled.
- Expect and accept constructive criticism.
- Show your willingness to spend extra time with trainees needing additional instruction.
- Adjust your attitudes and practices to the needs of the particular group you are instructing.
ORAL PRESENTATION SKILLS

- Master the subject matter of the entire course before teaching the first lesson.
- Maintain eye contact with trainees to gain and hold their attention.
- Talk; do not orate.
- Present information in interesting, earnest and conversational tones, and in a natural, personal manner.
- Speak clearly, at a moderate pace, and at an appropriate volume.
- Use language suitable to the group, but do not talk down to trainees.
- Refrain from using sarcasm and profanity.
- Make each topic clear and interesting.
- Use your body to emphasize important points; stand in the front center of the “stage” in front of the classroom and directly face the audience.
- Turn off audio-visual aids when not in use to shift the learners’ attention back to you.
- Use a variety of teaching methods and audio-visual aids to maintain the learners’ attention.
- Try to achieve as much class participation as time allows.

ESTABLISHING AND MAINTAINING LEARNER ATTENTION

During the instruction time, learners’ may be distracted. They may arrive distracted, or become distracted through the course of the day, but distraction will impede their ability to engage the problem-solving process that leads to learning. There are tools and skills available to instructors’ to, as much as possible, engage learners with the lessons necessary for their success. Following is a series of suggestions for establishing and maintaining learner attention (McKeachie, 1986; Gage & Berliner, 1984, as cited in the Pennsylvania School Bus Driver Training Manual, 2008):

- Make sure that all of the learners can see your face and lips.
- Capitalize on the arousal value of suspense, discovery, curiosity, conflict, and exploration.
- Wet the appetite.
- Show enthusiasm in your tone of voice, pace or pattern of speech, facial expressions, hand gestures, and body movements.
- Occasionally do the unexpected.
- Use familiar material for examples.
- Use unique and unfamiliar contexts to illustrate principles.
- Use key words or phrases to indicate that something is worth noting and remembering.
- Make occasional changes in your presentation style: pitch, intensity, pace, non-verbal cues, and audio-visual aids.
- Use audio-visual aids at reasonable intervals.
- Relate lecture content to learners’ interests.
- Build suspense toward the resolution of a conflict.
- Require learners to use material that was presented earlier.
- Verbally praise learners whose comments indicate attentiveness.
- Provide learners with occasional physical activity such as breaks and skills practice.
- Occasionally use simulations and games.

Complicating the issue of maintaining learner attention is the combining of new driver and recertification trainees in the same classrooms. Recertification trainees may have significant service as school bus drivers and find themselves as part of training on the most fundamental aspects of school bus driver training. While the value for any professional to occasionally reconsider the fundamentals of their craft is certainly arguable, recertification trainees may not recognize that value. The challenge to the instructor is to engage beginning and experienced trainees at the same time. Consider the experience of recertification trainees as an asset in the classroom.Pose
questions that encourage experienced trainees to contribute to the training of pre-service trainees. Engage experienced trainees as adjuncts to the instructor.

CLASSROOM DISCUSSION
As presented earlier in this guide, classroom discussion is an effective way to steer learners through the problem-solving process, particularly for global learners. Whether presenting course material through lecture, demonstration, or using audio-visual materials, following those presentations with discussion brings the learners to a point where they can wrestle with the material, forming and testing hypotheses toward learning. Not only is classroom discussion useful for following other forms of presentation, but discussion can itself be useful as a method of presentation, allowing learners to use their experience to develop new ways of thinking. Discussion can be used for any of the following purposes (Gage and Berliner, 1984):

- Increasing learner motivation.
- Promoting active participation in instructional activities.
- Increasing awareness of controversial issues.
- Examining different points of view.
- Allowing learners to discover relevant concepts, principles or solutions.
- Increasing understanding of concepts and their application to real world situations.
- Developing problem solving skills.

Successfully leading a classroom discussion requires the instructor to show confidence in the learners’ abilities to discuss the subject at hand and solve the problems presented. This demonstration of confidence is best shown in an atmosphere of mutual respect and openness. The instructor must assume the role of authority to launch the discussion, but must decline the role of expert in solving the problems at hand (Dinkmeyer and Muro, 1971, as cited in the Pennsylvania School Bus Driver Training Manual, 2008). The focus of the class is not what the instructor knows, but what trainees can learn. Again, this is where the experience of recertification trainees can be most valuable.

Following is a series of suggestions for appropriately structuring classroom discussion (McKeachie, 1986; Gage & Berliner, 1984, as cited in the Pennsylvania School Bus Driver Training Manual, 2008):

- Establish a receptive climate for participants’ involvement.
- Define the focus or expected outcome of the discussion.
- Keep the discussion on track.
- Model skills to be developed.
- Provide feedback to shape skills being developed.
- Provide information.
- Periodically summarize progress toward expected outcomes.
- Clarify, and then mediate differences.
- Encourage participation by all learners.
- Close the discussion.

For example, consider a class discussion about maintaining student discipline. The concepts from Unit B have been presented, and the instructor is going to use the list of scenarios to lead a problem-solving discussion. The instructor might begin by explaining the task – several scenarios will be presented, and the class will suggest possible driver’s responses to the problems, as well as potential consequences of the driver’s actions. The instructor should make the point that the purpose of classroom discussion is to allow time to consider new viewpoints and test new ideas. The instructor should also emphasize that everyone does not have to arrive at the same conclusion – the point is the discussion.

Occasionally during a class discussion the conversation will go off track. Sometimes these detours in discussion have value, and the instructor should allow the discussion – to a point. That point is up to the instructor, but
ultimately the instructor is the leader, and while not acting as expert in the discussion, should take control of the discussion and bring it back on track. A major point in the discussion about student passenger discipline in Unit B is that of the school bus driver remaining calm, and not raising his or her voice. The instructor should model this behavior throughout the discussion. Also, the instructor might consider demonstrating a trainee's suggestion for handling a discipline problem to show what that behavior might look like.

If during a class discussion a trainee suggests an idea that is most likely contrary to school district policy or state law, the instructor may offer that information, so trainees can discount that suggestion. When offering such information, the instructor merely guides the discussion away from dangerous territory without giving the ultimate answer. In such cases, learning may still occur because trainees can learn what not to do.

Occasionally trainees will argue, becoming passionate about their ideas and possibly hostile toward each other’s ideas. After each side has offered their opinion and the discussion turns hostile, the instructor needs to step in, summarizing each side’s idea, defusing their hostility, and possibly asking the other trainees to weigh in on the discussion. The idea is not to vote one side or the other a winner, but to help draw distinctions the original protagonists might not have understood.

If a particular group of trainees seems unwilling to participate in a group discussion or seems distracted, the instructor might ask the students to write the answers to the first several problem-solving scenarios, allowing three or four minutes for trainees to think and write each response, and then ask trainees to share what they have written. The writing may draw trainees from their distractions to the problem at hand, and having written their responses may give them confidence to respond orally. After a few scenarios are discussed, the instructor may drop the writing part of the activity and have students respond directly from their thoughts. Other suggestions for encouraging class participation are offered below. Following is a series of suggestions for improving participation during classroom discussions (McKeachie, 1986; Gage & Berliner, 1984, as cited in the Pennsylvania School Bus Driver Training Manual, 2008):

- Create an expectation for participation by emphasizing the importance of input from all of the trainees.
- Emphasize the value of each person’s ideas and experiences.
- Establish an atmosphere of trust where trainees will not fear sanctions for being wrong.
- Seat discussion participants in a circle or semicircle so they can see one another.
- Use trainees’ first names.
- Build upon trainees’ contributions.
- Use trainees’ responses as means of eliciting additional input from others.
- Respond to terse comments by asking the contributor to elaborate.
- Ask questions that require trainees to draw upon their personal experiences.
- Ask quiet participants to comment on issues for which they have special knowledge or experience.
- Use broad, open questions that elicit statements of opinions, descriptions of relationships or applications of facts.
- Ask trainees to discuss questions in pairs or small groups before holding a general discussion with the entire class.
- Reinforce contributions by using a variety of the following techniques;
  - Verbally acknowledge comments.
  - Smile and nod.
  - Thank the trainees for their contributions.
  - Praise insights.
  - Point out important implications of a particular remark.
  - Refer to earlier comments.
  - Point out congruence between trainees’ ideas.
  - Make positive exclamations such as “good point” and “that’s interesting.”
- Accept silences up to 30 seconds as thinking time.
CONCLUSION

The opportunity to guide the learning of others is an important responsibility even more so when the learning will lead to trainees becoming Pennsylvania school bus drivers. To their credit, by the time school bus driver trainees arrive in class they have considered their suitability for the work and taken initial steps toward their certification. The challenges are that the members of any given cohort come from varying backgrounds and life experiences, and have differing learning styles. And, the time for training is limited.

However, demonstrated respect for each trainee in an atmosphere of encouragement will set an appropriate tone for learning the necessary skills, policies and regulations for school bus drivers. This instructor's guide was intended to convey foundational information about current thinking in adult learning and offer suggestions on how to implement some of these ideas toward school bus driver training. This guide is not, nor was it intended to be, a comprehensive teaching manual, but rather focuses on the thinking and tools anticipated to be useful for this very specific training.

Teaching is built upon interactions between people who are often strangers. While anticipating generalities in human behavior is possible, anticipating the behavior of individuals in specific settings is more challenging. Teaching requires a balanced commitment to the goals of the course and the needs and individuality of learners, set in a cradle of flexibility and encouragement. A good sense of humor doesn't hurt.
REFERENCES


SCHOOL BUS DRIVER
TRAINING COURSE
LESSON SUMMARY

INSTRUCTOR’S PERSPECTIVE
This unit “sets the stage” for the rest of the driver’s course. It provides the instructor the opportunity to introduce him or herself to the class, as well as get to know the trainees. The instructor will review course logistics, provide a short history and reasons for course, and overview of course topics. A pre-test of general and school bus driving procedures is recommended here.

TRAINEE OBJECTIVES
1. Understand the reasons for training requirements for Pennsylvania school bus operators.
2. Understand the basic content of each unit and the schedule for training.
3. Take a brief pre-test to evaluate existing knowledge regarding school bus operations.

LOCATION
Classroom

DELIVERY MODE
Lecture, discussion and test.

MATERIALS
- Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker, or Power Point Presentation.
- Handouts - Course schedule, pre-test

RESOURCE PERSONNEL
This unit should be presented by the head course instructor. Supporting instructors and resource personnel may be present for this unit, but it is not required.

SUMMARY AND REVIEW QUESTIONS
- Summary - The complete lesson plan should be covered in detail for a new driver course. For a recertification course, the lesson can be covered more briefly, but should include administration of the pretest. If you add questions to suit local needs, remember to make the questions fair and unambiguous.
- Review Questions - N/A for this unit.

REFERENCES
Websites

PennDOT Publications

Note: These publications are available on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us, under the School Bus Driver Information Center.

Other
- Local regulations and/or procedure guides, if available.
NOTES:
INTRODUCTIONS

Welcome everyone to the training course. When starting the formal part of the class, introduce yourself. Besides your name, provide a brief description of your background, and your motivations and qualifications for instructing this course. If other instructors are present, introduce them by name and provide brief background information for each, or have them introduce themselves and how they will be helping with the course.

If you do not know the trainees, go around the room and have them introduce themselves and provide a little about their background and driving experience. Sometimes it is fun to ask why they decided to become a school bus operator. From the instructor’s standpoint, it may be helpful to have the trainees print their names on tent cards and place them on the tables in front of them so you can learn their names more quickly.

ICEBREAKERS

In cases where drivers do not know each other (more common for new driver courses), it may be appropriate to start the class with an “icebreaker.” The purpose of this exercise is to relax the participants and have them interact with one another in an informal manner. This should help facilitate discussions through the class. One example follows:

1. Divide the class into groups of four (4) or five (5) people.
2. Tell the groups that their assignment is to find five (5) things they have in common, with every other person in the group, that have nothing to do with work. Tell people no body parts (we all have legs; we all have arms) and no clothing (we all wear shoes, we all wear pants). This helps the group explore shared interests more broadly.
3. Tell the groups that one person must take notes and be ready to read their list to the whole group upon completion of the assignment.
4. Ask for a volunteer to read their whole list of things in common first. Then, ask each group to share their whole list with the whole group. Because people are your best source for fun, the reading of the lists always generates a lot of discussion.

This icebreaker takes 10 minutes, depending on the number of groups. To keep the activity to 10 minutes, after seven (7) minutes of brainstorming together, tell the groups that the lists they have created are perfect, no matter how many items they have, and debrief.

Other icebreakers could include:

The Little Known Fact: Ask participants to share their name, reason for wanting to become a school bus driver, and one little known fact about themselves. This “little known fact” becomes an element that can help break down differences in future interaction.

True or False: Ask your participants to introduce themselves and make three (3) or four (4) statements about themselves, one of which is false. Now get the rest of the group to vote on which fact is false. As well as getting to know other trainees as individuals, this ice breaker helps to start interaction within the group.

Interviews: Ask participants to get into twos. Each person then interviews his or her partner for a set time while paired up. When the group reconvenes, each person introduces their interviewee to the rest of the group.

CLASS LOGISTICS

After the icebreaker, review class logistics including:

- Locations of rest rooms.
- Emergency exits.
- Cell phone/texting policies.
- Overall schedule.
- Smoking rules.
- Eating and drinking rules.
- Breaks.
- Time and expense issues.
PENNSYLVANIA’S PERSPECTIVE

Relay to the trainees at the start of this course that the ultimate objective of this course is to provide safe and efficient transportation for school children in Pennsylvania. Pupil Transportation is such an important issue that the National Highway Traffic Safety Administration issued a federal safety standard (Standard 17) of the Highway Safety Act of 1966. To ensure statewide compliance with this safety standard, Pennsylvania responded with a comprehensive course of instruction for school bus operators.

So why is formal training for Pennsylvania school bus drivers so important?

Consistency. Everyone involved with student transportation, from parents of school children to transportation company managers to school administrators, as well as the travelling public, have a certain expectation of school bus driver behavior. A common training and certification program helps maintain that consistency and fulfill that expectation. To put this in perspective, fill in the blanks below using data from the most recent School Bus Statistics published annually by PennDOT. These are located on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us, under “News, Facts and Stats.”

There are approximately _________________ registered school buses in Pennsylvania being used to transport _________________ students on a daily basis.

To operate those buses, there are about _________________ licensed school bus drivers.

One piece of good news is that school bus transportation is the safest mode of ground transportation. In Pennsylvania, for example, school bus crashes account for less than half a percent of the total number of vehicular crashes. More specifically, during the past year there were a total of _________________ crashes involving a Pennsylvania school bus, ________________ persons were injured, and ________________ were killed.

Therefore, we are all striving for the elimination of all crashes involving school buses to eliminate those injuries and fatalities.

COURSE UNITS

Provide your trainees with a brief overview of the units and topics that will be covered. Note that the School Bus Driver’s Manual (Publication 117) refers to some information from the Pennsylvania Commercial Driver’s Manual (Publication 223).

UNIT A: THE SCHOOL BUS DRIVER: ROLE, RESPONSIBILITIES AND REQUIREMENTS

This unit describes the school bus driver’s role and responsibilities, and the endorsement process. The trainee learns how to understand the driver’s role in the school system, and to exercise his or her responsibilities to student passengers, the school system and the community. Additionally, the trainee gains familiarity with state qualifications for selection and certification. Instruction includes training requirements and procedures for a school bus driver, as well as documents to be carried while operating a school bus.

UNIT B: STUDENT MANAGEMENT AND DISCIPLINE

Desirable driver/student interactions and methods of controlling student behavior are presented here. Assertive discipline is presented as one structured method of handling behavior problems.

UNIT C: STUDENT LOADING AND UNLOADING

This unit presents procedures for maintaining safety during the loading and unloading process. A structured, step-by-step approach is included along with a discussion of the potential dangers in the loading and unloading area. Enforcing the school bus stopping law is also presented.
UNIT D: TRANSPORTATION OF STUDENTS WITH DISABILITIES
This unit provides guidelines for managing students with disabilities while they are being transported and unique transportation procedures used for these students. This includes desirable driver characteristics, additional loading and unloading procedures, guidelines for behavior management, and familiarization with special equipment. The level of detail provided when presenting this unit will vary widely depending on your audience.

UNIT E: PREVENTIVE MAINTENANCE
Routine pre-trip, on-the-road monitoring, and post-trip procedures are provided, including techniques required to keep a bus in a safe, efficient manner.

UNIT F: SAFE DRIVING
This unit presents important fundamental safe driving skills and applies these skills to normal and unusual conditions an operator will face while driving a school bus. Methods of anticipating and reacting to traffic hazards are presented, including recognition of potential hazards and proper driving defenses and reactions. Trainees learn how to evaluate mental and physical conditions to drive, and special emphasis is placed on techniques to maintain one’s attention during routine driving. Overall, it focuses on safe driving techniques for school bus operators geared toward reducing the number of crashes.

UNIT G: FUNDAMENTALS OF DRIVING A SCHOOL BUS
This unit covers additional safe driving skills required to operate a school bus. Unique situations including backing, turning around, stopping, highway railroad grade crossings, highway positioning, and steep hills and downgrades are discussed.

UNIT H: CRASH AND EMERGENCY PROCEDURES
Techniques to handle emergency conditions such as skids, tire blowouts and loss of brakes are presented in this unit. Procedures are provided for crashes or other emergencies, such as mechanical breakdowns, to prevent further damage or injury. Important post-crash procedures include bus evacuation, reporting requirements, and the location and operation of emergency equipment, such as portable emergency warning devices and fire extinguishers.

UNIT I: STUDENT EMERGENCIES
In this unit, the trainee learns how, following a crash, to make proper evaluations for establishing treatment priorities based on condition of the scene, type of injuries, and need for immediate treatment. The Good Samaritan Act is emphasized, along with the concept of liability. Emphasis is placed on administering immediate, temporary care until professional medical assistance is available. Local school policy may require further information to be presented in this unit.

COURSE SCHEDULE
Remember to hand out a course schedule and discuss how each of the above units fits into the schedule. Note how the in-bus instruction will allow trainees to supplement the above units with opportunities to practice.

For new driver courses, note there is a required minimum of 20 training hours with at least 14 hours in the classroom and at least six (6) hours of one-on-one in-bus instruction.

For recertification courses, note there is a required minimum of 10 training hours with at least seven (7) hours in the classroom and at least three (3) hours of one-on-one in-bus instruction. The material to be covered during this recertification program will be presented in terms of a review and as a refresher course, since you are already experienced school bus drivers.
PRE-TEST ADMINISTRATION

Hand out course pre-test. You can use the one provided at the end of this unit, or you can develop your own pretest.

With the pre-test, you can determine, through simple frequencies or percentages of correct responses, where group deficiencies exist. You can then adapt your presentation accordingly, emphasizing areas of demonstrated weakness while giving less attention to topics that the class as a whole seems to understand.

By examining the change that takes place in group performance between the pre-test and post-test, you can assess, in a general sense, the effectiveness of the instructional program. Using this, you should be able to make a close comparison of related items and pinpoint areas that might benefit from an improvement in instructional technique (e.g., where no change or a loss in performance occurs between the pretest and post-test administration). Significant gains would, of course, indicate the instruction was effective and the method or technique used should be retained.

Emphasize to the trainees that you are interested in the performance of the class as a group, not in individual performances. Explain that they will take a post-test at the end of the course to determine the effectiveness of instruction and their post-course knowledge.
SCHOOL BUS DRIVER PRE-TEST

1. The Pennsylvania School Bus Driver’s Physical Examination Certificate is valid for ____ year(s).
   a. 1
   b. 3
   c. 4
   d. 5

2. According to federal standards, each state must have regulations to ensure all school bus drivers are in good physical condition, of good character and skilled in the operation of their vehicles. How can a driver demonstrate he or she is of good character?
   a. Have a clean criminal history record as evidenced by Pennsylvania State Police criminal history check.
   b. Have a clean child abuse history record.
   c. Complete FBI clearance checks (fingerprinting).
   d. All of the above.

3. You have been hired as a new school bus driver and are receiving your new driver training. After completing 14 hours of classroom training, the instructor takes you and your two (2) fellow trainees on the road for in-bus training. Over the course of the next few days, you and your trainees spend six (6) hours training in the bus, evenly distributing the time behind the wheel between trainees, so you each get to drive two (2) hours and observe and critique the others the rest of the time. At the end, you are asked to sign the DL-714 “School Bus Drivers Training Report Form” documenting your six (6) hours of in-bus training time. What should you do?
   a. 14 hours of classroom, plus six (6) hours of in-bus training satisfies the 20 hours of training for new drivers. Sign the form.
   b. Don’t sign the form until you receive six (6) hours of one-on-one, in-bus training.
   c. Contact PennDOT’s Special Driver Training Unit indicating you did not receive the required training.
   d. B and C.

4. The best general rule for managing students on the bus is:
   a. Be very strict, or the students will take advantage of you.
   b. Be pleasant, firm and consistent in requiring all students to follow your rules.
   c. Make the bus ride fun.
   d. Ignore student behavior and get them to their destinations as quickly as possible.

5. Kindergarten/elementary students are most likely to:
   a. Be very concerned with personal dignity and image.
   b. Be sensitive to adult criticism.
   c. Gossip frequently.
   d. Resent authority.

6. You transport students from grades K-9 on the same bus. When the season changes to winter, some of the middle school students steal the winter hats off of the younger children’s heads and throw them around the bus. What do you do?
   a. Watch the interior mirror, determine the perpetrators, and yell at them by name to give the hats back or you will kick them off the bus.
   b. Nothing. Let the students work it out themselves. It will be a good lesson for the younger kids.
   c. Stop the bus in a safe location and make sure the hats are returned to the owners.
   d. Pick the older student who usually starts these problems, and tell him to get the hats or the whole bus will be reported to the principal.
7. Where is the school bus danger zone located?
   a. The area right around your tires where students are in the most danger of being run over.
   b. The 10 foot area right in front of the bus that you cannot see through the front windshield over your hood.
   c. The blind spots on the sides of the bus.
   d. A 10 foot band completely around the school bus.

8. When stopped at a loading zone loading passengers, which of the following should you monitor the least amount of time?
   a. The dashboard controls.
   b. Late students rushing to catch the bus.
   c. Your crossview mirrors.
   d. The number of students boarding the bus.

9. When stopped to load or unload students, your automatic transmission must be placed in:
   a. Neutral.
   b. Second gear.
   c. First gear.
   d. Reverse.

10. During the course of the year, you have continuously had problems at one particular student loading/unloading zone. The main issue is that other vehicles ignore your eight-way lighting system and side stop arm and drive past your bus putting you and your students in danger. What should you do?
    a. When stopping your bus, position it so that a portion is in the opposing traffic lane. That way, traffic will HAVE to stop so they don’t hit the bus.
    b. Work together with the students who use this stop and come to consensus on the best location to move it. Start using this new location as soon as possible.
    c. Deliver a signed written report to local or state police that includes the vehicle’s license plate number, color, and type of the vehicle; time and location of the incident and any information about the driver. Work with your supervisor to start the process of possibly moving the stop.
    d. All of the above.

11. Transporting students with disabilities is only completed by certain drivers using specialized vehicles.
    a. True.
    b. False.

12. At the start of the school year, you are called into a meeting with a new student’s parents and teacher who provide you with some information relating to the student. You learn that the student has autism, and will exhibit some unique behavior as a result of this condition. You should:
    a. Share this information with other student “helpers” on the bus so that they can assist you with your duties.
    b. Share this will all other students on the bus, so they may be prepared for unusual behavior.
    c. Keep this information confidential.
    d. Share this information with all other drivers in case they are a substitute driver for you when you are sick.
13. A student sitting in the seat behind you says they are feeling weak. They then start to have a seizure in which their eyes roll back and body spasms violently. Which of the following actions should you take?
   a. Put a soft object in their mouth.
   b. Hold them down tightly so they don’t hit someone or something.
   c. Continue on your route as the seizure will eventually pass.
   d. If possible, move anything the student may strike against with his or her head, arms or legs.

14. When does preventive maintenance take place?
   a. Only at the beginning of the day.
   b. Before, during and after each run.
   c. Only at the beginning of each run.
   d. Only when there is a reported problem, and the mechanic takes care of it.

15. What is the chief reason for maintaining the correct air pressure in all tires at all times?
   a. Make the bus easier to control.
   b. Make the ride smoother.
   c. To keep the bus from swaying when brakes are applied.
   d. To keep the tires from squealing on turns.

16. During your pre-trip inspection you notice the edge of one of the front tires is becoming chewed up. What should you do?
   a. Be aware of any shimmying in the steering and report the problem to your mechanic or supervisor according to local procedures.
   b. Change the tire.
   c. Nothing. This is normal on school buses.
   d. Diagnose the problem as poor alignment and have the mechanic perform a front-end alignment.

17. If your school bus is hydroplaning on a shallow layer of water, you should:
   a. Steer to the right side of the road while braking rapidly.
   b. Accelerate the bus.
   c. Rapidly brake without steering.
   d. Release the accelerator and push in the clutch.

18. What determines Blood Alcohol Concentration (BAC)?
   a. The amount of alcohol consumed, how fast it is consumed, the weight of the drinker.
   b. Whether or not food is consumed with the alcohol – lower BAC if drinking with food.
   c. The kind of alcohol consumed – a few beers are better than a shot of whiskey.
   d. Drinking indoors or outdoors – fresh air can keep the drinker's head clear.

19. When driving a school bus, how far ahead should you scan?
   a. 4 to 6 seconds.
   b. 6 to 8 seconds.
   c. 8 to 12 seconds.
   d. 12 to 15 seconds.
20. Another driver aggressively cuts you off in traffic. In response you should:
   a. Contest your place in traffic – after all, your bus is bigger than their car, and you have an important reason to be on the road.
   b. Help the other driver by teaching them what they did wrong with hand signals.
   c. Stay relaxed, avoid eye contact, and ignore any rude gestures.
   d. Block the passing lane to keep aggressive drivers behind you.

21. Watching the brake lights of the vehicle directly in front of you is the safest driving strategy to avoid road hazards ahead of you.
   a. True.
   b. False.

22. Reference point driving is:
   a. Lining up fixed objects inside the bus with points outside the bus to give consistent reference when driving the bus.
   b. Placing stickers on the windshield of the bus to line up with points outside the bus.
   c. Having known places along your route where you can check the time and be sure you are on schedule.
   d. Great for driving different kinds of buses; once you learn some reference points, you can use them on other buses.

23. When preparing to turn, how far in advance of the turn should you signal?
   a. 50 feet at speeds lower than 35 mph and 100 feet for speeds greater than 35 mph.
   b. 100 feet at speeds lower than 35 mph and 300 feet for speeds greater than 35 mph.
   c. 150 feet at speeds lower than 35 mph and 400 feet for speeds greater than 35 mph.
   d. 200 feet at speeds lower than 35 mph and 500 feet for speeds greater than 35 mph.

24. When driving a bus with Antilock Braking System (ABS), you should:
   a. Pump the brakes.
   b. Push harder on the pedal as the bus slows to a stop.
   c. Brake as you normally would, using only the braking force necessary to stay in control.
   d. Be careful, you can stop faster.

25. When driving a bus on a very steep downhill grade:
   a. Brake smoothly, consistently and lightly.
   b. Select the right gear and use “snub” braking.
   c. Move to the left lane, as gravity will tend to make the heavy bus go faster.
   d. Shift to a higher gear as you are going downhill.

26. When the right wheels of the bus get off the pavement, what is the correct way to get them back on?
   a. Slow down and then gradually turn the front wheels to the left.
   b. Slow down and then turn the front wheels sharply to the left.
   c. Continue at present speed and turn the front wheels sharply to the left.
   d. Continue at present speed and gradually turn the front wheels to the left.
27. A school bus must stop how far back from a railroad grade crossing?
   a. 10 to 12 feet.
   b. 25 feet.
   c. 15 to 50 feet.
   d. 40 feet.

28. If the bus loses traction and goes into a skid, the most important thing to do is:
   a. Apply hard pressure to the brakes to get the bus to stop.
   b. Apply hard pressure to the accelerator to get the bus to go.
   c. Move the steering wheel back and forth to get the front wheels to find traction.
   d. Slowly remove pressure from the gas and brake pedals to allow the wheels to start rolling again.

29. You have had a crash. The bus is upright, but you smell smoke and see it start to leak from under your hood and into the area near the driver’s seat. Your first priority is to:
   a. Find the fire to see if it is dangerous.
   b. Retrieve the bus’s fire extinguisher and put out the fire.
   c. Evacuate the student passengers and move them away from the bus.
   d. Dial 911 and report the fire.

30. There are many ways you could lose visibility, such as slush being splashed onto the windshield or the hood flying up. There are many actions to take, but one is consistent for almost every such incident:
   a. Activate your four-way hazard flashers.
   b. Activate your strobe light.
   c. Activate your turn signal.
   d. Look out the side windows and use the center or edge lines on the road to keep your sense of direction.

31. The school bus driver’s top priority in event of a crash or illness is to:
   a. Perform emergency medical help.
   b. Contact parents.
   c. Contact their employer.
   d. Keep the situation from getting worse until help arrives.

32. The Good Samaritan Act exempts a school bus driver from civil liability for rendering emergency care only if the bus driver:
   a. is currently certified in First Aid or emergency care.
   b. first drops off all remaining school bus passengers.
   c. first attempts to locate a physician or other health professional.
   d. has had at least two (2) years bus driving experience.

33. When may you send students to get help in an emergency?
   a. If local guidelines permit and the situation is extreme and warrants it.
   b. If you know the students and they seem sufficiently mature.
   c. Your cell phone is not working.
   d. The radio in the bus is broken.
# SCHOOL BUS DRIVER PRE-TEST ANSWER KEY

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UNIT A LESSON SUMMARY
THE SCHOOL BUS DRIVER: ROLE, RESPONSIBILITIES AND REQUIREMENTS

INSTRUCTOR’S PERSPECTIVE
Unit A presents foundational material about what it means to be a school bus driver. This material is divided into three categories: role, responsibilities, and requirements. Through the exploration of each of these categories, trainees will learn they are an important member of a safety team, and they will have multi-faceted responsibilities to themselves, their passengers, their employers, and the public. They will also learn the steps necessary to become certified, recertified, and the forms and schedules associated with these steps.

TRAINEE OBJECTIVES
1. Be able to describe the professional role and responsibilities of the school bus driver.
2. Recognize that the appearance of the school bus, as well as the appearance, performance and general behavior of the driver, affect community attitudes toward the entire school district and its activities.
3. Demonstrate the kind of attitudes and habits that will encourage the cooperation of passengers and their parents in support of the pupil transportation program.
4. Know his or her specific responsibilities to his or her immediate supervisor, to fellow school district employees, and to school board administrators.
5. Be fully familiar with state and local regulations governing school bus driver selection and training, and know what documents must be in the driver’s possession while operating a school bus.

LOCATION
Classroom

DELIVERY MODE
Lecture and discussion

MATERIALS
- Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker, or Power Point presentation
- Handouts - Unit A Study Guide, References (see below)

RESOURCE PERSONNEL
A school administrator may assist with teaching lesson topics such as the role and responsibilities of a school bus driver with regard to public relations. They may be able to provide a local perspective to these and other pertinent issues in the lesson. PennDOT’s Special Driver Programs Unit can also assist with questions or concerns associated with school bus driver training. Their contact information is (717) 787-6453 or ra-pdschoolbushelp@state.pa.us
SUMMARY AND REVIEW QUESTIONS

• **Summary** - The complete lesson plan should be covered in detail for a new driver course. For a recertification course, emphasis should be on the role and responsibilities of the driver and public relations. Recertification procedures also should be emphasized. For either course, inform students that the forms and documents periodically change. As an instructor you should be aware of these changes and adapt your course materials accordingly. Have samples of all required forms.

• **Review Questions** - N/A for this unit

REFERENCES

**Websites**

• For a comprehensive resource on virtually all aspects of becoming a school bus operator, visit: the School Bus Information Center on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us


**PennDOT Publications**

• Pennsylvania School Bus Driver’s Manual (Publication 117)

• Pennsylvania Driver’s Manual (Publication 95)

• Commercial Driver’s Manual (Publication 223)

**Laws and Regulations**

• Pennsylvania Code – Transportation (Title 67): Key Chapters are Chapters 71, 104, 171

http://www.pacode.com/secure/data/067/067toc.html

• The Pennsylvania Vehicle Code (Title 75) is available on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us. under the Laws and Regulations Information Center.

**Forms and Certificates**

• Training Report Form (DL-714)

• Certificate of Completion Card (DL-713)

• Pennsylvania School Bus Driver’s Physical Examination Form (DL-704)

• Physical Examination Certificate (DL-742)

• Commercial Learner’s Permit Application (DL-31CD)

• Commercial Driver’s License Application to Replace/Correct (DL-80CD)

• Medical Examination Report for Commercial Driver’s Fitness Determination

• Application for Revision/Return of CDL Classification (DL-100CD)

**Other**

• Local regulations and/or procedure guides, if available.
1. YOUR ROLE AND RESPONSIBILITIES

A. Your Role as a Driver

❖ Attitude
  • Be patient and understanding.
  • Be reliable, emotionally stable and mature.
  • Be interested in the welfare and needs of others.
  • Be aware of your moods and how these affect your driving.

❖ You are Important.
  • You are the first representative of the school system to meet children in the morning.

❖ You are Responsible.
  • Your job is to safely transport children to and from school.
  • Be well rested, and free from adverse affects of medications, alcohol or drugs.

❖ You are a Member of a Safety Team.
  • You share the safety goal with parents, teachers, school officials, and law enforcement officials.

B. Your Responsibilities as a Driver

❖ Your Driving Technique
  • Willingly observe all traffic laws, including local rules.
  • Constantly reassess your driving technique.

❖ Your Passengers
  • Refrain from using profanity.
  • Have a positive attitude toward passengers, frequently communicating.

❖ Public Relations
  • Be aware of public relations: You may be the only contact parents or the public have with the school system. Be flexible and open to others’ differing attitudes.

❖ Appropriate Dress
  • Present a neat and clean appearance.

❖ Your Supervisor and Fellow Employees
  • Cooperate with your supervisor and fellow employees. There are many ways you can create positive relationships, such as supporting written school policy, not repeating confidential information, submitting forms on time, etc.

❖ The Transportation Director/Supervisor
  • Your transportation director/ supervisor is an advisor and partner, especially when working through difficult discipline problems on the bus.

2. WHAT DO I NEED TO DO TO BECOME A SCHOOL BUS DRIVER IN PENNSYLVANIA?

A. Initial Requirements - First Step

❖ Be at least 18 years old.
❖ Pass a Pennsylvania School Bus Driver’s Physical Examination.
❖ Submit a Commercial Learner’s Permit Application (DL-31CD) with any applicable fee.
❖ Obtain a Knowledge Test Authorization and School Bus Learner’s Permit.
B. Knowledge Test Authorization and School Bus Learner’s Permit – Second Step
   ✦ Documents are valid for one year.
   ✦ During this year, all knowledge and skills tests are to be accomplished. This includes:
     • Vision test.
     • Knowledge tests.
     • Skills tests (see below).

C. Training and Skills Testing Requirements – Third Step
   ✦ Check eligibility date for 15-day wait.
   ✦ New driver training course is 20 hours of instruction (minimum).
     • 14 hours of classroom training.
     • Six (6) hours of one-on-one in-bus training.
     • After completing training, take tests within one year of permit issuance.
   ✦ PennDOT recommends completing all training before testing.
   ✦ Testing is permitted after completing half the instruction.
     • Seven (7) hours of classroom training.
     • Three (3) hours of one-on-one in-bus training.
     • If successful, complete training within 120 days of date of endorsement card.
   ✦ Skills examination is administered in three steps:
     • Safety inspection - Air brake check must be performed correctly, if applicable.
     • Basic Skills.
     • On-road driving test.

3. HEALTH AND SAFETY REQUIREMENTS
   A. General health and safety requirements:
      ✦ Comply with Department of Health and school district policies regarding communicable diseases.
      ✦ Have a clean criminal history record.
      ✦ Have a clean child abuse record.
      ✦ Have no, or a limited number, of motor vehicle crashes and traffic violations.
      ✦ Remain drug and alcohol-free when driving, and not consume any alcohol eight (8) hours prior to operating a school bus.

   B. Drug and alcohol testing for School Bus Drivers
      ✦ Federal law requires certain testing:
        • Pre-employment testing.
        • Random testing.
        • Post-accident testing.
        • Reasonable suspicion testing.
        • Return to duty testing (employer specific).
        • Follow-up testing (employer specific).
      ✦ Local or transportation company requirement may be more stringent.
4. **TO RETAIN YOUR SCHOOL BUS CERTIFICATION, YOU MUST:**
   A. Recertification required every four (4) years.
   B. Complete a 10-hour recertification course.
      ✷ Seven (7) hours of classroom training.
      ✷ Three (3) hours of one-on-one in-bus training.
   C. “S” endorsement knowledge and skills examination.
   D. Pass an annual physical examination.

5. **WHILE OPERATING A SCHOOL BUS, YOU MUST POSSESS A VALID:**
   A. CDL with the “S” and “P” endorsements;
   B. Pennsylvania School Bus Endorsement Card;
   C. Physical Examination Certificate (DL-742);
   D. Vehicle registration card for the bus being driven;
   E. Insurance card or proof of financial responsibility for the bus being driven.
   F. DOT physical, if applicable (i.e., contractors who cross state lines).
UNIT A - THE SCHOOL BUS DRIVER: ROLE RESPONSIBILITIES AND REQUIREMENTS

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INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the School Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the School Bus Driver’s Manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

General
Note that this manual (Pub 52) and the School Bus Driver’s Manual (Pub 117) use the terms school bus “driver” and school bus “operator.” For the purposes of the manuals, these terms are interchangeable. However, the preferred term to use is “operator” because, as demonstrated in this unit and throughout the training, a person does more than just drive a school bus: they manage students, operate specialized equipment, etc.

Introduction
Every one of the approximately 40,000 licensed school bus drivers in Pennsylvania has something in common with the others: School bus driver training and licensing.

Q: Why is having 40,000 school bus drivers undergo the same training and licensing procedures important?
A: Consistency. Everyone involved with student transportation, from parents of school children to transportation company managers to school administrators, as well as the travelling public, have a certain expectation of school bus driver behavior. A common training and certification program helps maintain that consistency and fulfill that expectation.

Introduction – School bus driver roles and responsibilities
Working toward consistency among school bus drivers does not mean that being a school bus driver is a singular duty. A school bus driver has many roles, with several responsibilities assigned to each role.

Q: What are some of the roles a school bus driver might assume in their duties?
A: Driver; member of the safety team; first contact with the educational system.

Introduction – Minimum training requirements
Not only does Pennsylvania law establish the training requirements for becoming a school bus driver, but also establishes training requirements for continuing as a school bus driver. We refer to these two sets of training requirements as “New Driver” and “Recertification” training. If you are here for the first time, this is new driver training. If you have been here before, and have been driving a bus for several years, this is recertification training.

Introduction – Specialized training on local procedures
This training was developed for training school bus drivers across the Commonwealth, and so it contains information that is generalized and relatively consistent everywhere. Some transportation companies and school districts have very specific policies, and forms for use. Where there are discrepancies between information here and the specific information you get from your employer, local procedures and guidelines will dictate, as long as they do NOT contradict federal or state regulations.
UNIT A - THE SCHOOL BUS DRIVER: 
ROLE RESPONSIBILITIES AND REQUIREMENTS

INTRODUCTION

Transporting students to and from school is a necessary part of a sound education program. For a safe, efficient, and economical transportation program, competent school bus drivers and standard bus operation are necessary. At present, there are approximately 30,000 school buses in operation within the Commonwealth of Pennsylvania and about 40,000 licensed school bus drivers. For detailed Pennsylvania school bus statistics, visit the Driver and Vehicle Statistics link under the News, Facts and Stats Information Center of PennDOT's Driver and Vehicle Services website, www.dmv.state.pa.us

Before you get behind the wheel of a school bus, you need to understand your role as a bus driver and your responsibilities to your passengers, your school system, your community and your fellow workers. These topics are covered in the first part of this Unit. The second part describes the requirements for certified school bus drivers in Pennsylvania.

If you are a new school bus driver in PA, you will receive a minimum of 14 hours of classroom training and six hours of one-on-one in-bus instruction. If you are recertifying to maintain your license, you will receive a minimum of seven hours of classroom training and three hours of one-on-one in-bus instruction.

If you are not given the minimum number of training hours, do not sign the Training Report Form (DL-714). You may contact PennDOT’s Special Driver Programs Unit at (717) 787-6453 or ra-pdschoolbushelp@state.pa.us, if you have any concerns associated with your school bus driver training.

Your employer may also provide you with additional training on the policies and procedures of the school district in which you will be working. Some of what you learn in this training might need to be adjusted to comply with your company’s policies. For instance, in classroom training you might be instructed to notify a mechanic if you discover something wrong with your bus during a pre-trip inspection. Your company might require that mechanical complaints be reported to the dispatcher who notifies the mechanic. You should follow local policies and procedures as long as they don’t violate state laws or regulations. Bring those to your employer’s attention.
Instructor Notes:

**Your Role as a Driver**
Being a school bus driver is not just about driving a school bus. There are many other roles and responsibilities that a driver must assume. Much of what a school bus driver must know and do has little to do with driving the bus.

**Attitude**
Being able to assume these roles and responsibilities requires the right attitude. The school bus driver shares the road and the bus with many other people who may not have the right attitude or be in the best of moods. But, the driver needs to be able to weather these varying attitudes and moods, and still focus on keeping themselves and their student passengers safe.

**You are Important**
Q: Who is the first person associated with school that a child sees each school day?
A: The school bus driver.

Q: Who is the last person associated with school that a child sees each school day?
A: The school bus driver.

Q: What environment has an important influence on the moods and attitudes of school children?
A: The school bus.

Q: Who is in charge of the school bus?
A: The school bus driver.

**You are Responsible**
Q: Who is most responsible for your mood and attitude each day?
A: You are.

**You are a Member of the Safety Team**
Q: Who is responsible for the safety of school children?
A: The school bus driver, along with:
   - Students
   - Parents
   - Teachers
   - School Administrators
   - Law enforcement officials

The safety of school children depends upon a team; the school bus driver is a member of that team.

**Other Notes and Questions**
Students learn directly from adult suggestions and examples. Set a good example.
YOUR ROLE AND RESPONSIBILITIES

The school bus driver plays an important role in the educational system. The role includes a number of responsibilities the driver must willingly accept.

YOUR ROLE AS A DRIVER

Learning to operate a vehicle the size of a school bus is a difficult task involving knowledge of laws, regulations, visual and mechanical skills, judgments, decisions, and accurate responses. Your performance as a school bus operator is dependent on developing skills, acquiring necessary knowledge and maintaining a positive attitude.

Attitude

Learn how to keep a positive attitude and recognize your moods. If you are angry, do you drive more aggressively? Do you still greet the students with a smile? Your mood not only affects your driving, but those around you. Keep a positive attitude. You must be mentally prepared to make allowances for the poor attitude and driving of other motorists, and not allow the actions of other motorists to cause you to react emotionally and involve you in a crash.

School bus drivers must be mentally alert at all times. They must keep their concentration on what they are doing.

You Are Important

You, the professional school bus driver, are a very important person with a responsible part to play in the educational system. In many instances, you are the first representative of the school system to meet the children in the morning and the last to see them at night. You are in a position to have a large influence on a child's attitude toward school.

You Are Responsible

Your position as a school bus driver is to safely transport students from one place to another.

You are responsible for how you drive and for how you feel about your students, coworkers, and position. You need to have a positive attitude, if you want to be a safe and successful school bus operator who enjoys your work.

You should like working with and being with students. If you don't, you will find it hard to keep a positive attitude about your position as a school bus operator.

You Are a Member of the Safety Team

Safety starts with you. Perhaps no other area of educational operations demands more responsibility for student welfare than the transportation of students in buses on public highways, streets and roads. The driver is a very important member of the safety team, which includes students, parents, teachers, school administrators, and law enforcement officials. As a key member of this team, you must constantly strive to improve operational safety and efficiency.
Instructor Notes:

**Your Responsibilities as a Driver – Students and parents have confidence in you.**

Q: As a responsible member of a team dedicated to the safety of school children each and every day of the school year, what qualities should you have, and present, to those with whom you work?

A: See the list in the School Bus Driver’s Manual. Taken together, these listed qualities essentially mean that school bus drivers must approach their jobs with a calm, patient willingness to do what is best to ensure the safety of their student passengers, even if these qualities intrude on their personal lives, such as getting sufficient rest and remaining drug and alcohol-free.

Note: Section 4552(g) of the Pennsylvania Vehicle Code (Title 75) requires two emergency evacuation drills: “Emergency drills.—Each school district and the administration of every private school within this Commonwealth shall ensure, through adequate instruction and a minimum of two actual drills each year, that every student is familiar with school bus emergency procedures and equipment and safe loading and unloading operations.”

**Your Driving Technique**

Q: What are the three vital links to safety mentioned under “Your Driving Technique” in the manual?

A: Attitude, Knowledge, and Skill. The proper attitude toward skill is that you can always learn more.

**Your Passengers – Good leaders versus poor leaders**

Q: As a school bus driver, you are the leader on the bus. What is the difference between a good leader and a poor leader?

A: Both have great responsibility and deal with difficult problems and conflict.

- Poor leaders demand strict obedience to policies, rules and procedures, and punish those who deviate from their vision or what is compliant. They are negative in ensuring compliance.

- Good leaders encourage people. They, too, insist upon obedience to policies, rules and procedures, but they do so in a way that builds people up. Good leaders desire the best for those under their charge.

While sounding a bit trivial, this is important to safety on the bus: encourage students to be the best passengers they can be.

Q: What can you do to establish a positive relationship with your passengers?

A: There are many things you can do, including:

1. Greet students in a friendly manner when they board the bus;
2. Learn your students’ names;
3. Express interest in each student;
4. Compliment good conduct, habits, and deeds; and
5. Explain rules at the beginning of the year.
YOUR RESPONSIBILITIES AS A DRIVER

As a professional driver, you are expected to meet high standards of conduct. A school bus driver is more than a professional driver and is expected to meet standards of conduct higher than those of other professional drivers. Always conduct yourself in such a manner that your actions on and off duty will not be open to criticism. You are a role model for the students and a representative of the school district and your employer.

Student passengers and their parents place a great deal of confidence in you. You should act deserving of this confidence, including being:

- A dependable person who can be relied upon to carry out your duties;
- Emotionally stable to work effectively and patiently with students, parents, school officials, and the public;
- Mature enough to cope with unexpected and unusual situations;
- Interested in the welfare and needs of others;
- Willing to practice patience and understanding;
- Observant of all traffic laws, Pennsylvania Department of Transportation (PennDOT) regulations, and local rules, regulations and policies, which includes conducting at least a minimum of two emergency evacuation drills on your bus every school year;
- Neat and clean, as a symbol of the entire school system;
- Careful to refrain from using profanity;
- Well rested, so you are free from fatigue, and;
- Free from the effects of alcohol and drugs, including prescription and over-the-counter medication.

A school bus driver also has the following specific responsibilities:

Your Driving Technique

When you transport a bus load of children to school every day in a wide variety of highway and weather conditions, you are charged with a serious responsibility. The vital links to safety – proper driver attitude, knowledge and skills – are developed through your interest in safe driving. Your ability to cope with a constantly changing driving environment demands both pre-employment preparation and continual in-service activity. You must constantly reevaluate your driving technique. It is important that you honestly evaluate yourself to ensure you are physically and mentally prepared for driving your bus.

A safe and defensive school bus driver must exercise self-control, alertness, foresight, judgment, and skills in handling and maintaining control of the bus at all times. A good attitude about safe driving and safety procedures is the best guarantee of the safest trip possible.

Your Passengers

Try to establish a positive relationship with your passengers. Their conduct will depend a great deal on what you say and do. Greet your students in a personable and friendly manner whenever they board your bus, and if possible, learn their names. Your expression of interest in each child will help you to gain the confidence of your riders. Remember, an essential part of your job is to maintain discipline according to procedures established by your local school system. Since students desire recognition of their good traits and abilities, compliment good conduct, habits, and deeds.
Instructor Notes:

**Your Passengers – Encouraging students**  
Q: What is the best way to encourage students?  
A: Talk to them. Tell them the rules. But, also tell them when they have done well.  
   You are not their friend, but you should be friendly. Find the balance between  
   being too harsh, and too lenient. Finding that balance is what makes a school  
   bus driver a professional school bus driver.

**Public Relations**  
Q: Do you remember the list of people who together comprise the safety team  
   of which you are a part?  
A: The safety team includes:  
   • Students;  
   • Parents;  
   • Teachers;  
   • School Administrators; and  
   • Law enforcement officials.

As a school bus driver, your professional demeanor should also extend to these  
people. To each of these you represent yourself, and the transportation company  
or school district for which you work.

Your professionalism must extend to your interaction with the travelling public; the  
people with whom you share the road.

**Appropriate Dress**  
Q: When someone sees you, what is it about you they cannot help but notice?  
A: How you are dressed.

Q: If you are interested in being seen as a professional, how should you dress?  
A: As a professional.
If you explain existing rules at the beginning of the school year, you will usually have the cooperation of students. If students know drivers are fair and have their safety in mind, they usually accept the rules. Drivers should recognize each student’s individuality. Drivers cannot maintain discipline and respect if they are too harsh or too lenient. Drivers who handle problems fairly and according to the rules get the respect of students, parents and administrators.

Under ordinary loading and unloading circumstances, communication between driver and passengers should be encouraged. You should help your passengers understand and follow what is considered normal and proper behavior on the school bus. Maintain a professional, yet friendly, relationship with all students. Refer to Unit B for additional information on Student Management and Discipline and to Unit C for additional information on Student Loading and Unloading.

Public Relations
Public relations are directly related to the opinion people have of drivers and the school system. This opinion is formed by the way you, a school bus driver, complete your daily responsibilities. Careful, courteous drivers make good impressions; careless, thoughtless drivers create harmful impressions. For example, the school bus driver who weaves in and out of traffic attracts unfavorable attention and more negative comment than one who observes proper lane usage. One discourteous, irresponsible act reflects poorly on all members of the student transportation team and, more significantly, can create a safety problem.

In many school districts, the school bus driver is the only contact parents have with school personnel other than teachers. Good or bad impressions of the school can be conveyed by the driver’s attitude toward students and their parents. You will encounter students and parents with a wide range of attitudes toward you and the school system. You should strive to be flexible and treat everyone in a courteous and professional manner. Your reputation in the community, your courteous treatment of children and their parents, and your willingness to better prepare yourself for your position will help parents and children to have confidence in you.

You should consider all law enforcement officers in the community, as well as crossing guards and school patrols as part of the safety team. Their job, as well as yours, is to ensure safety on the highways you travel. You should strive to develop good working relations with them – their authority and experience may be invaluable to you.

Building desirable public relations is a continuous process and depends on the attitude you bring to work each day. You can add to your system’s reputation by showing pride in your work. This sustains a good public opinion.

Good relations within your organization are essential. Public relations begins with fellow employees. An organization whose members have mutual friendliness, interest and respect meets a major requirement of good public relations.

Appropriate Dress
The way you dress and look affects many parts of your job. As a school bus driver, it is necessary to identify oneself as an adult, not a student. In order to accomplish this, the driver must dress in a manner designed to instill a degree of respect. If one dresses in a careless way, the driver cannot expect to receive the appropriate level of respect from the students on the bus needed to maintain good discipline.

Types of shoes should comply with school district safety recommendations. This typically eliminates wearing open-toed shoes, sandals, clogs, wooden-soled shoes of any type, or heels of more than two-inch height. The best driving shoe is one that has a flat sole, covers the entire foot and fastens securely. The type of shoe you wear could affect your ability to perform in a safe manner during an emergency situation.
**Your Supervisor and Fellow Employees**

Someone from the school district and/or someone from your transportation company will act as your supervisor.

Q: What should your attitude toward your supervisor be?
A: Professional, cooperative.

Your relationship with your supervisor and your co-workers is a partnership. They, along with you, are members of a team.
Your Supervisor and Fellow Employees
Someone in your school district or company is assigned the responsibility of supervising you as an employee. The person is another member of the safety team and is vitally interested in the safety of your riders. Cooperation with your supervisor and fellow employees is essential to transportation safety.

The following are ways you can cooperate with them:

- Understand and support your written school policy;
- Communicate often with your immediate supervisor and accept his/her authority;
- Willingly accept your responsibilities and assignments;
- Don’t repeat personal or confidential information;
- Always inform your supervisor of discipline problems, bus conditions, highway conditions, and changing pick-up/discharge conditions;
- Submit required forms and reports on time;
- Report any and all crashes or incidents, whether or not damage is apparent, including crashes with property, pedestrians, vehicles, animals, and passengers. Also report those crashes near, but not involving, your bus;
- Be helpful, assisting others in pre-trip inspections, and in school bus loading and unloading zones;
- Comply with your school district regulations regarding the number of chaperons that accompany students on various school activities;
- Never change a bus stop or route without permission from your supervisor;
- Maintain a positive attitude; and
- Help out with conditions such as routine overload, route adjustments, equipment repair, loading stop adjustments, and other areas of student safety.

The Transportation Director/Your Supervisor
You should consider your transportation director or supervisor as your adviser and partner in working with students on your bus, especially when working through discipline problems. The transportation director/supervisor should be informed of any significant problems that arise. In many larger schools, the day-to-day responsibilities of the transportation director are delegated to a transportation area coordinator or other supervisor.

The transportation director/supervisor is often responsible for:
1. Assigning drivers to buses;
2. Establishing bus routes, stops and turn-around locations;
3. Assigning passengers to buses;
4. Ensuring buses are in safe operating condition; and
5. Appointing monitors/aides as needed.
What Do I Need to do to Become a School Bus Driver in Pennsylvania?

To this point the discussion has focused on the characteristics of a good school bus driver. Here, we make a departure to the procedural requirements of acquiring the credentials necessary to drive a school bus.

Initial Requirements – First Step

Q: What is the age requirement to become a school bus driver?
A: 18 year of age or older.

Q: What kind of physical condition do you have to be in?
A: Good enough to pass a physical examination by your health care provider or an approved physician, who completes a Commonwealth of Pennsylvania School Bus Driver’s Physical Examination Form (DL-704).

Q: How do you prove you are in good enough physical condition to drive a bus?
A: The examining person will issue a Physical Examination Certificate (DL-742).

Q: How long is your Physical Examination Certificate good for?
A: One year.

Q: What else do you need to submit?
A: Commercial Learner’s Permit Application (DL-31CD) and a check or money order for the fee.

Initial Requirements – First Step – Fees

Q: What will the forms and fees just mentioned get you?
A: A Knowledge Test Authorization (KTA) and School Bus Learner’s Permit.
WHAT DO I NEED TO DO TO BECOME A SCHOOL BUS DRIVER IN PENNSYLVANIA?

According to federal standards, each state must have regulations to ensure all school bus drivers are in good physical condition, of good character and skilled in the operation of their vehicles. They should have strong morals, an even temperament, the ability to adjust to the varying conditions of their job, and a positive attitude toward safety. To become a certified school bus driver in Pennsylvania, a person must meet several initial requirements and then successfully complete the training and testing requirements established by PennDOT.

INITIAL REQUIREMENTS – FIRST STEP

To become a certified school bus driver in Pennsylvania, you must first obtain an appropriate Commercial Driver’s License (CDL) Knowledge Test Authorization/Learner’s Permit. To apply for a CDL Knowledge Test Authorization/Learner’s Permit:

- You must be eighteen (18) years of age or older.
- You must obtain a Commonwealth of Pennsylvania School Bus Driver’s Physical Examination Form (DL-704), which is to be completed by either your health care provider or a physician appointed by the local school board. You must obtain this form from your employer. When completed, make sure your employer gets a copy for your personnel file. If you satisfactorily pass the physical examination, the examining health care provider will issue a Physical Examination Certificate (DL-742). You need to keep the DL-742. It is a credential that must be carried when driving a school bus. The Physical Examination Certificate is valid for one (1) year.
- You must self-certify the type of driving in which you expect to engage using a DL-11CD. Drivers engaged in “Non-excepted” transportation are also required to submit a valid Medical Examiner’s Certificate to maintain licensure.
  - Driving types are
    - NI - Non-Excepted Interstate Transportation: Interstate drivers who are subject to the Federal Physical Qualifications and Examination regulations. A Medical Examiner’s Certificate must accompany this form.
    - NA - Non-Excepted Intrastate Transportation: Intrastate drivers who are subject to the Federal Physical Qualifications and Examination regulations. A Medical Examiner’s Certificate must accompany this form.
    - EI - Excepted Interstate Transportation: Interstate drivers who are not subject to the Federal Physical Qualifications and Examination regulations. Therefore, a Medical Examiner’s Certificate is not required.
    - EA - Excepted Intrastate Transportation: Intrastate drivers who are not subject to the Federal Physical Qualifications and Examination regulations. Therefore, a Medical Examiner’s Certificate is not required.

Additional information, including examples, is available in the Commercial Driver Information Center on our website at www.dmv.state.pa.us.

- You must also complete the Commercial Learner’s Permit Application (DL-31CD) and submit it along with the DL-704 with a check or money order payable to “PennDOT,” for any applicable fee required with this form. The cost is prorated and can be calculated on the form. Note that the DL-31CD and DL-11CD are available on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us under Forms and Publications.
- Remember to submit the DL-704, DL-11CD and Medical Examiner’s Certificate if applicable, and DL-31CD together with the fee.

Once these forms are completed and submitted, a Knowledge Test Authorization (KTA) and School Bus Learner’s Permit can be obtained either through mail or same-day service available at PennDOT’s Riverfront Office Center, Driver/ Vehicle Customer Service in Harrisburg, or a Driver License Center. If the forms listed above and the fee are forwarded through the mail, the KTA and School Bus Learner’s Permit will be returned in approximately 14 days from receipt of the documents.

Also visit PennDOT’s Driver and Vehicle Services website for online driver and vehicle services.
Instructor Notes:

**Knowledge Test Authorization and School Bus Learner’s Permit – Second Step**

- Q: What credential authorizes you to initially operate a school bus?  
  - A: School Bus Learner’s Permit.

- Q: How long is your School Bus Learner’s Permit and KTA good for?  
  - A: One year.

- Q: What needs to occur during the year that your learner’s permit and KTA are valid?  
  - A: Vision Test, Knowledge Tests, and Skills Tests. The Knowledge Test will consist of:
    - General knowledge.
    - Passenger endorsement (P).
    - School bus endorsement (S).
    - Removal of air brake restriction, if applicable.

**Training and Skills Testing Requirements – Third Step**

- Q: When may you take your Skills Test?  
  - A: After passing all applicable knowledge tests, and, if applicable, on or after the eligibility date on your School Bus Learner’s Permit.

**The School Bus Driver Training Course**

- Q: How much training is required to obtain a Pennsylvania School Bus Endorsement?  
  - A: Twenty (20) hour total instruction: Fourteen (14) hours of classroom training plus six (6) hours of one-on-one in-bus training with a certified instructor.
KNOWLEDGE TEST AUTHORIZATION (KTA) AND SCHOOL BUS LEARNER’S PERMIT - SECOND STEP
Upon receipt of these forms, PennDOT reviews your documents for correctness, license suspension and determination of medical competency. To see if you meet the physical requirements of the School Bus Driver Regulations (Title 67, Chapter 71 of the Pennsylvania Code), visit www.pacode.com.

A CDL Knowledge Test Authorization and School Bus Learner’s Permit are issued.

If you do not meet the physical qualifications required of school bus drivers, your application will be denied.

The School Bus Learner’s Permit is the only document that allows you to operate a school bus. You may not use the KTA for driving purposes.

The KTA and School Bus Learner’s Permit are valid for one (1) year. During this one-year period, you will be required to complete all knowledge and skills testing. The knowledge examination will consist of:

- Vision Test;
- Knowledge Tests, including, but not limited to general knowledge, Passenger Endorsement (P), School Bus Endorsement (S), and if you are going to operate a bus with air brakes, removal of the air brake restriction, if applicable. If you already have a CDL, you may just be pursuing the “P” and “S” endorsements.

TRAINING AND SKILLS TESTING REQUIREMENTS – THIRD STEP
Pennsylvania law requires certain commercial learner’s permit holders to wait at least 15 days before taking the examination to upgrade their driving privilege. You will need to check the bottom of your learner’s permit for your driver test eligibility date. This date identifies the earliest date you are eligible to take your driving test. Keep in mind that you MUST pass all applicable knowledge tests before taking your skills test.

The School Bus Driver Training Course
The Pennsylvania school bus driver training course is administered by local school districts, contractors or Intermediate Units (IU) under the supervision of PennDOT and is outlined in Section 71.5 of Title 67. This course is available to all public, private and parochial school bus driver applicants.

To obtain a Pennsylvania School Bus endorsement (S), you must complete a minimum of 20 hours of instruction including at least 14 hours of classroom instruction and six (6) hours of one-on-one vehicle familiarity and driving instruction (in-bus training). ALL training must be completed by a certified school bus driver instructor. Also note that the in-bus portion of the training must be one-on-one training with a certified instructor.

This requirement (commonly known as the New Driver Training Course) can be completed in two ways:

- Complete the full 20 hours of instruction before attempting to pass the skills examination administered by PennDOT or a state-certified Third Party Tester. This method is recommended by PennDOT.
The School Bus Driver Training Course – New Driver Training Course

Q: Do you have to complete the entire New Driver Training Course all at one time, or can it be divided into two sessions?
A: The New Driver Training Course may be completed in two, 10-hour training classes, with the skills examination attempted after the first 10 hours, but PennDOT recommends taking the complete training before attempting the skills examination, and some employers also require their drivers complete the training at one time.

The School Bus Driver Training Course – Timeframe to complete training and testing

Q: How long do you have to pass the skills examination?
A: Until your school bus learner’s permit expires. You will be required to apply for an extension, if you cannot complete testing within the timeframe.

NOTE: Knowledge testing may need to be repeated.

Q: For how long is your New Driver Training Course valid?
A: Twelve (12) months from the date of completion.
UNIT A - The School Bus Driver: Role Responsibilities and Requirements

- Complete 10 hours of instruction (seven [7] hours of classroom training and three [3] hours of one-on-one in-bus training) and attempt to pass the skills examination administered by PennDOT or a state-certified Third Party Tester. If successful, you have 120 days from the date the endorsement card is issued to complete the remaining 10 hours of instruction (seven [7] additional hours of classroom training and three [3] additional hours of one-on-one in-bus training). Note: check with your employer as to which completion method they require; some specifically prohibit the ‘splitting’ of training.

After completing the full 20 hours of instruction or the first 10 hours of instruction, you are issued a Certificate of Completion Card (DL-713). You will need to keep this card as it is required to test. State law (Title 75, Section 1607) requires that a person hold the learner’s permit to add or upgrade the commercial class for 15 days before they are eligible to take the skills test administered by PennDOT or a state-certified Third Party Tester, so check the bottom of your learner’s permit for your driver test eligibility date.

Your permit is valid for one (1) year, so your skills examination must be completed within 12 months from the date on your permit issuance. Also keep in mind that your New Driver Training is also only valid for one (1) year. If you do not pass your skills examination within one (1) year of the completion of the training, you must complete the training again.

When taking the skills examination, bring the following documents to the test site:

- A valid driver’s license (if you are a licensed driver);
- A valid Pennsylvania CDL learner’s permit;
- A valid Physical Examination Certificate (DL-742);
- A valid Certificate of Completion Card (DL-713);
- The current vehicle registration card for the bus being driven;
- A valid insurance card or proof of financial responsibility for the bus being driven; and
- A valid CDL of the person accompanying you that covers the class of license, endorsements (e.g., ‘P’), and commercial restrictions for which you are being tested.

You must be accompanied by a commercial driver who is at least 21 years of age and has all proper applicable endorsements to legally drive the bus to the testing point and back in case you fail the driving examination. All applicable knowledge tests must be successfully completed before taking the skills test regardless of your eligibility date.

The skills examination will be administered in three parts. Refer to Pennsylvania’s CDL Manual (Publication 223). The CDL Manual is available under Forms and Publications of PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us.


- The safety inspection shall be the first part of the skills examination. Inability to correctly perform the air brake check will result in automatic failure of this portion, if applicable.
- The basic skills test is the second part of the skills examination. The test will be comprised of a selection of the following exercises:
  1. Simulated or discussed student discharge (scored as part of the skills test);
  2. Simulated or discussed railroad crossing (scored as part of the skills test);
  3. Forward Stop;
The School Bus Driver Training Course – Skills Examination

The skills examination is presented in three parts.

Q: What are the three parts of the skills examination?
   2. Basic skills test.
   3. On-road driving test.

Q: Can you describe what can be expected for each part of the examination?
A: Refer to PennDOT's Commercial Driver's Manual (Publication 223) for the details - the manual is available on PennDOT's Driver and Vehicle website, www.dmv.state.pa.us, under the Commercial Driver's Information Center.

Q: How many times can you take the examination?
A: Three times on a valid permit.

Q: What happens if you fail three times?
A: You must reapply for a CDL learner's permit, pay the fee and complete the training requirements again.

Q: What happens if you pass two of the parts of the examination and fail only one part?
A: You only have to retest for the part you failed.

Health and Safety Requirements – Establishing fitness

Q: What kinds of characteristics constitute being “fit” for duty as a school bus driver?
A: There are a number of characteristics, including:
   1. Comply with Pennsylvania Department of Health regulations and any local school district policies regarding communicable diseases.
   2. Have a clean criminal history record as evidenced by Pennsylvania State Police criminal history check.
   3. Have a clean child abuse history record.
   4. Have no record of motor vehicle crashes or traffic violations determined to be excessive in number by your employer.
   5. Complete FBI clearance checks.
   6. Be drug- and alcohol-free when driving, and you must not consume any alcoholic beverages within eight (8) hours prior to operating a school bus and never consume illegal substances.
UNIT A - The School Bus Driver: Role Responsibilities and Requirements

4. Straight line backing;
5. Alley dock;
6. Parallel Park (driver side);
7. Parallel Park (conventional);
8. Right Turn; and

- The on-road driving test is the third part of the skills examination. An automatic failure will occur if you commit any traffic offense, run over a curb or sidewalk or cause a crash. (An accumulation of minor infractions will also cause a failure.)

You are permitted to take the driving examination three (3) times on a valid CDL learner’s permit. The examination may be taken only once during a given day. If you fail a portion of the test, you may return on another day and retake only the portion you failed. Note that you do not have to retake the sections you already passed. If you fail the driving examination three (3) times, you must reapply for a CDL learner’s permit, pay the appropriate fee, and complete all training requirements again. If you fail to successfully pass the skills test within 12 months of your training completion date, you will be required to repeat all 20 hours of training.

When you successfully complete the test, your passing test results will be credited to your driving record. Once your record reflects that all minimum requirements have been met, you will receive a CDL displaying the “S” endorsement and a School Bus Endorsement card from PennDOT. If the full 20 hours of the training has been completed, the school bus endorsement card is valid for one (1) year. The School Bus Endorsement card is reissued annually by PennDOT, if the requirement for the annual physical examination is met. If you successfully pass the driving examination after completing only 10 hours of instruction, you must complete the additional ten (10) hours of instruction (seven [7] hours of classroom and three [3] hours of one-on-one in-bus instruction) within 120 days of the endorsement card issue date, or PennDOT will cancel your School Bus Endorsement card.

PLEASE NOTE: School bus drivers are required to carry three credentials when operating a school bus in Pennsylvania: a valid CDL displaying the “S” endorsement, a valid School Bus Endorsement card, and a valid physician’s certificate. If you are going to operate a bus with air brakes, you must have the air brakes restriction removed (passing applicable knowledge and skills tests).

HEALTH AND SAFETY REQUIREMENTS
You must be fit to operate a school bus with regard to the health and safety of the students being transported. To establish fitness you must:

- Comply with Pennsylvania Department of Health and any local school district regulations and policies regarding communicable diseases;
- Have a clean criminal history record as evidenced by Pennsylvania State Police criminal history check.
- Have a clean child abuse history record;
- Have no record of motor vehicle crashes or traffic violations determined to be excessive in number by your employer;
- Complete FBI clearance checks (fingerprinting); and,
- Be drug-and alcohol-free when driving, and you must not consume any alcoholic beverages within eight (8) hours prior to operating a school bus and never consume illegal substances.

Local requirements may be more stringent than those listed above.
Instructor Notes:

**Health and Safety Requirements – (con’t.)**

Q: What are the testing thresholds for drug and alcohol testing?


<table>
<thead>
<tr>
<th>TYPE OF DRUG OR METABOLITE</th>
<th>INITIAL TEST</th>
<th>CONFIRMATION TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Marijuana metabolites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Delta-9-tetrahydrocannabinol-9-carboxylic acid (THC)</td>
<td>50 ng/ml</td>
<td>15 ng/ml</td>
</tr>
<tr>
<td>(2) Cocaine metabolites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Benzoylecgonine)</td>
<td>150 ng/ml</td>
<td>100 ng/ml</td>
</tr>
<tr>
<td>(3) Phencyclidine (PCP)</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>(4) Amphetamines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Amphetamine</td>
<td>500 ng/ml</td>
<td>250 ng/ml</td>
</tr>
<tr>
<td>(ii) Methamphetamine</td>
<td></td>
<td>500 (Specimen must also contain amphetamine at a concentration of greater than or equal to 200 ng/mL.</td>
</tr>
<tr>
<td>(5) Opiate metabolites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Codeine</td>
<td>2000 ng/ml</td>
<td>2000 ng/ml</td>
</tr>
<tr>
<td>(ii) Morphine</td>
<td>2000 ng/ml</td>
<td>2000 ng/ml</td>
</tr>
<tr>
<td>(iii) 6-acetylmorphine</td>
<td>10 ng/ml</td>
<td>10 ng/ml</td>
</tr>
<tr>
<td>MDMA</td>
<td>500 ng/ml</td>
<td>MDMA 250 ng/ml</td>
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<td>MDEA 250 ng/ml</td>
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</tbody>
</table>

49CFR §40.87

**In presenting case studies here and in future units, the instructor should:**

1. Have the class read a situation, then select a driver from the class.
2. Give the selected driver a few seconds to think about the situation, then have him or her explain to the rest of the class, in as much detail as possible, how the situation should be handled.
3. Have the rest of the class critique the driver’s response.
4. The instructor then takes the role of a facilitator and manages the discussion.

**Fit for Duty Case Study for Discussion**

For this case study, the best approach may be just to ask the question to the class and open it up for discussion.

Q: What would you do if your supervisor contacted you at 5 p.m. to ask you to be a substitute driver for a bus trip that evening? The trip leaves at 6:30 p.m. to transport one of the school teams to a neighboring town. Twenty minutes ago, you took two antibiotic capsules that a physician prescribed for your bad cold. You could use the extra money, you have no special plans for the evening, and you feel alert.

A: It is a medically recognized fact that certain antibiotics cause drowsiness, depressing your responses. You should describe the circumstances to your supervisor and courteously, but forcefully, decline to drive the bus.
Drug and Alcohol Testing for School Bus Drivers

All CDL drivers operating commercial motor vehicles (CMVs) (i.e. transporting more than 16 passengers) on public roadways must be DOT drug and alcohol tested. This means any school bus driver required to possess a CDL, whether a full or part time driver must also be included in an employer's drug and alcohol testing program.

The regulations require a five panel testing for the following classes of controlled substances: marijuana, cocaine, opiates, amphetamines, and phencyclidine (PCP). Drug testing is accomplished by a urine sample while alcohol testing is accomplished by breath analysis or other screening test approved by NHTSA.

There are many different methods used in establishing a policy on drug and alcohol testing. As a new driver, you are responsible to know and understand the drug and alcohol testing policies for your company or school district. Employers are required by federal law to do testing as indicated in the following:

1. **Pre-Employment Testing:** A new driver must be drug tested with a negative test result before an employer can permit him/her to operate a CMV on a public roadway.

2. **Random Testing:** CDL drivers are subject to unannounced random drug and alcohol testing throughout the year. Random alcohol testing must be conducted just before, during or just after a driver's performance of safety sensitive duties. Once notified of a random test, drivers must immediately report to the designated testing location.

3. **Post-Accident Testing:** This federally-mandated testing is required for any crash involving:
   - A fatality; or
   - Bodily injury requiring immediate medical treatment away from the scene AND the employee/driver has been issued a citation; or
   - Vehicle damage sufficient to require any of the involved vehicles to be towed AND the employee/driver has been issued a citation.

   Note: Pennsylvania state law (Section 3756 of Title 75) requires testing after any reportable crash in a school bus.

4. **Reasonable Suspicion:** Testing is done when a trained supervisor observes specific, contemporaneous, articulable objective facts indicating current drug or alcohol use.

5. **Return to Duty:** After a positive drug and/or alcohol test or refusing to take a test, the employee/applicant shall be referred to a Substance Abuse Professional (SAP). Following the initial assessment, the SAP will recommend a treatment unique to that individual. If your employer does not have a “Zero Tolerance Policy” and allows an employee to return to duty following a positive test and subsequent evaluation and treatment, the SAP will recommend a return-to-duty test when the employee has successfully completed treatment and is no longer a concern to safety.

6. **Follow-Up Testing:** After completing a return to duty test, follow-up testing will be performed for a period of one to five years with a minimum of six unannounced tests conducted during the first year. The number and frequency of tests beyond the minimums is set by the SAP based on his/her evaluation of the employee. Follow-up testing is separate and in addition to any other testing.

**Positive Test or Refusing to Take a Test**

A drug or alcohol test is considered positive if the individual is found to have a quantifiable presence of a prohibited substance in the body above the minimum thresholds defined in 49 CFR Part 40. Any applicant or employee who tested positive or refused to take a drug or alcohol test must have a negative return-to-duty test and be evaluated and released by a SAP before returning to safety-sensitive work. There is no requirement the company pays for this treatment or schedules the SAP appointment.
Instructor Notes:

**Driver Recertification**

Q: When do you need to be recertified?
A: Every four (4) years

Q: How much training is required for Recertification?
A: Ten (10) hour total instruction: Seven (7) hours of classroom training plus three (3) hours of one-on-one in-bus training with a certified instructor.
DRIVER RECERTIFICATION

State law requires you to renew your school bus endorsement every four (4) years, completing a minimum of 10 hours of instruction and the “S” endorsement knowledge and skills examinations. Recertification must occur in a school bus representative of the class of school bus the driver is licensed to operate, so test in the Class school bus listed on your license. The recertification skills exam is outlined in Chapter 71.4 of Title 67. Visit www.pacode.com.

The instruction must be provided by a certified instructor and must include seven (7) hours of classroom training and three (3) hours of one-on-one in-bus training. This ten 10-hour course (commonly known as the driver recertification course) may be completed at any time during the 12 months immediately preceding the recertification date on your School Bus Endorsement card. PennDOT notifies you of this requirement through a notice mailed one year before your endorsement expires. DO NOT LOSE YOUR RECERTIFICATION NOTICE; YOU WILL BE REQUIRED TO PRESENT IT TO THE EXAMINER WHEN TAKING THE KNOWLEDGE AND SKILLS TESTS.

Upon successful completion of the training and testing requirements, a new School Bus Endorsement card is issued to you 45 days prior to the expiration of your current “S” endorsement. If you fail the skills examination three (3) times, your current School Bus Endorsement card must be surrendered to the examiner. You must then reapply for the “S” endorsement learner’s permit and complete all training requirements for new drivers outlined in the previous sections. Any training taken as a requirement for recertification cannot be counted toward new learner’s permit training requirements. If the recertification requirements are not completed before the recertification date of the School Bus Endorsement, you have one (1) year from that date to complete the training and testing requirements, but you cannot drive except to complete in-bus training and the skills test. If the requirements are not completed within this additional year, you must reapply for an “S” endorsement permit and repeat all training and testing procedures.

After PennDOT receives your recertification paperwork, a new School Bus Endorsement card will be mailed to you. If your old School Bus Endorsement card expired before, or shortly after, the completion of recertification training, you are not permitted to operate a school bus until receiving the new School Bus Endorsement from PennDOT. Remember, you must have the School Bus Endorsement card with you to operate a school bus.

When taking the examination for recertification, you must bring the following documents to the testing site:

- Your valid commercial driver’s license;
- Your school bus recertification notice;
- Your valid Physical Examination Certificate;
- The current vehicle registration card for the bus being driven; and
- A valid insurance card or proof of financial responsibility for the bus being driven.
Instructor Notes:

**Completion of Report Form**
Q: Does a driver have to sign the School Bus Driver’s Training Report Form (DL-714)?
A: Yes. Signature on the Training Report Form certifies under penalty of law that the information contained on the form is true and correct.

**Annual Physical Examination**
Q: How often do you need a physical examination?
A: Annually

Q: Who is required to submit a valid DOT Medical Examiner’s Certificate to PennDOT in order to maintain their CDL?
A: Commercial drivers engaged in non-excepted transportation.

**Change of Information on License**
Q: What should you do if you need to change your name or address on your driver’s license?
A: Submit an application (DL-80CD) to change or correct information on license to PennDOT with the appropriate fee.
UNIT A - The School Bus Driver: Role Responsibilities and Requirements

COMPLETION OF REPORT FORM
You, the school bus driver, will be asked to sign the School Bus Driver's Training Report Form (DL-714), verifying the minimum training requirements have been met.

PLEASE NOTE: Your signature on the Training Report Form certifies, under penalty of law, that the information contained on the form is true and correct.

WARNING: Falsification to authorities is a misdemeanor of the third degree and is punishable by a fine of up to $2,500 and/or imprisonment up to one year.

IF YOU ARE NOT GIVEN THE MINIMUM NUMBER OF TRAINING HOURS OR YOUR IN-BUS TRAINING WASN'T ONE-ON-ONE, DO NOT SIGN THE TRAINING REPORT FORM. You may contact PennDOT’s Special Driver Programs Unit at (717) 787-6453 or ra-pdschoolbushelp@state.pa.us, if you have any concerns associated with your school bus driver training.

The safety of school children is the main concern of PennDOT. Compliance with every aspect of the School Bus Driver Training Program is essential to the safety of school children.

ANNUAL PHYSICAL EXAMINATION
To maintain a valid School Bus Endorsement, you must pass an annual physical examination given by either your physician or a physician appointed or approved by the local school board. A Pennsylvania School Bus Driver’s Physical Examination Form (DL-704) must contain the signature of the physician before sending it to PennDOT. Refer to Section 71.3 of Title 67 for details on this examination. Visit www.pacode.com.

A letter is mailed to you approximately 90 days prior to the expiration of your school bus physical. The purpose of this letter is to remind you that your physical is about to expire. Your School Bus Endorsement card will not be renewed unless PennDOT has a current physical on file. You must pass the minimum requirements listed on the physical examination form. Additional medical information may be required to further determine physical competency. If PennDOT determines you are not physically competent to operate a school bus, your School Bus Endorsement will be cancelled. You may request a re-examination.

Upon passing the physical examination, the examining physician will issue a Physical Examination Certificate valid for one (1) year. This certificate must be carried whenever operating a school bus.

In addition to the annual School Bus Driver's Physical Examination (DL-704), commercial drivers engaged in “Non-excepted” transportation are also required to submit a valid Medical Examiner's Certificate in order to maintain commercial licensure.

Additional information is available in the Commercial Driver Information Center on our website at www.dmv.state.pa.us.

CHANGE OF INFORMATION ON LICENSE
A new camera card or photo license will be issued whenever you are adding or deleting an endorsement, removing a restriction or upgrading your class of license.

If you are changing your name or address on your CDL and “S” endorsement, you must complete form DL-80CD (Commercial Driver's License Application to Replace/Correct) and forward it to PennDOT with the appropriate fee. The DL-80CD is located under the Forms and Publications link on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us.
Documents Carried While Operating a School Bus

Q: What credentials must a school bus driver carry when operating a bus?

A: 1. A valid commercial driver’s license displaying the “S” endorsement;
2. A valid school bus endorsement card;
3. A valid physician’s certificate;
4. A vehicle registration card for the bus being driven; and
5. A valid insurance card.
6. DOT physical, if applicable
DOCUMENTS CARRIED WHILE OPERATING A SCHOOL BUS
The following current and valid documents must be carried by you at all times while operating a school bus:

- CDL, with Passenger and School Bus Endorsements;
- Pennsylvania School Bus Endorsement Card;
- Physical Examination Certificate (DL 742);
- Vehicle registration card for the bus being driven;
- A valid insurance card or proof of financial responsibility for the bus being driven; and
- DOT physical, if applicable (i.e., contractors who cross state lines). This physical is known as the Medical Examination Report for Commercial Driver’s Fitness Determination and is available at www.fmcsa.dot.gov.

COMPREHENSIVE RESOURCE
For a comprehensive resource on virtually all aspects of becoming a school bus operator, visit the School Bus Information Center on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us.
UNIT B LESSON SUMMARY
STUDENT MANAGEMENT AND DISCIPLINE

INSTRUCTOR’S PERSPECTIVE
While Unit A focused on school bus drivers and their roles and responsibilities, Unit B focuses on the student passengers of school buses and their interactions with drivers. The students that board the school bus are children passing through various stages of life which can be confusing to them. Further, implicit in the very notion that they are students is the sense that they are limited in knowledge, which they are gaining through their school experience and interactions with others. Because of their varying moods and seemingly unending opportunities for learning, students will challenge the adults charged with their care, including school bus drivers. The purpose of this unit is to give school bus driver trainees foundational knowledge about the development of children and perspectives on managing student behavior. This management is primarily positive in nature, but does include perspectives on student discipline.

TRAINEE OBJECTIVES
1. Be able to describe local school district policy for appropriate behavior while on the bus, including while loading and unloading.
2. Be able to demonstrate the essential components of effective driver-student interaction, which are helpful in generating student respect and cooperation.
3. Be able to describe local policy in case of serious discipline problems.
4. Recognize the typical behavior patterns of students in the elementary and secondary age groups, how they differ, and identify the most effective approach for dealing with each age group.
5. Be able to demonstrate the basic concepts of Assertive Discipline.

LOCATION
Classroom

DELIVERY MODE
Lecture and discussion, role playing exercise

MATERIALS
• Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser or flipchart and marker, PowerPoint presentation
• Handouts - Unit B Study Guide, local school district rules and regulations for student passengers, if applicable.

RESOURCE PERSONNEL
Several persons from the local school district would be helpful for assisting with instructing portions of this unit, or assisting with questions and discussion throughout. Appropriate district personnel may include:

• a school psychologist;
• teachers from the elementary school, middle school, and high school levels, as appropriate; and/or
• a principal or assistant principal.
SUMMARY AND REVIEW QUESTIONS

- **Summary** - This unit should receive heavy emphasis in both new driver and recertification courses. When teaching either type of course, stress that drivers should communicate with substitute drivers concerning discipline problems. Because many new drivers start working as substitutes, stress the role of the substitute driver in all lesson topics of a new driver course.

- **Review Questions** -
  1. How can you build the proper relationships with your students?
  2. What are the basic guidelines for controlling student behavior?
  3. What are some of the responsibilities of a school bus driver?
  4. What are some of the responsibilities of student passengers?
  5. What are the five basic rules for student management, as suggested by the word CLASS?
  6. How should a school bus driver handle serious discipline problems?
  7. What are the characteristics of each of the three age/grade-categories; elementary, middle, and secondary?
  8. What is the foundational difference between assertive and non-assertive discipline?
  9. What is the best approach to dealing with a student passenger that is also a member of a gang?
  10. What should a bus driver do if suspicious of child abuse or neglect?

REFERENCES

**PennDOT Publications**

- Pennsylvania School Bus Driver’s Manual (Publication 117):  
  http://www.dmv.state.pa.us/drivers_manual/schoolbus_manual.shtml
- Commercial Driver’s Manual (Publication 223):  

**Laws and Regulations**

- Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapters 71, 104, 171  
  http://www.pacode.com/secure/data/067/067toc.html
- The Pennsylvania Vehicle Code (Title 75):  http://www.dmv.state.pa.us/vehicle_code/index.shtml

**Other**

- Assertive Discipline for Bus Drivers, Lee Canter & Associates Inc.
- Local regulations and/or procedure guides pertaining to student behavior and discipline, if available.
CASE STUDY EXERCISES

Even though many school bus drivers have had significant experience handling students, they still need practice. Also, new drivers may not have had much experience in this area other than perhaps with their own children. To provide practice, and make these student management principles relevant, this section contains several case studies.

In presenting case studies, the instructor should:

1. Have the class read a situation, then select a driver from the class:
2. Give the selected driver a few seconds to think about the situation, then have him or her explain to the rest of the class, in as much detail as possible, how the situation should be handled:
3. Have the rest of the class critique the driver’s response:
4. Take the role of a facilitator and manage the discussion.

Another method for presenting the case studies is, depending on class size, to break the class into several small groups. Each group can work on an individual case study as described above, then reconvene and share the results of their discussions with the rest of the class. The instructor should supervise the critiques developed by each group.

As an offshoot of this, each small group can work on the same case study. In this manner, the different groups can see how the scenarios were handled differently when they are all presented in front of the group.

Remember, the critique is a learning experience and there are no hard and fast rules. All critiques should be fair, and drivers should not be too defensive or take comments too personally.

CASES FOR ALL DRIVER TRAINEES

For the initial case, the instructor should be the driver and the class should critique his or her performance. Sample responses are offered for the first case.

Case 1 - Example:
It’s the second day of school. On the ride in, the driver notices that two 9-year-old boys, Tom and Steve, begin fighting over the ownership of a pet frog they’re taking to science class. The frog is in a glass jar, and the boys are too far back to hear the driver asking them to settle down. What should be done?

Case 1 - Sample Response:
Stop the bus in a safe location, activate the hazard warning lights, set the parking brake, turn off the motor, and remove the keys. Approach the boys in a calm but firm voice, and tell them to stop fighting. Explain the safety hazards they and others face, especially from broken glass, and discuss the policy concerning pets on the bus. Assign and escort them to separate seats if necessary.

Case 1 - Discussion:
General Comments - Look for comments pertaining to the driver being calm and firm, and whether the situation is correctable with only verbal explanation of safety hazards.

Safety Factors - In this case, the driver could have been distracted, and other students may have been injured from the students fighting.

Future Consequences - When the students board the bus the next day, the driver should offer them a second chance at their old seats in a friendly manner.

Similar Situations - If the students were, for example, older and carrying knives, the driver should stop the bus as before, and calmly and firmly get the students’ names and have them move to new seats. Their knives should be confiscated. If resistance is being presented, call 911 and the dispatcher. In any case, other student passengers must be protected. A full report of the incident should always be made to the supervisor following the run.
Case 2:
You have one 12-year-old girl who often misses the school bus. When she does ride the bus, you notice that she often seems upset and crying when she is exiting, but you haven’t been able to identify what is happening during the bus ride that is upsetting her. What do you do?

Case 3:
A student asks to be left off at a friend’s stop, even though she has no prior written authorization. What do you do?

Case 4:
A 16-year-old is a loud, intimidating kid who often yells at other kids on the bus and makes inappropriate racist and sexist comments. What do you do?

Case 5:
You have one girl on your bus who is physically more developed for her age than her fifth-grade peers. You have previously heard her threaten other children on the bus, and one day she exits the bus early at another child’s bus stop continuing to threaten a younger child, stating that she is going to beat her up once they exit the bus. What do you do?

Case 6:
You have a new boy who moves to town mid-year and is now riding your bus. His bus stop is the last on the route and the bus is nearly full when you pick him up. Despite seats being available, children will not make room for him and he wanders sadly up and down the aisle every morning. What do you do?

Case 7:
You have stopped at a railroad crossing and are awaiting the weekly, slow-moving train. In watching the riders in your mirror, you notice that several teens quickly stood up and moved away from another teen. You think you see that teen holding what looks like a firearm and playing around with it. What do you do?

Case 8:
Over the past week, you have found soda cans spilled in the back of the bus and remember seeing one girl drinking soda on the bus. Today, you find soda intentionally dumped on the seats and leftover sandwiches and crackers smeared on the seatbacks. What do you do?

Case 9:
On a two-hour field trip, your students are getting increasingly out of control, yelling and screaming out the window at passing motorists on the interstate highway. Two boys stand on their seats and ‘moon’ a passing bus. What do you do?

Case 10:
You have a second-grade student who has a profound hearing impairment and wears behind-the-ear hearing aids with external receivers. Kids often make fun of him for being different, and now an older child is harassing him and flicks his ears, dislodging both receivers which fall to the floor. The student walks up to you holding his hearing aids and is very upset. What do you do?

ADDITIONAL CASES WHEN EXPERIENCED DRIVERS ARE PRESENT
To gain additional insight to routine student management problems, an experienced driver should be assigned to each trainee group. The experienced drivers should describe additional situations, without telling how they were solved. An inexperienced driver should describe his or her solution after thinking for a few seconds. Then the rest of the group should critique the solution, as above.
1. SCHOOL BUS DRIVER RESPONSIBILITIES - As a professional school bus driver, you must be well-rounded, knowledgeable, and personable. You have to enjoy working with students for your position to be rewarding.

A. Be familiar with rules, policies, and procedures.
B. Be familiar with assigned routes and designated school bus stops.
C. Establish good working relationships with students, parents, supervisors, and school administrators.
D. Instruct student passengers on appropriate behavior and the consequences of inappropriate behavior.
E. Be professional.
F. Maintain a friendly but firm adult/student relationship.
G. Create an atmosphere where the rights of others are respected.
H. Keep rules of conduct reasonable and simple to understand.
I. Handle all infractions of policy according to policy.
J. Present a positive image.
K. Be considerate and patient.
L. Keep the bus clean.
M. Keep a daily log of events.
N. Maintain up-to-date passenger and emergency contact lists.
O. Avoid negative verbal interactions.

2. STUDENT SEATING PLANS - Follow school district policy, and consider the following:

A. Bus route and order in which students are loaded and unloaded.
B. Medical conditions of students, if known.
C. Evacuation concerns.
D. Student behavior and compatibility.
E. Driver supervision and observation requirements.
F. Student age.

3. STUDENT RESPONSIBILITIES

A. Know the rules and accept responsibility for actions.
B. Be respectful of others.
C. Be on time.
D. Be aware of the dangers of loading and unloading.
E. Enter and leave loading and unloading zones carefully.
F. Upon entering the bus, go to the appropriate seat and remain seated.
G. Keep the aisle clear.
H. Refrain from loud conversation or unnecessary noise.
I. Use appropriate language.
J. Do not bring prohibited items on the bus – these distract the driver.
K. Keep all body parts and other objects inside the bus.
L. Do not tamper with emergency exits.
M. Respect the personal space and possessions of others.
N. Do not tamper with or destroy school property.
O. Remain silent when the school bus is stopped at railroad crossings.
P. Be aware that transportation can be denied to those acting inappropriately.
Q. Help keep the school bus clean.

4. DRIVER - STUDENT INTERACTIONS
   A. Know the names and general behaviors of each person on your bus.
   B. Approach students in ways that gain their respect.
   C. Clearly state your rules, and quickly deal with infractions.
   D. Build morale by being friendly, courteous, and helpful.
   E. Use positive reinforcement.

5. GENERAL GUIDELINES FOR STUDENT INTERACTIONS
   A. Unless required by administration, don’t grant special student privileges.
   B. Student rights are equal and to be respected; privileges are granted, but can be lost. Riding the bus is a privilege.
   C. Speak and act quietly, clearly, firmly, and confidently.
   D. Praise students for accepting responsibility.
   E. Serious discipline problems should be referred to the school principal.
   F. If a discipline problem must be settled while on the road, stop the bus, activate hazard warning lights, turn off motor, remove the keys, stand up, speak calmly and firmly, and reseat students if necessary.

   C = Consistent ....... Always be consistent with praise and discipline.
   L = Limits ............ Be sure students are aware of the limits you set.
   A = Attitude ........... Have a positive attitude.
   S = Share .............. Share with students what is expected of them.
   S = Support ............ Support other drivers and discuss experiences.

7. SERIOUS DISCIPLINE PROBLEMS - For serious problems follow your school district’s procedures.
   A. Pull over and secure the bus.
   B. Address offenders courteously, firmly, and by name.
   C. Explain the specific inappropriate behavior you want changed, and school district policy regarding that behavior.
   D. Suggest an action that can be performed successfully.
   E. Make sure your actions, the actions you suggest, and consequences for inappropriate behavior are within district policy and WITHIN YOUR POWER TO INITIATE.
   F. Relay consequences for inappropriate behavior.
   G. Report the incident to your supervisor.
8. CHARACTERISTICS OF STUDENT BEHAVIOR

A. Kindergarten and elementary students: Physically active, loud, forgetful, insensitive to others’ feelings, sensitive to adult criticism, will cooperate in group projects, generally easier to handle in the morning.

B. Middle-school students: Curious, change at different rates, may have low self-esteem, have new interests and abilities, identify with peer groups and want to belong, seek some autonomy, question rules, easily offended, behave inconsistently.

C. Secondary students: Girls more mature than boys but easily influenced by boys, boy/girl relationships, image conscious, gossipy, resent authority, organize in groups, may disturb the driver.

9. GUIDELINES FOR CONTROLLING STUDENT BEHAVIOR

A. Discipline should be private whenever possible.
   ✦ The whole bus should not be reprimanded for the actions of a few.
   ✦ Unpleasant comments should only be given to one student at a time, unless the safety of the entire bus is at risk.

B. Stay professional.
   ✦ Don’t lose your temper or develop favorite students.
   ✦ Be strict and realize students will continually test your rules.
   ✦ Don’t hold grudges or exchange wisecracks with students.
   ✦ Be responsible, courteous, and alert.

C. Set discipline standards that are within your power to enforce.

D. Work closely with school authorities.
   ✦ Continually enhance local policies for dealing with discipline infractions.

E. Do not deal with discipline problems when loading and unloading.

10. ASSERTIVE DISCIPLINE

A. Assertive discipline is a set of guidelines and skills based on research regarding behavior management for children.

B. Assertive discipline can be effective on the school bus as well as the classroom when applied appropriately and consistently.

C. An assertive discipline plan can provide students with clear expectations, help you handle all behavior consistently, provide a common approach, prevent you from overreacting, and remind you to be positive.

D. Drivers who practice non-assertive discipline do not convey their wants, needs, and desires. Needs may be stated, but are not backed up with actions.

E. Drivers who practice hostile discipline express wants and needs in negative ways that may violate student’s rights. Students may act more aggressively under hostile discipline.

F. Drivers who practice assertive discipline clearly state their needs, backing them up with appropriate actions. They have a positive outlook, and can take charge in persistent and supportive ways.
11. GANG AWARENESS
A. Avoid confrontations with gang members.
B. Remove gang signs and symbols from the bus as they appear.
C. Treat all student passengers with the same respect.
D. Report gang activity that encroaches on loading and unloading zones or the bus to your supervisor.
E. Do not assume you can identify gang members.
   ♦ Signs and symbols in their dress and behavior are often imitated by popular culture.

12. BULLYING AND HARASSMENT ON THE SCHOOL BUS
A. Harassment includes unfair and disrespectful remarks, written words, or pictures that are unpleasant or offensive.
B. The bus driver should expect and strive to see that all students travel with dignity and respect and arrive at school and/or home safely.
C. Bullying occurs when a student is exposed repeatedly over time to the negative actions of one or more other students and that the school bus provides a prime environmental factor for bullying to occur.
D. Sexual harassment, in particular, appears to be rampant among secondary students.
E. Harassment, sexual harassment, and bullying are intentional, deliberate, unwelcome, and repeated. It could be verbal, non-verbal, visual, physical, and even done through technological means (cyber-bullying).
F. Document and report all incidents and allegations.

13. REPORTING SUSPECTED CHILD ABUSE AND/OR NEGLECT
A. School districts and transportation companies have specific policies and procedures for the reporting of suspected child abuse or neglect. Know and follow your employer’s policies and procedures.
B. Be familiar with the forms used to make such reports.
C. Know the information required to make an appropriate report.
UNIT B - STUDENT MANAGEMENT AND DISCIPLINE

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INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the Driver’s Manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Introduction - Discipline
Every one of the approximately 40,000 licensed school bus drivers has something in common with the others: School Bus Driver Training and licensing.

Q: Who is ultimately responsible for student discipline?
A: The school principal.

Remember that in the event student discipline is exceptionally poor, follow written school district policy. It would be helpful to have copies of any local policies to hand out to trainees and discuss the reasoning behind them and the rules listed in the driver’s manual as questions arise.

Introduction – Attitude
Remember that for students, the bus ride to school and back home after school is part of their school day. You have some influence over their moods, behavior, and behavioral development. Make it positive!

Introduction – Team
Remember that you are part of a team. You share responsibility for student behavior on the bus with parents, school officials, and students. The safety of the bus is, to a large degree, supported by cooperation among these groups.
UNIT B - STUDENT MANAGEMENT AND DISCIPLINE

INTRODUCTION

This unit is a general guide to help you manage student passengers. General guidelines are presented, which you may need to adapt to meet the specific local policies approved by your school district’s board of directors. In disciplinary cases, always follow written school district policy. The person ultimately responsible to discipline students is the school principal.

You, the driver, are often the first contact children have outside their homes every day. Your attitude toward them may set the stage for their conduct for the remainder of the day. Your words and actions can have a tremendous influence. Students are affected by what they experience while they are traveling to and from school. Undesirable conduct not only makes all passengers uncomfortable, but can jeopardize their safety. These experiences, good and bad, are an extension of the regular school day and become an important part of their education. Many of the same rules of behavior are in effect on the bus as in the classroom.

As a school bus driver, you are in the people business. Children, like adults, can be unpredictable and often have moods that reflect what is going on in their personal lives. These moods and changes in their life will be reflected in how they interact with you and with other passengers on the bus. Behavior is typically dependent on age and cognitive development, and can range from that of a toddler to a young adult. You should become familiar with the general characteristics for each age group with which you will be dealing, as well as how to apply positive techniques to manage student behavior.

In cooperation with students, parents and school officials, you are responsible for the safety of the students who ride your bus. You must be able to control them, and the bus during the ride, and during loading and unloading. The student ridership program should be a cooperative effort among students, parents, school officials, and bus drivers. A sound program makes the bus driver’s job easier and improves transportation safety.
School Bus Driver Responsibilities
Unit A introduced the idea of driver responsibilities. This Unit expands the issue with a long list of ways school bus drivers can work toward a safe and secure atmosphere on the bus. Allow trainees to read the items on the list aloud, one at a time or in multiples based on the number of trainees in the class, to help reinforce the points made here. Allow for discussion after each point if necessary.
**SCHOOL BUS DRIVER RESPONSIBILITIES**

School bus drivers have a significant responsibility to transport their students safely and efficiently to and from school. In order to do this effectively, you must create a positive atmosphere for travel, by implementing the following points:

1. Familiarize yourself with and abide by all rules, policies and procedures relating to student transportation.
2. Familiarize yourself with all assigned routes and designated school bus stops.
3. Maintain your passenger lists so they are up-to-date. These will be critical in an emergency.
4. Recognize the importance of establishing solid working relationships with students, parents, supervisors, and school administrators, especially when working to ensure proper student conduct.
5. Instruct students on proper behavior while on the bus and the consequences of improper behavior. Provide and enforce general policies regarding riding the bus, and instructions during emergency evacuation drills.
6. Conduct yourself in a professional and respectable manner.
7. Avoid becoming too closely acquainted with students; maintain a friendly but firm adult/student relationship. You should never put your hands on a student, nor should you grab, slap, hit, or shake a student.
8. Maintain order and safety on the bus at all times. Create an atmosphere where the rights of others are respected on the school bus and at the school bus stop. You can do this by:
   a. Requiring an orderly entrance and exit;
   b. Minimizing interior noise;
   c. Controlling passenger movement;
   d. Requiring silence at railroad crossings; and
   e. Prohibiting transportation of unauthorized materials.
9. Keep rules of conduct reasonable and simple for students to understand. Deal with infractions promptly, firmly and fairly.
10. Handle minor infractions with school district approved consequences. In instances of serious or recurring misconduct, follow school district policy.
11. Present a positive image in dress, hygiene, language, and manner while on duty because you represent the school system.
12. Be considerate and patient with all children, especially young students or students with special needs. These children may be entering school for the first time and may be intimidated or frightened by all the new experiences. It is important to make these children feel safe and welcome. Some students with special needs will require repetition and practice to become clear on expectations. Others may react strongly to changes in routine or environment.
13. Keep the bus clean during both regular route and extra-curricular trips. Consider making this part of students’ responsibilities by having them take any of their trash with them.
14. Remember to inspect the interior of the bus before a new group of students enters and again after they exit. This can help identify students who may be tampering with or destroying parts of the bus.
15. Consider keeping a daily log of events at the end of your routes.
16. Work with your school district to have a readily-available emergency contact list in case of an emergency, and ensure your communication system is operational.
17. Avoid negative verbal interactions, such as sarcasm, as these are not effective tools for student management.
**Student Seating Plans**

Q: How might seating charts be useful?

A: 1. Get to know students’ names.
   2. Helpful for substitute drivers.
   3. Helpful for managing students with medical conditions or disabilities.
   5. Assists law enforcement in the event of a crash.
   6. Identify owners of items left on the bus.

Q: How can a seating chart help with controlling student behavior?

A: 1. Identify troublemakers and keep them where you can best deal with them.
   2. Identify compliant students.
   3. Identify possible perpetrators of vandalism found after students unload.
STUDENT SEATING PLANS

Check with your school district regarding the use of seating charts in your bus. It may be a good policy to establish and use seating charts for morning and evening runs, when possible. These charts are helpful in controlling student behavior and assist you in getting to know the students’ names. This is particularly useful for elementary age students. Seating charts are especially helpful for a substitute driver and during an emergency.

Some things to consider when developing a seating plan:

1. Your route and the order in which students are loaded and unloaded at home and at school.
2. The medical conditions of the students. Keep in mind that you might not know this information. Otherwise, consider the following:
   a. Students who are medically fragile or vulnerable and who need to sit further front where there is less bounce;
   b. Students who are prone to seizures in certain light conditions;
   c. Younger students and those in child safety seats who need to sit in the first few seats;
   d. Students with respiratory conditions who need to sit away from the lift area and away from rear windows near the exhaust. Note that changes in temperature also tend to bother these students; and
   e. Students who may need to sit over wheel wells for additional lower extremity support.
3. For evacuations, consider:
   a. Which students can evacuate themselves;
   b. Which students need help;
   c. Which students could help others; and
   d. Which students are in child safety seats.
      i. They should not be in emergency exit rows; and
      ii. Never seat a student next to a window, if there is a child safety seat in the aisle position.
4. Consider behavior by thinking about students who are compatible with each other and who aren’t.
5. Consider supervision for behavior or a medical condition as indicated above.
6. Consider the age of the student. For example, some districts require grade levels to be seated together, chronologically from the front to the back of the bus. Know and follow your district procedures.
7. Consider your ability to observe the student.
Instructor Notes:

**Student Responsibilities**
Just as the school bus driver has certain responsibilities toward a safe, secure atmosphere on the bus, so do students. This is another long list worthy of emphasis. Allow trainees to read the items on the list aloud one at a time or in multiples based on the number of trainees in the class, to help reinforce the points made here. Allow for discussion after each point if necessary. You can facilitate this as an instructor by giving specific examples and/or prompting any experienced drivers for their input and familiarity with student issues.

**Student Responsibilities – Balancing Discipline**
Students tend to release more tension and energy on the afternoon ride home than in the morning. Drivers need to find the appropriate balance between what they can tolerate without distracting them from the task of driving.
UNIT B - Student Management and Discipline

STUDENT RESPONSIBILITIES

Like the school bus driver, the student has responsibilities with regard to his/her behavior during the transportation process. Since poor student behavior on the school bus can be distracting to the driver and contribute to crashes, it is important to establish clear rules for the student to follow and for each student to follow them. All students and parents need to know and understand the rules, and that these rules were established for the safety of the students who ride the bus. Further, students and parents must also understand the consequences of unacceptable behavior. Often, your school administration will prepare lists of rules and regulations covering student behavior and distribute them to students and parents. The parents’ active cooperation is also helpful. Therefore, students should:

1. Know the rules, and understand and accept responsibility for their actions.
2. Be respectful of the rights of other students.
3. Be on time at bus stop locations at home and at school. They should leave home in time to reach the bus stop five (5) minutes before scheduled pickup and avoid playing when waiting for a bus, especially right next to the roadway. Present clear safety procedures for walking on the highway or crossing roadways.
4. Be aware of the dangers involved in the loading and unloading zones, including the dangers involved with loose clothing, clothing accessories and personal items that can drop under the bus.
5. Enter and leave the bus at school loading and unloading zones and at bus stops in an orderly fashion, and follow instructions. They must be careful about their own safety and the safety of others. They must move without haste, crowding or pushing.
6. Upon entering the bus, go directly to their seats, and remain seated until instructed to stand and unload.
7. Keep the aisle clear at all times. Books, lunch boxes, instruments and book bags must be placed under the seat or held on the student’s lap. DO NOT BLOCK THE AISLE!
8. Refrain from loud conversation, unnecessary noise and boisterous conduct.
9. Use appropriate language (e.g., no profanity permitted).
10. Never bring tobacco, glass containers, weapons, drugs, alcohol, or any other items that could distract the driver on the bus.
11. Keep all body parts and other objects inside the school bus. The driver will tell students when they may open and close windows.
12. Never tamper with or block emergency exits.
13. Keep hands and feet off other children and their possessions. Throwing materials, hitting, pushing, spitting, biting, tripping and rough behavior will not be tolerated.
14. Never tamper with or destroy the school bus. Students can be prosecuted for doing so.
15. Remain silent while the school bus is stopped at railroad crossings.
16. Be aware that transportation can be ultimately denied to students who act inappropriately.
17. Keep the school bus clean. Do not leave trash behind.

As a new school bus driver, you will learn the after-school route may be more demanding on the driver when compared to the morning route. After being in a classroom all day, students may have a lot of energy and a desire to release tension. You will need to develop a higher tolerance for the students’ behavior on the after-school route, without allowing flagrant abuse of the privilege to ride the school bus.
Driver-Student Interactions

Just as there are appropriate responsibilities and rules guiding school bus drivers and students, there are responsibilities and rules guiding the interactions between drivers and students.

Often, the nature of a school district will allow you to transport the same students for several years, allowing you to develop an understanding about students’ behavior patterns that school district personnel may not have. For example, a teacher may see certain students for a school year at a time, while the bus driver may see the same students every year for five years of elementary school.

Keep a professional relationship.

Appropriate interactions between bus drivers and their student passengers:
• Begins with respect,
• Continues with consistency, and
• Strives for a balance between leniency and harshness.

Driver-Student Interactions – Who is in charge?

Q: Who in the safety team has the responsibility for teaching student passengers the rules of the bus?

A: The bus driver.

Driver-Student Interactions - Morale

Q: How does the morale of your student passengers contribute to bus discipline?

A: When the group is generally upbeat and positive in their outlook, that group can control behavior by pressuring would-be offenders to also behave more positively.

General Guidelines for Interacting with Students

Q: If the only time the bus driver speaks is to discipline students, what will students’ attitudes toward the driver be?

A: Negative, confrontational.

Q: If students hear the driver encouraging students, what will their attitudes toward that driver be?

A: Positive, cooperative.

General Guidelines for Interacting with Students

Emphasize the four points when dealing with students in the Driver’s Manual.
UNIT B - Student Management and Discipline

DRIVER-STUDENT INTERACTIONS

As a professional bus driver, you should always have a general knowledge of each of your passengers, including their names and general behavior. Since you have contact with the students for only a short time each day, you may not initially know as much about the students as their teachers, but often you will be assigned to a route transporting the same students for several years. This may give you a chance to develop relationships with students that other district staff may not have. You must not only know how to perform your job as a driver, but you must also know something of your riders’ behavior patterns and a great deal about their reactions in order to safely pick up and deliver your passengers. Your main function is to transport the students to their destination and discharge them safely.

You must also know how to approach students in a way that will gain their respect. It is better to talk to students without shouting, showing anger or displaying irritation. Be careful to never threaten them with any action you cannot enforce. Give your instructions to the students without favoritism. If you overlook poor behavior by one student, you lose the respect of the other students. Strike a happy medium by being neither too lenient nor too harsh; both extremes are equally bad for the morale of the students on your bus. Your attitude should be friendly, cheerful and professional.

Building good bus conduct starts the first day of the school year. After arriving at your first destination and prior to unloading, stand and state the rules very clearly. Be sure to deal with the very first infraction promptly and firmly. It is much easier to prevent a bad situation than to correct one.

Work to build cooperation with your students by being friendly, courteous and helpful. Over time, high student morale will help you control the worst offenders. When offenders find that improper conduct is unacceptable to the group, they will think twice about doing things that cause them to “lose face” with the group. If your school district has a student court of inquiry, it can often help in enforcing discipline.

GENERAL GUIDELINES FOR INTERACTING WITH STUDENTS

You can avoid many problems on the bus by recognizing good behavior and using proper techniques to reinforce that behavior. While it is often easier to use negative terms when dealing with behavior, it is much more effective to use positive comments to reinforce the good things that happen on the bus. Learn to recognize desirable behaviors and emphasize them with positive comments.

For example:
- “I saw you pick up that gum wrapper, Fred, and I appreciate it.”
- “Jane, you were at the stop on time this morning. Good for you.”
- “That’s what I like to see.”

If you learn to stress specific, positive and behaviorally-related activities on your bus, you will eventually eliminate the negative ones. Work to develop this skill. It will mean many safe and pleasant trips.

Remember the following points, when dealing with students:
- Though each student is different, do not allow special privileges for any student unless requested by the school administration.
- Observe the rights and privileges of each child only as long as he or she obeys the rules of good bus behavior. Riding is a privilege, not a right. The moment a student “gets out of line,” deal with the offender fairly, impartially and in the same manner you treat all such offenders.
Instructor Notes:

**General Guidelines for Interacting with Students – Setting an example**
Remember that your actions toward students are being observed and evaluated by many other students. You are setting an example – set a good one.

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**CLASS: A Student Management Memory Aid**
Emphasize the **C-L-A-S-S**. Repeat this to the trainees.

Some instructors may find it useful to put this memory aid on a card, laminate it, and provide it as a handout. Some may provide this in the driver’s packet of information that they have on board while others have this posted at the bus garage so that driver’s constantly are reminded.
UNIT B - Student Management and Discipline

- Remember that all eyes are on you while you are driving the bus. Your words and actions have tremendous influence on your passengers. Speak quietly, clearly, confidently, and firmly when talking to the students on your bus.
- Praise students generously when they accept responsibility and show a general pattern of good behavior.

If you are faced with a discipline problem, pause and relax for a few seconds. Use this time to think about what you are going to say and do next. How you handle behavioral situations, appropriately and inappropriately, will be watched closely by the students for consistency, fairness and understanding.

1. If you yell, expect yelling back, if not at you, then at someone else.
2. If you praise, expect it to be picked up by others.
3. Expect and encourage discussion and openness with students, and you will get it.
4. Keep discussions short and simple.
5. Never use profane or obscene language or raise your voice above a level necessary to be heard.

A word of warning directed to the offender may be enough for a minor infraction. Avoid getting into lengthy discussions, while the bus is moving.

CLASS: A STUDENT MANAGEMENT MEMORY AID
To help you remember important student management techniques, learn the rules represented by the letters of the word "CLASS." By remembering one easy word, you will be able to remember five simple rules for student management.

C = Consistent.... Always be consistent with praise and discipline. Whenever a student behavior problem arises, follow through with the appropriate consequences.

L = Limits......... Set limits and make sure the students are aware of them. They should be the same for all students.

A = Attitude........ Have a positive attitude. A cheerful smile may change the behavior of a student. The attitude of the driver often becomes the attitude of the student.

S = Share.......... Share with the students what is expected of them. State the rules and their consequences. If the students do not know the rules, they cannot be expected to follow them.

S = Support........ Support other drivers and exchange experiences. Other individuals may be able to assist in difficult situations. Also by sharing, common problems may be discovered and new techniques explored. Support is also available from your supervisors and from the school district, usually via the principal.
Instructor Notes:

**Serious Discipline Problems**

Q: What kinds of student behavior could be serious enough to require stopping the bus?

A: 1. Fights
   2. Displays of weapons
   3. Willful damage to the bus
   4. Dangerous behaviors

**Serious Discipline Problems – Your limits**

Remember that these steps are for exceptional, dangerous situations. Be prepared to do what is appropriate to keep your student passengers safe, within your position as a school bus driver.

Important note: Before you specify related consequences, be sure that they are supported by existing policy and school principal, that you are willing to follow through, and that **THEY ARE WITHIN YOUR POWER TO INITIATE**.

**Serious Discipline Problems – Moving students**

Q: Should you move problem students to the seat directly behind you?

A: Not usually. Move problem students to a seat where you can easily observe them. In circumstances of an extreme discipline problem, seating the problem student directly behind the driver may be dangerous.

Q: Can you put problem students off the bus, or refuse them a seat the day after?

A: No. School districts have written policies about such things. Refer such cases to your supervisor or school principal.

**Serious Discipline Problems (Item 4a)**

Repetition of expectations is sometimes referred to as the Broken Record technique. This consists of simply repeating your requests every time you are met with illegitimate resistance. Note that a disadvantage with this technique is that when resistance continues, your requests lose power every time you have to repeat them. If the requests are repeated too often it can backfire on the authority of your words. In these cases it is necessary to have some consequences on hand.
SERIOUS DISCIPLINE PROBLEMS

For problems of a more serious nature, such as a fight on the school bus, follow your school district’s procedures for discipline or refusal of rights to ride the bus and apply the following general procedure:

1. Drive out of traffic to a safe location, stop and secure the bus. This may be in a parking lot or a driveway. The fact you have taken this action makes the students realize the situation is one out of the ordinary.

2. After stopping the engine and removing the ignition key, get out of your seat, and stand and face the students. Address the offenders in a courteous manner, but in a firm voice. Don’t show anger, but all students must realize you expect an immediate, positive response.

3. Address the student(s) involved by name and state specifically what behavior you will not allow. Explain the district guidelines you expect the student to obey and you can enforce. Maintain control of yourself and avoid projecting hostility.

4. Relate your comments to a specific unacceptable behavior you want changed; don’t humiliate the child involved. This may require repeating the action you expect (using the same words) several times. Limit this communication to what is not acceptable and what must occur to remedy the situation. Suggest an action that can be performed successfully.

5. Before you specify related consequences, be sure they are supported by existing policy and the school principal, you are willing to follow through, and THEY ARE WITHIN YOUR POWER TO INITIATE.

6. Once you are sure you are on firm and acceptable ground, and you have committed yourself, THEN relay the consequences. You cannot afford to initiate hollow consequences. You must take the action you have indicated. This emphasizes the point made in Unit A regarding your relationship with your transportation director/supervisor and with the school principal.

7. Don’t forget to inform your supervisor as soon as possible after any confrontation. Make sure you document the incident, children involved and actions taken so a record is on file.

If these steps don’t work, radio the supervisor or dispatcher; don’t start the bus until you get a response. NEVER ask or send students to telephone school officials. You are responsible for all students; keep them on the bus. If you are near the school, you also might consider turning the bus around and driving back to the school. Never order any student off of the bus. Always call for assistance and be prepared if there is not a response. A call to the local police is not out of the question if the violator(s) are creating a hazardous situation which would make transporting the students unsafe.

When working through more serious discipline problems, never physically move a student. In fact, be extremely careful about physically touching a child. If a change in seating is needed, do not direct the student to sit directly behind you, but to a seat where you can more closely observe the behavior. Also keep in mind you have no legal right to put the student off the bus, except at the student’s regular bus stop or at school. Similarly, you cannot deny the student a seat on the bus the next morning.

Keep in mind there are behavioral approaches to help you with student management. However, it is most important to consistently follow established school district procedures.

If the situation escalates or requires additional attention, do not try to handle serious discipline cases by yourself. Refer all such cases to your supervisor or the school principal. Give all the facts, in detail, and be sure the entire problem is stated clearly. Usually the child who causes problems on the bus is also causing problems in the classroom. The school administrator has the whole picture of the child, while you, as a driver, know only about his or her bus behavior.
Characteristics of Student Behavior
Children tend to behave differently at various ages. Knowing the general behavior patterns of each age group can help with student passenger management.

Kindergarten and Elementary School Age Students
(Grades K-5)
Q: How do you picture elementary school age children? Give me some characteristics and describe how they relate to providing them transportation services. Should an issue arise, what discipline methods work best?
A: Allow trainees to offer responses, and then use those responses along with the manual material to build a picture of elementary school age children.

Middle-School Age Students (Grades 6-8)
Q: How do you picture middle school age children? Give me some characteristics and describe how they relate to providing them transportation services. Should an issue arise, what discipline methods work best?
A: Allow trainees to offer responses, and then use those responses along with the manual material to build a picture of middle school age children.
CHARACTERISTICS OF STUDENT BEHAVIOR
As described below, kindergarten and elementary students behave differently than middle school and secondary students. By learning some of these characteristics, you will be better informed when managing the students on the bus.

KINDERGARTEN AND ELEMENTARY SCHOOL AGE STUDENTS (GRADES K-5)
The kindergarten or elementary school age student tends to prefer a great deal of physical activity. Normally, these students have a problem staying in their seats. When they can’t move, they often talk instead. Loud talking on the bus is a problem you will need a lot of patience to deal with, but absolute silence among students is not a healthy school bus atmosphere. Students vary in the amount of activity they need, and their behavior will vary from day to day. Students of this age have limited attention spans and short memories, and the day after an occurrence they may have forgotten all about it. For this reason, they rarely hold grudges against those who discipline them. Beginning bus drivers should not try to gain the children’s favor by letting small misdeeds go unnoticed. Take prompt and continued action for all infractions of bus conduct.

These younger students tend not to pay attention to the feelings of adults, but, on the other hand, they care a lot about what the adults think of them. Some children can be actively rejected by their peers, sometimes because they are perceived as odd or have poor social skills. They also are sensitive to the opinions of other youngsters and sometimes tend to pick on children who do not fit in well with the group. If you transport students in special education and students in general education in the same bus, be alert to ensure the exceptional students are not being insulted or targeted.

Bullying can also emerge among older elementary school students. Bullying and other forms of victimization reflect individuals’ lack of self-control, and bullies tend to seek victims who are insecure, anxious and isolated. Bus drivers should monitor children’s behavior and provide appropriate intervention when bullying or harassment occurs or is reported. See the section below on bullying and harassment.

Be careful not to allow individual children to hurt themselves socially by setting themselves up as the “driver’s pet.” Some students who have not yet learned to get along with others may also misbehave to attract attention.

Given the way students of this age behave, you may be able to promote a group spirit “to make our bus the best.” Many bus drivers have achieved excellent results by discussing bus rules with their students and making them “our rules.” Some drivers develop a game of having each busload try to excel in keeping the bus clean, behaving well on the bus, and staying orderly when loading and unloading. This method requires considerable skill, and new bus drivers should consult experienced drivers before attempting to start this type of competition. Keep in mind, however, that art work, festive decorations, etc., should not be displayed on the bus. These can interfere with safe operations.

MIDDLE-SCHOOL AGE STUDENTS (GRADES 6-8)
Students in the middle school are often centered on themselves and will argue to convince others or to clarify their own thinking. They begin to think more independently and critically, and also tend to become more focused on acceptance and popularity among peers. With adolescence and hormonal changes, middle school students may experience mood swings and begin to test the limits of adult authority. Social interactions may involve changing seats or loud conversations. Verbal and sometimes physical aggression can occur, sometimes in the form of bullying and harassment. Fads and conformity in communication and dress develops among peer groups. Some youth begin exploring with sexual activity, and a small percentage, especially boys, may become involved in gangs and other delinquent social activities.
**Secondary Age Students (Grades 9-12)**

Q: How do you picture secondary age children? Give me some characteristics and describe how they relate to providing them transportation services. Should an issue arise, what discipline methods work best?

A: Allow trainees to offer responses, and then use those responses along with the manual material to build a picture of secondary age children.

**Summary of Age-Level Characteristics**

After the discussion about the general behavior for each of the three age groups, take a few minutes to list the age-group characteristics as these appear in the manual, or call the attention of your trainees to the lists in the manual, to reinforce these characteristics. Remind the trainees that even though we may talk about the general behavior of groups with some confidence, individual behavior may vary from group generalities, and may even vary from day to day.
SECONDARY AGE STUDENTS (GRADES 9-12)

In the junior and senior high school age groups, girls tend to be more mature than boys, but teens remain highly socially self-conscious. Relationships between romantic couples emerge, and sometimes may cause trouble on the school bus when some of the students are “going steady.” Other students often shield “making out” in the rear of the bus. Be alert to stop such actions as soon as you spot them. Ingenuity in seating arrangements can help to prevent this problem. For instance, placing the senior girls opposite seventh grade boys may help.

Students of this age are very concerned about their dignity and want to be treated like adults, although they do not always act the part. They are apt to be erratic in their behavior, and they are usually very anxious to dress and act the same as all members of their group.

You must be very careful not to make remarks about administrators and teachers. Secondary school students are chronic gossips, and any belittling remark you make may be widely circulated and magnified when retold. Students may also pass on remarks unintentionally to parents and others.

Young bus drivers must expect the older students to resent any great show of authority. Do not hesitate to ask for help from your supervisor or principal to solve problems involving these students.

SUMMARY OF AGE-LEVEL CHARACTERISTICS

The behavioral characteristics of elementary and secondary students are presented in summary form to assist you in dealing with these age groups.

Kindergarten and Elementary Students can be expected to be:

- Physically active;
- Talkative (loud);
- Forgetful (predictably unpredictable);
- Insensitive to the feelings of others (may pick on students with physical or mental disabilities);
- Sensitive to adult criticism;
- Willing to cooperate in group projects; and
- Harder to handle in the afternoon than in the morning.

Middle-School Age Students can be expected to:

- Change at different rates;
- Be vulnerable to bouts of low self esteem;
- Have new interests and abilities as well as many new feelings, thoughts, and concerns;
- Identify with their peer groups and want to belong;
- Seek limited independence and autonomy;
- Question rules and beliefs they had accepted at face value until now;
- Be easily offended and sensitive to criticism; and
- Behave erratically and inconsistently.
Instructor Notes:

Keep Discipline Private Whenever Possible
Many of us who are older were raised during a time when troublemakers were made example of by very public punishments, or the entire group was punished for the deeds of one to create peer pressure that was hoped to keep the troublemaker in line.

Research and behavioral therapists have found this technique not to be as effective as others. Engage the trainees in a discussion about current thinking on discipline. Current thinking is more about the positive aspects of respect, developing dignity, and professionalism, rather than more negative discipline that focuses on punishment.
Secondary Students have the following characteristics:

- Girls will be more mature than boys;
- Girls will be more influenced by boys than vice versa;
- Boy/girl relationships may cause problems;
- Concerned with their dignity (image);
- Gossipy, repeat things to their parents;
- Resent authority;
- Organize in groups;
- More prone to vandalism; and
- Try to disturb the driver.

**GUIDELINES FOR CONTROLLING STUDENT BEHAVIOR**

The following pointers can help you prevent and/or control discipline problems you may encounter on your bus.

**KEEP DISCIPLINE PRIVATE WHenever POSSIBLE**

- If an individual breaks the rules of bus conduct, do not reprimand him or her in front of all the students riding the bus. Individual behavior problems that do not affect the others on the bus are best handled in a private manner.
- Avoid a showdown with a chronic troublemaker in front of the other students. Instead, report an incident to the principal or supervisor, and request their help in the matter.
- Do not threaten the entire busload for the misdeeds of a few. Focus your attention on the students creating the disorder; avoid disciplining all of the students when restoring order.
- It is a good rule never to say anything unpleasant to more than one person at a time. On the other hand, if general bus safety is being threatened by one or more students, a driver should point out their misbehavior in front of all bus passengers. A case in point is the lighting of matches by students riding the bus. Stop the incident immediately in front of the entire busload of students.

**STAY PROFESSIONAL**

- Young people greatly resent any sign of favoritism. Avoid being too lenient with normally well-behaved students and too harsh toward those who have been causing trouble.
- Never lose your temper. In the event of an argument or misunderstanding, the less emotion you display, the less emotion you will rouse in the student. Avoid using threats or physical force. Be consistent in your actions.
- Young people tend to test adults to see how far they can go or how much they can get away with doing. Deal with this behavior fairly and firmly, avoiding harshness or unfriendliness. If students know that reasonably good behavior is expected of them at all times on the school bus, then you may not have any real disciplinary problems.
- Start out the school year being extremely strict and gradually lessen discipline, if bus behavior remains satisfactory. Students may also calm down during the course of the year. If a difficult child shows signs of calming down, do not hold a grudge; rather, show encouragement.
- Do not exchange wise cracks and gossip with the students, as your actions should aid the educational program of the school district. Avoid shouting, arguing, and obscene or profane language.
- Avoid biases against students. Do not prejudge students because of family name, background, appearance or neighborhood. Avoid being overly suspicious, but be alert for potential discipline problems.
Instructor Notes:

**Set Discipline Standards**
Emphasize the list of discipline standards, and in particular emphasize that the bus driver is responsible to set the standard of behavior on the bus, and that student passengers will more likely respond to positive encouragement.

**Work with School Authorities**
Q: Do you remember who is ultimately responsible for student discipline on the bus?
A: The school principal.

Q: Does the principal ride the bus with you?
A: Not likely.

Q: What, then, is the school bus driver’s responsibility with regard to student discipline?
A: The school bus driver is responsible to keep the students on the bus safe. Most behavioral problems are minor and can be handled by the driver according to school district policy. However, when extraordinary problems occur, the driver’s job is like first aid – keep everybody safe, defuse the crisis, and report incidents to the their supervisor or principal for extraordinary responses – always within written school district policy.
• Act in a responsible manner. Show the importance of your job in your actions.
• Always be courteous to children. Provide compliments whenever possible.
• Keep alert. Do not ignore minor incidents; they can easily become major problems.

SET DISCIPLINE STANDARDS
• Do everything possible to inform students they have important responsibilities in ensuring group safety.
• Settle discipline problems quickly.
• Handle serious discipline problems only when the bus is stopped.
• Seat any troublemakers near you where you can see them and observe their behavior.
• Display smooth driving skills; poor driving habits often increase student misbehavior and frighten younger passengers.
• Be firm, fair, impartial and consistent.
• Never lose your temper.
• Treat students as you would like your child to be treated.

WORK WITH SCHOOL AUTHORITIES
Discipline on school buses is the biggest problem confronting school bus drivers, and the critical relationship to nurture is the one with school authorities.

While a school bus driver is not alone when it comes to solving discipline problems, he/she may be alone when a disturbance occurs. You are responsible for the conduct of students on your bus, but you must have the backing of the school administration to effectively discharge this responsibility. A copy of local school district rules should be posted in a conspicuous place in the bus. Always follow written school district policy. In cases of continued misconduct, report the student to the supervisor or school principal.

In many school districts, the first action taken is a reprimand. A withdrawal of bus privileges for a short period of time may occur next. If the student's behavior does not improve after returning, the privilege to ride the bus for the balance of the school year may be denied or the student may be transferred to another bus. Never put a student off of the bus for misconduct; you are not empowered to make the decision yourself. School officials may take this step after all other measures have failed to improve the situation. Keep in mind some districts will discipline a student while in school so as not to interrupt their educational experience. Some students will not come to school, if they are denied a ride on the bus.

Remember the following pointers:
• Always follow the local policy adopted by the school board.
• Supply a copy of the rules to each student and post a copy of the rules so every student is aware of your expectations.
• If any action taken by the school administration does not promote good or safe school bus behavior, ask to meet with your supervisor to discuss the matter. They can work with administration to emphasize the safety of the entire busload of students is threatened, if no action is taken against chronic offenders.
• Maintain close contact with the principal and secure their cooperation.
Don’t Deal with On-Bus Problems When Loading and Unloading
This is an important point of emphasis and one that is repeated in other units. This discussion can provide a smooth transition to Unit C as well.

Q: Why is loading and unloading not the time to deal with on-bus problems?

A: Emphasize that loading and unloading are particularly dangerous times during the provision of transportation services because of the exposure of students to traffic and the potential for a serious incident, and the number of other safety-related procedures the driver must pay attention to. It is therefore not the time for managing disciplinary problems. The driver’s full attention must be focused on the roadway around the bus during loading and unloading.

Assertive Discipline - Introduction
Q: What is the school bus driver’s primary goal?
A: To safely transport student passengers to and from school.

Q: What is the school bus driver’s primary need from students?
A: To behave in ways that contribute to the safety of the bus.

Q: What is the primary need of student passengers on the bus?
A: To be safe.

Assertive discipline is an approach to classroom management developed by Lee and Marlene Canter. It is a structured, systematic approach designed to assist educators in running an organized, teacher-in-charge classroom environment. Its principles can be applied to the school bus environment. You want an organized, driver-in-charge bus environment. While there are other theories on behavior management, assertive discipline is one of the most widely used behavior management programs today and is more democratic and cooperative than the ‘traditional’ authoritarian approach. The approach maintains that bus drivers must establish rules and directions that clearly define the limits of acceptable and unacceptable student behavior, teach these rules and directions, and ask for assistance from parents and/or administrators when support is needed in handling the behavior of students. Students must follow the rules you have established at all times; positive recognition results for students who follow the rules, and escalating consequences result for those who do not.

Assertive Discipline – Student needs
The needs of school bus drivers and their student passengers is the same — safe behavior on the bus. The principles of assertive discipline are useful for helping school bus drivers and their passengers to achieve their common need.

Assertive Discipline – Driver needs
The essence of assertive discipline is that the school bus drivers make their needs clear to the students. If students know what to expect, they will know how to respond. They cannot respond appropriately if they do not know what the expectations are.
DON’T DEAL WITH ON-BUS PROBLEMS WHEN LOADING AND UNLOADING

In order to get students to and from school safely and on time, you need to be able to concentrate on the driving task. Loading and unloading requires all your concentration, especially considering the number of injuries and other incidents that occur during these times. Don’t take your eyes off of what is happening outside the bus. If there is a behavior problem on the bus, wait until the students have finished loading or have unloaded to a place of safety. If necessary, pull the bus over to handle the problem.

ASSERTIVE DISCIPLINE

There are many differences between the students of today and the students of past decades, and past disciplinary techniques used by school bus drivers and other school officials/personnel are no longer as useful as they once were.

While there are many theories regarding behavior management for children, one respected set of guidelines and disciplinary skills known as assertive discipline, can assist school personnel, including school bus drivers with handling disciplinary problems (Canter, 1976, 1992). Assertive discipline was developed for classroom situations so teachers and other personnel would be able to understand and communicate their needs to students in order to meet the needs of the students. A more productive environment results when needs of students and teachers are met. Essentially, a key to this technique is catching students being “good,” recognizing and supporting them when they behave appropriately, and on a consistent basis letting them know you like what they are doing.

Assertive discipline can and should be applied to school bus driver/student situations. School bus drivers need to have an orderly and quiet bus; students need a safe ride to and from school. The ride is much safer for the students when your needs are met. Along with the differences in today’s students, individual bus drivers also differ. Each bus driver operates in a different manner and may allow behaviors other bus drivers will not allow. This creates a conflict for the student who expects you to react in the same manner previous bus driver. Assertive discipline can help you communicate your particular needs to the students. Although you should effectively maintain order on the school bus, you also need to avoid alienating students or infringing upon their rights. Setting limits for the students must be balanced with showing compassion and warmth.

An assertive discipline plan can be used by you to:

- Provide students with clear expectations;
- Help you handle all behavior (major and minor) problems consistently;
- Provide a common approach everyone understands;
- Prevent you from reacting emotionally or overreacting; and
- Remind you to frequently praise students and acknowledge positive behavior.

Disciplinary measures can be categorized into three types: non-assertive, hostile and assertive. These terms describe the methods used, not the person using them.
Instructor Notes:

**Non-assertive Discipline**

Q: What can you expect to happen if you do not tell your student passengers what you expect from them?
A: They may behave in ways inconsistent with your expectations.

Q: What can you expect to happen if you do tell your student passengers what you expect from them, but do not act consistently with your words?
A: They will behave in ways inconsistent with your expectations.

**Hostile Discipline**

Emphasize that hostility is not appropriate behavior for school bus drivers. This kind of behavior can frighten student passengers and, in extremes, can violate their civil rights.

**Assertive Discipline – Driver characteristics**

Emphasize that assertive bus drivers:

- Are neither hostile nor passive;
- Are engaged in the well-being of their student passengers on the bus;
- Are positive;
- Are confident;
- Clearly communicate; and
- Reward good behavior.
NON-ASSERTIVE DISCIPLINE
There are two basic situations that can be classified as non-assertive discipline. First, if you do not clearly convey your wants and needs, then the student cannot be expected to follow them. A second non-assertive technique is to state your needs, but not back up the statements with actions. A bus driver who acts in a non-assertive manner is passive. Students will not usually cooperate with a non-assertive individual. If you feel you cannot handle student behavior, let students misbehave, back down when challenged, or feel overwhelmed, you are most likely a non-assertive driver, and you will need to change to manage student behavior.

HOSTILE DISCIPLINE
On the other hand, hostile bus drivers express their wants and needs in (negative) ways that may violate the rights of the student. While students usually obey a hostile bus driver, they may become afraid of you and act more aggressively when threatened. If you find yourself yelling constantly, threatening students (and not following up), or using physical force, you are acting in a hostile way, which is not appropriate for a school bus operator.

ASSERTIVE DISCIPLINE
Assertive discipline creates a positive environment in which the needs of you and your students are met. It creates a balance between the rights of each person, and a balance between the limits you place on students and the support you show for students. Because of this, the students trust and respect you (Canter, 1976, 1993).

Assertive bus drivers are neither hostile nor passive. They clearly state their needs and back up their statements with appropriate actions. Assertive drivers have a positive outlook and believe in their abilities. They communicate effectively and plan how to respond with actions. They are persistent and quick to respond in a meaningful way, operating in a take-charge manner, but aware of the support needed by each individual child. To summarize, assertive bus drivers:

- Are the boss on the bus;
- Say what they mean and mean what they say;
- Clearly and firmly tell students exactly how they want them to behave;
- Stay calm and use a normal tone of voice;
- Have a plan of action when students do not behave; and
- Reward students when they do behave. (Canter 1987)

To become an assertive bus driver,

1. Start with an assertive attitude—No student will stop me from driving a safe bus;
2. Speak assertively—calm, firm, clear, and without anger;
3. Have an assertive discipline plan:
   a. Set clear, simple rules for behavior on the bus
   b. Have consequences when students don’t follow the rules and be sure consequences match the problem behavior; and
   c. Provide positive rewards when students do behave.
**Assertive Discipline – Who is in charge?**

Q: Who has ultimate control over the behavior of the students on the bus?

A: The bus driver.

Emphasize that making excuses for poor student behavior is easy, but the better decision is to use your skills as an adult and a professional to positively influence student behavior as much as possible.

**Assertive Discipline – Effectiveness**

Q: Does Assertive Discipline come with a guarantee?

A: No. No disciplinary plan is guaranteed to work. When assertive discipline does not work, seek assistance form co-workers, teachers, or the principal.

**Gang Awareness**

Conventional wisdom suggests that gang activity is found in large urban areas, but not in smaller towns or even suburban areas. However, the reality is that while school bus drivers in large urban areas may deal with gang presence on their routes, school bus drivers in other locales across the state may also have to deal with gangs, or gang-like activity, along their routes to school.

The material presented here is for school bus drivers who may encounter gang activity along their routes to school. Instructors may have to determine how much time should be spent on this section based upon the need in their area.
Several obstacles may stand in your way as you try to achieve assertive discipline. First, you will not be able to influence a student, if you do not believe you can. It’s easy to make excuses for poor student behavior, such as heredity, ignorance, peer pressure, inadequate parenting, socio-economic background, or environment. You need to recognize the difference between students who cannot control their actions and those who can, but choose not to control them. Even many students with disabilities can choose whether to display good or poor behavior, as referenced in Unit D.

Don’t forget you must identify a student’s individual needs for a given bus trip; they may be different for field trips than for routine trips. You must also be able to clearly state these needs to all students on the bus. Tell all students you expect them to behave well and tell them the consequences, should they choose to behave poorly. Reinforce these directives by following through with appropriate actions. This includes praise when a student does something well and discipline for poor behavior. All students must receive the same disciplinary sanctions, but recognize some students need more attention and support than others. Misbehavior in a student may indicate the need for extra attention.

No disciplinary plan is foolproof. Some students will continue to misbehave even when you have acted correctly. Sometimes you will need to ask the help of other drivers, a teacher, or the principal in dealing with a particular student or situation. The assertive discipline plan is a necessary tool for routine student management.

BE ASSERTIVE!

GANG AWARENESS

One unique student discipline problem that may arise is gangs. Gangs have become commonplace in most cities, and unfortunately their members and activities are present on the school bus. Kids are entering gangs as early as elementary school. While you, as a school bus driver, cannot control who is or is not recruited, you can report unusual or inappropriate behavior to your supervisor. Under no circumstances are you, the bus driver, to confront gang leaders or potential gang members. Explain to your bus riding students the rules of the bus (what is and is not acceptable behavior). If they misbehave, follow district policy.

Gang activity is extremely serious and sometimes deadly. Never interfere. Should you see gang signs or symbols on the outside or inside of the bus, report it and then remove it. If you or your students are approached by gang members, avoid a confrontation, leave the area as quickly and as safely as possible, then report the incident to your dispatcher.

GANGS AND THE BUS DRIVER

Gang members generally bother kids who are not in gangs and are usually more interested in fighting rival gangsters, not a school bus driver. They usually associate only with fellow gang members. It is important to set and enforce rules on the school bus and at the school bus stop. Gang members need to know the school and school bus stop are neutral zones, and gang violence will not be tolerated. When speaking to a suspected gang member, do not disrespect the gang, their family members or friends. Speak one-on-one with the student, and do not belittle them. Treat them with the same respect all students deserve. If they misbehave, follow local school district policies.

Make sure you report all incidents that appear to be suspicious to the proper school district official. Listen to the kids on your bus since they often know what is going to happen long before the school district official or police are made aware of a problem. Some school districts may have 24-hour tip lines students should be aware of, if they are afraid to come to you. Refer to your school district policy.
Instructor Notes:

**Gangs and the Bus Driver**
If condensed to its most essential elements, the summary points listed on this page in the operator’s manual are:

- Treat everyone with respect – even gang members.
- Treat everyone with equal respect. You may be aware that a student is a member of a gang, but your behavior toward that student must be the same as other students – not more lenient, not more harsh.
- Treat everyone within limits established in written school district policy.
- Remember that your primary responsibility is the safety of the students on the bus.

Note: It may be helpful to check with your local law enforcement to learn what your localized gang signs or symbols may look like.

**Bullying and Harassment on the School Bus**
Sexual harassment and bullying have become legal issues, and as such, school districts have moved toward zero-tolerance policies regarding these behaviors to minimize their exposure to liability.

As a school bus driver, you are interested in developing and maintaining an environment that encourages positive behavior. You are also required to operate your bus and manage the behavior of your student passengers within school district policy. Reaching both of the goals means doing what you can to minimize sexual harassment and bullying on your bus.
A few summary points when dealing with gang issues:

1. Be assertive, decisive, firm, and fair. Lenient treatment of gang members is viewed as a weakness, and they will take advantage of your “weakness.”

2. Intimidation of gang members usually escalates into a confrontation and seldom creates respect. Remember, lectures to scare “gangsters straight” DO NOT WORK!

3. When gang graffiti is found, report it and remove it as soon as possible. It will attract rival gangs and/or invite more “writing on the wall” and vandalism of your bus.

4. Prevent conflict whenever possible. Experience has proven that an incident, no matter how minor today, can cause more gang-related or motivated acts of vengeance or reprisals as much as two or more years later.

5. Never insult or show disrespect for a gang member, particularly in front of his or her peers. In the gang subculture, no insult goes unchallenged.

6. Never be critical of gang clothing, slang, tattoos, jewelry, hand signs, rap music, graffiti, or other indicators of the gang subculture. This would be an obvious form of disrespect.

7. Never confront gang status, only behavior.

8. Never confront a gang member in the company of their gang peers. This invites resistance in normal society let alone in the gang subculture.

9. Never mimic gang activity by affecting a gang stance or throwing a gang hand sign.

10. Never call a gang member a “wannabe.” This is openly disrespectful and may induce the individual to prove you have underestimated them.

11. Never place rival gang members together.

12. Never assume you are safe just because you are encountering a gang member in a school bus.

13. Never physically confront a gang member.

14. Never underestimate the threat from a young or small gang member.

15. Never assume anything.

BULLYING AND HARASSMENT ON THE SCHOOL BUS

While there is a great deal of research in the topics of bullying and harassment in the school setting, relatively little has been investigated in these topics on the way to or from school or on the school bus. One of the few recent studies that has been completed with high school students found more students reported being fearful of their peers on the school bus than they were during any other time of their school day (DeLara, 2000; 2002).

Harassment includes unfair and disrespectful remarks, written words, or pictures that are unpleasant and offensive. Similarly, a person is bullied when they are exposed repeatedly over time to the negative actions of one or more other students. These actions may range from stares and teasing up to and including physical assault. Research has found that two incidents of bullying occur on each bus ride, and a full bus and poorly supervised conditions are prime environmental factors for bullying (Raskauskas, 2005).

Sexual harassment, in particular, appears to be rampant among secondary students with 80 percent of students reporting sexual harassment, and half of all students admitting they sexually harass others (AAUW, 2001). This type of harassment has also been reported among middle school age students. In fact, one university researcher has indicated sexual harassment is a much more serious issue in public schools than most people have been willing to admit, and it’s much more likely to occur in unsupervised venues like buses or bathrooms (Williamson and Aratani, 2005). Remember that sexual harassment is a form of sex discrimination and is illegal according to Title VII of the Civil Rights Act of 1964, as amended, which protects the adolescent at work, and Title IX of 1972, which protects the teen from sex discrimination at school.
Instructor Notes:

**Description of Harassment and Bullying**

Emphasize the kinds of sexual harassment and bullying opposite this page. The ability to identify these kinds of behaviors can help school bus drivers develop appropriate responses toward maintaining a more positive atmosphere on the bus. Use the case studies provided with this Manual and add your own.
UNIT B - Student Management and Discipline

DESCRIPTION OF HARASSMENT AND BULLYING
Harassment includes unwelcome remarks or behavior that shows disrespect for its victims. It hurts and harms the students in long-lasting ways. No student should be treated in this manner.

- It is a deliberate or repeated behavior, which is unwelcome, not asked for, and not returned.
- It is intentional.
- The behavior can be verbal, nonverbal, visual, and/or physical.
- Examples of verbal harassment could include teasing someone about their body development or body parts; telling dirty sexist jokes; calling others names that have a negative sexual meaning; or saying something to someone about sexual acts.
- Examples of nonverbal harassment could include looking at another person in a way that makes them feel uncomfortable (suggestive looks, leering, staring), obscene gestures or whistling.
- Examples of visual harassment could include glaring or staring; obscene/ suggestive letters, notes, or graffiti; obscene/suggestive pictures taped on notebooks.
- Examples of physical harassment could include “purposely” brushing against someone’s body; “friendly” pats, pinches, grabs and holds; pulling down someone’s gym shorts; or using force to “physically hold/ corner” a person in one place.
- Examples of cyber bullying could include the use of e-mail, instant messaging, chat rooms, pagers, cell phones, or other forms of information technology to deliberately and repeatedly, harass, taunt, ridicule, threaten, or intimidate someone. This can occur on the bus or at a bus stop.
- The word “unwelcome” places responsibility on the receiver to tell the sender the behavior is unwanted.
- The student who is a victim may:
  a. Suffer from loss of confidence or self-esteem;
  b. Find it hard to study and pay attention; and
  c. Dread or even avoid going to school or sports in which they anticipate harassment.

School personnel have a legal responsibility to protect students from known or reasonably foreseeable harm occurring during or in connection with school activities.

Harassment and bullying are not limited to children. Often the school bus driver has been the victim of harassment. If you feel as though you have been harassed, report the incident to your supervisor.

The bus driver should expect all students to travel with dignity and respect, and to arrive at school safely and ready to learn. In the transportation arena, we have an opportunity and obligation to be role models who will display and expect respect is always the order of the day. If a student confides in you, listen, and show understanding and support.

When you hear unkind, and humiliating remarks, respond immediately.

In her exploratory study, DeLara (2008) outlined the following strategies developed BY school bus operators, FOR school bus operators to help combat bullying and harassment:

1. Seat who are susceptible to bullying or being victimized children close to the driver;
2. Separate children who are fighting or having difficulty and assign seats;
3. Be “aware of everything” and watch for the moods and signs of troubled kids;
4. Talk with bullies about being respectful on the bus;
5. Intervene before anything happens and discuss with students;
Instructor Notes:

**Reporting Suspected Child Abuse and/or Neglect**
Seeing children each day gives school bus drivers the opportunity to notice changes in individual's behavior that can signal abuse or neglect.

Be sure to know your school district’s policy regarding the gathering of information and reporting suspected abuse or neglect.
6. Maintain a good relationship with each child;
7. Ask about interests and hobbies;
8. Try to engage potential bullies in positive conversations; and
9. Above all, talk to students with respect.

These strategies build on the strengths of aggressive children and distract them from disrespectful and disruptive behavior.

In cases of bullying or harassment, you as the school bus operator must document and report all incidents and allegations. Take all your concerns to your supervisor, principal or other designated school personnel.

**REPORTING SUSPECTED CHILD ABUSE AND/OR NEGLECT**

In some unfortunate circumstances, you may encounter a situation where levels of bullying or harassment have severely escalated. School bus drivers have the unique opportunity to get to know their students. Often the same driver will be assigned to a route transporting the same students for several years. This gives drivers the chance to develop relationships with students that other district staff may not have. Because of this level of trust, it is possible that a student may disclose information to a driver or the driver may begin to observe behavior leading to a suspicion of child abuse or neglect.

Each school district and/or transportation department should have specific policies and procedures that must be followed to facilitate reporting of suspected child abuse or neglect. This may include specific forms for documentation or a designated contact person. Know your district’s policies and procedures for reporting suspected child abuse or neglect.

Whether you are reporting through district channels or directly to Child Protective Services (CPS), the following information is needed to the extent available:

- Name, address, and age of child;
- Name and address of custodial parent/guardian;
- Nature and extent of injury/injuries;
- Nature and extent of neglect;
- Nature and extent of sexual abuse;
- Evidence of previous injuries, including nature and extent; and
- Any other pertinent information supporting the reasonable suspicion of abuse, neglect, or the perpetrator.

The law protects any person reporting or testifying regarding suspected child abuse and neglect. You are immune from any liability resulting from such reporting/testimony.
UNIT C LESSON SUMMARY
STUDENT LOADING AND UNLOADING

INSTRUCTOR’S PERSPECTIVE
While school buses are the safest mode of ground transportation, loading and unloading can be among the most
dangerous times for student passengers. As was alluded to in Unit B, even discipline issues are delayed during
the loading and unloading process in deference to the focus required to ensure safety during this time. While the
number of serious injuries and death associated with school bus transportation are relatively few compared to
other forms of transportation, the consequences of error are worthy of all efforts made to avoid them. Vigilance
during loading and unloading is critical to safety.

TRAINEE OBJECTIVES
1. Recognize why loading and unloading are the most dangerous situations in transporting students.
2. Know the laws and regulations of the use of the school bus eight-way light system.
3. Be able to demonstrate proper loading and unloading procedures, including use of signal lights,
   helping students cross a roadway, and proper seating of passengers.

LOCATION
Classroom - This can be supplemented by a live demonstration in a school bus. Please note that a live
demonstration does not count toward in-bus training.

DELIVERY MODE
Lecture and discussion

MATERIALS
  • Classroom Aids - LCD Projector (screen optional), chalkboard, chalk, and eraser or flipchart and
    marker, PowerPoint presentation
  • Handouts - PennDOT Crash Facts and Statistics, Unit C Study Guide

RESOURCE PERSONNEL
An experienced school bus driver with Instructor Training is a key person who should instruct part of this lesson.
Other experienced drivers can be available to provide real-life examples.

SUMMARY AND REVIEW QUESTIONS
  • Summary - This Unit should receive emphasis in both new driver and recertification courses. Review
    the tragedy of student fatalities to emphasize the importance of understanding the danger zone and
    always knowing where students are during loading and unloading. Stress that the highest number of
    student fatalities occur during loading and unloading. Many new drivers begin working as substitute
    drivers, so the role of substitute drivers and their need to replace familiarity with vigilance should also
    be emphasized.
  • Review Questions -
    1. What is the “Danger Zone”?
    2. Why is the “Danger Zone” potentially hazardous?
    3. What tools do school bus drivers have at their disposal to mitigate the hazards of loading
       and unloading?
    4. What are the four steps to loading or unloading student passengers?
5. When should you activate your eight-way flashing light system when approaching a loading zone?
6. What are the special dangers of loading and unloading zones?
7. Where should students cross the road if necessary?
8. In what gear should you place the bus to load and unload?
9. Which vehicles may pass a stopped school bus that is loading or unloading?
10. Why is counting students loading and unloading important?

REFERENCES

Websites

PennDOT Publications
- Pennsylvania’s School Bus Stopping Law Brochure (Publication 97): http://www.dmv.state.pa.us/pdotforms/fact_sheets/fs-pub97.pdf

Laws and Regulations
- Pennsylvania Code – Transportation (Title 67): Key Chapters are Chapters 104 and 171 http://www.pacode.com/secure/data/067/067toc.html
- The Pennsylvania Vehicle Code (Title 75). Key Sections are 3345 and 3105 http://www.dmv.state.pa.us/vehicle_code/index.shtml

Other
- Local regulations and/or procedure guides, if available.
1. **LOADING AND UNLOADING FATALITIES**
   A. Students are sometimes killed by their own school bus because the bus driver could not see them crossing in front of or behind the bus.
   B. Sometimes students will return to the bus after unloading because they forgot something. Be careful to check your mirrors and proceed only after all students are away from the bus.
   C. Children are sometimes killed by motorists not respecting the traffic laws concerning school bus loading and unloading.

2. **THE LOADING AND UNLOADING AREA**
   A. The “Danger Zone” is 10 feet from the bus, on all sides.
   B. Children must be taught how to be safe, especially during the loading and unloading process. Safety extends from arriving at the bus stop, through transport, to arriving at home after school. You should remind the children that they should be at their designated bus stop at least 5 minutes early.
   C. Motorists learn the bus driver's intentions when the driver uses the safety warning devices on the bus.
   D. The school bus eight-way light system, the side stop arm with STOP sign, and the crossing arm are tools at the driver’s disposal to control, as much as possible.

3. **SELECTING LOADING ZONES**
   A. Load students only at designated bus stops.
   B. Students should wait at a designated place, at least 10 feet from the edge of the roadway.
   C. Students should be waiting when the bus arrives.

4. **LOADING PROCEDURES**
   A. Approach and Check
      - Slow down, in preparation for the stop.
      - Watch for late-arriving students.
      - Activate amber flashing lights when you are 150 to 300 feet from the stop.
      - Check all mirrors for traffic.
      - Approach students with care, giving consideration to the road surface and weather conditions.
   B. Stop
      - Come to a full stop.
      - Set the parking brake.
      - Place the transmission in neutral.
      - Open service door slightly (note that this may not be possible with some automatic doors), activating red flashing lights and side stop arm.
      - Open service door completely only after traffic has stopped.
C. Load
   ✦ Be sure to count students as they enter the bus
   ✦ Have students board slowly, in single file, and using the handrail.
   ✦ Seat students according to local policy.

D. Check and Proceed
   ✦ When all students are loaded and seated, close the service door, deactivating red flashing lights.
   ✦ Check all mirrors, check traffic, put transmission in gear, and release the brakes.
   ✦ Recheck mirrors and proceed to next stop.

5. UNLOADING PROCEDURES
   A. Approach and Check
      ✦ Slow down, in preparation for the stop.
      ✦ Check rearview mirrors for traffic conditions as you approach.
      ✦ When you are 150 to 300 feet from the unloading zone, activate the amber flashing lights and brake gradually.
      ✦ Make sure students do not stand until you are fully stopped.
      ✦ Recheck all mirrors to ensure traffic is clear.

   B. Stop
      ✦ Come to a full stop.
      ✦ Set the parking brake.
      ✦ Place the transmission in neutral.
      ✦ Open service door slightly (if physically possible), activating red flashing lights and side stop arm.

   C. Unload
      ✦ Remember, it is illegal to unload a student at a stop other than a school bus loading zone that has been established by the school district. You may also want to check your local policy on dropping students off at other designated loading zones that the student is not assigned to.
      ✦ Students should leave the bus in an orderly manner, without running.
      ✦ Students who must cross a roadway after exiting the bus must cross in front of the bus.

   D. Check and Proceed
      ✦ Check all mirrors for students returning to the bus, and for pedestrians and traffic.
      ✦ Close service door to deactivate the buses’ safety features, including the red lights.
      ✦ Recheck child safety and mirrors, and then proceed to the next stop.

6. SPECIAL DANGERS OF LOADING AND UNLOADING ZONES
   A. Dropped or forgotten objects.
   B. Handrail dangers.
   C. Schools.
   D. Students left on the bus.
   E. When possible, don’t deal with on-bus problems when loading or unloading.
7. **ENFORCING THE SCHOOL BUS STOPPING LAW**

   A. On highways not separated by a physical barrier, traffic in all directions must stop at least ten feet from the bus.

   B. On highways separated by a physical barrier, traffic moving in the same direction as the bus must stop at least ten feet from the bus.

   C. The driver of a vehicle approaching an intersection where a school bus is stopped for loading or unloading must stop at the intersection.

   D. Emergency vehicles must stop for the red flashing warning lights of a stopped school bus. They may also proceed after exercising due diligence.

   E. Drivers observing violations must do their best to warn students not to attempt to cross the highway.

   F. Gather as much information about the violation as possible, including driver and vehicle information. Deliver this information in a signed, written report within 48 hours to the police agency with jurisdiction.
UNIT C - STUDENT LOADING AND UNLOADING

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ENFORCING THE SCHOOL BUS STOPPING LAW .......................................... C-9
Instructor Notes:

INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the driver’s manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the driver’s manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Fatalities During Loading and Unloading
Emphasize that the number of fatalities involving school buses is very low, but when fatalities occur, they most often occur during loading and unloading.

In Pennsylvania, from 2000-2010, 4 students were killed while entering or leaving the school bus.

The Kansas State Department of Education conducts an annual “National School Bus Loading and Unloading Survey” resulting in a collection of fatality crash records provided by the state agencies responsible for school transportation safety and/or crash records. Only those fatalities involving school children in or around the loading or unloading areas of a school bus or transit bus are included in this survey. Onboard fatalities are excluded. A link to these surveys is provided in the Unit C Lesson Summary.

As an instructor, you may want to access the surveys and review crashes from across the country and share them with your trainees. Several are included in the Driver’s Manual for discussion.

Of the crashes described in the driver’s manual, the first 4 fatalities were from the 2007-2008 National School Bus Loading and Unloading Survey, the next 4 fatalities were from the 2006-2007 National School Bus Loading and Unloading Survey fatality report and the last two were from the 2005-2006 National School Bus Loading and Unloading Survey.
UNIT C - STUDENT LOADING AND UNLOADING

INTRODUCTION

In Pennsylvania, and across the nation, incidents during student loading and unloading are responsible for more school bus-related fatalities than any other source. While fatalities are very low, you must be vigilant during student loading and unloading to help prevent these incidents from occurring.

Listed below are descriptions of a few fatalities. Unfortunately, students are often killed by their own school bus because the driver could not see them crossing in front of or behind the bus. A particularly hazardous situation is when a student leaving the bus reaches a point of safety, then re-approaches the bus, slipping under the wheels as it proceeds. To prevent these situations, you must be very attentive at all times during student loading and unloading.

FATALITIES DURING LOADING AND UNLOADING

- A student was waiting in his parent's vehicle across the street from the school bus stop. As the school bus slowed to approach the stop with its amber lights flashing, the student exited his mother's vehicle and darted in front of an oncoming vehicle. The student, a 6-year-old male, was struck and killed.
- A student was waiting at his bus stop when a car drove up on the sidewalk striking the student from behind. The student, a 10-year-old male, was killed.
- A student exited the school bus and crossed the street. The bus driver completed student drop off and pulled up to make a left turn. As the driver was turning, the student, a 9-year-old male, chose to run toward the bus and slipped on the ice and slid under the bus, being run over by the left rear duals.
- A student was exiting her bus after dark at her bus stop. An oncoming vehicle failed to stop for the flashing school bus lights and struck her with the left front bumper. There was no evidence the driver applied the brakes. The student, a 5-year-old female, died without regaining consciousness.
- A 5-year-old female student was run over and killed by the left rear wheels of her school bus after she had exited the bus.
- A 6-year-old male student unexpectedly ran back toward the school bus, after he had been discharged from the bus and was struck and killed beneath the left front wheels of the bus.
- A student arrived at his bus stop early and decided to cross the road to a store on the opposite side of the road. When the student came out of the store, he saw the school bus approaching his stop and was in a hurry to get back to the bus stop. As the 9-year-old male ran across the roadway in the direction of his stop, he was struck and killed by a passing vehicle.
- A student and his brother missed their bus at the assigned bus stop location. The students went to their old bus stop, which had been declared unsafe due to sight distance. The bus driver had been instructed by dispatch not to pick up the student at the old location. As the school bus driver was coming up the road, the two students were in the roadway attempting to stop the bus. The school bus driver opened her driver's window to tell the students she could not pick them up at the location when an approaching vehicle came over the hill. One student was able to get out of the roadway, but the other, a 16-year-old male, was struck and killed by an approaching vehicle. The bus did not have the eight-way light system in operation.
- A 4-year-old male student ran back toward the bus to pick up something he had dropped, and was struck and killed by the right rear dual wheels of the bus.
- A student was late getting to her bus. As she ran up on the right to catch her bus, the 10-year-old female was struck and killed by the right rear dual wheels of the bus.
Instructor Notes:

**The Loading/Unloading Area**

**Q:** Why do you think loading and unloading are among the most dangerous times for student passengers?

**A:** During loading and unloading, student passengers are outside of, and sometimes too near the bus. They are in danger of being struck by passing motorists and the bus itself. Sometimes students can be unpredictable and make decisions that are not the safest, like coming back to the bus because they forgot something. A driver has to be vigilant at all times.

**The Loading/Unloading Area – Danger Zone**

Emphasize the location of the danger zone at 10’ immediately around the bus.
UNIT C - Student Loading and Unloading

Loading and unloading maneuvers expose students and drivers to many hazards. You must be aware of the proper procedures for driving the bus and maintaining student behavior while performing these maneuvers. Driving procedures can be found in Units F and G.

This unit presents procedures for maintaining safety during loading and unloading. These procedures include: controlling traffic; assisting students crossing streets or highways; seating the students; and loading and unloading the students. The procedures below also cover proper use of the eight-way light system at the bus stop.

THE LOADING/UNLOADING AREA

While children are safest on the school bus, the school bus loading and unloading area is a dangerous location because children are at a greater risk of being struck. The 10-foot area immediately around the bus is known as the danger zone because it is the area where children entering and exiting the school bus are at greatest risk of being hit by a motor vehicle, or accidentally run over by their bus driver. It is shown below in Figure C-1.

To help alleviate the danger in the loading and unloading area, the school bus driver has a number of tools at their disposal.
Instructor Notes:

**Education**
Q: Who is the best person to educate student passengers about loading and unloading procedures?
A: The school bus driver.

**Physical Tools – eight-way light system**
Q: Describe the eight-way light system.
A: Two amber flashing lights and two red flashing lights mounted on the front and rear of the school bus.

**Physical Tools – Side stop arm and crossing arm**
Q: Does the bus have any other built-in safety features for loading and unloading?
A: A side stop arm with a STOP sign, and a crossing arm.

Q: What does the crossing arm do?
A: Causes students to walk far enough in front of the bus so the bus driver can see them.

**When Selecting Loading Zones at a Bus Stop,**

**Follow These Procedures Carefully**
Emphasize these five components of the loading zone selection Procedure by allowing trainees to read them aloud – one trainee reading the first component, a second reading component 2, etc.

As an Instructor, it may be helpful to have a copy of Chapters 71 and 104 of Title 67 and a copy of the CDL Manual (Publication 223). Links to these are provided in the Unit C Lesson Summary.

After explaining the five components of the Approach and Check Procedure, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. It may be helpful to break the class into groups and move from group to group when explaining the Loading and Unloading Procedures on the next few pages.

Note that the loading and unloading processes will be practiced numerous times as part of the one-on-one, in-bus training in preparation for the skills test. Reviewing these procedures before they practice will be important for retention. If this is a recertification class, it is your opportunity to correct any mistakes you notice.
EDUCATION

Educating children on how to be safe pedestrians is fundamental to school bus safety. Beginning with their first step onto a school bus, children must learn how to safely arrive at the school bus stop, board the bus, behave during the bus ride, exit the bus, and arrive home safely. Most of the time, children only get this information from the school bus operator. If the school bus operator doesn’t instruct them on these items, chances are no instruction will be received until they get in trouble.

As a school bus operator, not only are you educating the students that ride your bus, you must also adequately warn (educate) other motorists of your actions when loading or unloading students. This is accomplished through different devices on the school bus.

PHYSICAL TOOLS

All school buses in Pennsylvania are equipped with a school bus eight-way light system. This system consists of two amber flashing lights and two red flashing lights mounted on the front and rear of the bus.

School buses also have a side stop arm with a stop sign and a crossing arm. The crossing control arm, which is attached to the front of the bus, causes students to walk far enough in front of the bus so the bus driver can easily see them.

WHEN LOADING AT A BUS STOP, FOLLOW THESE PROCEDURES CAREFULLY!

1. Load students only at designated bus stops approved by the school board. NEVER change a bus stop without approval by your supervisor. Student loading zones should be on the right side of the highway where visibility is clear. Refer to Chapter 104 of Title 67 for loading zone standards. Visit www.pacode.com.

2. Students should wait at a specific designated place. This place should be at least 10 feet from the edge of the highway at the approved bus stop. You may often have to remind students after they board to stay back from the bus as it approaches.

3. Tell students to be on time according to district policy. Typically this means students are to be at the bus stop five minutes before the scheduled pick-up time. The driver and students share the responsibility of maintaining the bus schedule.

4. As a bus operator, if you are running late, don’t speed to make up the lost time. Remember, it is safety first and schedule second.

5. If you arrive at a pick-up location early or on time and the student is not present, proceed with extreme caution. The student may be running late and be rushing to catch the bus. If you proceed without double checking, you may miss the location of the approaching child.
Instructor Notes:

**Loading Procedures – Approach and Check**
Emphasize safe driving practices as the bus approaches the stop: consider slippery road conditions, weather conditions, etc. Indicate that this will be discussed in greater detail in Units F and G.

**Loading Procedures – Stop and Load**
After explaining the five components of the stop and two components of the Load procedures, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees than responded previously.

Note that the loading and unloading processes will be practiced numerous times as part of the one-on-one, in-bus training in preparation for the skills test. Reviewing these procedures before they practice will be important for retention. If this is a recertification class, it is your opportunity to correct any mistakes you notice.

**Stop**
Step 4 under STOP indicates for drivers to open the front entrance door (service door) slightly. Note that this may not be possible with some air assist doors.

Drivers should note that doors on some of the newer buses cannot open slightly – it is all or nothing. Some do have an override switch, and drivers should look for this when learning about their bus.

**Load**
Q: Why should you count students while loading?
A: To ensure you have picked up all of the students assigned to that stop on your roster.
UNIT C - Student Loading and Unloading

LOADING PROCEDURES

APPROACH AND CHECK
1. When approaching the designated stop, start slowing down in preparation for the stop. Evaluate the stop as far in advance as possible and approach at a slow rate using extreme caution. Look for pedestrians, traffic or people who may not belong at the school bus stop.
2. Always watch for late-arriving students who may be running to the bus stop. Use the mirrors to check for students to the rear of the bus.
3. When the loading zone is between 150-300 feet away (at most the length of a football field), activate the amber flashing lights of the school bus eight-way light system to warn other vehicles. Brake gradually with the transmission in gear while approaching the stop. The greater your approach speed, the greater the distance away you should activate your amber lights.
4. Check all mirrors to see if traffic is clear and it is safe for you to stop.
5. Approach students with extreme care giving due consideration to the surface on which you are going to stop:
   a. When road and traffic conditions are normal, require students to stand at least 10 feet from the edge of the road. If students are not complying with this, remind them as they board the bus, before the next pickup.
   b. When road surfaces are hazardous (e.g., slippery, rough), stop short of the bus stop, by as much as 20 feet, and ease the bus carefully to the stop. Instruct students to always wait a safe distance from the flow of traffic, especially in inclement weather.

STOP
1. Come to a full stop;
2. When stopped, set the parking (emergency) brake;
3. Place the transmission in neutral;
4. Open the service door slightly (note this may not be possible with some automatic doors), activating the red flashing lights, side stop arm, crossing arm, and automatically deactivating the amber flashing lights of the eight-way light system; and
5. Check traffic to assure all traffic is stopped, and open the door completely ONLY after traffic stops.

LOAD
1. Instruct students not to move toward the bus until the bus stops and the door opens. Make sure to count all the students while loading. This will let you know if you have picked up all of the students assigned to that stop on your roster.
   a. When students must cross a roadway before getting on the bus, you must be able to see them at all times. When crossing in front of the bus, students should cross in front of the arm and should be able to see your face (at least 10 feet in front of the bus). If you have concern with a particular bus stop being at an unsafe location for students to cross the street (poor sight distance, long crossing distance for the student, etc.), let your transportation director/supervisor know immediately.
   b. Be alert to warn students of an illegally passing motorist. Stress that students must look both ways before crossing the street or highway in front of the bus. Do not tolerate crowding or pushing. Have students board the bus slowly, in single file, and using the handrail.
Instructor Notes:

**Loading Procedures – Check and Proceed**

After explaining the four components of the Check and Proceed Procedures, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees than those who responded previously.

Note that the loading and unloading processes will be practiced numerous times as part of the one-on-one in-bus training in preparation for the skills test. Reviewing these procedures before they practice will be important for retention. If this is a recertification class, it is your opportunity to correct any mistakes you notice.
UNIT C - Student Loading and Unloading

2. Seat students according to local policy. Refer to Unit B for Seating Plans.
   a. Keep in mind that seating capacity is limited according to the inspection sticker affixed on the bus by the Pennsylvania State Police. However, this rating is not an absolute; it is a maximum. Refer to Section 4552(d) of Title 75 as well as Sections 42, 69, and 144 of Chapter 171 of Title 67 for additional information on aisle and seating requirements.
      • Aisles shall be unobstructed at all times. Passengers may not be seated so as to encroach on the minimum aisle clearance.
      • A seating space at least 13 inches wide shall be provided for each passenger.
   b. Remember that passengers are not permitted to stand while the bus is in motion.

CHECK AND PROCEED
1. Check all mirrors around the bus for students.
2. When all students are accounted for, prepare to leave. Close the service door, which turns off the red lights, and retracts the stop arm and the crossing arm.
   a. Wait for everyone to be seated before putting the bus in motion. Otherwise, you cannot expect your passengers to remain seated while the bus is in motion. You may consider requiring students to be seated before the door is shut to help prevent a driver behind your bus accidentally rear-ending the bus and causing standing students to fall.
   b. Know the students assigned to your bus and be careful not to leave students stranded. Account for all the students on your bus.
   c. When all passengers are seated, prepare to proceed to the next stop.
3. Using all mirrors, check traffic, put the transmission into proper gear, then release the parking brake.
4. Check child safety, recheck the mirrors and proceed safely to your next stop.
**Instructor Notes:**

**Unloading Procedures**

Q: What is the biggest difference between loading and unloading procedures, other than the student passengers are getting off the bus during unloading?

A: During loading, students are typically gathered at a designated loading zone at the bus stop, while during unloading, students are moving through the “Danger Zone” of the bus as they leave the bus stop.

A simulated or actual student discharge is part of the driver recertification skills exam. The following are considered automatic failures.

1. Not activating amber lights 150'-300' in advance of discharge;
2. Not completely stopping, applying the parking brake, and putting the transmission in neutral;
3. Not checking traffic;
4. Not checking all mirrors around the bus; and
5. Not checking child safety and rechecking mirrors before proceeding.

Drivers should be made aware of all of the steps in the loading and unloading processes. They should know that in addition to the above automatic failures, a failure on this part of their exam can ALSO occur if they accumulate three or more errors.
UNIT C - Student Loading and Unloading

UNLOADING PROCEDURES

When unloading students, you must make sure all of your students get safely across the street and out of the danger zone. Unload students only at properly designated bus stops. Use the following procedures when unloading students at a bus stop:

APPROACH AND CHECK

1. When approaching the designated bus stop, start slowing down in preparation for the stop.
2. As you approach the bus stop, look in your mirrors to check traffic conditions.
3. When the loading zone is between 150-300 feet away, activate the amber flashing lights of the school bus eight-way light system to warn other vehicles. Brake gradually with the transmission in gear while approaching the stop.
4. Do not allow students to stand until the bus has come to a full stop.
5. Check all mirrors to see if traffic is clear and it is safe for you to stop.

STOP

1. Come to a full stop;
2. When stopped, set the parking (emergency) brake;
3. Place the transmission in neutral;
4. Open the service door slightly (if physically possible), activating the red flashing lights, side stop arm, crossing arm, and automatically deactivating the amber flashing lights of the eight-way light system; and
5. Check traffic and open the door completely after traffic stops, and ONLY after traffic stops.

UNLOAD

1. Do not permit students to leave the bus except at regularly assigned stops, unless they have written permission from a school administrator (Refer to school district policy). It is illegal for you to discharge students at places other than designated bus stops as per Section 3345(i) of Title 75.
2. Have students exit in an orderly fashion, counting them as they exit; this will let you know if you have dropped off all of the students assigned to that stop. Observe students as they step from the bus to see all move promptly away from the danger zone. Recount the students as they reach a place of safety outside of the danger zone, i.e. sidewalks, curbsides, or inside houses for door to door routes.
   a. Instruct students who must cross a roadway after getting off of the bus to stand on the side of the roadway far enough in front of the bus to see your face (at least 10 feet). Be alert for passing motorists so you may warn students. The students are to look both ways before stepping into the roadway. They should cross in front of the crossing arm.
   b. Instruct students who do not have to cross the roadway after unloading exactly where they should walk or wait until the bus pulls completely away. Tell them to never re-approach the bus.
   c. Students should never cross the roadway behind the bus.
   d. Take extra time with elementary school age students to make sure they understand these procedures. Be overly cautious when loading and unloading these students.
Instructor Notes:

**Unloading Procedures – Check and Proceed**
After explaining the four components of the Check and Proceed Procedure, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees than those who responded previously.

Note that the loading and unloading processes will be practiced numerous times as part of the one-on-one in-bus training in preparation for the skills test. Reviewing these procedures before they practice will be important for retention. If this is a recertification class, it is your opportunity to correct any mistakes you notice.

Again, as an instructor, it may be helpful to have a copy of Chapters 71 and 104 of Title 67 and a copy of the CDL Manual. Links to these are provided in the Unit C Lesson Summary.

**Unique Dangers of Loading and Unloading Zones**
Q: Besides the obvious exposure to traffic, can you identify some unique dangers to loading and unloading zones? For each, explain why.
A: Dropped or forgotten objects - Student may try to return to the bus to get them.
   Handrails and the bus door - Clothing or accessories may get caught. Pushing and shoving at schools - Students can get pushed in to the path of a bus.
   Students left on the bus: Some may have fallen asleep and missed their stop.

Refer to local policies and procedures regarding checking for students left on the bus: some do this in a safe location just after the last drop off. Others may do this at the bus yard before leaving their bus for the evening.

These might be more difficult for trainees to come up with if they do not have the Driver’s Manual in front of them. Feel free to prompt with hints.
CHECK AND PROCEED
1. Check all mirrors for students, and make sure students are not returning to the bus, and check for traffic and other pedestrians;
2. Close the service door to deactivate the flashing red lights, side stop arm, and crossing arm;
3. Check the mirrors, put the transmission in gear, release the parking (emergency) brake; and
4. Recheck child safety, recheck mirrors, and proceed safely to your next stop.

If you cannot account for a student outside the bus, secure the bus, (engage emergency brake, shut off the engine and remove keys) and get out and check around and underneath the bus.

WHEN IN DOUBT, CHECK IT OUT!
The following is an example of an alert, quick acting driver who prevented a tragedy:

- During a noon return of kindergarten students at a stop with a wide shoulder, the bus was stopped and a student was unloading. The driver saw a car in her mirrors that was obviously committed to passing the bus on the right side. The bus door was open, and the child was going down the steps. The driver grabbed the child’s coat and pulled her down onto the bus step.

Hopefully, you will be prepared to act in a similar manner if the situation arises.

UNIQUE DANGERS OF LOADING AND UNLOADING ZONES
1. Dropped or Forgotten Objects - Always focus on students as they approach the bus and watch for any who disappear from sight. Students may drop an object near the bus during loading and unloading. Stopping to pick up the object or returning to pick up the object, may cause the student to disappear from the driver’s sight at a very dangerous time. Students should be told to leave any dropped items and move to a safe place out of danger and attempt to get the driver’s attention to retrieve it.
2. Handrail Dangers - Students have been injured or killed when clothing, accessories or even parts of their body get caught in the handrail or door as they exit the bus. You need to closely observe all students exiting the bus to confirm they are in a safe location prior to moving the bus.
3. Schools - Another area where serious incidents occur is the loading and unloading zones at the schools. You as a driver must train your students not to push and shove other students when they get on or off the bus. Teach the students to use handrails and go directly to their seats and face forward at all times.
4. Students Left on the Bus - After your last drop off, in a safe location, make sure to walk to the back of your bus and check for sleeping or hiding students before returning to the yard.
Instructor Notes:

**When Possible, Don’t Deal with On-Bus Problems When Loading and Unloading**

This is an important point of emphasis and one that is introduced in Unit B.

Q: From Unit B, should the school bus driver use loading and unloading times as opportunities to handle discipline problems?

A: No. Pull the bus over to a safe place if discipline problems require it. The school bus driver’s attention during loading and unloading must be totally focused on what is happening around the bus.

**Enforcing the School Bus Stopping Law**

Emphasize the law in the Vehicle Code (Section 3345 of Title 75) regarding traffic’s obligations when they encounter a stopped school bus with red lights flashing.

Q: Why do school bus drivers need to know what cars should be doing when the buses’ red lights are flashing?

A: So the school bus drivers know what dangers to look for as students leave the bus and cross or walk along the streets on their way home.
WHEN POSSIBLE, DON’T DEAL WITH ON-BUS PROBLEMS WHEN LOADING AND UNLOADING

As outlined in Unit B, in order to get students to and from school safely and on time, you need to be able to concentrate on the driving task. Loading and unloading requires all your concentration, especially considering the number of injuries and other incidents that occur during these times. Don’t take your eyes off of what is happening outside the bus. If there is a behavior problem on the bus, wait until the students have finished loading or have unloaded to a place of safety. If necessary, pull the bus over to handle the problem.

ENFORCING THE SCHOOL BUS STOPPING LAW

While loading or unloading, check to make certain traffic in all directions obeys the red flashing lights as required by Section 3345 of Title 75 (Pennsylvania Vehicle Code). The following summarizes this section and provides some requirements for school bus operators to follow to help with enforcement. Note that Figures C-2, C-3, and C-4 illustrate examples of required motorist stops for school buses.

• On highways or trafficways not separated by a physical barrier, traffic in all directions must stop at least 10 feet away from the bus and remain stopped until every child has entered the bus (when loading) or has reached the sidewalk or side of highway (when unloading). Painted center lines, ridged or grooved roadway dividers, or a center turning lane do NOT create separate roadways or constitute a physical barrier; all traffic must stop on highways with these markings.

Figure C-2. Drivers Stopping for a School Bus on Undivided Highway

ALL TRAFFIC MUST STOP

MUST STOP

RED LIGHTS ACTIVATED
Instructor Notes:

**Figure C-3**
Emphasize that a ridged or grooved roadway surface in the position of a median does not constitute a divided highway.

Check out the interactive school bus stopping law on DriveSafePA.org:
http://www.drivesafepa.org/Traffic-Safety-Information-Center/School-Bus-Safety/When-to-Stop-for-School-Buses/
• On highways or trafficways separated by a physical barrier, traffic moving in the same direction as the bus must stop as described above. Traffic approaching the bus from the opposite direction may proceed with caution. A highway with separate roadways is divided into two or more roadways with physical barriers such as: concrete median barrier, metal median barrier, non-mountable curb or clearly indicated dividing sections (e.g., concrete mountable curb, trees or shrubs, rock or boulders, stream grass) to block traffic between the roadways.

• The driver of a vehicle approaching an intersection where a school bus is stopped to load or unload students must stop the vehicle at the intersection until the flashing red signal lamps are no longer actuated.

• You, as a school bus driver, should not be stopping in the middle of an intersection.

• If you are having difficulty at an intersection or drop off location, work with your transportation director or supervisor to find a better location.
Instructor Notes:

**Figure C-4**
Emphasize that traffic should stop on the perpendicular street. Also emphasize that the bus should not stop in the intersection to try to ensure that traffic stops. This is a dangerous practice!

**Enforcing the School Bus Stopping Law –**

**Emergency Vehicles**

Q: Do emergency vehicles have to stop for a school bus stopped with red lights flashing?

A: Yes. Keep in mind that after stopping, the driver of the emergency vehicle may pass the school bus only after exercising due diligence and caution for the safety of the students in a manner that will not risk the safety of the students, even if the red lights are still flashing.

**Enforcing the School Bus Stopping Law - Violators**

Q: What can you do if a driver violates the traffic laws?

A: First - Make sure students are safe!

Second - Note the license number, color, and type of vehicle, as well as the time and location of the incident and identity or description of the driver (as much as you can tell).

Third - Deliver a signed, written report within 48 hours to state or local police with jurisdiction where the incident occurred.

At the end of this Unit, go over each of the review questions provided in the Lesson Summary at the start of the unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What is the “Danger Zone”?
2. Why is the “Danger Zone” potentially hazardous?
3. What tools do school bus drivers have at their disposal to mitigate the hazards of loading and unloading?
4. What are the four steps to loading or unloading student passengers?
5. When should you activate your eight-way flashing light system when approaching a loading zone?
6. What are the special dangers of loading and unloading zones?
7. Where should students cross the road if necessary?
8. In what gear should you place the bus to load and unload?
9. Which vehicles may pass a stopped school bus that is loading or unloading?
10. Why is counting students loading and unloading important?
Emergency vehicles (fire engines, ambulances and police cars) must also obey the red flashing warning lights of a loading or unloading school bus. In fact, Section 3105(h) of Title 75 states “… the driver of an emergency vehicle shall come to a complete stop when a school bus flashes its red signal lights and activates its side stop signal arms. After stopping, the driver of the emergency vehicle may pass the school bus only after exercising due diligence and caution for the safety of the students in a manner that will not risk the safety of the students.”

If you see another vehicle disobeying these laws:

- Try your best to warn students before they attempt to cross the highway;
- Note the license plate number, color and type of the vehicle; time and location of the incident; and identity of the driver (as much as you can tell). You must deliver a signed, written report containing this information within 48 hours to the state or local police with jurisdiction where the incident occurred.

When someone is convicted of violating Pennsylvania’s School Bus Stopping Law, they will receive a 60-day driver’s license suspension, five points on their driving record and a $250 fine, plus court costs.
UNIT D LESSON SUMMARY
TRANSPORTATION OF STUDENTS WITH DISABILITIES

INSTRUCTOR’S PERSPECTIVE
This unit provides school bus driver trainees information about managing students with disabilities during their transport to and from school, as well as the special transportation procedures that may be necessary. Trainees must be aware that they may be privileged to confidential information about the medical conditions of some students, and the responsibilities that knowledge engenders. The Unit offers an introduction to the types of disabilities students may present, along with guidance for managing the behavior associated with these types of disabilities.

Ultimately, the unit is intended to encourage trainees to be open to the particular challenges that students with disabilities may present, to be patient and understanding, and to recognize that extending patience and kindness, particularly in these cases, can return unquantifiable rewards. Typically, this unit will be supplemented with additional training by the employer on the specific specialized equipment needed on buses for transporting students with disabilities.

You will need to know your audience and students they will be transporting to adequately address this topic as part of the new driver course and recertification course. As outlined in this unit, while many students with disabilities may require specialized transportation services, others are included with general transportation services. Therefore, all drivers should be provided with information in this unit, but emphasis and additional time can be invested when necessary, depending on the driver responsibilities and passengers.

TRAINEE OBJECTIVES

1. Be able to describe the driver’s role and responsibilities involved in the transportation of students with disabilities.
2. Describe general guidelines for managing students with disabilities.
3. Recognize the main characteristics of the different types of disabilities and how they can affect the transportation needs of students.
4. Be able to demonstrate specialized procedures involved in loading and unloading students with disabilities.
5. Be able to demonstrate how to work with students with disabilities in emergencies and evacuation drills.

LOCATION
Classroom

DELIVERY MODE
Lecture and discussion

MATERIALS

- Classroom Aids - LCD Projector (screen optional), chalkboard, chalk, and eraser or flipchart and marker, PowerPoint presentation
- Handouts - Unit D Study Guide
RESOURCE PERSONNEL
It would be helpful to have the school district’s or Intermediate Unit’s Director of Special Education or Special Education Supervisor assist with teaching this Unit. A mechanic or supervisor familiar with the operation of modified vehicles and special equipment may also be helpful for demonstrations and instruction. Other experienced drivers can be available to provide real-life examples.

SUMMARY AND REVIEW QUESTIONS
• **Summary** - This Unit should receive at least one hour of coverage in a new driver course and at least one half-hour in a recertification course. If trainees work with many students with disabilities on a regular basis, additional time should be invested and additional training should be provided in the specific specialized equipment. In either course, heavy emphasis should be placed on local guidelines and procedures that apply to the transportation of students with disabilities. In many cases, this type of transportation is conducted by the Intermediate Unit so the instructor should work closely with Intermediate Unit staff.

• **Review Questions** -
  1. What are the responsibilities of a school bus driver transporting students with disabilities?
  2. With whom can you discuss information about a student with disabilities?
  3. What are the five special concerns associated with transporting students with disabilities as illustrated by the memory aid START?
  4. In addition to following the guidelines presented in previous units, what guidelines are specific to managing students with disabilities?
  5. Describe what you may need to do to assist students with physical disabilities.
  6. What behavior patterns are common to students with learning disabilities?
  7. What procedures should you follow if a student has a seizure?
  8. In addition to the loading procedures discussed in Unit C, what procedures do you need to follow when loading a student with disabilities?
  9. How can you evacuate students with disabilities from your bus?
 10. What is the single most important consideration in transporting students with disabilities?

REFERENCES

**Websites**
• National Highway Traffic Safety Administration’s (NHTSA) Guideline for the Safe Transportation of Pre-school Age Children in School Buses:  

**PennDOT Publications**
• Pennsylvania School Bus Driver’s Manual (Publication 117):  

**Laws and Regulations**
• Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapters 71 and 171:  

• Pennsylvania Code – Education (Title 22), Key Chapters are Chapters 14 (Special Education Services and Programs) and 15 (Protected Handicapped Students):  
  [http://www.pacode.com/secure/data/022/022toc.html](http://www.pacode.com/secure/data/022/022toc.html)

• The Pennsylvania Vehicle Code (Title 75):  
  [http://www.dmv.state.pa.us/vehicle_code/index.shtml](http://www.dmv.state.pa.us/vehicle_code/index.shtml)

**Other**
• Local regulations and/or procedure guides, if available.
SENSITIVITY EXERCISE

Even though many school bus drivers have had significant experience working with students with disabilities, many still need practice. Some school bus drivers may rarely encounter a situation where a student with a disability rides on their bus. Your employer or IU may provide additional training on specialized equipment and other topics in this area, but all drivers may benefit from a few small changes starting with language.

Like any other kind of interaction, using language that hurts or insults can cause anger or resentment. It can also generate distrust and cause students with disabilities and their parents to be reluctant to rely on you for help. Using inappropriate language can demonstrate ignorance or insensitivity. Even if people don’t know they are using the wrong terms, they can hurt people when they say them. So, it is important to know and use the correct terms at all times to avoid hurting people and causing unnecessary problems.

It goes beyond just being ‘politically correct.’ It involves being able to effectively communicate in order to do your job well. Adopting appropriate language in all your speaking will make it feel normal when working with students with disabilities. Note that it is NOT necessary to avoid certain terms such as walk, see, or hear. Students who have a disability in these areas may not be able to conduct these activities in the same way as other people, but they accomplish much of the same tasks in other ways.

For this exercise, the Instructor should read the sentence on the left, then ask the trainees whether that would be acceptable or not. If not, why? Facilitate the discussion and ask for other examples.

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>INSTRUCTOR DISCUSSION POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is such a shame that that kid is crippled.</td>
<td>“Crippled” is a term with a negative meaning and should not be used.</td>
</tr>
<tr>
<td>I don’t have too many people with disabilities on my bus, but sometimes those people ride.</td>
<td>Using a term like “those people” indicates an “us” and “them” attitude. It also groups people in a broad category.</td>
</tr>
<tr>
<td>You need to speak clearly when you talk to the deaf.</td>
<td>Terms like “the deaf,” “the blind,” and “the disabled” group people by a physical description. It makes them a group, not individuals. Use terms like “people with hearing impairments” or “people who are deaf.” These terms describe the individuals as people first and people with a disability second.</td>
</tr>
<tr>
<td>Have you been blind all your life or was it some kind of accident?</td>
<td>Unless the person is a close personal friend, it is not appropriate to ask about the specifics of their disability. Even with a friend, it is best to wait until they decide to talk about it.</td>
</tr>
<tr>
<td>(To a person in a wheelchair) Let’s walk to the other store and see if they have it on sale.</td>
<td>This is fine. People who use wheelchairs are perfectly capable of understanding that other people walk and think of themselves as walking. It is important to remember that, although people in wheelchairs do not, technically, walk, they are accomplishing the exact same thing-getting from place to place themselves-the others accomplish by taking steps.</td>
</tr>
<tr>
<td>A person who is handicapped can sometimes need assistance to get on the bus.</td>
<td>“Handicapped” is a term that implies that the person is less than other people. It comes from the 16th century, when King Henry VII of England declared that disabled veterans could beg in the streets with their cap in their hand, thus, “handicap.” This was at a time when people with disabilities were not accepted in the larger society, so is not appropriate for current use.</td>
</tr>
<tr>
<td>The blind kid got on the bus last.</td>
<td>It is necessary to describe people as people first, so it would be “the boy/girl who is blind.” Compare it to this sentence: “My blind friend is coming over today.” It sounds as if you have a quota of one friend who is blind and that is the one. The person is defined by the quality of being blind, not by being your friend. It is probably inappropriate to even include the persons’ disability in the description unless it is relevant, such as, “My friend, who is blind, is coming over today, so I better clean this mess off the floor.”</td>
</tr>
</tbody>
</table>
UNIT D STUDY GUIDE

TRANSPORTATION OF STUDENTS WITH DISABILITIES
The Individuals with Disabilities Education Improvement Act (IDEIA) is a federal law ensuring services to children with disabilities. The IDEIA guides the provision of educational services, including related services such as transportation. Chapter 14 of the Pennsylvania Code (Title 22) provides regulatory guidance in Pennsylvania to ensure compliance with the IDEIA. A second major law related to students with disabilities is Section 504 of the Rehabilitation Act of 1973. Students who qualify for Section 504 services do not require specially designed instruction; however, they do require accommodations that may include specialized transportation services. The federal requirements of Section 504 are addressed under Chapter 15 of the Pennsylvania Code (Title 22).

This Unit provides school bus drivers information about managing students with disabilities during their transport, and special transportation procedures used for students with disabilities.

1. DRIVER RESPONSIBILITY
   A. Bus stops for students with disabilities are determined by the school district and/or intermediate unit, in cooperation with the transportation provider.
   B. Bus stops may include the student’s home. Introducing yourself to the student’s parents and, reminding them of procedures and times, can be beneficial.
   C. Parents should be notified to have students ready at least 5 minutes before pickup.
   D. A responsible adult should be home to receive each student in the afternoon, if applicable per school district policy.
   E. You should keep a written record of your route, students’ addresses, and phone numbers in a safe place.
   F. If you assign seats, keep a copy of the seating arrangement in the bus and provide a copy for the school office.
   G. Coordinate activities with any aides assigned to specific students.
   H. Keep written seizure plans, local policies on allergy management, use of medication, etc.

2. CONFIDENTIAL INFORMATION
   A. Any information contained in school records is confidential.
   B. You are entitled to know certain information regarding a student’s disability, but it is your duty to keep the information confidential.
   C. Maintain medical information for each student that is received from your transportation director or supervisor, including medications and side effects.
   D. Work closely with your employer to determine the extent of your duties regarding the administration of medication. Follow your local procedures.
   E. Note any changes in behavior patterns while a student is under your supervision.

3. GUIDELINES FOR MANAGING STUDENTS WITH DISABILITIES
   A. Know the behavior patterns and required treatments of students.
   B. Try to anticipate problems, expecting the unexpected.
   C. Keep teachers, professionals, and parents informed of any problems or changes in behavior.
D. Work with classroom teachers or parents to learn and understand appropriate communication methods for students with limited cognitive skills.
E. Students with emotional or behavioral disorders should have some responsibility in setting behavior standards.
F. If a student with an emotional disorder becomes agitated, verbally intervene in a calm, direct manner.
G. A student may show significant day-to-day fluctuations in behavior. A Behavior Intervention Plan (BIP) may be useful.
H. Always put safety first.
I. Changes in routine, such as a substitute driver, may cause significant emotional reaction. Be prepared and plan ahead.

4. S-T-A-R-T: A MEMORY AID FOR MANAGING STUDENTS WITH DISABILITIES

S = Special........... Every student with a disability is unique. Drivers need to get to know each one and learn their individual traits.
T = Treat Equally..... Students with disabilities want to be treated the same as all other students.
A = Attention........ Drivers must pay specific attention to students with disabilities.
R = Restraints........ Drivers must learn to use special seats, restraining devices or other specialized equipment, if their bus is so equipped.
T = Techniques...... One particular method of maintaining control of students with disabilities may not work in every situation. Drivers must be prepared to try something new.

5. TYPES OF DISABILITIES

A. Autism
B. Deaf and blind (Deaf-blindness)
C. Deafness/Hearing impairments
D. Emotional disturbance
E. Mental retardation
F. Multiple disabilities
G. Orthopedic impairments
H. Other health impairments
   ✦ Epilepsy
   ✦ Tourette Syndrome
   ✦ Attention Deficit Hyperactivity Disorder (ADHD)
I. Specific learning disability
J. Speech or language impairment
K. Traumatic brain injury (TBI)
L. Visual impairments
6. **BUS STOP PROCEDURES**

A. Talk to your employer about obtaining specialized training in the use of unique equipment or procedures.

B. General considerations.
   - Length of ride.
   - Level of assistance needed.
   - Seating.
   - Special adaptive and assistive equipment.
   - Evacuation (Note that ALL students should participate in evacuation drills unless they have been exempted by authorized medical personnel).

C. Identifying bus stops with unique requirements.
   - Bus stops may be located in front of students’ homes.
   - There may be instances where bus stops may need to have level parking, smooth approaches, and adequate space.
   - Bus stops that require the bus pulling over to the left side are prohibited.
   - Each bus stop requires a unique approach.
   - Stops for students with disabilities may require more time. Try to locate such stops where traffic will not be unduly delayed if the eight-way light system is activated.

D. Loading procedures.
   - In general, follow procedures outlined in Unit C.
   - If the bus can be pulled completely off the roadway, the eight-way light system is not required; just the hazard warning lights.
   - Drivers may leave their seat for assisting with loading and unloading of students with disabilities.
   - Be sure that others assisting with loading and unloading know their roles.
   - If the bus has restraints for use and students who require them, be sure they are fastened before restarting the bus.
   - Plan for more time.
   - Never leave a student unattended, especially if they require an aide.

E. Assigning seats.
   - If assigning seats, students with disabilities want to sit near their friends, not the driver. Don’t automatically seat them near the front seat.
   - Consider independence, needs, mobility, and availability of assistance in an emergency.

F. On the road.
   - Watch for situations that could be dangerous.
   - Remind aides of their role.
   - If aids are not available, make periodic checks of restraining devices.

G. Unloading procedures.
   - In general, follow procedures outlined in Unit C.
   - Never leave a student unless a parent or other responsible person is there.
   - School districts may have policies in the event no responsible person is available at unloading.
7. **MODIFIED VEHICLES AND EQUIPMENT**
   A. Additional training may be required for certain equipment.
   B. State law requires that modified vehicles conform to standards set in Chapter 171 of Title 67.
   C. For *School Vehicles*:
      - State law requires that children who are under four years of age must be fastened securely in a child safety seat.
      - The law also requires that children four years of age or older, but under eight years of age, must be fastened securely in a child booster seat.
      - Always follow the child safety seat and child booster seat installation instructions, particularly for seating positions that are equipped with a lap belt only.
      - Any children transported that are over the age of eight, but less than 18 years of age, must be fastened in a seat belt.
   D. Manual ramps are sometimes used to load wheelchairs. Make sure the ramp is properly supported and engaged.
   E. Some buses are equipped with lifts to load wheelchairs. Practice maneuvering wheelchairs and operating lifts to ensure you understand the proper techniques. Additional specialized training may be necessary.
   F. Always make sure that wheelchairs and students are properly restrained inside the vehicle.

8. **EMERGENCY PROCEDURES AND EVACUATION DRILLS**
   In addition to information provided in Units H and I:
   A. Contact 911 for immediate assistance.
   B. Never leave the students being transported alone.
   C. Able students may be able to help you in emergency situations. Consult with parent and teachers in advance about the abilities of particular students.
   D. Students who are blind and/or deaf should be assigned partners who can help them in emergencies.
   E. Evacuation drills for students with disabilities should generally be limited to simulations at school.
   F. Students with disabilities who can walk should be evacuated in the same way as students in general education, where possible.
   G. Students who can’t walk may be placed on the floor and pulled to safety.
   H. Students with disabilities involved in any emergency should be carefully examined by qualified medical personnel even if they appear uninjured. Refer to local guidelines and procedures regarding the notification of parents or guardians.
UNIT D - TRANSPORTATION OF STUDENTS WITH DISABILITIES

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INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the Driver’s Manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Introduction
This section of the driver’s manual provides an OVERVIEW of providing transportation services to students with disabilities. There are a large number of unique situations related to working with students with disabilities including special equipment on the bus and used by students, aides, securement, medical issues, etc.

As an instructor, you will need to customize this Unit of training for your audience. In some classes, you may spend a great deal of time on this topic, while in others, just a cursory overview. Local policies and procedures will dictate, and in many cases, more detailed, specialized training on this topic will be provided by the local school district or Intermediate Unit.

One important point to keep in mind is that as the inclusion of special education students and other students with disabilities in general education classes and transportation is increasing, school bus operators may be transporting students with disabilities on their ‘regular’ routes and not be directly aware of it. Drivers must keep this in mind when working through behavior issues.

On the other hand, some classes may be comprised of operators who work specifically with students with disabilities. In this case, you must be prepared to answer many additional questions and be prepared to involve drivers with experience in this area in the discussions.

Q: Who has had the opportunity to transport students with disabilities? What are some of the unique challenges you have faced? What are some of the rewards you have realized?

A: The answers to this question will vary. As the instructor, your job is to facilitate the discussion in a useful manner. Emphasize the wide variety of situations, what operators were doing correctly, and what could change. If little input is provided, kindle the discussion with a discussion of inclusion and working with students in the general transportation setting.

NOTE: As noted in the driver’s manual, local school districts are responsible for providing Individualized Educational Programs (IEP) for the students who qualify for special education services under the IDEIA within their district. Sometimes, as a result of this IEP, specialized transportation services are provided, often involving different types of vehicles and procedures. The IEP is most often developed by the school district, parent, and teacher. In some cases, the Transportation Director may be involved when specialized transportation services are required. Drivers should be encouraged to discuss their concerns with their supervisor/transportation director. Their input can have an important impact on the student’s IEP.
UNIT D - TRANSPORTATION OF STUDENTS WITH DISABILITIES

INTRODUCTION

There are two significant laws that ensure services to students with disabilities. The Individuals with Disabilities Education Improvement Act (IDEIA) is a federal law ensuring special education and related services to children with disabilities throughout the nation. IDEIA governs how states and public agencies provide early intervention, special education and related services including transportation. This law mandates that school districts provide transportation services for all eligible students, regardless of their disability. Chapter 14 of the Pennsylvania Code (Title 22) provides regulatory guidance in Pennsylvania to ensure compliance with IDEIA, and its regulations. This chapter can be found at www.pacode.com.

A second major law related to students with disabilities is Section 504 of the Rehabilitation Act of 1973. This federal law assures other protected students with disabilities receive the accommodations and related services they require in order to access educational programs. Students who qualify for Section 504 services do not require specially designed instruction (or special education services which would require an IEP); however, they do require accommodations that may include specialized transportation services. The federal requirements of Section 504 are addressed under Chapter 15 of the Pennsylvania Code (Title 22).

Local school districts are responsible for providing individualized educational programs (IEP) for the students who qualify for special education services under the IDEIA within their district. The school district or intermediate unit is responsible for identifying, locating, evaluating, and providing services for all students who qualify for special education within its boundaries and placing them into appropriate programs planned uniquely for them. Students are required to be included in the least restrictive (e.g., general education) environment when appropriate, including ordinary transportation to and from school. Where this is not possible or appropriate, however, specialized transportation services are provided, often involving different types of vehicles and procedures. With this special transportation, these students can receive the education, therapy and other opportunities they need.

Although transportation is a privilege for regular education students, it is an entitlement for students with special needs. Transportation is typically listed as a related service on IEPs. If special considerations for transportation are warranted for students, they will be addressed within the 504 Service Agreement (or Chapter 15 Service Agreement).

The inclusion of special education and other protected students with disabilities in general education classes and transportation is increasing. Consequently, bus drivers must have a working knowledge of the guidelines for managing students with disabilities while they are being transported; and special transportation procedures used for these students.

This unit provides information on both of these topics. The position you hold as driver for these students may be one of the most demanding and difficult jobs you will ever have, but it may also be one of the most rewarding. Keep in mind that additional, more specialized training may be provided by your employer on these topics including the proper use of wheelchair securement devices and other occupant protection systems.
**Driver Responsibility**

Q: What are some of the operational differences when providing transportation services for students with disabilities from providing general education bus transportation?

A: (1) You may have much more contact with the student’s parents or guardians. They will be able to share any unique needs that the student may have, and you can establish pick-up and drop-off times. (2) You also should make sure that a responsible adult is home to receive a student in the afternoon – never leave a student with a disability alone at dropoff, especially if help at home is expected.

Q: Since you will be providing transportation to students with disabilities who may have additional mobility concerns, is it okay to change bus stops to accommodate them?

A: NO. You cannot establish or change bus stops. This must be done by the School District and/or Intermediate Unit in conjunction with the Transportation Department.

**Quick Case Study**

Q: During the afternoon route, you reach the appropriate bus stop to unload a student that has mental retardation. However, her mother is not at the stop. What should you do?

A: Always follow school district policy! Some suggestions may be to see if any neighbors are outside and available, you could call them to your vehicle, and ask if they know where her mother is. Do not leave the student with the neighbors. Otherwise, call your dispatcher who may have emergency parent contact information to call. You can also continue your route and come back to this stop later, as her mother may have been called away suddenly or may not have returned home yet. If her mother is still not available, take the student back to the school and attempt to call her mother.

**Confidential Information**

Q: If you are transporting a student with a disability to school and have information on their medical condition, can you share information with other drivers?

A: No. You cannot share records or information about a student with anyone who does not have an education interest. Work with your supervisor and the student’s parents regarding issues in this area.
UNIT D - Transportation of Students with Disabilities

DRIVER RESPONSIBILITY

Local policy is the guideline for your role and responsibility as a driver of students with disabilities. To ensure smooth pick-up and return of students, keep in mind:

- Stops will be established by the intermediate unit or school district staff in cooperation with the transportation provider. Changes in stops must be approved by the Transportation Department. You cannot establish or change bus stops.
- The student’s home may be assigned as the pick-up and return location. If so, you may wish to introduce yourself to each student’s parent(s) by telephone or personal visit, and tell them approximately what time you will pick up the student each morning and approximately when you will deliver the student home in the afternoon.
- Remind parents to have the student ready for morning pickup at least five minutes before your expected arrival. If the student is continually late for pickup, notify your supervisor. (Keep written notes of dates.)
- A responsible adult should be home to receive the student in the afternoon. If not, contact your supervisor. Never leave a student with a significant disability alone, especially if help at home is expected.

To ensure students’ safety in case of a crash:

- Keep a written description of your route, pupils’ addresses, and their telephone numbers in a safe place. This information is critical to emergency response personnel.
- If you assign permanent seats in your bus, keep one copy of the seating arrangement in the bus and turn one copy in to the office.
- Coordinate activities with any aides, paraprofessionals, personal care assistants or therapeutic support staff (TSS) who may be assigned to assist specific students or the entire bus.
- Also keep written emergency seizure plans, local policies on allergy management, use of medication, etc. Be familiar with the plans and policies as described throughout this unit and in Units H and I.

CONFIDENTIAL INFORMATION

By law, information contained in school records is confidential. No one should see school records unless he/she has an educational interest in the child. Typically, only individuals who are responsible for some aspect of a child’s educational program have an educational interest. As a bus driver, you are entitled to know certain information regarding a child’s disability, and it may be shared with you, if you have a legitimate educational interest as a service provider. However, it is your duty to keep the information confidential. This means you cannot share records or information about a child with anyone who does not have an educational interest. More specifically, you cannot talk about a child’s special needs with other students, parents of other students, or other bus drivers who do not provide transportation services for the child.

You will have to talk occasionally to parents and teachers about transporting a student. Apart from these practical conversations, do not discuss anything concerning students, parents, teachers, classes, or vehicles with parents or neighbors. If anyone raises a question, refer them to the proper source, i.e., teacher, principal, or supervisor. Never hold any discussions in front of the students.

Obtain medical and emergency information for each student from your transportation director or supervisor. Any medications used by the student, their administration, and any possible side effects should be included for each student as applicable. This information must be kept current and accessible to aides and substitute
Guidelines for Managing Students with Disabilities

Q: What can you do to get to know each student better?
A: In addition to taking some time at the start of the school year to introduce yourself to the student and parents, take some time each day to interact with the student. Also, work with the student's parents, teacher, and/or principal to determine any specific needs and whether services are being provided well.

Q: Earlier, we discussed some of the operational differences when providing transportation services for students with disabilities from providing general education bus transportation. What are some of the differences in managing the students on your bus?
A: While all students are different, some of the specific behavior patterns and required treatments for students with disabilities are significantly different. Patience will be critical as well learning specific details about the different types of disabilities and how transportation services, including discipline, may need to be modified.

Q: What are some of the things you can do as a bus operator to help improve your skills in working with students with disabilities while providing them with transportation services?
A: There are several items. Discuss these with your class.
  • Be observant and anticipate problems.
  • Expect the unexpected.
  • Keep parents and teachers informed.
  • Work with students’ teachers to learn appropriate communication skills.
  • Give students with emotional or behavioral disabilities some responsibility in setting behavior standards.
  • Verbally intervene when necessary.
  • Be aware that bad days happen. Be patient.
  • ALWAYS put safety first.
  • Introduce substitute drivers in advance, if possible.
drivers who will work with the students on your bus. Note any unique behavior patterns to watch for and procedures for managing any circumstances that might arise while the student is under your supervision. If you feel behavior patterns warrant additional attention, contact your supervisor. Work closely with your employer to determine the extent of your duties regarding the administration of medication: FOLLOW YOUR LOCAL POLICIES.

GUIDELINES FOR MANAGING STUDENTS WITH DISABILITIES

To manage students with disabilities while transporting them, you must know individual specific behavior patterns and required treatments. All students are affected by other people’s actions, particularly people who play significant roles in their lives. Students with disabilities may be especially sensitive to the behavior and moods of others.

Parents, teachers and special education professionals can give you information about the nature and extent of a student’s disability along with other relevant information. In some instances, it may be appropriate for a bus driver to be included in an IEP meeting or a 504 Service Plan meeting in order to ensure necessary information is shared. School staff will coordinate such meetings, and you will be invited, if deemed appropriate.

In addition to following the previous guidelines for managing students outlined in Unit B, keep these points in mind when working with students with disabilities:

• Be observant and try to anticipate problems. Always expect the unexpected.
• Keep teachers, professionals and parents informed of problems with the student or significant changes in behavior.
• In dealing with individuals with limited cognitive skills or mental retardation, work with the classroom teacher or parents to learn and understand appropriate communication methods for that student. Some students may use an augmentative communication device such as a laminated card with pictures or a computer with a voice simulator to express their needs. It may be helpful to ask simple yes/no questions in order to communicate effectively.
• Give students with emotional or behavioral disorders some responsibility in setting the standards of behavior they must meet.
• If a student with an emotional disorder becomes agitated or loses self-control, you should verbally intervene and attempt to calm the situation. Do so in a calm, directive manner.
• Be aware that “bad days” happen. The student’s efficiency and self control may vary from day to day or from week to week. These puzzling shifts may lead you to feel much of the student’s behavior is willful disobedience. Remember, these fluctuations may not be under the student’s control. Document these incidents and report them to your supervisor, if you feel additional attention is needed. In some cases, you may work with a classroom teacher and parent to implement a Behavior Intervention Plan (BIP) reflecting the goals identified for that student’s development.
• Always put safety first. If a student’s behavior is distracting or dangerous to others, report the situation to your supervisor immediately.
• Introduce a substitute driver to the students in advance, if possible, since a change in routine or environment (e.g., driver change) may cause some students to react emotionally. Substitute drivers or aides must also be made aware, and be properly trained to understand and work with each student on the bus. Make sure the new driver has explicit, written instructions about the route and pick-up and drop-off times for each student.
Instructor Notes:

**S-T-A-R-T: A Student Management Memory Aid**
Emphasize the S-T-A-R-T, and compare it with C-L-A-S-S from Unit B. Repeat this to the trainees.

Some instructors may find it useful to put this memory aid on a card, laminate it, and provide it as a handout. Some may provide this in the driver’s packet of information that they have on board, while others have this posted at the bus garage so that driver’s constantly are reminded.

**Types of Disabilities**
The next few pages outline different types of disabilities (as defined by IDEIA) that different students may have. The purpose is to provide trainees with a basic understanding of characteristics of these disabilities including common behaviors exhibited by students who may have these disabilities. Focus on what a driver needs to understand about the disability that can help them better communicate, discipline, and provide overall better transportation services.

**Q:** What are the dangers of categorizing students with disabilities?

**A:** All people are people first. They are not defined by the fact that they have a disability, but by the fact that they are people. By categorizing students, you are defining him or her by their disability and not by who they are. It can be demeaning and demoralizing to a student.

**Q:** Should you change your everyday language to interact with students with disabilities? How should it change?

**A:** Yes, and it goes beyond just being ‘politically correct.’ It involves being able to effectively communicate in order to do your job well. Adopting appropriate language in all your speaking will make it feel normal when working with students with disabilities. Note that it is NOT necessary to avoid certain terms such as walk, see, or hear. Students who have a disability in these areas may not be able to conduct these activities in the same way as other people, but they accomplish much of the same tasks in other ways. Here are a few examples:

<table>
<thead>
<tr>
<th>SAY SOMETHING LIKE THIS:</th>
<th>NOT SOMETHING LIKE THIS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A student with a vision impairment</td>
<td>A blind person</td>
</tr>
<tr>
<td>A student who uses a wheelchair</td>
<td>A wheelchair-bound student</td>
</tr>
</tbody>
</table>

**EMPHASIZE:** Encourage your trainees to think of their student passengers as people, rather than categories of people or groups.

**Consider using the Sensitivity Exercise provided earlier in this unit.**
UNIT D - Transportation of Students with Disabilities

“START”: A MEMORY AID FOR MANAGING STUDENTS WITH DISABILITIES

You will likely carry at least one student with a disability on your bus during your driving career. Because a bus operator may not even know he/she is transporting a student with a disability, all operators should be aware of the special concerns relating to these passengers. An easy way to remember these special concerns is with the word “START.”

S = Special ............... Every student is unique. You should get to know each one and learn their individual traits. Talk with the student, their parents, aides, and teachers to find out important information. Students, even those who have similar conditions, are different. The more you know about their needs, the better you can accommodate them. Be aware some information is confidential.

T = Treat Equally .......... Students with disabilities want to be treated the same as all other students. Although there are many differences, whenever possible, all students should be required to follow the same rules.

A = Attention ............. You must pay specific attention to students with disabilities. Some students will behave poorly in order to get your attention. By paying attention to them when their behavior is appropriate, you may improve their behavior. They may require more of your time than other students.

R = Restraints ............. Students with physical disabilities often require special seats or restraining devices. If you are driving a bus equipped with these devices, learn to properly secure these students in their seats. Wheelchairs used by students need to be properly tied down.

T = Different Techniques ... One particular method may not work in all situations with all students. If you are having trouble maintaining control of a student, change your method and try something new. Keep trying until you find something that works. The old saying “try, try, try again” is particularly appropriate when it comes to working with students with disabilities. Be sure to ask other drivers or your supervisor for helpful suggestions in working with particular students or situations. Even better, consult a behavioral specialist or school psychologist with expertise in this area.

TYPES OF DISABILITIES

In addition to the general guidelines above, you should understand the different types of disabilities defined in the IDEIA that students you transport may have, and the specific procedures used in managing each type. Many of these conditions may not be visibly apparent, so drivers must be prepared to work with different conditions.

As mentioned earlier, some students with disabilities outlined below will require specialized transportation services often involving different types of vehicles and procedures. At the same time, some students with disabilities will be included in general education transportation, so you need to be aware of any unique guidelines or specialized procedures that are required.
### Autism

**Q:** What are some things to keep in mind when transporting students who have autism?

**A:** There are a number of items:

1. Some students with autism may be included in general education transportation, and others may require specialized services.
2. Some conduct may not be willful; it is a function of the disorder.
3. Practice routine, repetition, calmness, and structure when working with students with autism.
4. Use short simple sentences when communicating.
5. Prepare students for changes.
6. Recognize signs of stress or anxiety in the students.
7. Do not insist on eye contact.
AUTISM

IDEIA defines autism as, “a developmental disability significantly affecting verbal and non-verbal communication and social interaction, generally evident before age three adversely affecting a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.” Autism spectrum disorders are viewed on a continuum. Students with severe autism may be nonverbal and often have mental retardation as a co-existing condition while students with milder symptoms may have some social skills deficits and a limited range of interests. Some students with autism may be included in general education transportation while others may require specialized services.

Behaviors that may be evident in students who are autistic include:

- Indifference to other people - Students with autism sometimes treat other people as if they were objects and just in the way. They may bump into you as if you were a piece of furniture, without excusing themselves or noticing they bumped into another person.
- Difficulty looking people in the eye - When you talk to students with autism, you may have to work hard to get and keep their attention, especially if they are not facing you. The students may not notice or pay attention to other students or adults.
- Problems with their speech and language - Some students with autism cannot speak at all, and others may just scream or make other noises. Students who do speak may have some unusual speech patterns. For example, some students have trouble with pronouns and may use “you” instead of “I” when speaking. Some students tend to repeat what they hear instead of responding in a more typical way. For example, a student may repeat, “How are you?,” instead of responding to the question.
- Unusual reactions to different parts of their environment - They are very resistant to any change in routine or environment. They are easily upset and anxious about changes other students may not even notice, such as if a different type of bus picks them up, if they are in the window seat instead of the aisle seat, or if they are sitting next to someone new. They are often very sensitive to changes in temperature, loud noises, or physical touch, and may have a panic reaction at times to some of these changes.
- Unusual interest in objects - They may cling to objects, and examine and reexamine them. They may also be fascinated by various kinds of movements, for example, becoming completely absorbed by a spinning wheel or fan.
- Problems with their own movement - They may repeat movements over and over again without any particular purpose, for example, swaying, rocking, banging their head, or flapping their hands.
- Non-age appropriate behavior - Some students with autism may display behavior more typical of much younger students.

When working with students who are autistic, remember these students are affected by a disorder; their conduct is not necessarily willful. They cannot always control or stop their behavior upon request. These students need sameness, calmness, structure, and firmness along with gentleness, and patience. Here are a few pointers:

- Stick to a routine with the students. It will be critical.
- Prepare students for changes, such as detours, new passengers or substitute bus drivers.
**Deafness/Blind Impairments**

**Q:** What are some things to keep in mind when transporting students who are deaf and blind?

**A:** There are a number of items:

1. Work with a mobility specialist and the student to determine the best methods for assistance.
2. Learn signals for help, distress, toileting needs, illness, hunger, and any other daily events that may occur on a bus.
3. Consider seating students who are deaf and blind close to the bus door for ease of exit/entry and to avoid objects or people who may block movement in the aisle.
4. Avoid seat reassignment for behavior management to ensure a consistent route from the stairwell to their seat.

Some schools are now transporting service animals – follow your local School District policy when transporting service animals. Keep in mind that aisles must be kept clear at all times when the school bus is in operation.

**Deafness/Hearing Impairments**

**Q:** What are some things to keep in mind when transporting students who are deaf or who have a hearing impairment?

**A:** There are a number of items:

1. Many students with hearing impairments may be included in general education transportation, and others may require specialized services.
2. Exercise particular caution during loading and unloading, especially if the students need to cross the street; they will be unable to hear oncoming traffic.
3. Work with a teacher or parent to improve communications skills.
4. When communicating, look directly at the student, maintain eye contact, and speak clearly and naturally.
UNIT D - Transportation of Students with Disabilities

- Use short, simple sentences and concrete concepts when communicating. For example, “Stay in your seat.”
- Recognize when students may be experiencing stress from changes in the environment.
- Do not insist on eye contact.
- Some students respond well to music. Parents may be able to help you determine what medium will provide a calming effect during the bus ride.

DEAF AND BLIND (DEAF-BLINDNESS)

Some students may have hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs they cannot be accommodated in special education programs solely for children with deafness or children with blindness. If available, you should work with a mobility specialist and the student to determine the best methods for assistance (sighted guide techniques, etc.). Many intermediate units (IUs) will have mobility specialists who can work with you.

Drivers should learn signals for help, distress, toileting needs, illness, hunger, and any other daily events that may occur on a bus as these signals are the only means by which the student can communicate. Consider seating students who are deaf and blind close to the bus door for ease of exit/entry and to avoid objects or people who may block movement in the aisle. Also, avoid seat reassignment for behavior management to ensure a consistent orientation route from the stairwell to their seat.

DEAFNESS/HEARING IMPAIRMENTS

Students who have hearing impairments may require special transportation, though the inclusion of students with hearing impairments in general education transportation is fairly common. Hearing impairments may range from some degree of hearing loss to totally deaf.

Students who are deaf are taught and communicate through their other senses and therefore rely on visual and tactile information. Their greatest difficulty is to learn speech and language. To communicate, the student often learns to respond to lip movement, facial expression, signs, and/or finger spelling. When reading lips, students may not understand all of what is said, so repetition may be necessary. As a driver, you may need to gain the student’s attention by tapping him/her on the shoulder or waving your hand. Remember to look directly at the student, maintain eye contact, and speak clearly, naturally and slowly; shouting is useless. Repetition, facial expressions and gestures can also help with communication. Ask the teacher or parent to explain the nature and extent of the student’s hearing loss, and the best way to communicate with him or her. If the student communicates using sign language, you should attempt to learn a few common, useful ‘signs’ the student will understand.
Instructor Notes:

**Emotional Disturbance**

Q: What are some things to keep in mind when transporting students who have an emotional disturbance?

A: There are a number of items:

1. The inclusion of students with emotional disturbance in general transportation services is fairly common.
2. Students with emotional disturbance may be particularly aggressive when confronted with rules.
3. Be calm, fair, and consistent.

**Intellectual Disability**

Q: What are some things to keep in mind when transporting students with intellectual disability?

A: There are a number of items:

1. May be useful to assign specific seats with appropriate seat belts or CSRS.
2. Assign one student per seat if possible.
3. Remember patience and consistency.
EMOTIONAL DISTURBANCE

Students who are emotionally disturbed have a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects their educational performance:

- An inability to learn that cannot be explained by intellectual, sensory or health factors;
- An inability to build or maintain satisfactory relationships with peers and teachers;
- Inappropriate types of behavior or feelings under normal circumstances;
- A general pervasive mood of unhappiness or depression; and
- A tendency to develop physical symptoms or fears associated with personal or school problems.

The inclusion of students with emotional disturbance in general education transportation is fairly common. These students may act in ways that are inappropriate, either in their nature or in their timing or degree. Since many have unusual difficulties maintaining interpersonal relationships, they can be aggressive, withdrawn, anxious, or easily frustrated. These students may be unable to express feelings and needs. They may be loud, excitable, defiant and aggressive, particularly when confronted by adults setting rules, such as bus drivers. Behavior may include destroying property, starting fights, and using offensive or inappropriate language.

On the other end of the spectrum, some students who are emotionally disturbed have a pervasive mood of unhappiness or depression, and do not cope well with stress. They may be excessively shy and withdrawn, and avoid contact with their peers and adults alike.

As a bus driver, it is likely you will encounter students with emotional disturbances. Therefore, it is important to be calm, firm, fair, and consistent. Pay attention to your students and immediately report any threats of suicide to the school. It is a difficult challenge to maintain a professional distance and to stay involved with the students, but it is an important responsibility of the bus driver.

INTELLECTUAL DISABILITY

IDEIA defines intellectual disability as, “significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects the child’s educational performance.” In other words, these students have impaired intellectual development, which seriously reduces their ability to learn. In addition, they struggle with age appropriate adaptive behavior skills. Adaptive behavior refers to the daily living skills that students need to function and includes communication, personal care, motor skills, and social skills. Some students will have mild intellectual disability while others will be significantly impaired, and so the levels of driver assistance and/or specialized equipment may vary.

As the bus driver, you may find it useful to assign specific seats with appropriate seat belts or child safety restraint systems (CSRS, i.e., car seat, safety vest, etc.). One person per seat is best. Consistency in the bus routes, personnel and service will help the trip go smoothly. Be patient as students with intellectual disability will require more repetition than typical peers to learn procedures.
Orthopedic Impairments

Q: What are some things to keep in mind when transporting students with orthopedic impairments?

A: There are a number of items:

1. Depending on the severity, many students with orthopedic impairments may require a wheelchair or other specialized mobility device.

2. Work with your employer to make sure you get the required training on specialized equipment to safely transport the student.

3. Loading and unloading procedures will be very different than those procedures described in Unit C, as there will be several additional steps.
MULTIPLE DISABILITIES
A student with multiple disabilities has a combination of disabilities (such as intellectual disability and blindness or intellectual disability and orthopedic impairment). The combination of disabilities causes such severe educational needs that such students cannot be accommodated in special education programs solely for one of the impairments.

Students with multiple disabilities often require specialized transportation, especially if one of the impairments is an orthopedic impairment. These students are typically severely impaired and may need significant assistance in all areas of functioning. It would be important to obtain specific guidance for such severely impaired students from knowledgeable individuals such as the parents, teachers and other specialists to include physical therapists, speech therapists or mobility specialists.

ORTHOPEDIC IMPAIRMENTS
Students with orthopedic impairments have severe orthopedic issues that adversely affect their educational performance. The impairments may be a result of a congenital anomaly, disease or other causes. Some students may require wheelchairs or other holding devices for mobility, while others can walk with crutches or a walker. Therefore, they may need help in loading and unloading the bus. Refer to the later section on special equipment and your local specialized training provided by your employer or IU.

Whenever possible, students with minor physical disabilities are integrated into the regular transportation system, but may need some slight assistance. Other students may have physical disabilities that might not affect mobility in terms of boarding a bus, but may impair speech or other forms of communication, writing, or arm, hand, eye, and head movement. This may affect their seating requirements on your bus.

Some common physical disorders and their effects include:

- **Cerebral Palsy (CP)** — Causes abnormal changes in physical movement, such as slow or spastic limb movement or seizures. A person with CP may be unable to coordinate body movement and may have possible speech problems. Intellectual functioning is often not affected. In the transportation setting, a student with CP may need a special harness.

- **Muscular Dystrophy (MD)** — A progressive general weakening of various muscle groups in the body. Students with MD may fatigue easily and may require the use of braces, harnesses or a wheelchair.

- **Spina Bifida** — A birth defect involving the spinal cord. Depending upon the severity of the defect, the student may be partially paralyzed (lower half of the body) or have a physical deformation. Some students with spina bifida are very verbal. On the bus, be careful with lower body positioning because these students may not have feeling in the lower half of their body. If they are positioned too close to a baseboard heater, they can get serious burns on their legs and not realize it.

OTHER HEALTH IMPAIRMENTS
Students with other health impairments have limited strength, vitality or alertness, including a heightened alertness to environmental stimuli resulting in limited alertness with respect to the educational environment. This is due to chronic or acute health problems, such as asthma, attention deficit hyperactivity disorder (ADHD), diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, or Tourette’s Syndrome. These conditions can adversely affect a child’s educational performance.
**Epilepsy**

Q: What are some things you can do if a student has a seizure on your bus?

A: There are a number of items:

1. Listen to the student. If the student warns you, pull the bus over to a safe location.
2. Keep calm.
3. Help the student to a safe place.
4. Don’t restrain movements or stick anything in their mouth.
5. Encourage deep breathing when the student regains consciousness.
6. Assure the student and the others in the bus that all is well.
7. Call your dispatcher and report the incident. Medical attention may be needed if the student does not regain consciousness.
8. Refer to local guidelines and procedures.
When transporting students on the severe end of the spectrum, such as those requiring special transportation, you may need to talk to parents or teachers to find out about the special needs of these students on your route. Some students may wear medical identification tags specifying care and medical limitations.

Some of the more common impairments are discussed below.

**EPILEPSY**

Epilepsy is a chronic nervous disorder, characterized by seizures of varying degrees. Students with epilepsy are commonly included in general education transportation. Epileptic seizures may be triggered by stress, hitting bumps in the road while driving, hot weather or a hot passenger compartment, strobes or flashing lights. You should know what to do, if a student has a seizure during the bus ride. Most students will have an “emergency preparedness plan” or “seizure plan”. This plan will provide you with some basic information on how to respond appropriately for that student.

**Follow these steps to minimize any injuries to the student:**

- Listen to the student - Sometimes a student with epilepsy experiences a peculiar sensation known as an aura before a seizure. If the student warns you, pull the bus over to a safe location.
- Keep calm - The student is usually not suffering or in danger.
- Help the child to a safe place, but do not restrain his or her movements. Move anything the student may strike against with his or her head, arms, or legs. Most injuries occur from bumping hard objects.
- Do not force a hard object between the student’s teeth.
- Do not give the student anything to drink.
- Saliva may flow from the student’s mouth. Wipe it away with a tissue.
- Stand by until the student has fully recovered consciousness and seems clearheaded. The student may seem dazed and incoherent for awhile after a seizure.
- Encourage deep breathing after the student regains consciousness.
- Assure the student all is well and encourage him or her to go about regular activities.
- If the student is unconscious after the seizure, call for assistance and place him/her on his/her side in the recovery position.
- Occasionally, after a seizure, the student may want to sleep. Help him or her to a safe place to rest.
- Refer to local guidelines and procedures regarding the administration of medications and any supervisor/parent notification requirements.
Instructor Notes:

**Tourette’s Syndrome**

Q: What are some things to keep in mind when transporting students who have Tourette’s Syndrome?

A: There are a number of items:

1. Do not point out the behavior to the student.
2. Give careful consideration to seat assignment.
3. Stick to a routine as much as possible.

**Attention Deficit Hyperactivity Disorder (ADHD)**

Q: What are some things to keep in mind when transporting students who have ADHD?

A: There are a number of items:

1. Be patient.
2. Communicate firm, fair, and consistent expectations.
3. Provide verbal clues and reminders to the student.
4. Work with the student's teacher to see what is working in the classroom.
TOURETTE’S SYNDROME

Tourette’s Syndrome is a neurological disorder characterized by repetitive, stereotyped, involuntary movements, and vocalizations called tics. The early symptoms of Tourette’s are almost always noticed between the ages of seven and 10 years. Most people with the condition experience their worst symptoms in their early teens, with improvement occurring in the late teens and continuing into adulthood. Students with Tourette’s are commonly included in general education transportation.

Tics are classified as either simple or complex. Simple motor tics are sudden, brief and repetitive movements such as eye blinking and other vision irregularities, facial grimacing, shoulder shrugging, and head or shoulder jerking. Simple vocalizations might include repetitive throat-clearing, sniffing or grunting sounds. Complex motor tics might include facial grimacing combined with a head twist and a shoulder shrug. Other complex motor tics may actually appear purposeful, including sniffing or touching objects, hopping, jumping, bending, or twisting. More complex vocal tics include words or phrases. Do not be offended by the behavior or language exhibited as this may be a manifestation of the syndrome. Note that tics are involuntary and are often worse with excitement or anxiety and better during calm, focused activities.

Here are a few tips for you as a bus driver:

- Do not point out the behavior to the student;
- Give careful consideration to seat assignment;
- Stick to a routine as much as possible; and
- Keep your rules and directions short.

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

Attention Deficit Hyperactivity Disorder (ADHD) includes primarily inattentive type, primarily hyperactive-impulsive type, and combined type. Students with ADHD have significant difficulty maintaining their attention to effortful tasks, excessive physical activity and impulsivity, or both.

Common symptoms include:

- Impulsiveness - A child who acts quickly without thinking first or exhibits uncontrolled, abrupt and sudden changes in behavior. Students often act without considering the consequences and may endanger or harm themselves, or others.
- Hyperactivity - A child who can’t sit still, walks, runs, or climbs around when others are seated, talks when others are talking. They may also be unable to stick to one task for very long before looking for something else to do.
- Inattention - A child who daydreams or seems to be in another world or is sidetracked by what is going on around him or her.
- Forgetfulness - The student may forget items or have a tendency to misplace them.

Have patience with a student with ADHD. Like other students with impairments, have firm, fair and consistent expectations. You may need to provide verbal clues to let your student know when his/her stop is nearby so he/she can gather his/her belongings. For some students, permission to use electronic devices (i.e., music device, handheld game, etc.) may be considered to keep the child engaged in a preferred activity and minimize problem behaviors.
Speech or Language Impairment
Q: What are some things to keep in mind when transporting students with a speech or language impairment?
A: There are a number of items:
1. Listen attentively.
2. Repeat what you think you heard.
3. Encourage rather than correct when responding.
4. Ask “yes/no” questions.
SPECIFIC LEARNING DISABILITY
Students with learning disabilities are those who have a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language. The disorder may show up as trouble with listening, thinking, speaking, reading, writing, spelling, or solving math problems. This category does not include students with learning disorders caused by visual, hearing or motor disabilities, or intellectual, emotional, cultural, economic or environmental disorders. The inclusion of students with learning disabilities in general education transportation is common.

You may find it helpful to contact the classroom teacher to ascertain what is working for the student during the school day.

SPEECH OR LANGUAGE IMPAIRMENT
A speech or language impairment means a communication disorder, such as stuttering, impaired articulation or a speech or language impairment that adversely affects a child's educational performance. The inclusion of students with a speech or language impairment in general education transportation is fairly common.

Students with speech or language impairments may have trouble communicating clearly because they may be difficult to understand. Listen attentively and repeat back what you think was said. Keep your manner of responding "encouraging" rather than "correcting" and be patient! Watch a student's reaction to your response. It will help you know whether the message has been communicated. If you still don't understand the student, ask a peer to help, or ask a series of short questions that require "yes" or "no" answers. It may be helpful to use an alternative means of communication such as a pen and paper.

TRAUMATIC BRAIN INJURY (TBI)
Some students have acquired injury to the brain resulting in total or partial functional disability including impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; or speech. Participation in regular transportation will be dependent on the level of impairment.

Students with TBI may exhibit the following characteristics:
- Reduced physical stamina,
- Possible seizures or headaches,
- Possible hearing or vision problems,
- Easily confused,
- Susceptible to mood swings, and
- Issues with social skills.

Remember to be consistent, and review the rules of the bus often. Be clear with your expectations. You may find it helpful to contact the classroom teacher to ascertain what is working for the student during the school day.
**Visual Impairments**

Q: What are some things to keep in mind when transporting students who have visual impairments?

A: There are a number of items:

1. Inclusion of students with visual impairments in general education transportation is common.
2. Allow students with visual impairments to move independently.
3. Provide descriptive feedback to help the student orient, especially as their stop approaches.
4. Exercise particular caution during loading and unloading.
5. You may want to consult with a mobility specialist.

**Transporting Students with Disabilities:**

**General Considerations**

Q: When transporting students with disabilities, what are some of the things you need to consider as a bus driver?

A: There are a number of items:

1. Length of ride.
2. Level of assistance needed.
3. Seating.
4. Special adaptive and assistive equipment needed.
5. Evacuation.

**NOTE:** Unit G outlines the Diesel-Powered Motor Vehicle Idling Act: Act 124 of 2008. Essentially, Act 124 prohibits the owners and drivers of any diesel powered vehicle of a certain weight from allowing the engine to idle for more than 5 minutes in any continuous 60-minute period. However, 35 P.S. Section 4603(c)(10) allows a school bus transporting students with special needs to idle for an unlimited amount of time when it is necessary to maintain a safe temperature for the students.
VISUAL IMPAIRMENTS

IDEIA indicates that students who have visual impairments have vision that, even with correction, adversely affects their educational performance. They may have partial sight, meaning they can only see low light or shapes, or be legally blind. While the visual impairment may affect their educational performance, it will not affect their intelligence unless they have cognitive disabilities as well. The educational development of students with visual impairments may not be very different from students without a visual impairment. The inclusion of students with visual impairments in general education transportation is fairly common.

Students with visual impairments should be allowed to move independently, but they should be monitored for safety. Students with visual impairments may use a cane, service animal or other mobility device, and may rely on auditory and tactile information. Consultation with an orientation or mobility specialist may be warranted when transporting students with visual impairments.

If a student with a visual impairment rides your bus, provide descriptive feedback during the ride to help the student orient, especially in advance of their stop, so they can prepare. Having the student sit near the driver can help with this. Some students may need assistance navigating the narrow steps and aisles on the bus. Also, be sure to address the student clearly and specifically by name so he/she is sure you are communicating with him/her. As the student becomes more familiar with riding your bus, he/she may need less assistance as the school year progresses. Exercise particular caution during pickup and drop off.

TRANSPORTING STUDENTS WITH DISABILITIES

As indicated in the sections above, transporting students with disabilities may involve special equipment and procedures in addition to basic bus driving skills. This section describes general procedures, unique bus stop procedures, the modified vehicles and special equipment used in transporting students with disabilities as well as emergency procedures and evacuation drills. Talk to your employer about obtaining specialized training in the use of unique equipment or procedures. You must become familiar with local guidelines and training.

GENERAL CONSIDERATIONS

When determining the level of support a given student may require related to transportation, it is important to consider the following factors:

1. **Length of Ride** – Health factors and the impact of the student’s disability should be considered as they influence the safety of the student during transit. Young students may show limited tolerance for extended bus rides, and the behavior of students with emotional disturbance or behavioral disorders tends to deteriorate as the length of the bus ride increases. There may also be unique issues for students requiring medication.

2. **Level of Assistance Needed** – The level of assistance required by a student is influenced by the student’s age, size, sensory skills (e.g., vision, hearing), communication skills, level of intelligence, and social/emotional factors.

3. **Seating** – Seating decisions are generally based on the student’s level of functioning. Students with limited trunk strength may require a seat belt or vest to provide additional support while on a moving bus. Students with visual impairments are likely to require an assigned seat they can independently locate. Students with significant intellectual limitations may require assistance to find their seats. Students with seizure disorders may need to be seated where they can be monitored and where lighting can be controlled.
Instructor Notes:

**Transporting Students with Disabilities:**

**General Considerations - Evacuation**

Q: Are students with disabilities exempt from participation in evacuation drills?

A: No. All students must participate in evacuation drills unless they have been exempted by authorized medical personnel.

**Bus Stop Procedures: Identifying Bus Stops**

Q: Can you pull your bus over to the left side of the road on a two-way street (facing traffic) to pick up a student with a disability?

A: No. These bus stops are prohibited. If you are having problems with a particular stop, notify your supervisor and work with the school district to resolve the situation. You cannot change bus stops.

**Loading Procedures**

Q: Do you have to use your hazard warning lights if you can pull your bus completely off the roadway at the loading or unloading location for a student with a disability?

A: Yes. If you can pull completely off the roadway, you must use your hazard warning lights, but you do not have to use your eight-way light system.

Q: If you pull your bus into a parallel parking space for loading and unloading using your lift, do you need to use your eight-way light warning system?

A: In general, no. You must use your hazard warning lights, but you do not have to use your eight-way light system. Section 3345(c) of Title 75 states: “Use of red signals.--The red visual signals shall be actuated by the driver of every school bus whenever the vehicle is stopped on a highway or trafficway for the purpose of receiving or discharging school children, except as provided in subsections (e) and (f). The signals shall not be terminated until the school children who may have alighted from the school bus have reached a place of safety or until boarding school children have completed boarding the bus.” Section 3345(e) goes on to state: “Limitations on use of signals.--The visual signals required in the regulations shall not be actuated on streets in urban districts designated by the department or local authorities, at intersections or other places where traffic is controlled by uniformed police officers or appropriately attired persons authorized to direct, control or regulate traffic, or in school bus loading areas designated by the department or local authorities when the bus is entirely off the roadway.”

Keep in mind that the Vehicle Code’s definition of a roadway is: “That portion of a highway improved, designed or ordinarily used for vehicular travel, exclusive of the sidewalk, berm or shoulder even though such sidewalk, berm or shoulder is used by pedalcycles. In the event a highway includes two or more separate roadways, the term ‘roadway’ refers to each roadway separately but not to all such roadways collectively.” Parking lanes are not part of the roadway because they are not designed or ordinarily used for vehicular travel – they are used for parking.

The Vehicle Code’s definition of a highway is: “The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel. The term includes a roadway open to the use of the public for vehicular travel on grounds of a college or university or public or private school or public or historical park.”
4. **Special Adaptive and Assistive Equipment** – Seat belts, vests, harnesses, and wheelchair securement devices must be properly used. It is important to consult with a knowledgeable professional such as a physical therapist, school therapist or mobility specialist to ensure any such devices are used properly. If a student brings an assistive device on the bus, make sure it is properly secured for transport.

5. **Evacuation** – When preparing for the possible evacuation of students with disabilities, it is essential to have a written plan, which pays close attention to the individual needs of students. All students should participate in evacuation drills unless they have been exempted by authorized medical personnel. School bus operators and other personnel should plan to evacuate all students using all available exits with and without the use of the power lift (if applicable). Refer to Unit H for evacuation procedures.

**BUS STOP PROCEDURES**

**Identifying Bus Stops**

- The bus stop for many students with disabilities, especially those with physical disabilities using wheelchairs, may be located on the sidewalk or driveway in front of the students’ homes.
- The bus stop should have level parking, smooth approaches from the house, and adequate space for placing ramps and loading wheelchairs.
- Bus stops where you must pull your bus over to the left side of the street, facing oncoming traffic, are prohibited.
- Just as each student requires individual attention, each stop requires its own approach. Adapt your pickup and drop off procedures for the particular needs of the student and the location.
- Stops for students with disabilities require more time and care than those for typical students. Try to find a place where traffic will not be unduly held up, if the school bus eight-way light system is activated.

**Loading Procedures**

- Follow the procedures outlined in Unit C on loading and unloading for pulling up to the bus stop.
- If you can move your bus completely off of the roadway, you do not need to use the school bus eight-way light system. However, you must use the hazard warning lights.
- Sometimes students will need your help boarding or carrying their belongings. Assisting in the loading of a student with a disability (usually a student with a physical disability) is a time when you are permitted to leave the wheel of your vehicle. If you must leave the wheel, put the transmission in park or neutral and turn off the ignition. Be sure to remove the keys and set the emergency brake. On some vehicles with special equipment such as a lift, you must leave the engine on during loading and unloading. In these situations, make sure the transmission is in park or neutral, and the emergency brake is engaged before you leave the vehicle for loading or unloading. Know your vehicle.
- In order to board or exit the bus, some students may need the help of several people (e.g., parents, aides) in addition to you. Be sure all persons involved know their role in this procedure, ideally before the beginning of the school year.
- Most vehicles that transport students with disabilities have seat belts or other forms of child safety restraint systems (CSRS) you must help students secure. Before turning on the engine again, make sure all seat belts are fastened, all doors and windows are locked, all security devices are engaged, and all belongings are securely placed. Keep messages and supplies for delivery to parents or teachers in a secure place.
Instructor Notes:

Therefore, if the area in the parking lane has been designated as a school bus loading area, the eight-ways are not required.

Some local policies may be more stringent when using your eight-way lighting system. If you have an unusual circumstance that may be confusing, contact your local law enforcement personnel to make a final determination of the appropriate use of the eight-way system.

Assigning Seats

Q: In a large bus with general education students, you should always seat a student with a disability in the front seat.

A: No. In some cases, it may be appropriate, but you have to use your best judgment. Remember, students will want to sit with their friends, not the driver.

Modified Vehicles and Special Equipment

Q: What does state law say about students wearing seat belts on school buses?

A: State regulation does require that if a school bus is equipped with seat belts then the school bus driver and passengers are required to wear them. School buses with a Gross Vehicle Weight Rating (GVWR) greater than 10,000 lbs are not required to have seat belts; therefore, the law relating to occupant protection does not require children transported on school buses to be fastened into a child passenger restraint system. If you are in a situation where you are transporting pre-school age children in school buses, follow your local school district’s policies on this issue and refer to NHTSA’s Guideline for the Safe Transportation of Pre-school Age Children in School Buses. If it is a school vehicle, students must be secured as per Section 4581 of Title 75, because a school vehicle is a “passenger car.”
UNIT D - Transportation of Students with Disabilities

- Plan considerably more time to load students with disabilities, especially those with physical impairments. Follow your school district policy on wait time and expected boarding time. Parents should be instructed to have students at the bus stop five minutes before the scheduled time of arrival.
- Remember — if a student requires an aide, you must never leave him or her unattended.

Assigning Seats
- If you are transporting a student with a disability in a large bus with general education students, don’t automatically assign the student to the front seat. Typically, front seats are saved for “problem” students, and not many students want to sit near the driver. Students with disabilities are like most of your student passengers — they would prefer to sit with their friends.
- When assigning a seat to a student with a disability, consider such factors as mobility and independence of the student, needs of the student, ease of emergency evacuation, availability of dependable assistance, and vulnerability of the student during interactions with other students.

On The Road
- While on the road, watch for any behaviors that might cause a dangerous situation. If aides are available, part of their responsibilities should be to make sure all students remain safely seated and secure. With or without aides, make periodic checks yourself. Knowing each student’s specific behavior patterns will enable you to avoid potentially dangerous situations during transport. Before transporting any student with special needs, it is critical to understand the disability and potential behavior each student may exhibit.

Unloading Procedures
- Unloading procedures are similar to loading procedures, but in the reverse order.
- Never leave students unless a parent or other responsible person is there. Since policies differ from area to area, local school district officials must establish specific procedures to follow when no responsible person is present where the student is to be unloaded.

MODIFIED VEHICLES AND SPECIAL EQUIPMENT
Depending on the needs of students with disabilities in each school district, various modifications can be made to vehicles and special equipment can be obtained. You will be given additional training by the local school district or intermediate unit in the operation of modified vehicles and special equipment (e.g., wheelchair securement devices, car seats, child safety restraints, etc.) you will need to use.

Modified Vehicles
Because students with disabilities have a wide variety of needs, there is a wide range of vehicles available for their transportation. State law (Section 4551 of Title 75) requires modified vehicles to conform to standards set by regulations in Chapter 171 of Title 67. These regulations may be found at www.pacode.com.

Special Equipment
State law (Title 75, Section 4581) requires children under four years of age and transported in a school vehicle (which is a vehicle originally designed to transport 10 or fewer passengers, including the driver) must be fastened securely in a child safety seat. The law also requires children four years of age or older, but under eight years of age, must be fastened securely in a child booster seat. Always follow the child safety seat and child booster seat installation instructions, particularly for seating positions that are equipped with a lap belt only. Any children transported over the age of eight, but less than 18 years of age, must be fastened in a seat...
Instructor Notes:

Lifts
Note that included in this section are summarized loading procedures for using a lift for students who use wheelchairs. Local procedures may vary. For example, it is recommended that when the wheelchair has been raised to the bus floor level, you unlock the brakes and push the wheelchair inside the bus as far as you can. Then secure the brakes again and inform your passenger that you are going inside the bus. This is recommended because otherwise the student must sit outside on the lift while you walk around, enter the bus then begin the securement process. Not only might this be uncomfortable for the student in inclement weather, but it could pose quite a risk if the bus were struck by another vehicle while the student is out on the lift. Follow local loading procedures and manufacturers recommendation for operating a lift.

Lifts – Wheelchairs
Q: List some important points to consider when working with students who use wheelchairs.
A: 1. When talking to a student who uses a wheelchair, try to minimize the angle between you – take a few steps back or find a place to sit so eye contact is not difficult.
2. Always make sure brakes are engaged when the wheelchair is unattended.
3. Sport wheelchairs typically do not have armrests, so talk to the student about their mobility needs.
4. When setting the brakes, use both on the wheelchair.
5. Never lift a wheelchair by its arms or footrests.
6. Keep loose clothing away from the wheels.
7. Use the full securement system when transporting a student in a wheelchair on your bus.
8. Check the hand grips before tilting a wheelchair back.
9. ALWAYS talk to the student in the wheelchair and let them know what you are doing.

Remember: Some schools transport service animals. In this case, follow your local policy keeping in mind that the aisle must be kept clear while the vehicle is in motion.
belt. NOTE: The above provisions are for school vehicles, not school buses. The law is silent regarding school buses on this issue. If you are in a situation where you are transporting pre-school age children in school buses, follow your local school district’s policies on this issue and refer to the National Highway Traffic Safety Administration’s (NHTSA) Guideline for the Safe Transportation of Pre-school Age Children in School Buses (http://www.nhtsa.dot.gov).

Other special equipment you may have to use includes ramps, lifts, seat belts, positioning belts, safety vests, or harnesses. Some students with physical disabilities often use wheelchairs, and a general description of the lifts and ramps used to load and unload passengers is presented below. The specific procedures for using all special equipment will be provided as a part of your local training.

**Ramps for Bus or Vans** – Some vehicles carry ramps to allow aides to manually roll wheelchairs into a van or bus or to allow students who can walk to enter without climbing steps; a combination ramp and shallow step may also be available. These should be securely stored while the bus is in motion. You may also have to secure the ramp in place on the vehicle to use it for loading or unloading. You may need to use special techniques to push the wheelchair and the passenger up the ramp and to lower them down without straining yourself (or the attendant) and without endangering the security of the student.

**Lifts** – Buses and other vehicles designed or converted to carry students who use wheelchairs are often equipped with a lift. In these cases, guide the wheelchair onto the lift platform so the wheelchair is facing outside the bus, lock the wheelchair’s brakes, and secure the safety strap. Make sure the rider’s hands and arms are inside the armrests. After you secure the rider, stand back from the platform at a position where you can operate the lift controls and safely hold onto the wheelchair with one hand. As the lift rises, the front kick plate should flip up to secure the front. When the wheelchair has been raised to the bus floor level, unlock the brakes and push the wheelchair inside the bus as far as you can, then secure the brakes again, and inform your passenger you are going inside the bus. Enter the vehicle, unlock the brakes and secure the wheelchair into position. Always position the wheelchair and secure it to the floor using four tie downs, a lap/shoulder belt, and the independent wheelchair seat belt, if it has one. Check with your supervisor for the correct method of tie downs.

Here are a few additional tips for working with wheelchairs:

- There are separate brakes for each side of the wheelchair – use them both.
- Always make sure the wheelchair brakes are engaged when the wheelchair is unattended and when the student is moving in and out of the wheelchair.
- Never lift a wheelchair by its arms or footrests (as they may come off of the chair) or by the wheels – always use the frame.
- Keep loose clothing away from the wheels.
- Always secure the passenger with a three-point seat belt system attached to the wall of the bus. The seat belt on the wheelchair is NOT a proper occupant restraint.
- If assisting a student in a wheelchair, don’t forget to use the tilt bars, when necessary.

Note: Lifts should be operated in accordance with manufacturer’s recommendations. No standees should be permitted on the lift while in operation and the operator should not be on the lift during operation.
Instructor Notes:

At the end of this Unit, go over each of the Review Questions provided in the Lesson Summary at the start of the unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What are the responsibilities of a school bus driver transporting students with disabilities?

2. With whom can you discuss information about a student with disabilities?

3. What are the five special concerns associated with transporting students with disabilities as illustrated by the memory aid START?

4. In addition to following the guidelines presented in previous units, what guidelines are specific to managing students with disabilities?

5. Describe what you may need to do to assist students with physical disabilities.

6. What behavior patterns are common to students with learning disabilities?

7. What procedures should you follow if a student has a seizure?

8. In addition to the loading procedures discussed in Unit C, what procedures do you need to follow when loading a student who uses a wheelchair?

9. How can you evacuate students with disabilities from your bus?

10. What is the single most important consideration in transporting students with disabilities?
UNIT D - Transportation of Students with Disabilities

EMERGENCY PROCEDURES AND EVACUATION DRILLS

The procedures to follow in case of a crash or any serious incident forcing you to stop and seek assistance are generally the same as those outlined in Unit H (Crash and Emergency Procedures) and Unit I (Student Emergencies). Carry a copy of First Aid procedures in the vehicle and make sure your vehicle has the required and optional emergency equipment listed and described in Unit H.

When planning emergency procedures, keep these points in mind:

- If immediate assistance is needed, contact 911 for assistance.
- Under no circumstances should you leave the students being transported.
- An able student can sometimes serve as a second-in-command in emergency situations, if an aide is not available. Consult with the parents and teachers in advance about the abilities of particular students to decide whether this would work.
- Assign those students who are blind and/or deaf to a partner who can assist them in case of an emergency.
- Because many students with mental impairments have trouble remembering, evacuation drills should be limited to simulations at the school, where school supervisory personnel can assist in performing the drill and help train those students capable of taking responsibility. Bus evacuation procedures and drills are described in Unit H.
- Ambulatory students with disabilities are evacuated in the same manner as students in general education, whenever possible.
- In a crisis, non-ambulatory students may be placed on the floor and pulled by their clothing or drag cloth out of any available exit. Ramps may be used to roll or slide students to the ground, if necessary. Contact your employer regarding training in these specialized areas.
- Students with disabilities who have been involved in a crash or an emergency evacuation should be examined by qualified medical personnel even if they appear uninjured. Refer to local guidelines and procedures regarding the notification of parents or guardians.
UNIT E LESSON SUMMARY
PREVENTATIVE MAINTENANCE

INSTRUCTOR’S PERSPECTIVE
Unit E presents detailed and specific information about potential problems with buses, and how to discover and report such problems. Diligent and regular inspections by bus drivers can identify potential problems before they become serious, thereby positively impacting safety on the road, and longevity of the bus.

TRAINEE OBJECTIVES
1. Be able to identify and describe the basic procedures involved in normal daily pre-trip, on-the-road, and post-trip inspections.
2. Be able to detect impending vehicle defects, using the physical senses, and know how to report them in a meaningful manner.
3. Be able to recognize common driving errors or abuses that cause excessive component wear and employ proper driving habits which will prolong the life of the bus.

LOCATION
Classroom - This can be supplemented by a live demonstration in a school bus (refer to the Parked Bus Unit - Unit PB). Please note that a live demonstration does not count toward in-bus training.

DELIVERY MODE
Lecture and discussion

MATERIALS
• Classroom Aids - LCD Projector (screen optional), chalkboard, chalk, and eraser or flipchart and marker, PowerPoint presentation. Any available bus components to enhance discussions. Examples include brake components, different colored fluids (wiper fluid, oil, coolant, etc.).
• Handouts - Unit E Study Guide

RESOURCE PERSONNEL
A qualified mechanic may teach part of this unit, or may assist with answering questions about the specifics of bus systems and functions. They should be included when completing this section.

SUMMARY AND REVIEW QUESTIONS
• Summary - While most useful for new trainees, experienced bus drivers often demonstrate poor preventive maintenance habits as they may get complacent over time, therefore this Unit should receive attention in both new driver and recertification courses. Because this is a classroom presentation, using pictures, diagrams, and even actual bus parts is recommended to effectively show trainees what they need to identify. Customize it for the types of buses that your trainees will use.
• Review Questions -
  1. What are the main steps of the pre-trip inspection?
  2. What should you do during the walk-around inspection?
  3. During a trip, what signs would indicate abnormal vehicle behavior?
  4. How can you properly use the clutch and the transmission to reduce vehicle wear?
  5. What are the procedures in your area for reporting vehicle problems?
  6. What are the five basic items mechanics want you to know?
REFERENCES

PennDOT Publications
- Pennsylvania School Bus Driver’s Manual (Publication 117):
  http://www.dmv.state.pa.us/drivers_manual/schoolbus_manual.shtml
- Commercial Driver’s Manual (Publication 223):

Laws and Regulations
- Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapter 71 and 171:
  http://www.pacode.com/secure/data/067/067toc.html
- 49 CFR Section 396 (Inspection, repair, and maintenance), Key sections are Section 3 (Inspection, Repair, and Maintenance), Section 11 (Driver Vehicle Inspection Reports), Section 13 (Driver Inspection), and Section 21 (Periodic Inspection Recordkeeping Requirements):
- Federal Motor Vehicle Safety Standard No. 111 (Rearview Mirrors), 49 CFR 571.11:

Other
- Local regulations and/or procedure guides, if available.
CASE STUDY EXERCISE

This Unit focuses on learning to recognize defects both during the pre-trip inspection and while on the road, and immediately reporting problems to your supervisor or the bus maintenance department. To emphasize the points being made, here are two case studies which illustrate the importance of preventive maintenance and also highlight how poor preventive maintenance practices can lead to serious emergencies.

In presenting case studies, the instructor should:

1. Have the class read the situations.
2. Give the class a few seconds to think about the situation, then ask for volunteers to explain to the rest of the class, in as much detail as possible, how the situation should be handled.
3. Have the rest of the class critique the driver’s response.
4. The instructor then takes the role of a facilitator and manages the discussion.
5. Specific discussion questions are provided after the case studies to help facilitate discussions.

Another method for presenting the case studies is for you (the instructor) to read the case study out loud, and simply facilitate the discussion from there using the prompt questions to get the class involved.

VEHICLE PREPARATION CASE STUDY

Jan is an experienced school bus operator for a small school district. She normally drives the same vehicle every day and knows its equipment location and characteristics very well. She arrives at work a little late one particular day. In order to meet the schedule and pick up her first student on time, she hurries through her pre-trip inspection and neglects to check her windshield wipers, defroster, and lights. She feels comfortable with signing the pre-trip inspection sheet because she knows the vehicle very well and has just driven it two days before with no problems. Her morning routes are uneventful, although the weather starts to cloud up and there are signs of afternoon thundershowers.

Jan starts her afternoon route from the school unloading students at the designated bus stops. About half way through her route, thunder and lightning fill the sky and it begins to rain heavily. Jan, driving down a rural road at about 45 MPH, turns on her windshield wipers. They don’t work. She can’t see at all because the rain is coming down intensely. Jan tries to slow the bus, guide it off the road, and stop. Because she cannot see what is in front of her, she puts the right wheels in a ditch on the outside of a curve from which she cannot get out of. The students are upset but uninjured. They wait for an hour before a tow truck and spare bus arrive.

The problem turned out to be a loose connection in the wiper motor mechanism.

Discussion Questions

1. What two things did Jan do wrong during the pre-trip inspection?
2. What should Jan have done to demonstrate that she was prepared for emergencies?
3. When Jan called for help on the two-way radio, what information should she have provided?
   NOTE: This question is a tie-in with Unit H. It will get participants thinking along procedural lines and introduce this topic to be covered in Unit H.
4. Was this problem Jan’s responsibility or not? Why or why not?
5. Is Jan subject to discipline in this situation? What if Jan did not tell the truth?
   NOTE: This is an optional question for the Instructor. This is an excellent opportunity to discuss local policies and procedures that are to be followed in these circumstances.
6. How could Jan’s reputation for professionalism be damaged by this situation?

Note how these questions focus on safety factors and future consequences as well as the importance of preventive maintenance steps like the pre-trip inspection.
ON THE ROAD MAINTENANCE CASE STUDY

Larry is a school bus operator for a larger school district. He has several years of driving experience and considers himself to be a good driver with excellent student management skills. He does not have a strong mechanical aptitude, and is glad that his employer’s policy does not require the driver to do any emergency vehicle maintenance.

One winter morning while it is still dark outside, Larry picks up his last student for the morning and is headed to the school. As he pulls out after the last student has boarded, he smells the odor of burning rubber and hears a hissing sound. Since it is his last leg of his morning trip and his mind is already elsewhere, he ignored the smell and sound and promises himself he’ll look at it in the afternoon. He forgets to monitor his gauges as well and drifts into thoughts about his responsibilities after dropping his students off at school. Soon, he notices steam or smoke coming from the vehicle engine compartment. Larry looks at his gauges and sees that his temperature gauge reads “very hot.” He pulls off the road, puts his emergency flashers on and gets out of the vehicle to check things out. Since he has no mechanical background, he decides not to open the engine compartment, but simply calls for assistance explaining that he has an overheated vehicle.

Discussion Questions

1. What obvious warning signs of trouble did Larry ignore? How can the human senses of sight, hearing, and smell be important resources to the driver? How could they have helped here?

2. Should Larry have continued his trip if he had any thoughts that trouble might lie ahead? When should he have called for assistance?

3. When Larry realized that there was a problem, what action should he have taken to try to identify the nature of the problem?

4. Should Larry have evacuated the bus?

5. Should Larry have opened the engine compartment?

6. By not opening the engine compartment or trying to discover what had happened, did Larry put his passengers in any possible danger? Or did he protect them from danger?

7. What are your local policies and procedures regarding how far a driver should go in trying to identify and fix any mechanical problems you might experience while on the road? What about fighting a fire on the bus?

8. In what ways does a knowledgeable driver assist maintenance personnel by identifying a breakdown problem?
Dependable school bus service is built upon dependable buses. The job of maintaining buses and thereby increasing their safety and dependability belongs to qualified mechanics. However, the school bus driver spends the most time with the bus and is in the best position to notice mechanical problems as they arise. Because of their familiarity with the bus, the bus driver is a member of the maintenance team, along with mechanics, supervisors and owners.

This Unit is divided into three sections:

- Pre-trip inspection
- Operational inspection
- Post-trip inspection

## PRE-TRIP INSPECTION OVERVIEW

- Purpose is to identify problems that could cause a crash or breakdown. The driver should be satisfied that the vehicle is in safe operating condition.
- Your supervisor can help with specific school district or bus company policies and checklists.
- Make your inspection routine.
- Know local policy relating to pre-trip inspections.
- Even if the district or bus company have mechanics do pre-trip inspections, the driver should still check the bus before driving. The DRIVER is responsible.
- Some helpful items:
  - Work gloves.
  - Rags.
  - Towels.
  - Window cleaning fluid.
  - Checklist.

### 1. VEHICLE OVERVIEW

A. Note the general condition of the bus.
B. Look for fluid leaks.
C. Check around the bus for hazards.
D. If recently in for service, check that any necessary repairs have been made.

### 2. ENGINE COMPARTMENT INSPECTION - While the engine is cool and the parking brake is set, check:

A. Oil level.
B. Coolant level.
C. Condition of hoses.
D. Power steering fluid level.
E. Windshield washer fluid level.
F. Battery fluid level, connections and tie downs.
G. Automatic transmission fluid level.
H. Check for tightness and excessive wear on alternator belts, water pump and air compressor.
I. Check for leaks in any components in the engine compartment.
J. Check for cracked or worn insulation around electrical wiring.

3. **INSPECT INSIDE OF BUS** - Start the engine, set the parking brake, and inspect:
   A. Driver compartment.
      ✦ Gauges.
      ✦ Controls.
      ✦ Mirrors.
   B. Passenger entry.
      ✦ Service doors.
      ✦ Stairwell.
      ✦ Handrail.
   C. Passenger compartment.
      ✦ Vandalism.
      ✦ Exits.
      ✦ Emergency equipment (required and optional equipment).
      ✦ Interior lights.
      ✦ Suspicious items.

4. **INSPECT OUTSIDE OF BUS: WALK-AROUND INSPECTION**
   A. Teaming up with another driver can be helpful.
   B. Check all exterior lights and signal devices.
   C. Tires, Wheels and Rims.
      ✦ Learn abnormal wear patterns for tires.
      ✦ Use your pry bar.
   D. Check right-front.
      ✦ Fender-mounted mirror.
      ✦ Tire, wheel, and rim.
      ✦ Right Front suspension.
      ✦ Crossing control arm.
      ✦ Right front brake.
   E. Check front side.
      ✦ Front axle.
      ✦ Steering system.
      ✦ Windshield including wipers and arms.
      ✦ Lights and reflectors.
F. Check left front.
   ♦ All items as the right front.
   ♦ Left side stop arm and wing guard.
   ♦ Front fender and crossover mirrors.

G. Check left side.
   ♦ Left fuel tank(s).
   ♦ Battery.
   ♦ All visible parts.

H. Check left rear.
   ♦ Left rear tires, wheels, and rims.
   ♦ Suspension.
   ♦ Brakes.
   ♦ Lights and reflectors.

I. Check rear side.
   ♦ Lights and reflectors.
   ♦ License plate.
   ♦ Splash guards.
   ♦ Rear and side emergency doors.
   ♦ Exhaust system.

J. Check right rear.
   ♦ All items on left side and fuel tank area.

5. CHECK BRAKE SYSTEM
   A. Check parking brake by allowing the bus to move slowly forward and applying.
   B. Check hydraulic brakes (if equipped) by pumping brake pedal three times.
   C. Check air brakes as per Sections 5 and 10 of the CDL Manual.
   D. Regardless of the type of brakes, make sure they work!
   E. Check automatic brake adjusters (ASAs).

OPERATIONAL INSPECTION
- Use most of your senses: sight, sound, smell, touch.
- Detecting abnormal vehicle behavior.
- Continuous checks.
- Parking brake.
- Transmission.
- Steering.
- Suspension.
- Engine.
- Tires.
• Good driving habits.
  - Proper starting procedures.
  - Proper use of the clutch.
  - Proper use of the brakes.
  - Protection of the rear axle.
  - Proper use of a manual transmission.
  - Proper use of an automatic transmission.

**POST-TRIP MAINTENANCE**
• After parking the bus, allow the engine to idle following the manufacturers guidelines.
• Use the idling time to check the interior for damage, lost or forgotten possessions, and sleeping students.
• Sweep the floor and steps of the bus.
• Check the interior of the bus for burned out bulbs or other damage.
• Turn off all electrical equipment, shut down the engine, and secure the bus.
• Local policy will dictate procedures regarding ignition keys.
• Federal regulations require a written report each day with specific content.
• If problems are discovered that need reporting, be sure to be accurate in describing the problem:
  - Location.
  - Timing.
  - Sounds.
  - Other descriptive characteristics.

**FIVE ITEMS MECHANICS WANT YOU TO KNOW**
• Learn to read and understand your gauges.
• Sweep the floor and steps of the bus.
• Write up a repair as soon as you notice it – waiting could lead to a more costly repair.
• Idling the engine, particularly a diesel engine, before shutting the vehicle off, may extend engine life.
• Do not drive on a flat tire.
• The glow plug indicator on the dash of a diesel bus (if so equipped) will go out when the bus is ready to start.
# UNIT E - PREVENTATIVE MAINTENANCE

## INTRODUCTION

PRE-TRIP INSPECTION

VEHICLE OVERVIEW

- Engine Compartment Inspection
- Inspect the Inside of Bus
- Driver Compartment
- Passenger Entry
- Passenger Compartment

Inspect Outside of Bus: Walk-Around Inspection

- Tires, Wheels, and Rims
- Check Right Front
- Check Front Side
- Check Left Front
- Check Left Side
- Check Left Rear
- Check Rear Side
- Check Right Rear
- Check Brake System
- Automatic Brake Adjusters (ASAs)

PREVENTIVE MAINTENANCE WHILE ON THE ROAD

Detecting Abnormal Vehicle Behavior

- Continuous Checks
- Check Parking Brake
- Check Service Brakes
- Check Transmission
- Check Steering
- Check Suspension
- Check Engine
- Check Your Tires

Good Driving Habits

- Starting the Bus and Basic Operations
- Proper Use of the Clutch
- Proper Use of the Brakes
- Protection of the Rear Axle
- Proper Use of the Transmission

POST-TRIP PREVENTIVE MAINTENANCE PROCEDURES

- Importance of Reporting Problems
- Five Basic Items Mechanics Want You to Know
Instructor Notes:

INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the driver’s manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Introduction
Q: Of all the people involved with school buses, who spends the most time with the bus?
A: The school bus operator.

Q: Who is in the best position to recognize a problem with the bus?
A: The school bus operator, because they spend the most time with the bus.
UNIT E - PREVENTATIVE MAINTENANCE

INTRODUCTION

The life of a school bus and the dependable service it can provide to you as an operator as well as to the pupils you are transporting is directly related to how you care for your bus. Central to this is a planned, budgeted and proactive preventative maintenance system. This system involves such items as service, adjustments, replacements, inspections based on pre-determined intervals, and tolerances. These minimize failures and costs, and maximize safe and comfortable operations. Most significantly, safety is the most important and obvious reason for performing inspections: inspecting your vehicle helps you to know your vehicle is safe. You should never operate a vehicle that is not running properly, is not safe or does not have the proper equipment on board.

As a school bus operator, you have significant responsibility in the preventive maintenance program, especially in the proactive component of preventive maintenance. Remember: with an effective preventive maintenance system, service begins with the pre-trip inspection. With an ineffective preventive maintenance system, breakdowns and complaints control the service. From an operator’s standpoint, preventive maintenance includes the following items:

1. Pre-trip inspection;
2. Operational inspection; and
3. Post-trip inspection.

As indicated in this unit, as an operator, you should NOT be making repairs yourself; this is the role of your maintenance team. Report, don’t diagnose. However, since you are on the road with your vehicle for several hours each day, you are in the best position to observe how it performs under all conditions. Learn to recognize defects both during the pre-trip inspection and while on the road, and immediately report problems to your supervisor or the bus maintenance department. Problems cannot be repaired, if they are not reported.

This unit covers each of these items as part of your normal daily preventive maintenance tasks. Responsibility for these tasks may vary due to differences in buses and/or local policy. If you are ever unsure of the preventive maintenance duties assigned to you, ask your supervisor.
Instructor Notes:

Pre-trip Inspection

Q: Why is the pre-trip inspection so important?

A: The pre-trip inspection may find problems that could cause a break-down or crash. Also, federal regulations require that (1) the driver be satisfied that the bus is in safe operating condition; (2) review the last driver vehicle inspection report; and (3) sign the report, only if defects or deficiencies were noted by the driver who prepared the report, to acknowledge that the driver has reviewed it and that there is a certification that the required repairs have been performed. The signature requirement does not apply to listed defects on a towed unit which is no longer part of the vehicle combination.

Emphasize that the school bus operator is not a mechanic. The school bus operator is to be a reporter – to observe potential problems and report to a mechanic.

A safety equipment check will be part of the driver recertification skills exam. They will want to see you check the following items:

- Lighting Systems: 8-way lighting systems, headlights, turn signals, stop lights, hazard warning system, tail lights, ID and side marker lights.
- Safety Equipment: fire extinguisher, first aid kit, pry bar, portable emergency warning devices.
- Vehicle Equipment: Tires, emergency exits, condition and mounting of seats.
- Brake Checks: service brakes (air/hydraulic), emergency brake.

Note that failure to correctly perform your air brake check during skills testing will result in an automatic failure.

The pre-trip inspection described in this unit will cover ALL of these items.
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PRE-TRIP INSPECTION

The purpose of a pre-trip inspection is to identify problems that could cause a crash or breakdown. Each school bus operator may have unique methods or procedures for completing and documenting a pre-trip inspection, so work with your supervisor to review system-specific policies and/or checklists. The key for you, the operator, is to complete your pre-trip inspection the same way each time. In this fashion, you will learn all the correct steps, improve the efficiency of your inspection and will be less likely to forget something important.

The following is a pre-trip inspection that should take an operator about 15 minutes to complete. This is only a recommended procedure that makes logical sequential sense. If you have a more efficient process that still covers the requirements in 49 CFR Section 396.13 (Driver Inspection), or if your school district or contractor requires something different, use their procedures. Remember, federal regulations require you to ALWAYS be satisfied your bus is in good operating condition and you review the last driver inspection report.

It is also good practice to always complete your pre-trip inspection the same way each time so you will be less likely to forget a step. A few items to have on hand when you complete your pre-trip inspection include:

- Work gloves to keep your hands clean;
- Rags for removing caps and checking fluid levels under the hood;
- Paper towels for cleaning small spills;
- Window cleaning fluid for washing windows, mirrors and headlights. It is good practice to clean all lights, reflectors and glass, as you go along; and
- A checklist provided by your employer (may be company-specific) for making sure you check all important items.

Remember federal regulations require that before driving your bus, you shall:

1. Be satisfied it is in safe operating condition;
2. Review the last driver vehicle inspection report; and
3. Sign the report, only if defects or deficiencies were noted by the driver who prepared the report, to acknowledge the driver has reviewed it and there is a certification the required repairs have been performed. The signature requirement does not apply to listed defects on a towed unit, which is no longer part of the vehicle combination.

There are also specific federal requirements for post-trip inspection in 49 CFR Section 396.11 (Driver Vehicle Inspection Reports) as discussed later in this unit.
Instructor Notes:
1. **VEHICLE OVERVIEW**

As you approach the vehicle, note its general condition, and look for damage or whether the vehicle is leaning to one side. Look under the vehicle for fluid, which may be fresh indicating oil coolant, grease, or fuel leaks. If any of these are noted, contact your supervisor or maintenance professional. Recognize what items are critical to operating a bus safely. If the fluid is condensation from the air conditioner, there is no need to report a problem, but if it is a fuel leak, the bus should be immediately removed from service until the problem is repaired. Also, check the area around the vehicle — above and below — for hazards to vehicle movement (people, other vehicles, objects, low hanging wires or limbs, etc.). This is of particular importance for homeland security issues.

If your vehicle has recently been in for service, pay particular attention to the problem areas to determine whether they have been adequately repaired. Review the bus repair report and/or last bus inspection report. This is particularly important if you are driving a bus that is not your own.

![Pre-Trip Inspection Diagram](image)
2. Engine Compartment Inspection – Fluid levels

Q: Why check the oil?
A: If the oil level is low, the engine may run hot, causing excessive wear, and ultimately serious damage. Also, regular checking and reporting will give the mechanic an idea how the engine is using oil, and give an indication of potential leaks.

Q: Why check the coolant level?
A: If the coolant level is low, the engine may overheat, causing excessive wear and perhaps a breakdown on the road. Regular checking and reporting can give the mechanic an idea if there is a leak.

Q: Why check the power steering fluid?
A: If the fluid level is low, the power steering pump may be damaged. If the power steering pump is damaged, the steering of the bus could become exceedingly difficult. This can be quite dangerous if the bus is in operation.

Emphasize that some under-hood checks are best done when the engine is not running, and others are to be done while the engine is running and warm. Using the Driver’s Manual, review both as outlined in this section.
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2. ENGINE COMPARTMENT INSPECTION

Some contractors and school districts do not require drivers to perform under-the-hood checks, but all drivers should be trained in the proper procedure. Make your first set of checks under the hood while the engine is cool and the various fluid systems have had time to stabilize.

Ensure the parking brakes are on and/or wheels chocked. You may have to raise the hood, secure loose items so they don’t fall and break something, or open the engine compartment door.

Check the following while the engine is not running:

- **Engine oil level** – Remove the oil dipstick, wipe the dipstick clean with a rag and look at the indicator at the bottom of the dipstick. Push the dipstick back into the hole, making sure to push it all the way back in until it seats. Pull out the dipstick again and see where the oil has left a residue in relationship to the indicators. Make sure the level is between the ‘add’ and the ‘full’ line.

- **Coolant level in radiator** – While the engine may not be running, you may be doing this check after someone else has used your bus, and it has not completely cooled yet. Because of this, never remove the radiator cap when the engine is hot. The fluid is under pressure, and you can be burned seriously.
  
  Indentify the full hot and full cold level markings on the opaque white plastic coolant overflow tank located right next to the radiator. If the engine is hot, fill to the hot line. If the engine is cold, fill to the cold line. If you’re low, top it off with a 50/50 mixture of coolant and water. There is more than one type of coolant. Only use the type of coolant specified by the mechanic. To add the coolant, unscrew or pop the top of the opaque plastic reservoir, and add your mixture until it reaches the full mark. Replace the cap tightly. If you spill any coolant on the ground, wipe it up. Certain coolants are deadly to animals, but they like to drink it because it tastes sweet. If there is no fluid in the reservoir, notify the mechanic for instructions before starting the bus.

- **Condition of hoses** –
  
  To check the condition of the hoses, when the engine is cold, squeeze each hose. If the hose feels crunchy or brittle, it’s old and needs to be replaced.
  
  Visually inspect the hoses for cracks, tears, frayed ends, and damp or wet areas. Check the clamps at ends of the hoses.

- **Power steering fluid level. Make sure it is above the “fill” mark** –
  
  Wipe the power steering fluid reservoir cap with a clean rag or paper towel before opening.
  
  Visually inspect the hose for cracks, tears, frayed ends, and damp or wet areas (if any).
  
  Some tanks require this to be checked when hot. Refer to your bus manual for specific details.

- **Windshield washer fluid level** –
  
  The windshield washer fluid reservoir is a large, clear plastic container that may be labeled with words or a symbol on the cap showing two sprits of water.
  
  Check the fluid level. You can fill this reservoir all the way to the top.

- **Battery fluid level, connections and tie downs (battery may be located elsewhere)** –
  
  No smoking and extinguish all open flames. Batteries produce hydrogen gas when charging. Hydrogen is extremely flammable and explosive.
  
  Clean the top surface to remove any dirt and debris with a rag before removing the caps.
  
  Remove the vent caps by prying them up or turning them counter clockwise and look inside each cell. The fluid level should be level with the filler ring for each cell.
  
  Use a battery fill jug. Fill any low cells with distilled water up to the proper level.
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- Replace the vent caps and clean up any spills.
- Warning – battery fluid is sulfuric acid. Do not get any on your skin or clothing. If battery fluid does make contact with your skin, flush with fresh water immediately.
- Only use distilled water in your battery. Anything else will cause the battery to fail.

- **Automatic transmission fluid level (may require engine to be running and be fully warmed up)** –
  - Be careful around the running engine. The fan might come on suddenly and catch any lose clothing or jewelry and may cause serious injury.
  - Pull out the dipstick and wipe it clean with a rag.
  - Put the dipstick back in the hole. Make sure to push it all the way back in until it seats.
  - Pull out the dipstick and ensure the fluid level is between the full and low levels.
  - Use a long, thin funnel to add transmission fluid through the dipstick hole if required.
  - There is more than one type of transmission fluid. Only use the type of transmission fluid specified by the mechanic or as shown on the dipstick or engine manual.

- **Tightness and excessive wear on belts on the alternator, water pump, and air compressor** –
  - Learn how much “give” the belts should have when adjusted right, and check each one. Press lightly with your thumb on each belt at the belt’s longest part between pulleys. In general, there should be no more than ½” to 1” of movement. The belt should not be cracked. As mentioned earlier, this portion of your pretrip will normally be done when the engine is cool. If for some reason it is not, let the engine cool before checking belts, and be careful around hot engine parts and sharp edges.

- **Inspect for leaks in the engine compartment (fuel, coolant, oil, power steering fluid, hydraulic fluid, brake fluid, windshield washer fluid, gear oil, automatic transmission fluid, battery fluid).**
  - Except for windshield washer fluid and fuel, the fluids in your bus shouldn’t get used up or go anywhere.
  - As brake linings wear, brake fluids will drop slightly.
  - If you notice any other fluids are low, you probably have a leak.
  - Inspect underneath the bus looking for wet areas or drips clinging to the underside of the bus.
  - Sticky sweet smelling fluid is coolant. The old color for coolant was green, now it comes in yellow, as well as other colors. Dark slick greasy fluid is engine oil. Honey or dark colored thick fluid with a chestnut smell is gear oil. Clear slippery fluid is brake fluid. Slippery red fluid is transmission fluid or power steering fluid. Fuel is easily identified by its odor. Windshield washer fluid comes in several colors – blue and orange are typical. Battery fluid could be on top of the battery. Don’t touch this. It is acid.
  - If you are running the air conditioner expect to see water dripping, which is just condensation and is nothing to worry about.
  - Look for cracked worn insulation around electrical wiring. Look for bare wire spots where the insulation has broken, burnt or worn away.
  - Don’t tug on the wires. You might pull them out of the connections and disconnect the wire.

When the engine compartment inspection is complete, carefully lower and secure hood latches or the engine compartment door.
Instructor Notes:

3. **Inspect Inside of Bus**
   Q: Why is starting the bus engine and letting it run during the inside inspection a good idea?
   
   A: Part of the inside inspection includes observing the gauges that monitor the running engine. Also, part of the inside inspection and the following outside walk-around include checking ALL lights. Turning on lights while the engine is running is easier on the battery. When the inspections are complete, the engine will be warm and ready to operate.

As an instructor, you should review the fleet of vehicles that your drivers will be operating. One of the items to learn are what ‘typical’ gauge readings are for the different gauges to share with new drivers so they know what to look for.

**Driver Compartment – 1. Inspect the gauges**
   Q: During a pre-trip inspection, you notice the temperature gauge is indicating a dangerously hot condition. What should you do?
   
   A: Turn off the engine, check the fan belt and coolant level in the radiator (after it has cooled). Contact your supervisor right away and get further instructions. Don’t drive the bus!

   Note: The bus operator should NOT leave the yard if any of the items found during the pre-trip check would result in a safety concern. This includes wipers not working.
3. **INSPECT INSIDE OF BUS**

Once the engine compartment has been checked, inspect the inside of the bus. This task can be separated into three areas: the driver compartment, the passenger entry and the passenger compartment. It is recommended you start the vehicle engine and complete this portion with the engine turned on. For diesel engines, make sure the injector pump is engaged before starting.

Refer to Unit F for starting and driving a diesel vehicle. At a minimum:
- Make sure parking brake is on;
- Put gearshift in neutral (or park, if available);
- Turn off the heaters before starting, so the engine will reach operating temperature more quickly; and
- Start the engine and listen for unusual noises.

**Driver Compartment**

At the start of your in-bus check, activate the four-way flashers and amber lights from the operator’s seat. From the seated position, you can see in your mirrors whether the front ambers are working and can see the turn signals both flashing. Later, when you walk through the bus and open the back door, you can see whether the back turn signals are flashing and the amber lights in the back are flashing.

1) **Inspect the Gauges. Check all of the following gauges:**
   - Oil pressure should come up to normal within seconds after engine is started. If it does not, shut down the engine and notify the mechanic.
   - Ammeter and/or voltmeter should be in normal range(s).
   - Coolant temperature should begin gradual rise to normal operating range.
   - Oil, coolant and charging circuit warning lights should go out right away.
   - Fuel gauge should indicate a safe margin for the day’s trip.
   - Buses equipped with hydraulic brakes with vacuum assist have a vacuum gauge and low vacuum warning light. If the gauge reads less than normal or the warning light starts to blink, report the condition.
   - Air gauges with warning buzzers on buses with air brakes stop buzzing when air pressure increases above 60 psi. Do not drive the bus, if the pressure is less than 60 psi.

2) **Check Controls. Check all of the following for looseness, sticking, damage, or improper setting:**
   - Steering wheel;
   - Clutch;
   - Accelerator (gas pedal);
   - Brake Controls; and
     - Foot brake,
     - Parking brake,
     - Retarder controls (if vehicle has them),
     - Transmission controls.
   - Horn: Horn should be heard approximately 200’ away.
Driver Compartment - 3. Check All Mirrors
Obviously, this section will be clarified/enhanced when actually walking through a bus and showing them how to adjust the mirrors, but in the classroom portion, you should emphasize to the trainees what an operator should see in the bus mirrors:

- Mirrors need to be adjusted for safe driving.
- Mirrors need to be adjusted for observing student passengers both in and around the bus – remember the danger zones.

The Driver’s Manual lists this information (what an operator should see) for each type of mirror. You may choose to ask this in a question format:

Q: What should the operator see in the outside left and right side flat mirrors?
A: (1) ~200’ or ~4 bus lengths behind the bus; (2) along the sides of the bus; (3) the rear tires touching the ground.

Q: What should the operator see in the outside left and right side convex mirrors?
A: (1) the entire side of the bus up to the mirror mounts; (2) front of the rear tires touching the ground; (3) at least one traffic lane on either side of the bus.
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- Windshield wiper/washer. Spray the washer fluid before turning on the wipers, to avoid damaging the windshield.
- Lights.
  - Headlights;
  - Dimmer switch;
  - Turn signal;
  - Four-way flashers;
  - Clearance, identification, marker light switch(es);
  - School bus eight-way light system; and
  - Strobe light, if applicable.

3) **Check All Mirrors.** Mirrors play a critical role in the safe operation of your vehicle because they allow an operator to observe the zone around the bus and look for students, traffic and other objects in this area (Refer to Unit B). For example, children standing in front of the bus may not be visible in any other way. Therefore, all mirrors must be secure, clean and unbroken. Check mirrors to make sure they are clean and adjusted so you can see all areas around the bus from the driver’s seat and you can obtain the maximum viewing area consistent with the vision requirements of Federal Motor Vehicle Safety Standard No. 111, “Rearview Mirrors.” Refer to 49 CFR 571.111. See Figure E-2 below. The interior rearview mirror must provide a good view of passengers and the area directly behind the bus. The right and left side mirrors must provide a clear view past the right and left rear of the bus. The right and left front fender-mounted rear mirrors (convex mirrors) must provide a clear view from the forward-most point of the front fenders past the rear of the bus. The left front fender-mounted crossover mirror (convex) must provide a view of the blind area directly in front of the bus.

![Figure E-2. Location of Test Cylinders for School Bus Field-of-View Test](image)
Outside Left and Right Side Flat Mirrors.
These mirrors are mounted at the left and right front corners of the bus at the side or front of the windshield. They are used to monitor traffic, check clearances and students on the sides and to the rear of the bus. There is a blind spot immediately below and in front of each mirror and directly in back of the rear bumper. The blind spot behind the bus could extend up to 400 feet depending on the width of the bus. Ensure the mirrors are properly adjusted so you can see:

- 200 feet or four bus lengths behind the bus;
- Along the sides of the bus; and
- The rear tires touching the ground.

May use in conjunction with the left and right side convex mirrors to obtain the desired visibility.
Instructor Notes:
Outside Left and Right Side Convex Mirrors.
The convex mirrors are located below the outside flat mirrors. They are used to monitor the left and right sides at a wide angle. They provide a view of traffic, clearances and students at the side of the bus. These mirrors present a view of people and objects that does not accurately reflect their size and distance from the bus. Ensure the mirrors are properly adjusted so you can see:

- The entire side of the bus up to the mirror mounts;
- Front of the rear tires touching the ground; and
- At least one traffic lane on either side of the bus.

Figure E-4. Left and Right Side Convex Mirrors

May use in conjunction with the left and right side standard (flat) mirrors to obtain the desired visibility.
Instructor Notes:

**Outside Left and Right Side Cross View Mirrors**
Q: What should the operator see in the outside left and right cross view mirrors?
A: (1) The entire area in front of the bus from the front bumper at ground level to a point where direct vision is possible. Direct vision and mirror view vision should overlap. (2) The right and left front tires touching the ground. (3) The area from the front of the bus to the service door.

**Overhead Inside Rearview Mirror**
Q: What should the operator see in the overhead inside rearview mirror?
A: (1) the top of the rear window in the top of the mirror; (2) all of the students, including the heads of the students right behind you.
Outside Left and Right Side Cross View Mirrors.
These mirrors are mounted on the left and right front corners of the bus. They are used to see the “danger zone” area directly in front of the bus not visible by direct vision, and to view the “danger zone” areas to the left side and right side of the bus, including the service door and front wheel areas. The mirror presents a view of people and objects that does not accurately reflect their size and distance from the bus. The driver must ensure these mirrors are properly adjusted. Ensure the mirrors are properly adjusted so you can see:

- The entire area in front of the bus from the front bumper at ground level to a point where direct vision is possible. Direct vision and mirror view vision should overlap;
- The right and left front tires touching the ground; and
- The area from the front of the bus to the service door.

These mirrors, along with the convex and flat mirrors, should be viewed in a logical sequence to ensure a child or object is not in any area of the danger zone.

Overhead Inside Rearview Mirror.
This mirror is mounted directly above the windshield on the driver’s side area of the bus. This mirror is used to monitor passenger activity inside the bus. It may provide limited visibility directly in back of the bus, if the bus is equipped with a glass-bottomed rear emergency door. There is a blind spot area directly behind the driver’s seat as well as a large blind spot area beginning at the rear bumper and could extend up to 400 feet or more behind the bus. You must use the exterior side mirrors to monitor approaching traffic and enter this area. Ensure the mirrors are properly adjusted so you can see:

- The top of the rear window in the top of the mirror; and
- All of the students, including the heads of the students right behind you.
Instructor Notes:
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Passenger Entry

1) **Check Service Doors** – Open and close your service door to ensure it operates smoothly, and there is no broken or obscure glass.

2) **Check the Stairwell** – Ensure the skid resistant tread is in good operating condition and the stairs themselves are not bent or rusting. Some stairwells are lighted. If this is the case, the lens cover should not be broken. Make sure if a light is present, it operates correctly.

3) **Check the Handrail** – This item is required in a school bus, and it should be secure and undamaged. This is of particular importance so it does not snag a student’s clothing and drag them, if the bus is in motion.

Passenger Compartment

A walk-through examination of the passenger compartment should be completed next. You should examine seats to ensure they are secure to the floor with no broken parts, and the condition of the upholstery is adequate. This includes making sure the seat bottoms are secure on the way down the aisle and also check for vandalism. Correct any problems, if possible, and report any hazardous conditions to your supervisor. Also be sure the compartment is free of clutter or trash, which could cause a student to slip or fall.

At the end of the walk-through, be sure the emergency door(s) is unlocked and opens and closes properly, and the warning buzzer works properly. While the door(s) must be shut to prevent carbon monoxide fumes from entering, it must not be locked at any time during operation of the bus. In addition, the door and aisle should never be blocked. The rear emergency door and side emergency door exits must open and close properly from outside the bus.

When you walk through the bus and open the back door, you can see that the back turn signals are flashing, and the amber lights in the back are flashing.

Check emergency exit windows on sides and emergency escape hatches in the roof to see they are operational and the warning buzzer works properly.

Lastly, check the school bus emergency equipment. This includes:

- Spare electrical fuses, unless vehicle has circuit breakers;
- Three red reflective triangles;
- Properly charged and rated fire extinguisher. This is a fire extinguisher with a total rating of not less than two A-10 BC for electrical and liquid-fuel fires. Ensure the pin is in place. You need to make sure the fire extinguisher is inspected at least once a year to ensure it is fully charged, properly filled and operable. Upon approval, the fire extinguisher shall be tagged, signed and dated. Check to make sure your extinguisher is tagged, signed and dated as part of your inspection. Refer to Section 171.51, 171.122, 171.132, and 171.147 of Title 67 for additional details on fire extinguishers;
- Complete First Aid Kit (refer to Unit I) including a Body Fluid Clean-Up Kit;
- Pry bar;
- Tire chains (Optional: where winter conditions require them);
- Tire changing equipment (optional);
- List of emergency phone numbers; and
- Crash reporting packet (Refer to Unit I).
4. Inspect Outside of Bus: Walk-around Inspection

**Emphasis point:** Emphasize to the operators that THEY are responsible for safety. The mechanics play an important role, but ultimately is it their responsibility.

**Emphasis point:** Valves and brake shoes cannot be checked by the operator during the pre-trip inspection. Operators should work with mechanics when they detect problems with the brakes (too soft, making loud sounds, etc.).
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Refer to state regulations in Title 67, Chapter 171 for additional regulatory information regarding safety equipment: www.pacode.com.

Don’t forget to check the interior signal pilot and dashboard lights. Make sure the headlight dimmer switch is working, and check the dome and stepwell lights. Lastly, activate the school bus eight-way light system. While it is on, the red flashing lights will be activated once you open the service door of the bus. Leave all lights on at this point so you can check them from the outside during your walk-around inspection.

4. INSPECT OUTSIDE OF BUS: WALK-AROUND INSPECTION
Walk around the bus for the next set of checks. Leave the engine running with the parking brake set, transmission out of gear, and lights and signal devices left on. To save time, it is a good idea to team up with another driver when checking mirrors, headlights, the red and amber flashing lights of the school bus eight-way light system, side marker lights, brake lights, and back-up lights.

Tires, Wheels, and Rims
Tires, wheels and rims operate together. Tires should be of the same size, evenly matched, and of the same type (radial or bias type). The recaps are permitted on rear tires unless they are single wheels, but not on the front. If using recapped tires, they must be stamped as “regroovable.” Refer to Section 171.36 of Title 67 for additional details. The tread should not be separating from the tire. Rims should not be bent or damaged, and should have no welding repairs. Look for rust trails, which may indicate the rim is loose on the wheel. Rust around lug nuts may also indicate looseness. You may need to tighten with a wrench. Also, the hub oil seals, axle seals, and wheel bearing seals should not be leaking. Look for any other signs of misalignment or missing lug nuts.

When walking around, carry your pry bar or tire buddy, and strike each tire; the bar should bounce back adequately, if properly inflated. If you have any indication a tire is not properly inflated, check the tire with a tire gauge. Also check for tread depth: A minimum depth of 4/32” is required on the front tires and 2/32” on the rear tires as per Section 171.36 of Title 67. The valve stem and cap should be in place and undamaged. Also, there should be no obstructions between the dual wheels.

Develop the habit of observing tires for abnormal wear patterns, which may be a symptom of suspension problems. Figure E-6 shows several types of abnormal wear that can cause steering problems, shimmy conditions and premature tire wear. Do not operate the bus, if the tire has such defects as bubbles, cracks or significant abnormal tire wear patterns.

Figure E-6. ABNORMAL TIRE WEAR PATTERNS

SMOOTH SMOOTH CHEWED
OVER UNDER OUT OF INFLATED INFLATED ALIGNMENT
4. **Inspect Outside of Bus: Walk-around Inspection - Check Right Front**

**Emphasis point:** Emphasize to the operators that THEY are responsible for safety. The mechanics play an important role, but ultimately it is their responsibility.

**Emphasis point:** Valves and brake shoes cannot be checked by the operator during the pre-trip inspection. Operators should work with mechanics when they detect problems with the brakes (too soft, making loud sounds, etc.)
Check Right Front

- Right fender-mounted mirror (previously outlined in this unit);
- Right front tires, wheels and rims (previously outlined in this unit);
  - Condition,
  - Hub oil level adequate,
  - 4/32” tread depth.
- Right front suspension;
  - Spring, spring hangers, shackles, U-bolts: Mount should be secure, not broken or cracked, without missing or loose bolts. Bushings and axle mounting parts should not be damaged, broken, or missing. Check for missing or broken leaves; leaves that have shifted and may be nearly in contact with the tire, rim, brake drum, frame, or body. For a coil spring, look for breaks or distortions.
  - Shock absorbers should be secure, unbroken and have no leaks.
  - A key with this inspection is to give valid information on important parts, and to know what constitutes an unsafe condition. YOU are responsible for safety.

![Figure E-7. Suspension System](image-url)
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- Crossing arm control should be secure and not broken;
- Right front brake;
  - Brake drum – The brake drum should have no cracks, dents or holes, and no missing or loose bolts. Brake linings should not be worn thin.
  - Condition of hoses – Hoses should not be cracked, worn, or frayed, and couplings should be secure.
  - Slack adjuster (for air brakes) – The slack adjuster should have no broken, loose or missing parts. The angle between the push rod and the adjuster arm should be about 90 degrees when the parking brake is applied. When pulled by hand, brake push rod should move no more than about 1” (front brake).
  - Brake chamber (for air brakes).
  - NOTE: Valves and brake shoes cannot be checked by the operator during the pre-trip inspection.

Check Front Side

- Condition of front axle;
- Condition of steering system (See Figure E-8);
  - No loose, worn, bent, damaged, or missing parts.
  - Grab the steering wheel to test for looseness. Steering wheel play should not be more than 10 degrees or two inches of movement at the rim of a 20-inch diameter steering wheel.
  - Steering box and steering linkage: Look for missing nuts, bolts, fluid leaks, and damage to the power steering hose. No connections to the front wheels should be cracked.

**Figure E-8. Steering System**

- Parking, clearance and identification lights are clean, operating and proper color (amber at front).
- Reflectors are clean and proper color (amber at front).
- Front turn signal light is clean, operating and proper color (amber or white on signals facing forward).
- Left school bus eight-way light system – is clean and operating.
Instructor Notes:
Check Left Front

• Check all items as for right front;
• Check left side stop arm and wing guard. The Stop sign should come out with the lights and indicators flashing alternately; and
• Check left front fender rear and crossover mirrors as the right front.

Check Left Side

• Left fuel tank(s):
  - Securely mounted, not damaged or leaking,
  - Cap(s) on and secure.
• Battery check:
  - Securely mounted,
  - Adequate fluid level,
  - No leaks.
• Condition of visible parts:
  - Transmission not leaking,
  - Exhaust system is secure, not leaking, not touching wires, fuel, or air lines,
  - Frame and cross members have no bends or cracks,
  - Air lines and electrical wiring are secured against snagging, rubbing and wearing;
• Spare tire carrier or rack is not damaged (if equipped),
• Spare tire and/or wheel is securely mounted in rack, and
• Spare tire and wheel adequate (proper size, properly inflated).

Check Left Rear

• Check left rear tires, wheels and rims (previously outlined in this unit):
  - General condition,
  - Hub oil level adequate,
  - 2/32" tread depth,
  - Make sure there are no obstructions between the dual wheels.
• Suspension: Same as front right suspension (previously outlined in this unit):
  - Condition of spring, spring hangers, shackles, U-bolts,
  - Axle is secure.
• Brakes – Same as front right suspension (previously outlined in this unit):
  - Condition of brake drum(s),
  - Condition of hoses,
  - Slack adjuster (for air brakes),
  - Brake chamber (for air brakes).
• Lights and Reflectors:
  - Side-marker lights are clean, operating and proper color (red at rear, others amber),
  - Side-marker reflectors are clean and proper color (red at rear, others amber),
5. **Check Brake System**

Q: What is the most critical piece of safety equipment on the bus?
A: The brakes.

Q: Regardless of the type of brakes, what ‘problem signs’ should you watch for when you stop your bus?
A: Skidding, swerving, pulling to either side, grabbing, locking, making excessive noise.

Operators must become fully familiar with the procedures for testing their brakes (parking, hydraulic, and air, as applicable).

It is an automatic failure if you fail to correctly perform your air brake check during the skills exam. Refer to Sections 5 and 10 of the CDL Manual for additional information.
UNIT E - Preventative Maintenance

Check Rear Side
- Lights and Reflectors;
  - Rear clearance and identification lights are clean, operating and proper color (red at rear),
  - Reflectors are clean and proper color (red at rear),
  - Tail lights are clean, operating and proper color (red at rear),
  - Rear turn signal is operating and proper color (white, red or amber at rear).
- License plate(s) is present, clean and secured;
- Splash guards are present, not damaged, properly fastened, not dragging on ground or rubbing tires;
- Rear emergency door and side emergency door exits open and close properly from outside the bus;
- Exhaust system;
  - Pipes, muffler, tailpipe and hangers are securely mounted without cracks, holes, or severe dents,
  - Muffler and pipes should not be touching wires, fuel hoses or air hoses,
  - No excessive smoke, hissing, vibration, or noise,
  - The tailpipe does not extend beyond two inches from the rear of the vehicle.

Check Right Rear
- Check all items as on left side and fuel tank area including straps, cap, and signs of fuel leaks:

5. CHECK BRAKE SYSTEM
Brakes are the most critical piece of safety equipment on your vehicle. You will need to make sure they are working properly before taking your bus on the road. This includes the parking brake and the service brake.

To test the parking brake:
1. Fasten seat belt;
2. Allow bus to move slowly forward; and
3. Apply parking brake. If the bus doesn’t stop, it’s faulty, and you must get it fixed before taking your bus on the road.

If your bus is equipped with hydraulic brakes, test for hydraulic leaks:
1. Pump the brake pedal three times;
2. Apply firm pressure to the pedal and hold for five seconds; and
3. The pedal should not move. If it does, there may be a leak or other problem. Get it fixed before operating the vehicle.

If your bus is equipped with air brakes, refer to Sections 5 and 10 of the Commercial Driver’s License Manual for testing. The manual is available on PennDOT’s Driver and Vehicle Services website, www.dmv.state.pa.us under the Commercial Driver Information Center.
Instructor Notes:
Here are some procedures for an air brake test:

- With the engine running, build the air pressure to the governed cut out (typically 100-125 psi) and shut off the engine. Turn the key, but do not start the engine; chock your wheels and release the parking brake. Check the air gauge to see if the pressure drops more than two psi in one minute. If the air loss is greater, check for leaks and fix before driving.
- Then fully apply pressure to the foot brake and hold for one minute. Check the air gauge to see if the pressure drops more than three psi. If the air loss is greater, check for leaks and fix before driving.
- Begin fanning off the air pressure by rapidly applying and releasing the foot brake. The low air warning devices (buzzer, light, flag) should activate before the pressure drops below 60 psi.
- Continue to fan off the air pressure. At approximately 40 psi to 20 psi, the parking brake valve should close by popping out.
- Check the air pressure build-up rate by starting the engine. When the engine is at operating RPM, the pressure should build from 85 to 100 psi within 4.5 seconds in dual air systems. If the vehicle has larger than minimum air tanks, the build-up time can be longer and still be safe. Check the manufacturer’s specifications.

Regardless of what type of brake system your school bus is equipped with:

1. Release the parking brake;
2. Move forward at about five MPH;
3. Push brake pedal firmly; and
4. Watch for “pulling” to one side or any unusual brake pedal “feel” or delayed stopping action. These may indicate trouble, and you should have the bus serviced.

**Automatic Slack Adjusters (ASAs)**

All airbrake vehicles manufactured since Oct. 20, 1994, are required to have automatic slack adjusters (ASAs). ASAs should not have to be manually adjusted except when performing maintenance on the brakes and during the installation of the brake adjusters. In a vehicle equipped with ASAs, when the pushrod stroke exceeds the legal brake adjustment limit, it is an indication a mechanical problem exists in the adjuster itself, a problem with the related foundation brake components or the adjuster was improperly installed.

The manual adjustment of an ASA to bring a brake pushrod stroke within legal limits is generally masking a mechanical problem and is not fixing it. Further, routine adjustment of most ASAs will likely result in premature wear of the adjuster itself. It is recommended when brakes equipped with ASAs are found to be out of adjustment, you take the vehicle to a repair facility as soon as possible to have the problem corrected. The manual adjustment of an ASA should only be used as a temporary measure to correct the adjustment in an emergency situation, as it is likely the brake will soon be back out of adjustment since this procedure usually does not fix the underlying adjustment problem. ASAs are made by different manufacturers and do not all operate the same. Therefore, the manufacturer’s service manual for the specific ASA being used should be consulted prior to troubleshooting a brake adjustment problem.)

Once everything has been completed, check for all required papers, trip manifests, permits, etc., and secure all loose articles in driver’s compartment.
Detecting Abnormal Vehicle Behavior

Emphasize that mechanical problems with the bus can be detected using most of a school bus operator’s senses.

Q: What is an example of mechanical trouble that can be detected by hearing?
A: An engine knock.

Q: What is an example of mechanical trouble that can be detected by seeing?
A: A loose wire or a coolant leak.

Q: What is an example of mechanical trouble that can be detected by smelling?
A: Burning insulation or the engine leaking oil onto a hot manifold.

Q: What is an example of mechanical trouble that can be detected by feeling?
A: A shimmy in the steering or a problem with the brake pedal.

Q: What should you be looking for?
A: Anything loose, weakening, broken, or leaking; anything that looks/seems different from usual; problems that increase noticeably with time.

Q: You notice a dripping trail and puddle under the engine. The liquid is thick, wet, yellow-green, and the engine temperature is increasing. What do you do?
A: Don’t operate the bus any longer, and report the problem to your maintenance department. Most likely there is a problem with the antifreeze.
UNIT E - Preventative Maintenance

PREVENTIVE MAINTENANCE WHILE ON THE ROAD
The previous section detailed checks you should make before leaving on your daily route. This section deals with preventive maintenance while on the road. The section is divided into two parts: detecting abnormal vehicle behavior, and following good driving habits that will extend the life of the vehicle and its components.

DETECTING ABNORMAL VEHICLE BEHAVIOR
Detecting abnormal vehicle behavior requires you to use most of your senses: sight, sound, smell, and touch. As a first step, you must learn to recognize the normal running condition of the vehicle while at the wheel so you can compare normal conditions with unusual steering, rattles, odd smells, or other conditions. For this reason, and as a vital safety practice, it is important to road test the vehicle every morning before picking up the first passenger. This is not to say that after the road test, your preventive maintenance responsibilities are over. Throughout a trip, you should constantly monitor the engine gauges and the general operating condition of the vehicle in the same manner as during the road test.

Continuous Checks
- Watch gauges and instruments for trouble:
  - Instruments;
  - Air pressure gauge (if you have air brakes);
  - Temperature gauges;
  - Pressure gauges;
  - Ammeter/voltmeter;
  - Use your senses (sight, sound, smell, feel) to check for problems.
- Check critical items when you stop:
  - Tires, wheels, and rims;
  - Brakes;
  - Lights.
- Watch your mirrors.
- If you see, hear, smell, or feel anything that might mean trouble, check it out.

Check Parking Brake
Check the parking brake again before pulling out onto the road.
- If your bus is equipped with a ratchet-type lever, you should feel a distinct clicking of the ratchet pawl and the lever should lock firmly into place when you apply the brake. When properly adjusted, this brake should be capable of holding the bus on a hill. If you detect excessive looseness or lever travel, the lever slipping out of locked position, the lever binding, or the brake not holding the bus on a hill, have the parking brake adjusted.
- If the parking brake is an over-center type, it should not take excessive effort to apply, but it should still prevent the vehicle from rolling on a grade or with the transmission in gear.
- If the bus is equipped with air brakes, pull out the parking brake control knob to engage the parking brake. Put the bus in low gear and pull against the parking brake. If the vehicle does not hold with the parking brake knob in the engaged position, have the rear brakes adjusted.
Detecting Abnormal Vehicle Behavior – Check Suspension

Q: What are some symptoms that might indicate a suspension malfunction?

A: (1) The bus sags at one end or corner. (2) The bus bounces excessively. (3) The bus hits bottom when going over bumps or potholes. (4) The bus is not tracking properly. (5) The bus weaves or sways when turning.
Check Service Brakes
Check the service brakes after the parking brake, preferably before reaching the highway. Test at low speeds by bringing the bus smoothly to a complete stop. Your bus should stop in a straight line without skidding, swerving, pulling to either side, grabbing, locking, or making excessive noise.

- For buses with hydraulic brakes, the brakes should not need to be pumped to have braking power and should not need excessive pedal effort to engage. If they need either, have the brakes adjusted.
- With air brakes, the bus should stop as described above, but you have an additional check. Since air pressure is being used to apply the brakes, you will see some loss of pressure (as indicated on the air pressure gauge). In general, a brake adjustment is required, if the gauge pressure drops by more than 10 lbs. during a single brake application.
- Check the air pressure gauge, and vacuum the gauge periodically while on the road.

Check Transmission
Automatic transmissions should not slip or produce harsh, jerking shifts. With a manual transmission, ensure all forward and reverse gears engage smoothly with no unusual metallic clashing noises, burning clutch smells or shifting difficulties. The clutch should engage easily and smoothly, without jerking, slipping excessively, or chattering. Also, with a properly adjusted clutch, the pedal should move freely for approximately the first 1 to 1½ inches. Greater or lesser amounts of free clutch travel, or freeplay as it is commonly called, may indicate clutch wear.

Check Steering
While the bus is moving straight ahead, check the steering for the amount of play or looseness in the wheel. Check for a binding feel or any unusual noises when making full turns. As with the other checks above, report any unusual conditions at once.

Check Suspension
To ensure safe control of the bus while on the road, check the suspension. The suspension may have a malfunction, if the bus sags at one end or corner or if it bounces excessively. Also check that the bus tracks properly and does not weave or sway when turning.

Check Engine
In addition to periodic gauge checks, especially oil pressure, temperature and ammeter/ voltmeter, listen for any unusual engine noises. Note any hesitation in acceleration or any power loss when going uphill. This behavior can indicate cylinder misfires, damaged valves, a restricted exhaust system, or inaccurate engine timing. All of these problems can cause early engine wear and excessive fuel consumption.

As stated earlier in this section, you should continually check the items mentioned above while on the road. However, it is especially important to make these checks before picking up your first passenger. Report any abnormal operating condition immediately.

Check Your Tires
As mentioned in the pre-trip inspection, pay particular attention to your tires: proper inflation, no unusual wear, and proper tread depth, 4/32” on front tires and 2/32” on rear tires.
Instructor Notes:

**Good Driving Habits**
Emphasize that smooth driving is not only safer, in terms of negotiating traffic, but better for the bus itself.

**Diesel-Powered Commercial Motor Vehicle Idling Act**
- On October 9, 2008, Governor Rendell signed Senate Bill 295, which establishes the Diesel-Powered Motor Vehicle Idling Act. The legislation, now known as Act 124 of 2008, prohibits commercial diesel vehicles from idling for more than five minutes during any 60-minute period; provides for penalties ranging from $150 to $300; and requires permanent signs informing drivers of the idling restrictions to be posted. The bill provides several exemptions to the idling restrictions, including the following, which apply to school buses:
  - When a bus, school bus or school vehicle must idle to provide heating or air conditioning when non-driver passengers are onboard. For purposes of this exemption, the bus, school bus or school vehicle may idle for no more than a total of 15 minutes in a continuous 60-minute period, except when idling is necessary to maintain a safe temperature for students with special needs who are transported by a school bus or school vehicle.
  - When idling by a school bus or school vehicle off school property during queuing for the sequential discharge or pickup of students is necessary because the physical configuration of a school or the school’s surrounding streets do not allow for stopping.

The complete bill may be accessed at http://www.legis.state.pa.us/cfdocs/legis/PN/Public/btCheck.cfm?txtType=HTM&sessYr=2007&sessInd=0&billBody=S&billTyp=B&billNbr=0295&pn=2485.
GOOD DRIVING HABITS
The second part of your on-the-road preventive maintenance responsibility is operating the vehicle properly through good driving habits. Most of the procedures to be covered in this section will have no immediate effect on the vehicle’s operation, but if practiced regularly, they will significantly increase the lifespan of the vehicle components.

Starting the Bus and Basic Operations
When starting your bus, don’t engage the starter for more than 10 seconds. This could cause damage to the flywheel or other parts. Never operate a bus with an overheated engine or with low oil pressure. This can cause serious engine damage – pay attention to your gauges.

To ensure proper service length for tires and to avoid damage while driving, never operate your bus with flat or under-inflated tires. Driving over curbs, objects and into potholes can damage tires quickly as can rubbing tires against curbs.

Don’t idle excessively. A diesel bus gets warm by driving it. You won’t get heat until the bus is operating on the road. It will not get warm sitting and idling no matter how long you let it idle.

Proper Use of the Clutch
The clutch is the most abused component in the bus because of frequent use and because many drivers do not understand its function. A clutch assembly will give many miles of trouble-free operation, if you drive properly and maintain the clutch properly.

Here are some pointers:

• Don’t use the clutch as a brake. Many drivers incorrectly use the clutch as a brake. For example, they will stop on an incline and, by feathering the clutch (letting the clutch partially out), hold the bus from rolling. By so doing, they force the slipping clutch to hold the entire weight of the bus and passengers. This severe friction generates excessive heat, which greatly shortens the life of the clutch.

• Don’t ride the clutch. The throw-out bearing is a component of the clutch that does not turn when the clutch pedal is released, its normal position during driving. “Riding the clutch” is when the weight of a driver’s foot resting on the clutch pedal is enough to move the throw-out bearing forward until it makes contact with the pressure plate and spins at the same speed as the engine. This serves no purpose except to increase wear and cause premature destruction of the bearing. The bearing is engineered to last a certain length of time and is factory packed in enough grease for this usage. Excessive use will use up this grease and will burn out the bearing. When shifting, use the clutch briefly and smoothly to achieve maximum durability.

• Make sure the clutch is adjusted properly. Another term you may have heard is toeboard clearance or freeplay. This refers to the amount of travel of the clutch pedal between its highest position and the point where you can feel contact being made. This clearance must be maintained in order to prevent the throw-out bearing from turning. On most equipment, clearance should be approximately 1 to 1½ inches. Due to normal wear of the clutch, clearance decreases gradually. The clutch should be adjusted frequently to maintain freeplay. Alert your supervisor or mechanic, if the clutch needs to be adjusted.
Instructor Notes:
Proper Use of the Brakes
Brakes are another commonly abused vehicle component. You can extend brake life if you follow a few pointers. By watching the traffic ahead, you can observe when you may have to stop; slow the bus by letting up on the gas pedal prior to the stop so the brakes will be used lightly and only for a short time. You can use the engine’s braking power to slow the bus prior to making a stop and to control your speed on downgrades. When stopping, apply the brakes gently whenever possible and ease up on pedal pressure as speed drops so you are using very light pressure at the end of the stop. Do not:

- Disengage the clutch until the bus has almost stopped; and
- Brake quickly or harshly or for extended periods of time on downgrades.

Both of these actions cause excessive brake heat and shorten brake life and braking effectiveness. Delayed braking can result in abrupt stops and ultimately in crashes. For buses with automatic transmissions, refer to the section on shifting procedures in Unit F (Driving Fundamentals).

Protection of the Rear Axle
Protection of the rear axle is a third good driving habit. For long rear axle life, never spin the rear wheels on slippery surfaces (such as snow or ice) or loose surfaces (such as sand or gravel). If the rear wheels spin for a long time, the high speed will throw the lubricant out from between the gears, which can damage the differential assembly. In more extreme cases, the internal gears may seize and break the shaft. Also, if a spinning wheel suddenly hits dry pavement or solid ground, the resultant shock can totally destroy the differential.

Proper Use of the Transmission
Proper use of the transmission can save wear and tear on gears, clutch, engine, and brakes. Maintain a constant speed whenever possible to save fuel and reduce wear on drive line components.

Manual Transmission.
With a manual transmission, always start the vehicle moving in low gear, moving at a slow rate of speed. This will ensure proper lubrication of internal transmission and rear axle parts, and will avoid the possibility of lugging the engine or slipping the clutch. As you move faster, progressively shift the transmission to the gear that will maintain the desired road speed. When driving a vehicle with a manual transmission:

- Always start off in first gear when carrying a heavy load;
- With a four-speed transmission, use first through fourth gears on level ground;
- With a five-speed transmission under light load conditions, use second through fifth gears for normal driving;
- When going up hills, downshift to avoid lugging the engine;
- When going down a hill, use one gear lower than would be required to go up the hill. Using lower gears will help slow the bus down and prevent the brakes from overheating due to excessive use; and
- Stop completely before shifting into first gear or reverse.
Post-Trip Preventive Maintenance Procedures
Q: Why is the post-trip inspection so important?
A: It's not only a good idea, it's required by Federal Regulations (49 CFR Section 396.11).

Emphasize the importance of making a written report of the bus’ condition at the end of each day. Even if little is changing, the regular reports give the mechanic a baseline for detecting changes that could suggest a leak in fluid levels or a broken part.
UNIT E - Preventative Maintenance

Automatic Transmission.
For vehicles equipped with automatic transmissions, proper selection of the correct gear provides better control without undue wear on the transmission. Avoid using the accelerator to hold a vehicle with an automatic transmission on a hill. When driving a vehicle with an automatic transmission, use the gearshift as described in the owner’s manual for better vehicle control. Shifts are especially helpful when approaching hills and grades. Before driving a bus equipped with an automatic transmission for the first time, consult the owner’s manual for detailed operating instructions. While the preventive maintenance on-the-road checks and driving habits presented in this section are vitally important to the safe operation and long life of the vehicle, your single most important preventive maintenance responsibility is to immediately and accurately report any malfunctions.

POST-TRIP PREVENTIVE MAINTENANCE PROCEDURES
Your maintenance responsibilities are not over until you stop the vehicle, check it over, and report its condition to your supervisor or maintenance department. Complete the following steps at the end of every trip:

• If possible, fill the fuel tank in the evening rather than waiting until the following morning, if this is one of your responsibilities. This will reduce the overnight condensation of water vapor inside the fuel tank.
• When parking your bus, after you set the parking brake and put the transmission in neutral, allow the engine to idle slowly as per manufacturer’s recommendations. This will permit proper lubrication of all engine parts, and is of particular importance for diesel vehicles.
• While the engine is idling, check the interior for broken windows, ripped seats or other damage that should be repaired before the bus is used again. Check on and under the seats for sleeping students, books, clothes or other materials that may have been left by the students.
• Sweep the floor and steps of the bus. Enforcing a clean bus policy with your students will help you maintain your bus. Also, periodically washing the interior of the bus including seats, windows and windowsills is good practice.
• Check the exterior of the bus for burned out bulbs or other damage that needs to be repaired. Re-enter the bus, turn off all electrical equipment, shut off the engine, remove the keys, and secure the bus.
• Generally, drivers should remove the key from the ignition. Check with your supervisor for your local policy on this issue.

Remember that federal regulations in 49 CFR Section 396.11 require every motor carrier require its drivers to report, and every driver shall prepare a report in writing at the completion of each day’s work on each vehicle operated, and the report shall cover at least the following parts and accessories:

• Service brakes, including trailer brake connections;
• Parking (hand) brake;
• Steering mechanism;
• Lighting devices and reflectors;
• Tires;
• Horn;
• Windshield wipers;
• Rear vision mirrors;
Instructor Notes:

*Five Basic Items Mechanics Want You to Know*

Emphasize these five items. Paying attention to these five recommendations can cover the most common problems of bus deterioration and damage, and can significantly reduce bus maintenance costs.

At the end of this Unit, go over each of the Review Questions provided in the Lesson Summary at the start of the Unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What are the main steps of the pre-trip inspection?
2. What should you do during the walk-around inspection?
3. During a trip, what signs would indicate abnormal vehicle behavior?
4. How can you properly use the clutch and the transmission to reduce vehicle wear?
5. What are the procedures in your area for reporting vehicle problems?
6. What are the five basic items mechanics want you to know?

Consider using the Case Studies provided earlier in this Unit.
• Coupling devices;
• Wheels and rims; and
• Emergency equipment.

The regulation also details report contents, corrective actions and exceptions.

**IMPORTANCE OF REPORTING PROBLEMS**

Clearly, your responsibilities as a school bus operator include reporting any and all abnormal conditions encountered during the day to your supervisor or maintenance department. This could be something you discovered in the pre-trip inspection, while the bus was in service, or after your trip. Failure to inspect equipment before each trip and failure to report defects and needed repairs cannot only create costly maintenance problems, it can also create an unsafe condition for you and your passengers. Remember, problems cannot be repaired, if they are not reported.

When reporting, be accurate in describing the problem; you do not need to diagnose. Mechanics will need accurate information on:

1. Location;
2. Timing;
3. Sounds; and
4. Other descriptive characteristics.

Write it down, pass it on, get it fixed.

Report anything affecting safety or possibly leading to mechanical breakdown. The vehicle inspection report tells the vehicle owner about problems that may need to be fixed. Keep a copy of your report in the vehicle for one day. That way, the next driver can learn about any problems you have found. Federal regulations outline additional recordkeeping requirements and timeframes. Refer to 49 CFR Sections 396.3 and 396.21.

**FIVE BASIC ITEMS MECHANICS WANT YOU TO KNOW**

1. Understand and learn to read your gauges. Knowing your voltage meter, oil pressure and water temperature readings could save your engine.
2. When you first notice any type of repair that needs to be done, write it up immediately. This could prevent a major repair later and be less costly to fix.
3. If you drive a diesel bus, remember to let your bus idle as per manufacturer’s recommendations in the lot before you turn it off. This will cool down the turbocharger and may extend engine life.
4. If you have a flat tire in a rear wheel, do not drive on it. A minor cost can turn into an expensive replacement.
5. The glow plug (if equipped with one) on the dash on a diesel bus will go out when the bus is ready to start.
UNIT F LESSON SUMMARY

SAFE DRIVING

INSTRUCTOR’S PERSPECTIVE
This Unit introduces the issue of safe driving by exploring the combination of three elements of roadway safety: the driver; roadway conditions, and the vehicle. Of these elements, school bus drivers have the most influence over their own behavior, so this unit devotes most of its attention to the condition and abilities of the driver. However, even though the condition of the bus and the roadway seem beyond the driver’s control, the driver can influence these elements. Through attentiveness to the bus and timely reporting of problems, the driver can assist with maintaining the buses’ condition. In addition, attentiveness to roadway conditions, learning the basic ‘rules of the road,’ and adjusting driving behavior accordingly can give the driver some control over roadway conditions.

TRAINEE OBJECTIVES
1. Be able to describe the basic elements of safe driving, including primary causes of crashes and methods to reduce those crash risks.
2. Be able to articulate an awareness of limitations – the mechanical limitations of the bus and their own physical and mental limitation with regard to driving.
3. Develop an ability to recognize potential dangers associated with driver, vehicle, natural, and man-made conditions.
4. Know the steps necessary to successfully negotiate hazardous situations and how to select appropriate driving techniques for specific circumstances.

LOCATION
Classroom.

DELIVERY MODE
Lecture and discussion.

MATERIALS
- Classroom Aids - LCD Projector (screen optional), chalkboard, chalk, and eraser or flipchart and marker, PowerPoint presentation, sample traffic signs, (if available.)
- Handouts - Unit F Study Guide

RESOURCE PERSONNEL
A State or local police representative may assist with knowledge of laws regarding other motorists and school bus drivers.

SUMMARY AND REVIEW QUESTIONS
- Summary - This unit should be emphasized in new driver and recertification courses. A formal defensive driving program might also be considered to supplement the information presented in this unit.
- Review Questions -
  1. What is defensive driving?
  2. What factors affect your ability to drive?
  3. How does alcohol affect your body with regard to driving?
  4. How might your attitude affect your driving?
  5. What are some of the driving offenses that are considered aggressive?
6. Discuss methods for effective monitoring of critical sources of information while driving.
7. What can you do to make sure your bus is in proper condition to drive?
8. How far ahead on the road must you be able to see clearly?
9. What are some things you can do to increase visibility?
10. What driving adjustments should you make for slippery roads?
11. What differences are there between nighttime driving and daytime driving?
12. At what locations should you be particularly cautious of heavy winds?
13. Why are man-made hazards particularly hazardous?
14. What three things can you do to identify hazards and changes in the shape of the road?
15. What effect does road surface have on stopping distance?
16. When is hydroplaning likely to occur?
17. Where should you be particularly alert for pedestrian hazards?
18. Why must you be observant of other vehicles’ behavior?
19. Explain the factors that make up total stopping distance.

REFERENCES

Websites
• Federal Motor Carrier Safety Administration (FMCSA) summary of driver fatigue research: http://www.fmcsa.dot.gov/facts-research/research-technology/topics/fatigue.htm

PennDOT Publications

Laws and Regulations
• Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapter 71, 104, 171, 212 and 447 http://www.pacode.com/secure/data/067/067toc.html
• The Pennsylvania Vehicle Code (Title 75): http://www.dmv.state.pa.us/vehicle_code/index.shtml

Other
• Local regulations and/or procedure guides, if available.
CASE STUDY EXERCISE

ATTENTION AND MONITORING ACTIVITY
This Unit focuses on safe driving techniques for school bus operators geared toward reducing the number of crashes involving school buses. To emphasize the many points in this unit, here is a case study which illustrates the importance of safe driving. Following this case study is an attention and monitoring exercise.

In presenting case studies, the instructor should:

1. Have the class read the situations.
2. Give the class a few seconds to think about the situation, then ask for volunteers to explain to the rest of the class, in as much detail as possible, how the situation should be handled.
3. Have the rest of the class critique the driver’s response.
4. The instructor then takes the role of a facilitator and manages the discussion.
5. Specific discussion questions are provided after the case studies to help facilitate discussions.

Another method for presenting the case studies is for you (the instructor) to read the case study out loud and simply facilitate the discussion from there using the prompt questions to get the class involved.

HAZARDOUS CONDITIONS CASE STUDY
Judy is a school bus driver for a rural school district. She is an experienced driver who has logged many years driving in all weather conditions including snow, rain, and fog. On this particular day, in late fall, she is on her morning route transporting students to school. She notes that it’s raining out and the temperature is dropping. This tells her there’s a possibility of snow later in the day. At this point, however, she feels no traction problems whatsoever. Nevertheless, like a professional, she slows her bus down and puts more distance between herself and the car in front of her. The students are excited about the possibility of snow that afternoon and are very animated on the bus, including engaging Judy in conversation. In hazardous situations, Judy would never allow herself to be distracted, but she feels no immediate threat from weather or road conditions and allows herself to be drawn into the conversation. Suddenly, on the overpass that crosses the interstate, the bus goes into a skid. Judy slows the bus down and gets it under control. The students, and Judy, are shaken but unhurt. Judy knows, however, that her performance was less than professional.

Discussion Questions
1. What two actions did Judy take that may have saved this situation from being much more serious? Why is that the case?
2. What may have been the cause of Judy’s bus going into a skid? What could Judy have done to possibly avoid this dangerous occurrence?
3. What professional action did Judy omit? How might she have handled the situation differently?
4. Should Judy have called for assistance after this incident occurred? Why or why not? What should she have reported if she called in?
5. Is it important for drivers to keep others informed about changing road conditions? Why?
ATTENTION AND MONITORING TRAINING ACTIVITY

A simple simulation in the classroom can reinforce attention and concentration skills for monitoring the most important information sources while transporting students. Every individual has some level of ability to concentrate on one source of information while avoiding unintended sources. This classroom activity is intended to introduce the new driver to all of these information sources, while reinforcing or correcting proper monitoring strategies in experienced drivers.

Monitoring Events

A novice operator may be quite challenged by the number of different bits of information from which to choose, whereas an experienced operator has developed strategies for optimally monitoring these. The school bus driver must attend to the front view, left side view, left side mirrors, right side, right side mirrors, dashboard displays, steering wheel/hand position, rearview mirror(s), and students being transported. In addition, engine sounds, student voices, and other important roadway information are constantly being given to the driver. In well developed and practiced strategies for monitoring all of this information, the driver will devote more attention to information most likely to influence the safety of student transportation. For example, the expert driver will sample the areas outside of the bus much more frequently than the dashboard controls and displays, as a crash or hazardous situation is much more likely to first evolve from these external views.

Estimation of Event Frequencies

The development of proper, efficient monitoring strategies depends highly on accurate estimation of the frequencies of the critical events mentioned above. People are generally not very accurate estimators of potential crash frequencies. This may result from focusing on some displays or views too often, and not focusing on others often enough. Training can greatly aid in presenting and maintaining an accurate perception of frequencies of events or potential crashes. Overemphasizing a potential crash event, such as a left sideswipe, may force trainees to place greater attention on the exterior environment on the left and right sides of the vehicle.

Attention and Stressful Situations

In times of stress, such as driving in highly congested areas or in bad weather, marked changes in a driver’s monitoring pattern may occur. For example, sources with low perceived event frequencies may be neglected in favor of only higher frequency events. Unfortunately, serious crashes often occur as a result of an unfortunate combination of very low frequency events. The successful bus driver must continue to monitor both high and low frequency information at all times.

Attention and Monitoring Training Activity

Using the following steps, the classroom can provide valuable training in proper monitoring procedures for the school bus driver trainee.

1. Using input from both experienced and inexperienced drivers, develop a list of everything that the school bus driver must monitor during routine driving. Discuss the list, considering if any items would change in times of stressful driving or weather conditions.

2. Rank the items on the list, according to their perceived importance for safe, routine student transportation.

3. Break the class into groups and assign a driver within each group. The remaining trainees in each group should each be one of the monitored sources from the list. Each should also sit in the correct position relative to the driver. For example, a “front windshield” should sit directly in front of the driver.

4. The driver should now attempt to “drive,” explaining each activity and what he or she is currently monitoring. The monitored sources may, from time to time, develop a “problem” by holding a piece of paper, or other more subtle symbol. The driver should verbally note when and where a problem occurs, and should mention how the problem should be solved. Later training could speed up the rate of problems, simulating higher stress conditions. The driver’s monitoring technique should be discussed within each group.

5. The entire class should later consider both successful and unsuccessful monitoring strategies. Discussion should consider both the event frequency and severity of missed sources. The class may try to reach a consensus as to the best order and sources to monitor.

6. This exercise can be done on board a bus as well.
UNIT F STUDY GUIDE

Riding a school bus is the safest mode of ground transportation. However, because school bus incidents typically involve children, those incidents can be serious. Toward eliminating the relatively few incidents that do occur, this Unit introduces general knowledge about safe driving.

There are three primary contributing factors to crashes:

- Driver,
- Vehicle, and
- Roadway and environment

Over 90% of crashes are due to driver error.

Safe driving can counteract many crashes and can be expressed in a formula:

\[ \text{Recognize Potential Hazards + Decide on the Defense + Act in Time = Safety} \]

In addition to a focus on driver efforts to improve safety, this unit presents a complete approach considering other factors as well:

- The driving task.
- The driver’s condition to drive.
- The condition of the vehicle.
- The weather and road conditions.
- Road construction, pedestrians, and other potential hazards.

1. THE DRIVING TASK

A. Information

- Traffic control devices (signs, signals, and pavement markings) are designed to convey particular messages to drivers.
- By learning the shapes and colors of sign categories, a driver can more quickly understand a particular sign’s message.

B. Decision

- Good decisions come from skill and experience.
- Process information quickly.
- Ignore messages that are not necessary.
- Making several simple decisions, one after another, is easier than making one big, complex decision.

C. Action

- The results of an action can provide more information.
- Reaction time is the time it takes to notice a condition, decide what to do, and then do it.
- The more complex the information or the decisions, the longer the reaction time, and thus the time to take action.
- Complicating this process for school bus drivers are many additional distractions, such as student behavior and frequent stops for loading and unloading.
- Better late and safe than never.
2. DRIVER CONDITIONS

A. Human factors refer to people and things they do or fail to do that can cause a crash.

B. Take stock of yourself and make sure you are ready to drive.

C. Knowledge
   - Experience driving a car can serve as a foundation for building bus driving skills.
   - State and local driving rules and regulations are the same whether driving a car or bus.
   - Be prepared for unusual events.

D. Expectancy
   - As you gain experience, you expect things to happen as they always have. Any violations of this can lead to a crash.
   - Don’t become complacent: drive defensively and anticipate hazardous conditions.

E. Skills
   - If you need practice, make arrangements with your supervisor.
   - Always practice in an empty bus.

F. Health
   - Be aware of daily afflictions like fatigue and sickness.
   - Be aware of changes due to aging such as hearing loss or diminished depth perception and account for them.

G. Drugs and Driving: Alcohol
   - As a school bus driver, your personal decisions may affect many people.
   - Pennsylvania has a zero-tolerance policy for drinking and driving.
   - The threshold blood alcohol concentration (BAC) for a school bus driver is 0.02%.
   - Alcohol negatively affects judgment and self control, which are necessary for safe driving.

H. Drugs and Driving: Other Drugs
   - Legal and illegal drugs can affect driving performance.
   - Ask your doctor about the effects of prescribed medications.
   - Ask your pharmacist about the effects of over-the-counter medications.
   - The safest approach is to not mix any drugs with driving.

I. Concentration and Attitude
   - Stress can cause driving errors.
   - Be aware of your own attitude.
   - Make adjustments, if necessary, to be able to focus on driving.

J. Aggressive Driving
   - Speeding and other aggressive driving behaviors (tailgating, etc.) are among the leading causes of crashes in Pennsylvania.
   - Be aware of the characteristics of aggressive driving.
     - Do you speed excessively?
     - Do you tailgate slower vehicles?
     - Do you race to beat red lights or run stop signs?
• Do you weave in and out of traffic?
• Do you pass illegally on the right?
• Do you fail to yield right-of-way when required?

✦ Be aware of methods to prevent the tendency to drive aggressively.
  • Plan ahead.
  • Concentrate.
  • Relax.
  • Drive the posted speed limit.
  • Be late rather than unsafe.
  • Set an example for younger passengers.

K. Attention and Monitoring
  ✦ Determine what you need to observe.
  ✦ Prioritize your monitoring and attention.

L. Driver Fatigue
  ✦ School bus operators can be an at-risk group for driver fatigue.
  ✦ Be aware of the warning signs of driver fatigue.
    • Your eyes feel heavy.
    • You blink and yawn frequently.
    • You become less attentive to the road.
    • Your head feels heavy and you have trouble keeping your head up.
    • You can’t remember the last few miles driven.
    • You drift from your lane or hit a rumble strip.
    • You experience wandering or disconnected thoughts.
    • You have difficulty focusing or keeping your eyes open.
    • You tailgate or miss traffic signs.
    • You have to jerk your vehicle back into the lane.
  ✦ Learn the ways to avoid fatigue.
    • Get a good night’s sleep.
    • Be alert.
    • Recognize early warning signs.
    • Avoid alcohol and medications.
    • Don’t rely on students, the radio, etc. to keep you awake.
    • Eat sensibly and avoid heavy meals.
  ✦ The only cure for fatigue is rest.

M. Cell Phones and texting while driving
  ✦ Using these devices while driving distracts the driver.
  ✦ School bus driving requires focus and concentration.
  ✦ The safest course of action is to refrain from using a cell phone or texting while driving.
  ✦ Use a cell phone when parked and only in an emergency.
3. VEHICLE CONDITIONS
   A. Your pre-trip inspection procedures are designed to avoid problems on the road. Conduct your inspection rigorously and carefully.
   B. Learn how to use your senses to detect on-the-road problems as they develop.
   C. Locating a problem early may save you from an emergency situation later.
   D. Do not drive your school bus if it is in unsafe condition!

4. ENVIRONMENTAL AND ROADWAY CONDITIONS
   A. Scanning ahead
      ✦ Have a clean windshield and properly adjusted mirrors.
      ✦ Scan 360 degrees around the bus.
      ✦ Don’t stare too long at a particular object.
      ✦ Look far enough ahead (12 to 15 seconds ahead) to be sure there is room to maneuver the bus safely, and look farther ahead as your speed increases.
      ✦ Watch for merging traffic or traffic changing lanes.
      ✦ Watch for brake lights.
      ✦ Check the mirrors.
   B. Slippery roads
      ✦ Remember: safety first, schedule second.
      ✦ Use your wipers in rain, snow, sleet, and fog.
      ✦ Use of headlights is mandatory.
      ✦ Check brakes after driving through standing water.
      ✦ Use the lowest appropriate gear for better traction.
      ✦ Keep the bus moving slowly forward to avoid stuck or spinning wheels.
      ✦ Slow down.
      ✦ Don’t allow wheels to lock when approaching intersections.
      ✦ Avoid skids by braking before potentially slippery areas.
      ✦ Plan ahead.
      ✦ Increase following distance.
      ✦ When pulling onto the highway, allow for greater stopping distances for traffic.
      ✦ Be aware of black ice and the dangers of hydroplaning.
      ✦ After your trip, sweep water, snow, and mud from the bus steps, windows, mirrors, lights, and reflectors. Keep the roof clean as well.
   C. Reduced visibility
      ✦ Keep your windshield clear, stopping to remove ice if required.
      ✦ Sit out very heavy showers or snow squalls in a place of safety when there is no visibility. Be sure to call your supervisor in these situations.
      ✦ Use sunglasses, adjust visors, and clean windshields to prepare for bright sun.
D. Night driving
   ✤ Slow down.
   ✤ Don’t overdrive your headlights or stare at oncoming headlights.
   ✤ Allow additional space in front of your bus.
   ✤ Allow your eyes to adjust to the darkness.
   ✤ Learn to use pavement markings and reflector posts.

E. Equipment adjustments
   ✤ Use low beams on sharp curves and when traffic is approaching.
   ✤ Keep instrument panel lights dim.
   ✤ If oncoming drivers fail to dim their lights, do not reciprocate.
   ✤ Don’t tailgate.
   ✤ If you must stop the bus, make sure there is 500 feet of clear visibility both in front of and behind the bus; turn off headlights, but leave parking lights and/or hazard warning lights on.

F. Heavy Wind
   ✤ The side of the bus can act like a sail.
   ✤ Be careful when overtaking or being overtaken by other large vehicles.

G. Highway hazards
   ✤ Road geometry such has horizontal and vertical curves can affect safety and how you operate your bus.
   ✤ Over 60% of crashes where the school bus operator was the prime unit occurred at intersections.
   ✤ Right-of-way establishes who can use the section of roadway or intersection and who has to wait.
   ✤ At unregulated intersections, reduce speed, check traffic, and proceed if others have yielded right-of-way. When two vehicles arrive at an unregulated intersection at the same time, the vehicle on the left always yields right of way to the vehicle on the right.
   ✤ At intersections regulated by yield control, approach the intersection at a reasonable speed for the existing conditions, but slow enough to allow you to stop the bus and yield right of way to another vehicle in the intersection or to avoid a collision.
   ✤ At intersections regulated by stop control, you must completely stop at the stop line or 4’ in advance of the crosswalk. If neither are there, stop at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway.
   ✤ At intersections regulated by traffic signals, always obey the color of the traffic signal.
   ✤ At circular intersections:
     • Slow down.
     • Keep to the right of the painted or raised island that separates entering traffic from exiting traffic.
     • Look left for traffic approaching in the circle.
     • Enter the roundabout (circle) by turning right when there is a safe gap in traffic approaching from your left.
     • Yield to traffic already in the roundabout.
     • Do not pass bicyclists or other vehicles when in the roundabout.
     • When in the roundabout, do not stop (except to avoid a crash) – you have the right-of-way over entering traffic.
• Use your right turn signal to indicate where you plan to exit the roundabout.
• If you miss your exit, just continue around the circle until you reach it again.
• As you exit, yield to pedestrians who are in the crosswalk or are waiting to cross the exit lane.

✦ Uniformed police officers have authority over signs and signals.
✦ Always yield right-of-way when leaving a driveway.
✦ When crossing main highways, always check and recheck for approaching traffic.
✦ Be aware of loose, rough, or slippery road surfaces and hazardous roadside conditions.

H. Pedestrian hazards
✦ School bus stops can be dangerous/Pay attention to unusual activity.
✦ On side streets, pedestrians may suddenly dart from between cars at the side of the road.
✦ Animals may also unpredictably cross in front of the bus.

I. Vehicle hazards
✦ Be aware of other drivers who are in a hurry, or who are losing control of their vehicle.
✦ Watch for situations where other drivers execute maneuvers without signaling their intentions.
✦ Other drivers may not observe your bus.
✦ Other drivers may not adjust properly to changing roadway conditions.
✦ If other drivers are driving aggressively, do NOT retaliate – let it go.
✦ Watch for slow-moving or stopped vehicles.
✦ Be aware of vehicles moving into your path, even if several vehicles are ahead of you.

J. Work zones are particularly hazardous areas. Use four-way flashers to warn drivers behind you.

K. Motorcycles
✦ Motorcyclists are smaller and more narrow than a car, can be hard to see, and can hide in a blind spot.
✦ Look for motorcycles.
✦ Respect motorcyclists’ rights.
✦ Anticipate a motorcyclist’s maneuvers.
✦ Allow plenty of following distance.
✦ Check and recheck your blind spot.

5. CONTROLLING SPEED

A. Adjust speed and driving techniques to different driving conditions.

B. Following distances
✦ General rule: 4 seconds
✦ Add one second for each condition including:
• Travelling over 40 MPH.
• Poor roadway or weather conditions.
• Following motorcycles or large vehicles.
• Following another school bus.
• Driving at night.
• You are being tailgated.
6. STOPPING
   A. Stopping Distance
      ✦ Perception Distance is the distance your vehicle travels from the moment you see a hazard until your brain recognizes it as a hazard.
      ✦ Reaction distance is the distance your vehicle travels from the time your brain decides what to do and tells your foot to push the brake pedal.
      ✦ Brake Lag Distance is the distance your vehicle, with air brakes, travels until the brakes engage.
      ✦ Braking distance is the distance your vehicle takes to stop after the brakes have engaged.
      ✦ Total stopping distance from the time the bus driver first perceived a hazard until the bus stopped.
      ✦ For example, in good conditions at 55 MPH, a bus will travel the distance of a football field or more before it can be stopped.
      ✦ Leave enough stopping distance.
   B. Speed and Traffic Flow
      ✦ Trying to drive faster than the speed of traffic will not save time.
      ✦ Trying to drive faster than the speed of traffic increases the risk of a crash.
UNIT F - SAFE DRIVING

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Instructor Notes:
INSTRUCTOR’S NOTES

Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the driver’s manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Note that when discussing crashes in this unit, the manual references crashes where the school bus was the prime unit in the crash. This is in reference to the unit (vehicle) identified by the police as being associated with the first or most harmful event.

Introduction

Q: How safe do you think school buses are compared to other forms of ground transportation?
A: School buses are the safest form of ground transportation. As with anything, there is always room for improvement.

Q: The three primary contributing factors to highway crashes, including school bus crashes, are driver error, roadway condition, and vehicle malfunctions. Of these, which causes the most crashes?
A: Driver error: 93%.

Emphasize that many crashes are not purely the result of one cause or another. Often, there is more than one contributing factor to crashes, such as a driving too fast in rain or fog. Weather affects the roadway condition, but the bus operator has the option to choose to slow down.

This Unit of the school bus operator training course focuses on how operator error contributes to vehicle crashes, and how operators can learn to make better driving decisions at the appropriate times toward reducing the potential for crashes.

In a quantitative analysis of Pennsylvania school bus crashes for a recent 10-year period, it was determined that most persons involved in school bus crashes, whether occupants of the buses or of other vehicles involved, were uninjured. Among persons injured in these crashes, most injuries were suffered by occupants of other vehicles, not by occupants of the school buses or school vehicles. No school bus or school vehicle passengers were killed in these crashes, but three school bus drivers were killed. The remaining 82 persons killed were occupants of other vehicles.

When looking at the percentage of all prime unit crashes in which a given driver action was implicated, in descending order, the top five are: failure to stop (21.3%), other improper driving (20.2%), improper turn (16.7%), speeding (9.5%), and tailgating (8.6%). In other words, speeding was recorded as a contributing driver action in 9.5% of school bus crashes in which the bus was the prime unit.

Refer to Instructor’s Notes on Page F-31 of this manual that discuss injuries and injury rates associated with these crashes. You’ll note that crashes involving speeding and tailgating have higher injury number and rates than failure to stop crashes.
UNIT F - SAFE DRIVING

INTRODUCTION

The social and economic cost of traffic crashes in the United States is tremendous. Over the last few years, the country has experienced millions of reportable crashes per year in which thousands of persons have been killed and millions injured. These are not just statistics; the numbers represent real people who are our families, friends and co-workers. The economic loss is estimated to be in the billions every year.

One piece of good news is school bus transportation is the safest mode of ground transportation. In Pennsylvania, for example, school bus crashes account for less than a ½ percent of the total number of vehicular crashes. In striving for the elimination of all crashes involving school buses, there needs to be an understanding of what causes them so that we can implement better, safer driving techniques as countermeasures. One way to understand crashes is to identify three primary contributing factors to crashes:

• The driver;
• The vehicle; and
• The road and its environment.

According to police crash reports, the following diagram represents these factors and the relative frequency of their occurrence.

As shown, driver error is the cause of most crashes, followed by road condition, and vehicle defect or malfunction. A human factor may be speeding while operating a vehicle. In fact, Pennsylvania school bus crash statistics show the top five driver actions implicated when the school bus was the prime unit in the crash were: failure to stop; improper turn; speeding; tailgating; and other improper driving. “Distracted driving” and “careless backing” were other significant factors. All of these are human factors.
**Instructor Notes:**

**Pre-trip Inspection**

Q: Can you give me an example of a driver action that could contribute to a crash?
A: Speeding, tailgating, or talking on a cell phone.

Q: Can you give me an example of a vehicle factor that could contribute to a crash?
A: Brake failure or tire blow-out.

Q: Can you give me an example of a roadway factor that could contribute to a crash?
A: Pavement edge drop-off, missing traffic sign, or malfunctioning traffic signal.

**Emphasize the Safe Driving Formula:**


A number of short courses on the basics of defensive driving are offered throughout the state. You should consider enrolling in one of these courses to improve your driving skills and to become aware of your limitations as a driver.
Vehicle factors may be mechanical failures, such as bad brakes or tires. Road-related factors can be limited sight distance, poorly marked roads or missing road signs, or sudden changes in roadway width. Weather is also a major factor affecting road conditions. Too often, drivers fail to consider wet roads or fog when they drive. Pennsylvania school bus crash statistics indicate school bus drivers were more likely to be noted for driving too fast for conditions in crashes occurring in rain-fog conditions and especially snow-sleet conditions, than in clear weather conditions. Remember: Safety first, schedule second!

When you consider road transportation as a system, it is clear that as school bus operators, you can directly control some factors, but not others. For example, you can control driver factors (how you operate a vehicle), and to a certain extent vehicular factors (practicing good preventive maintenance techniques as discussed in Unit E). On the other hand, as a school bus operator there is not much you can control in the roadway environment. You cannot engineer a roadway to eliminate shoulder edge drop-offs, nor can you control the weather. However, you can learn how to safely operate your bus, if you encounter dangerous roadway conditions.

Therefore, safe driving techniques can be applied to counteract many crash causes, especially those involving driver error and even some involving roadway and vehicular issues. Crashes can be reduced through the knowledge and practice of safe driving techniques. Learning safe driving procedures and techniques designed to help you, the driver, avoid getting yourself, your vehicle, and your passengers into hazardous situations are a critical part of your job as a school bus operator. A number of short courses on the basics of defensive driving are offered throughout the state. You should consider enrolling in one of these courses to improve your driving skills and to become aware of your limitations as a driver. There is nothing new or magical about the concept of defensive driving. The formula is simply:

![Figure F-2. Safe Driving Formula](image)

This unit considers how you can apply these steps to the following types of normal and unusual conditions you must face while driving a school bus.

This unit will focus on safe driving techniques for school bus operators geared towards reducing the number of crashes in the categories listed previously in this unit. It will focus on:

- The driving task;
- Your condition to drive (Driver);
- The condition of your vehicle (Vehicle);
- The weather and road conditions (Environmental and Roadway); and
- Road construction, pedestrians and other obstacles (Other).

Note that Unit H (Crash and Emergency Procedures) covers procedures and techniques for emergency and crash situations where the driver did not or could not avoid a potential hazard.
Instructor Notes:

**The Driving Task**

Q: Why is operating a school bus more challenging than operating a ‘regular’ motor vehicle?

A: The school bus operator has many responsibilities in addition to just driving, including student management and discipline, and loading and unloading students.

Emphasize the complexity of the driving task by pointing out all the tasks a school bus operator is trying to accomplish simultaneously.

Emphasize the information/decision/action process cycle and explain that this process can help operators make better driving decisions more effectively.

Q: What is the primary way that drivers get information on the roadway?

A: Through traffic control devices - signs, signals, and markings.
THE DRIVING TASK

Although most of us take it for granted, driving is hard work because it requires us to do several things at the same time. This is especially true for school bus operators who have additional responsibilities, such as student management and discipline; loading and unloading students; monitoring traffic, etc. When you drive a bus, you control the vehicle: slowing down, speeding up, and turning; anticipating what other road users might do; and deciding whether evasive actions are necessary. These tasks are to be accomplished simultaneous to steering the vehicle to get from where you were to where you need to be. Unfortunately, there are limits to how much information you can process at a time. When there is too much information to accurately and safely process, mistakes can happen.

There are three distinct phases to the task of driving: information, decision and action. Roadway information leads the bus operator to decide to do something and take action. The results of that action provide more information, which then starts the process over again. This can be shown graphically in Figure F-3.

INFORMATION

School bus operators, indeed ALL drivers, need good information to perform the driving task safely. In this fashion, operators can properly PERCEIVE the information and RECOGNIZE its meaning. As the following points indicate, how drivers get information is important to safety:

- Signs have standardized shapes and colors to help drivers easily recognize their message. Most agencies rely on the Manual on Uniform Traffic Control Devices (MUTCD) for information on sign design and messages. For example, studies on human factors have shown most drivers can read only three or four familiar words at a glance, so signs are designed and installed to avoid overloading drivers with information. They also consider information needs of both older and novice drivers. If there are confusing sign messages, report them to your supervisor who can follow up with the appropriate entity responsible for traffic control devices in the area.

- Signs should be placed at locations where drivers expect them and can see them. Often the message is repeated for emphasis. As a school bus driver, pay attention to these messages that relay critical safety information. For instance, using chevron signs along the outside of a curve can reinforce a curve warning sign. Learn about the basics of traffic control devices so you can readily absorb and react to the information provided.

- Engineers avoid designing roads with sharp curves just over hillcrests to improve sight lines for drivers. Similarly, they use consistent design curve radii so drivers are not surprised by curves that are too sharp or too gradual.
The Driving Task: Action

Q: What is a typical perception-reaction time for a driver?
A: It can range from 1 second for a simple decision to 15 seconds for a complex one.
DECISION
As a school bus driver, you combine the information you gather with your driving experience to make driving decisions. It takes skill and experience to make the right decision. You must pay attention so you can process several information messages at once, and ignore what you do not need. These are skills that novice drivers are still learning and older drivers sometimes find difficult to process.

Hopefully, information and decision points are spread at sufficient distances on the roadway. It is easier to make several simple decisions, one after the other, than it is to make one complex decision in a hurry.

ACTION
Action happens when you make a decision and act on it. The results of the action provide more information, which, as indicated above, starts the process over again.

For your trip to be a safe one, you need time to respond to different conditions. Reaction time is the time it takes for you to notice a condition, decide what to do about it and then act on it. The more information you must process, or the more complex the decision required, the longer it takes you to react. This concept is discussed in detail below.

While a perception-reaction time of 2.5 seconds is commonly used in highway design, driver response times can range from 1 second for a simple decision like initiating a panic stop to 15 seconds for a complex decision like choosing the correct exit in a convoluted highway interchange.

Further complicating the task of driving for the bus operator are distractions inside and outside the vehicle. Maybe you hear a cell phone ring or students are being unruly on the bus. Maybe you get a call on the radio from your dispatcher. Perhaps a student is talking to you or pointing out something of interest along the roadside. Maybe you are a bit behind schedule, and your students are slow to get onto the bus and get seated. Maybe the trip must be made during a severe rain or snowstorm. Possibly it is just a beautiful day to drive through a scenic area, and you are tempted to focus on something other than the road.

Whatever it is that draws your attention from the road, it is clear that driving a school bus requires the operator’s full attention. This will be discussed later in this unit.

“Better late than never” is an old saying that applies to all drivers. You can’t rush and drive cautiously at the same time. Establish a pattern for driving cautiously and stick with it, late or not. Drive according to the motto “Safety first…schedule second.” Plan your schedule, so you always have plenty of time.
**Instructor Notes:**

**Driver Conditions**

Human factors, as a driving issue, have many components. These may include components such as operator inattention, tiredness or illness, or the use of drugs (over-the-counter, prescription, or illegal) and alcohol. Age is certainly a factor, with young and old having benefits and limitations. This section of the unit focuses on the many factors that together comprise the impact of human factors on safe school bus operation. Key points to emphasize:

- Be prepared.
- Control the factors you can control.

**Knowledge**

Emphasize that as new or recertifying school bus operators, trainees already have basic driving knowledge. Using this knowledge as a foundation, trainees need to learn the differences between driving a car and driving a bus.

Refer to the Instructor’s Guide for additional information regarding how adults learn and build on experiences.

Emphasize that there is more to know about safely operating a school bus than can be presented in the standard training. The formal training represents basic information and provides a good start, but trainees should review other informational resources on their own to better prepare for the task. Links on the opposite page to Pennsylvania resources are available to trainees.

One additional link that may be helpful is Chapter 447 of Title 67 – Transportation (Pennsylvania Code) relating to Hazardous Walking Routes:

http://www.pacode.com/secure/data/067/chapter447/chap447toc.html

Typically, bus operators won’t need this, but it may be helpful for you (the instructor) to answer specific questions. One key section states: “This chapter may not be construed to require school buses to stop at every dwelling in the event that a student walking route or a portion thereof is declared hazardous, since such a policy would increase the probability of bus-related crashes. A student may be required to walk up to 500 feet on a roadway designated as a hazardous walking route when the route is designated as hazardous in accordance with § 447.4(b) (relating to criteria).”

If a hazardous walking route is present, students will be bused to school.
UNIT F - Safe Driving

DRIVER CONDITIONS

Human factors refer to people and the things they do, or fail to do, that can cause a crash. Human factors cover drivers whose attention is distracted, are tired or ill, (and may have taken medication that makes them drowsy), or use alcohol or drugs. Age also affects a driver’s ability to be safe on the roadway. For example, older drivers often have vision problems at night, while younger drivers tend to take more risks on the road.

Therefore, you must be mentally and physically prepared to drive every minute of every trip. Your general attitude toward driving, whether you look upon driving a school bus as a privilege and high responsibility or as a chore to be done in as little time and with as little effort as possible, will determine, more than anything else, your safety record. Some temporary conditions, such as anger, worry or fear, can take your mind off of the road. A tendency to daydream can be just as dangerous, because driving requires concentration at all times.

Before operating a school bus, take mental stock of yourself: Are you mentally and physically ready to drive? Safe drivers are aware of their own deficiencies and constantly strive to overcome them. YOU are in control of these elements.

KNOWLEDGE

Your experience in driving automobiles can provide a basis for learning to drive a school bus. Automobile and bus operation require similar knowledge, including rules of the road and general safe driving habits. The skills needed to operate the steering, transmission, lights, wipers, and other mechanical components of a bus are similar to those for an automobile. There is usually, however, a difference in scale. Most differences between automobile and bus operation are due to the relatively large size and weight of the bus. Always remember a bus has a longer stopping distance, slower acceleration, wider turning radius, and higher and wider clearances. Another difference is while school bus drivers sit higher and have a better forward view, there is much more reliance on mirrors for adequate rear and side viewing.

Evaluate your knowledge of state and local driving rules and regulations, driving fundamentals, emergency procedures, and defensive driving habits. If you are uncertain or have questions, ask before it’s too late. As described above, school bus drivers need good information to operate their vehicles safely. Since much of the information is communicated through traffic control devices, learn about traffic control devices and methods by which they communicate information.

Also, state laws applicable to all drivers (both cars and school buses) are not described in this manual. For information on these laws, check the following references:

2. The Pennsylvania Vehicle Code (Title 75), available at www.dmv.state.pa.us.
Expectancy
Emphasize that expectancy is the result of experience. Expectancy is useful for most situations and conditions. Expectancy can work against a driver who becomes complacent, though, because unexpected situations or conditions may suddenly occur. Develop a habit of expecting the unexpected.

Skills
Skills are the actual abilities to operate the equipment associated with school bus operation, including the bus and its safety equipment. Practice makes perfect. If unsure about any operation of the bus or its equipment, seek extra training.

Health
While the process for becoming a school bus operator includes a physical examination, one exam each year is not sufficient for assuring that operators are well enough to drive any given day during the year. School bus operators need to be aware of their own health and the changes that occur in their bodies over time. Emphasize that trainees should be aware of their health and how that can affect their driving.
EXPECTANCY
As all drivers gain experience, they expect things to happen as they always have. For example, you would expect a green light on a traffic signal will be followed by a yellow light. Another example would be you adjust your speed as you perceive an upcoming curve, because it looks similar to other curves you have driven, and your experience tells you that you need to slow down. This is called expectancy. If a signal changes from green to red, or a curve becomes suddenly tighter halfway through, your expectancy is violated, and you may react in an erratic or incorrect way.

The more experienced you become, the greater the level of expectancy, which leads to quicker and more accurate reactions as long as your expectancy is met. A sudden change in road conditions, which violates your expectancy tends to increase your reaction time and increases the likelihood of you making an error because you take longer to understand the situation and respond to it. If extra time is not available, the result may be a crash. That is why expectancy violations cause problems, and removing expectancy violations helps improve safety.

Keep in mind, however, not to become complacent. Most likely you are on the same route day after day, and it can be easy to become complacent regarding driving habits. Defensive driving techniques and anticipating hazardous conditions is critical.

SKILLS
If you need practice in driving maneuvers, operating safety equipment, or other driving-related skills, ask your certified school bus driver instructor or supervisor for help, then practice with your supervisor or on your own. If you have been involved in a crash, some school districts and/or employers will require you to complete remedial training with an instructor. Always practice in an empty bus rather than in one filled with students. Unit G and H provide you with descriptions of the many skills you will need to acquire to safely operate a school bus.

HEALTH
Check yourself for fatigue, sickness, deficient eyesight, and deficient hearing. If you have any of these health problems, you should not drive until cleared by health services or your doctor.

For example, if you have problems with judging distance, or you know your depth perception is not as good as it might be or used to be (this is a normal eye-aging condition), it does not mean you may have to give up driving. You must be aware of the problem, however, and adjust your driving to it.

Illness
Once in a while, you may become so ill you cannot operate your bus safely. If this happens to you, you must not drive. However, in case of an emergency, you may drive to the nearest place where you can safely stop.
**Drugs and Driving: Alcohol**

Alcohol makes a driver unfit to drive. Driving under the influence of alcohol is ethically and legally wrong. Emphasize the falsehoods surrounding the issue of drinking alcohol, particularly as this impacts the work of driving.

Consider using Table F-1 as a question and answer session.

For example:
True or False: If you eat a lot first, you won’t get drunk.

The answer is false, but read it aloud and accept all answers and input and facilitate discussion around this topic.

One way to present this information is to read each question on the opposite page aloud and facilitate discussion around student responses. Make sure to hit the key points on the opposite page. These are summarized below:

<table>
<thead>
<tr>
<th>Q: What is a drink?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Anything that contains alcohol.</td>
</tr>
</tbody>
</table>
UNIT F - Safe Driving

DRUGS AND DRIVING: ALCOHOL
Alcohol and drugs affect the driver and make them unfit to drive. Driving under the influence of alcohol is a serious violation of state law and a very dangerous mistake. People who drive under the influence are involved in crashes resulting in over 20,000 deaths every year. As a school bus driver, your personal decisions affect the lives of many others. You should know:

- How alcohol works in the human body;
- How alcohol affects driving;
- Laws regarding drinking and driving;
- Note that Pennsylvania has zero tolerance for drug and alcohol use by school bus and school vehicle drivers. Refer to Sections 1612, 1606 and 3802 of Title 75; and
- Legal, financial, and safety risks of drinking and driving.

If you have questions about the law, ask your supervisor to provide clarification.

The Truth about Alcohol
There are many dangerous ideas about alcohol use. The driver who believes in these wrong ideas is more likely to get into trouble. Here are some examples:

<table>
<thead>
<tr>
<th>TABLE F-1. Statements About Alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALSE</strong></td>
</tr>
<tr>
<td>Alcohol enhances your ability to drive.</td>
</tr>
<tr>
<td>Some people can drink a lot and not be affected by it.</td>
</tr>
<tr>
<td>If you eat a lot first, you won’t get drunk.</td>
</tr>
<tr>
<td>Coffee and a little fresh air will help a drinker sober up.</td>
</tr>
<tr>
<td>Stick with beer – it’s not as strong as wine or whiskey.</td>
</tr>
</tbody>
</table>

What is a Drink?
It is the alcohol in drinks that affects human performance. It doesn’t make any difference whether that alcohol comes from “a couple of beers,” two glasses of wine, or two shots of hard liquor. All of the following drinks contain the same amount of alcohol:

- A 12-ounce glass of 5 percent beer.
- A 5-ounce glass of 12 percent wine.
- A 1 ½-ounce shot of 80 proof liquor.
Q: How does alcohol work?
A: It is absorbed from the stomach into the bloodstream.

Q: What determines Blood Alcohol Content?
A: Amount of alcohol, rate of consumption, and your weight.

Q: How does alcohol affect the brain?
A: It negatively affects judgment and self control.

Q: How does alcohol affect driving?
A: It causes serious errors. See the list.
HOW DOES ALCOHOL WORK?
Alcohol goes directly from the stomach into the blood stream. A drinker can control the amount of alcohol he or she takes in by having fewer drinks or none. However, you cannot control how fast your body gets rid of alcohol. If you have drinks faster than your body can get rid of them, you will have more alcohol in your body and your driving will be more affected. The amount of alcohol in your body is commonly measured by the Blood Alcohol Concentration (BAC).

WHAT DETERMINES BLOOD ALCOHOL CONCENTRATION (BAC)?
BAC is determined by the amount of alcohol you drink (more alcohol means higher BAC), how fast you drink (faster drinking means higher BAC) and your weight (a small person doesn’t have to drink as much as a large person to reach the same BAC).

HOW DOES ALCOHOL AFFECT THE BRAIN?
Alcohol affects more and more of the brain as BAC builds up. The first part of the brain that is affected controls judgment and self control. One of the bad things about this is it can keep drinkers from knowing they are getting drunk. And of course, good judgment and self control are absolutely necessary for safe driving.

As blood alcohol concentration continues to build up, muscle control, vision, and coordination are affected more and more. Eventually, a person will pass out. Alcohol can increase the effects of other drugs.

HOW DOES ALCOHOL AFFECT DRIVING?
All drivers are affected by drinking alcohol. Alcohol affects judgment, vision, coordination, and reaction time. It causes serious driving errors, such as:

- Slower reactions to hazards;
- Driving too fast or too slow;
- Driving in the wrong lane;
- Running over the curb;
- Weaving;
- Straddling lanes;
- Quick, jerky starts;
- Not signaling, failure to use lights;
- Running stop signs and red lights; and/or
- Improper passing.

All of these increase the chances of a crash, losing your driving privilege, or injuring or killing yourself and/or others. Crash statistics show that the chance of a crash is much greater for drivers who have been drinking than for drivers who have not.
**Drugs and Driving: Other Drugs**

While the issue of possessing and using illicit drugs may be self-evident, many people may not realize the influences that legal over-the-counter and prescription medications may have on perception, reaction time, and judgment. Emphasize that as much as possible, school bus operators should drive drug free, but if they have chronic medical conditions that require the use of medications, they should know how these medications affect the abilities required for driving before driving a school bus.

The Manual mentions “pep pills” and “bennies” which are just common terms for amphetamines. “Bennies” refer to Benzedrine, and “pep pills” are benzylpiperazine (BZP) – both illegal recreational drugs.

**Concentration and Attitude**

School bus operators must be aware of how their personal lives can influence their driving. The typical challenges and trials of life make anyone prone to daydreaming, stress, and lack of focus. School bus operators need to be aware of these influences and learn how to set them aside while driving the bus. Within the bus, there can only be an attitude of safety.

Q: What characteristics must you constantly work toward maintaining?

A: The bus operator must be alert, thinking positively, concentrating on the job, and in control of their temper. These can be challenging to maintain at all times, but by keeping an attitude of safety, much of these characteristics fall in line.

**Aggressive Driving**

Review the list of questions on page F-11 with the class. It may be effective to read each question and ask the class who has engaged in that behavior, been the passenger in a vehicle with someone who has been driving aggressively, or seen it ‘in action’ by other motorists.

Discuss the dangers of these behaviors to the vehicle operators, and especially to the passengers of a school bus.
UNIT F - Safe Driving

DRUGS AND DRIVING: OTHER DRUGS
Besides alcohol, other legal and illegal drugs are common in our society. Laws prohibit you from possessing or using certain drugs while on duty. These same laws prohibit you from being under the influence of any “controlled substance,” including amphetamines, such as “pep pills” and “bennies,” narcotics, or any other substance that can make you unsafe.

While illegal drugs are always unlawful to possess and use, you should be aware that many medicines, prescribed and over-the-counter (e.g., cold medicines), can affect your eyesight, hearing and judgment. They may make you drowsy or otherwise affect your safe driving ability. While possession and use of a drug given to a driver by a doctor is permitted if the doctor informs the driver it will not affect safe driving ability, you should always read the labels on patent medicine bottles to check for possible side effects. Ask your doctor or pharmacist about prescriptions or over-the-counter medications you are taking to get a clear understanding of their effects and whether they will impair your ability to perform the task at hand. Also, keep in mind the interactions of different drugs can cause impairment. Ask your doctor or pharmacist.

The safest rule is not to mix drugs with driving at all. Mixing the use of alcohol and drugs while operating a school bus can lead to crashes resulting in death, injury and property damage. Drug abuse can lead to arrest, fines and jail sentences in addition to the loss of a person’s driving privilege.

CONCENTRATION AND ATTITUDE
Being under emotional stress from home or work will often affect your ability to control the students on a loaded bus, so you will have to be extra cautious as you drive. You may be tired, dejected or depressed, making it hard to cope with a bus full of young, spirited children. During times of stress, ordinarily good drivers may miss stop signs and red lights, and may fail to yield the right-of-way. Under normal conditions, they would be less likely to commit these serious errors.

You must be alert to your own attitude. If you are under emotional stress and are unable to concentrate on your driving, or fear you cannot control your temper under stress, don’t drive. Under normal day-to-day stresses, your attitude can affect your good driving judgment. You must be aware of your attitude so you can be alert, think positively, keep yourself under control, and keep your mind on the job at hand.

It is extremely important you remain alert and attentive at all times. Even the shortest lapses into daydreaming or inattention can cause severe crashes to occur. Always be aware of what is happening in your surroundings and anticipate what other drivers will do and what road conditions will be in order to act appropriately.

Aggressive Driving
One component of driving with the right attitude is not to engage in aggressive behavior while operating your bus. Speeding and other aggressive driving behaviors are among the leading causes of highway crashes and fatalities in Pennsylvania. However, many motorists don’t realize they in fact, aggressive drivers. Here are some questions to help you determine if you are an aggressive driver:

- Do you speed excessively?
- Do you tailgate slower vehicles?
- Do you race to beat red lights or run stop signs?
- Do you weave in and out of traffic?
- Do you pass illegally on the right?
- Do you fail to yield the right of way to oncoming vehicles?
If you answered yes to any of these questions, you may be an aggressive driver and are putting yourself, your passengers, and other people on the road with you at increased risk of a crash.

While a driver must commit two or more of the following 16 offenses to be categorized as an aggressive driving violation and/or crash, ANY of these behaviors is aggressive and not acceptable for school bus operators:

1. Making an illegal u-turn;
2. Improper/careless turning;
3. Turning from the wrong lane;
4. Proceeding w/o clearance after stop;
5. Running a stop sign;
6. Running red light;
7. Failure to respond to other traffic control device;
8. Tailgating;
9. Sudden slowing/stopping;
10. Careless passing or lane change;
11. Passing in a no passing zone;
12. Making improper entrance to a highway;
13. Making improper exit from a highway;
14. Speeding;
15. Driving too fast for conditions; and

As illustrated by Pennsylvania school bus crash data, any of these behaviors is unacceptable when operating a school bus.

- For example, Pennsylvania school bus crash data indicated drivers involved in rear end collisions are very likely to be noted as tailgating.
- In fact, drivers noted as tailgating were 61 times more likely to be involved in a rear-end collision than drivers involved in collisions who were not noted as tailgating.
- Similarly, drivers noted as failing to stop were 33 times more likely to be involved in an angle collision than drivers who were not. (An angle collision occurs when two vehicles approaching from non-opposing angular directions collide.) These typically result from one vehicle failing to either stop or yield right of way from a Stop or Yield sign, running a red light, or not clearing an intersection when the conflicting movement’s signal turned green.

The line is aggressive driving leads to a higher risk of crashing.
Instructor Notes:

Q: What are 6 things you can do as a bus operator to prevent yourself from being an aggressive driver?
A: Plan ahead, concentrate, relax, drive the posted speed limit, be late rather than unsafe, and set an example for younger passengers.

Review the guidelines provided on page F-13. Indicate to the drivers in your class that when a sample of individual crashes involving school buses and aggressive driving were qualitatively analyzed, it was observed that in most cases, the school bus driver did not properly adjust driving to conditions, resulting in the crash. Drive carefully, not aggressively, when operating a school bus.

Attention and Monitoring
Appropriate attention and monitoring are, together, an exercise in focus. School bus drivers need to be doing several tasks simultaneously. However, at any given moment, one task or another takes priority. An example is loading and unloading. During loading and unloading, student passengers are in the danger zone of the bus. That has to be the focus at that moment, even above maintaining order on the bus. Get students safely on the bus, or off the bus and onto the sidewalks, and then maintaining order can become the primary focus.

Q: To properly focus on the task of operating a school bus, what are the two key steps?
A: (1) Determine what you need to observe. (2) Prioritize your monitoring and attention.
To mitigate this, follow these guidelines:

- **Plan ahead** – Allow yourself enough travel time to prevent a time crunch. Safety first, schedule second.
- **Concentrate** – Don’t allow yourself to become distracted by students. Do NOT talk on your cell phone, eat or drink while driving.
- **Relax.**
- **Drive the posted speed limit** – Fewer crashes occur when vehicles are travelling at or about the same speed. Driving too fast can lead to “bottle-necking,” bringing traffic to a standstill and frustrating drivers.
- **Be late rather than unsafe** – Obviously schedule is important, but just be late, if safety will be compromised.
- **Set an example for younger passengers** – Children are keenly observant. Educating them at an early age through your actions will teach them the importance of being courteous.

While many people associate aggressive driving with road rage, they are two different behaviors. Road rage, which is a criminal offense, is often the result of aggressive driving behavior escalating into an assault with a vehicle or other dangerous weapon. NEVER take your anger out on someone else on the road. Sometimes incidents of road rage are caused by simple misunderstandings between drivers. One driver may make a momentary error in judgment that another driver sees as aggressive, though none was intended.

**ATTENTION AND MONITORING**

As mentioned earlier, there are many things you must be aware of when you are driving a school bus. You must be able to divide your attention between the students, the road, other vehicles, and your own bus. At each point on your trip, you must focus your attention on the most important factor at that time. For example, you must carefully focus on the students crossing the street at loading and unloading zones.

First, **determine what you need to observe, inside and outside the bus**, while driving the bus. Inside the bus, you must be aware of the students and their behavior, the dashboard, your inside mirror, and the steering wheel. Outside the bus, you must observe other traffic, pedestrians, your outside mirrors, the road in all directions, and the surrounding area.

Next, **prioritize your monitoring and attention**. For example, it is critical to monitor student behavior especially when they are misbehaving, and before and after student pickup and dropoff as described in detail in Unit C. If behavior is taking too much attention away from your driving, stop the bus, and get control of the students.

On the dashboard, you must check the fuel gauge, oil gauge, temperature gauge, and speedometer. It is best to look at the gauges carefully at the start of the trip, and occasionally during the trip, especially if there seems to be a problem with the bus. The speedometer should be monitored throughout the entire trip to maintain a safe speed.

There is usually one inside mirror you must monitor, although a rearview mirror may be present on some Class C buses. The interior mirror is used to monitor the students, most frequently when there are behavioral problems. If you have a rearview mirror, monitor it frequently throughout the trip to watch the behavior patterns of the traffic behind the bus.

You should always be aware of and monitor your hand position on the steering wheel. As indicated in Unit G, your hands should be placed on opposite sides of the wheel, and the hand-over-hand method or the push-pull method should be used for turning.
Instructor Notes:

**Attention and Monitoring**
Spend some time with trainees reviewing Table F-2 on the opposite page and discuss appropriate frequencies of monitoring the various tasks a bus operator performs. Keep in mind that bus operators will likely develop their own strategies as they gain experience. Have the experienced drivers talk about these in the training.

Q: The highest rate of injuries in PA school bus crashes involved crashes where drivers were engaged in what actions?
A: Speeding and distracted driving, or speeding and tailgating.

Emphasize that drivers need to pay attention and monitor their behavior to help prevent crashes.
UNIT F - Safe Driving

Constantly monitoring the traffic in front of the bus is a necessity. Your eyes should move back and forth across the road, scanning the activity. Always be on the lookout for pedestrians, especially at intersections, near parks, houses, and parked cars. Use efficient eye scanning habits and a systematic search pattern to search for conflict situations.

There are many ways to pay attention to your surroundings while driving the bus. Use the method that is most comfortable to you and allows you to be more aware of everything around you. For example, when stopped at a bus stop and loading passengers, you should concentrate on the students outside the bus. Most of your time should be spent focusing on the cross view mirrors and directly at the students through the front and side windows, while monitoring other traffic through the side mirrors. When the bus is in motion, your attention is focused less on the cross view mirrors, and more on the road in front of the bus. Your view must alternate between the front window of the bus, the side mirrors, the rearview mirror (if present), the interior of the bus, and the dashboard. While looking at each of these in a systematic order, it is important you always remember to check everything.

More attention is needed on areas more critical for student’s safety. It may be helpful to follow the guidelines presented in the following table for how often you should check things.

<table>
<thead>
<tr>
<th>How Often?</th>
<th>While Driving</th>
<th>At a Bus Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constantly</td>
<td>Other traffic; road in front of the bus.</td>
<td>Side mirrors; crossover mirrors; road in front and to the side of the bus; students loading the bus.</td>
</tr>
<tr>
<td>Frequently</td>
<td>Side mirrors; rearview mirrors; interior of the bus; area near road for pedestrians.</td>
<td>Interior of the bus; surrounding area.</td>
</tr>
<tr>
<td>Occasionally</td>
<td>Speedometer; controls on dashboard.</td>
<td>Control on dashboard.</td>
</tr>
</tbody>
</table>

Watching all of your mirrors, controls and surroundings is a lot to remember. Distractions while driving can affect your attention. The most common thing that will distract your attention is the students riding the bus. Be prepared for this, and be sure to know the guidelines for managing students discussed in Unit B. The road conditions also affect your ability to concentrate; however, drivers usually will concentrate better on days when the weather is bad. Remember, the highest rate of injury in Pennsylvania school bus crashes involved crashes where drivers were speeding and distracted, or speeding and tailgating. Pay attention and monitor your behavior.

Don’t forget to pay careful attention when the weather is good, too; others will be enjoying the nice weather and may not be paying attention either. Surprisingly, Pennsylvania school bus crash data reveals head-on, backing, angle, and hit fixed object crashes are more likely to occur with no adverse weather conditions and on dry pavement than in adverse weather conditions. It appears from this that data drivers may be complacent in better weather. It is important to pay attention and be vigilant at all times.
Instructor Notes:

**Driver Fatigue**

Emphasize the dangers of driving while fatigued. Point out that fatigue increases information processing time and lowers reaction time. Also point out that while individuals vary, generally people experience sleepiness between 3:00 and 5:00 PM – the time during the afternoon trip home from school. School bus operators need to know about how to avoid fatigue, and recognize and mitigate it when it occurs.

Ask the trainees:

Q: Who has driven their own vehicle while tired?

Q: What behavior did you notice?

Q: How were your actions different when you were fatigued compared to when you were alert and well rested?

One response you might get is a trainee describing driving and not remembering a section of roadway, or not remembering how he/she got there. This is called a ‘microsleep.’ A microsleep is an episode of sleep which may last for a fraction of a second or up to thirty seconds and may be the result of fatigue. Microsleeps can occur at any time, typically without significant warning.

Microsleeps (or microsleep episodes) become extremely dangerous when occurring during situations which demand continual alertness, such as driving a bus.

One example is called “gap driving”. From the perspective of the driver, he drives a car, and then suddenly realizes that several seconds have passed by unnoticed. It is not obvious to the driver that he was asleep during those missing seconds, although this is in fact what happened. The sleeping driver is at very high risk for having a crash during a microsleep episode.

Q: Is coffee helpful to combat driver fatigue?

A: Stimulants like caffeine in coffee are no substitute for sleep. Drinks containing caffeine, such as coffee or cola, can help you feel more alert, but the effects last only for a short time.

Q: What can you do to avoid the consequences of driving when fatigued?

A: Get a good night’s sleep, be alert, recognize the signs of fatigue (listed on the opposite page), avoid alcohol and medications, don’t rely on your students, the radio, or opening a window to stay awake, eat sensibly and don’t use drugs that hide fatigue.

Here are two good resources for driver fatigue from FMCSA and FHWA:

http://www.fmcsa.dot.gov/facts-research/research-technology/topics/fatigue.htm

UNIT F - Safe Driving

**DRIVER FATIGUE**
Illness, exhaustion or weariness from hard work or lack of sleep also can rob a driver of the extra edge of alertness is necessary for greatest safety in driving. If you feel you are unable to operate the school bus safely, do not drive, and ask your supervisor for a replacement.

Statistics from the National Highway Traffic Safety Administration (NHTSA) estimate there are over 100,000 fatigue-related crashes each year in the United States. In most cases, these driving fatigue crashes occur because drivers don't recognize the dangers of drowsy driving.

According to research by NHTSA, the sleep-wake cycle determines when we get tired. In spite of individual variations, a specific amount of uninterrupted sleep is necessary for each 24-hour period, usually about eight hours, and subsequent alertness will be compromised without that amount of sleep. Additionally, sleeping less than four consolidated hours can impair performance for tasks requiring strict vigilance, like driving. When we begin to get drowsy, our reaction time slows, and it takes us longer to process information. As a result, fatigue can result in impaired performance for basic tasks needed for driving, and could ultimately lead to a driver veering off of the road or into oncoming traffic.

Note that because of the body's natural rhythms, there are two periods of maximal sleepiness in a 24-hour day—one roughly from 3 a.m.–5 a.m., and a second, less pronounced period, from 3 p.m.–5 p.m.

**Warning Signs of Driver Fatigue**
The National Sleep Foundation warns there are numerous signs of driver fatigue including:

- Your eyes feel heavy;
- You blink and yawn frequently;
- You become less attentive to the road (miss your exit, don’t activate your eight-ways when approaching a bus stop, etc.);
- Your head feels heavy, and you have trouble keeping your head up;
- You can’t remember the last few miles driven;
- You drift from your lane or hit a rumble strip;
- You experience wandering or disconnected thoughts;
- You have difficulty focusing or keeping your eyes open;
- You tailgate or miss traffic signs; and
- You have to jerk your vehicle back into the lane.

**At-Risk Groups**
Several groups are more likely to be involved in driving fatigue crashes, according to NHTSA. Men under the age of 30, shift workers and people who are chronically sleep deprived are more likely to drive drowsy and suffer driver fatigue injuries. Many school bus operators have second jobs. If fatigued from the first, it could lead to problems when operating a bus.
Instructor Notes:

**Cell Phones and Texting While Driving**

Emphasize the impacts cell phone use has on driving. Take some time with trainees to discuss Table F-3. Point out the increased crash risk associated with looking at the device, and ask why looking at a cell phone might decrease driving safety.

Emphasize that a cell phone is an important tool in an emergency, but only use your cell phone in emergency situations. If you must use a cell phone, safely pull completely off the roadway. Always refer to local procedures.
Avoiding Consequences of Driving While Fatigued

There are ways to prevent driver fatigue, starting even before you get behind the wheel:

- Get a good night’s sleep. While this varies from individual to individual, the average person requires about eight hours of sleep a night;
- Be alert and recognize early warning signs of fatigue;
- Avoid alcohol and medications (over-the-counter and prescribed) that may impair performance;
- Don’t rely on your students, the radio or opening a window to keep you awake;
- Eat sensibly and avoid heavy meals; and
- Remember not to use any drug that hides fatigue - the only cure for fatigue is rest.

Clearly, your physical condition affects your ability to drive safely. Be sure to get plenty of sleep and only drive the school bus if you are in good physical and mental health. Finally, be as familiar with the route as possible. The better you know the roads, the more time you will be able to spend concentrating on the important things.

CELL PHONES AND TEXTING WHILE DRIVING

Cell phones have grown enormously in popularity in the past decade, and research continues to quantify how cell phone calls and texting contribute to crashes. For example, a study conducted by the Insurance Institute for Highway Safety found motorists who use cell phones while driving are four times more likely to get into crashes serious enough to injure themselves. Along the same lines, according to the Human Factors and Ergonomics Society, drivers talking on cell phones are 18 percent slower to react to brake lights and take 17 percent longer to regain the speed they lost when they braked. A Virginia Tech study* looked at the relative levels of distractions caused by various cell phone tasks and found the following:

<table>
<thead>
<tr>
<th>TABLE F-3. Relative Levels of Distraction Caused by Various Cell Phone Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>CELL PHONE OR OTHER RELATED TASKS</td>
</tr>
<tr>
<td>Light Vehicle/Cars.</td>
</tr>
<tr>
<td>Dialing Cell Phone.</td>
</tr>
<tr>
<td>Talking/Listening to Cell Phone.</td>
</tr>
<tr>
<td>Reaching for an Object (i.e. electronic device, other)</td>
</tr>
<tr>
<td>Heavy Vehicles/Trucks</td>
</tr>
<tr>
<td>Dialing Cell Phone.</td>
</tr>
<tr>
<td>Use/Reach for Electronic Device.</td>
</tr>
<tr>
<td>Text Messaging.</td>
</tr>
</tbody>
</table>

It is clear driver inattention is a leading cause of crashes, and talking on the phone and texting behind the wheel lead to distraction. In fact, anything your cell phone can do – hands free, texting, downloading music, navigation, etc., is distracting. The primary responsibility of the bus driver is to operate their bus safely. As described above, the task of driving requires full attention and focus. Using a cell phone can distract drivers from this task, risking harm to themselves and others. Available research indicates whether it is a hands-free or hand-held cell phone, the cognitive distraction is significant enough to degrade a driver’s performance. This can cause a driver to miss key visual and audio cues needed to avoid a crash.

* Information on the Virginia Tech Study can be found at:
Instructor Notes:

**Cell Phones and Texting While Driving**
Texting while driving is illegal for all drivers in Pennsylvania.

Use of hand-held cell phones is illegal for all commercial drivers when operating a commercial motor vehicle.

Cell phones may be used to call law enforcement or emergency services.

To view the final rule on the prohibition of texting and cell phone use by CMV operators (including School Bus Drivers) visit www.fmcsa.dot.gov

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**Vehicle Conditions**
Emphasize that school bus operators are responsible for the vehicles they drive. Unit E focuses on preventive maintenance, including the pre-trip inspection.

Complete a pre-trip inspection every day, do the inspection the same way every day, report potential problems appropriately for your company or school district, and expect to see repairs and corrections.

School bus operators should develop habits of using their senses to monitor the bus and identify potential problems early. Refer to exercises in Unit E.
As of March 8, 2012, it is illegal in Pennsylvania to use a wireless communications device to send, read or write a text-based communication while driving and while the vehicle is in motion. The law allows drivers to be pulled over and cited just for the texting offense and the penalty is a $50 fine plus other costs. In addition, the use of hand-held mobile telephones for all drivers engaged in the operation of a commercial motor vehicle is prohibited in Pennsylvania except when it is necessary to communicate with law enforcement officials or other emergency services. Both the ban on texting for all drivers and the ban on cell phone use for commercial vehicle drivers were enacted by the Federal Motor Carrier Safety Administration in 49 CFR 392.80 and 392.82 and have been adopted in their entirety in Pennsylvania through 67 Pa.Code 231.

In summary, at times when the distractions are the greatest, you will need to find ways to maintain your concentration. Listed below are a few suggestions that may help. Your own methods for keeping your mind on safe driving or methods you learn from other drivers may work just as well.

- Observe traffic defensively — always be on the lookout for what the other driver might do;
- Visualize the route and what you are going to do;
- Make a concentrated effort to keep extra space between you and the vehicle ahead of you;
- Have a systematic pattern of mirror checks you always follow;
- Keep watch to maintain a safety circle around the bus;
- Remind yourself of the responsibility you have transporting students;
- Drive mindfully, not mindlessly — keep tuned in to the bus, all the sounds it makes and how it feels;
- Count the students as they get off the bus, and watch where they all go. Make sure the same number reach safe zones before proceeding; and
- Do not talk/text on your cell phone while driving.

**VEHICLE CONDITIONS**

You must be aware of vehicle conditions before driving and constantly monitor your vehicle as you drive. This is discussed in detail in Unit E. Identifying a problem with your vehicle quickly can prevent a failure, which can result in a crash.

**PRE-TRIP CONDITIONS**

The purpose of a pre-trip inspection is to identify problems that could cause a crash or breakdown. Each school district or contractor may have unique methods or procedures for completing and documenting a pre-trip inspection, so work with your supervisor to review system-specific policies and/or checklists. The key for you, the operator, is to complete your pre-trip inspection the same way each time to identify potential problems. Be sure you can adequately answer the following questions:

- Is the school bus you are assigned to drive in safe operating condition?
- Will it respond instantly and effectively to all controls?
- Have you checked it over?
- Did you report deficiencies to your supervisor and have they been corrected?

You are the driver and are responsible for the vehicle you are driving. Refuse to drive an unsafe bus. Remember, if these reported deficiencies are not corrected, you can report them to the area supervisor, school principal, school superintendent, state board of education, or state police.

You have to use and take advantage of all vehicle components. It is your responsibility to see they are complete, operational and safe. Correct deficiencies before your route, or if you are suspicious of a potential mechanical problem, report it, and have it checked.
Instructor Notes:

Environmental and Roadway Conditions
Emphasize that school bus operators can become complacent because they travel
the same route twice a day. However, weather and other conditions may change,
sometimes quickly, making a familiar route more dangerous.

This can result in:

• Loss of control.
• Loss of traction.
• Loss or reduction in visibility.
• Need for adjustments for nighttime visibility.
ON-THE-ROAD CONDITIONS
Mechanical problems that will create potentially hazardous conditions may develop during your route. Safe drivers use all their senses to constantly check the mechanical operation of the bus.

- Sight – Constantly check all gauges for proper readings, check lights, and watch for smoke or fire.
- Smell – Constantly check for telltale odors of smoke, exhaust fumes, gasoline, oil, and burning rubber.
- Sound – Listen for unusual noises, such as engine knocking or clashing gears.
- Touch – Often you will feel the first sign of trouble. Be alert for loss of steering, brakes, transmission, power, or other vehicular functions.

If you identify a mechanical problem during your route, be prepared to act. If you are at all uncertain whether the problem constitutes a safety hazard, stop the bus, call your supervisor and follow school district guidelines or procedures.

ENVIRONMENTAL AND ROADWAY CONDITIONS
During the course of a school year, you will face a variety of environmental and roadway conditions demanding alert and skillful action. These conditions may include rain, ice, snow, mud, fog, flood waters, bright sun, and high winds, as well as potholes, edge drop-offs, missing or malfunctioning traffic control devices, and roadside hazards. While these conditions rarely cause crashes by themselves, they can make driving more hazardous than normal, especially when combined with human and/or vehicle factors.

Most likely, you will be driving over the same route twice a day during the school year. You’ll become thoroughly acquainted with the route and, after a short time, may begin to take the road for granted. But conditions change rapidly: potholes develop during the spring thaw; grades can wash away; shoulders can become soft; railroad crossing approaches appear different depending on the time of day; loose gravel can accumulate; and slick spots can develop through accumulations of snow and ice, or oil deposits. Conditions are different each day, and you must be alert to detect these changes so as not to be caught unaware. Road conditions do not generally cause crashes by themselves. However, crashes related to road conditions often occur because drivers fail to adjust their driving behavior to road conditions. Your responsibility is to be ready for changing conditions, anticipate problems and adjust your driving behavior to match conditions.

SCANNING AHEAD
To be a safe driver you need to know what’s going on all around your vehicle.

All drivers must scan ahead and search for potential conflicts or hazardous conditions. Use a systematic search pattern and efficient eye scanning habits to identify conflict situations. To properly scan ahead:

- Have a clean windshield and properly adjusted mirrors;
- Develop the habit of scanning 360 degrees around the bus – front, sides and rear;
- Don’t stare too long at a particular object, as you will be less aware of clues from your larger field of indirect vision; and
- Focus farther ahead as your speed increases, and slow down if your view becomes limited by hills or curves.
Instructor Notes:

**Know How Far to Scan**
Q: In general, how far ahead should a school bus operator scan?
A: 12 to 15 seconds.

School bus operators should constantly scan as they drive. Scanning means looking ahead the distance the bus will travel in 12 to 15 seconds at its current speed. This gives the operator 12 to 15 seconds to identify, process, and react to danger.

Scanning is more than looking ahead while driving. Scanning also means making a full 360 degree sweep of the bus’ environment, knowing what is happening behind and beside the bus. Clearly, a key to being able to scan properly is having a clean, unobstructed windshield and properly adjusted mirrors.

**Check Mirrors**
Checking mirrors is an important part of scanning. Check your mirrors every 5 to 8 seconds.
UNIT F - Safe Driving

Importance of Scanning Ahead
Because stopping or changing lanes can take a lot of distance, knowing your vehicle and what traffic is doing on all sides of you is very important. You need to look far enough ahead to make sure you have room to maneuver your bus safely.

Know How Far to Scan
You should look 12 to 15 seconds ahead. That means looking ahead the distance you will travel in 12 to 15 seconds. At lower speeds, that’s about one block; at highway speeds, it’s about a quarter of a mile. If you’re not looking that far ahead, you may have to stop too quickly or make quick lane changes. Looking 12 to 15 seconds ahead doesn’t mean ignoring conditions that are closer. You need to shift your attention back and forth, near and far.

Look for Traffic
Look for vehicles coming onto the highway, coming into your lane or turning. Watch for brake lights from slowing vehicles. By identifying these conditions far enough ahead, you can change your speed or change lanes, if necessary, to avoid a problem.

Check Mirrors
When using your mirrors while driving on the road, check quickly. This means about 3 to 5 seconds of scanning time. Look back and forth between the mirrors and the road ahead. Check your mirrors every 5 to 8 seconds. Don’t focus on the mirrors for too long. Otherwise, you will travel quite a distance without knowing what’s happening ahead. Refer to Unit E for more information on mirror positioning and usage.

The use of your mirrors will greatly extend the view outside and around the bus. For example, the side mirrors allow you to see the traffic approaching from behind your bus and those passing you, in addition to the surroundings at loading and unloading zones. The crossover mirrors also allow a further view in front of the bus, most often at a loading or unloading zone. Carefully checking and rechecking these mirrors for students that may be in front of the bus during loading or unloading is essential.

You must be alert to all hazards. The key to your defense is timely recognition and avoidance. Always try to leave yourself an escape route.

DRIVING ON SLIPPERY SURFACES
A roadway condition drivers often encounter is a slippery road surface. This may be the result of rain, snow, ice or even wet leaves, or standing water on the roadway. Expert drivers can safely control a vehicle on slippery surfaces. Also, by following proper procedures before, during and after your trips, you can help keep your vehicle in the best condition to operate as safely as possible on slippery surfaces, and maintain control while driving.

Before Your Trip
• Start on time, but adjust driving to conditions; safety first...schedule second; and
• Ensure chains are secure for snow and icy conditions, if applicable.
Driving on Slippery Surfaces
Control of the bus, that is, starting out and accelerating, as well as slowing, stopping and turning, all require rolling wheels. Slippery roadway surfaces limit a driver’s ability to control the bus because slipperiness reduces friction between the road surface and the tires, allowing the wheels to skid. If the wheels are not rolling, there is no control.

Q: What can cause a slippery surface?
A: Rain, ice, snow, wet leaves, standing water, loose gravel, mud, sand or other loose surfaces.

Reinforce that school bus operators need to limit the loss of traction by driving smoothly. Sudden applications of power or brakes can make wheels break traction and skid. Turning quickly can make wheels slide sideways, causing understeer, or the bus not turning commensurate with the steering application. Sometimes during understeer, wheels sliding sideways will suddenly grip, causing oversteer, or a condition in which the bus turns too much for the given steering application. Oversteer can cause the rear end of the bus to swing around.

Driving on slippery surfaces means not expecting the normal response from the bus commensurate with the normal applications of control. Operators will have to learn how to modulate accelerator and brake pedal pressures and apply steering control smoothly and gently. Refer to Unit H for additional information on this topic.

School bus operators should pay attention to ambient temperatures during winter driving. If the road looks wet, but the temperature outside is below 32 degrees, assume the wetness is ice.

To support these recommendations, you may want to share some results of the quantitative analyses conducted on 10 years of crashes involving school buses in Pennsylvania.

- Perhaps not surprisingly, drivers were more likely to be noted for driving too fast for conditions in rain-fog and especially in snow-sleet conditions than in clear weather conditions (i.e., driving too fast for conditions was more likely to be noted if adverse conditions were present than if they were absent).
- Drivers were more likely to be noted as driving on the wrong side of the road under snow-sleet conditions, perhaps indicating loss of control of the vehicle on slick roads and/or difficulty in seeing the center line. In fact, these collisions were three times more likely to occur under adverse environmental conditions than when no such conditions were present.
- Failure to stop was less likely to be noted under snow-sleet conditions than under clear or rain-fog conditions. This suggests that on slick roads drivers proceed cautiously enough to enable stopping when necessary. The point to make to drivers is while they appear to be approaching stopping cautiously, speeding remains a concern.
- Although 75% of prime school bus crashes overall occurred in urban areas, snow-sleet crashes were more likely to occur in rural than urban areas, perhaps due to lower levels of winter services on rural routes. If your drivers operate buses in rural areas, be particularly careful in adverse weather conditions.
- Snow-sleet crashes were likely to involve single-vehicle hit fixed object crashes. This suggests school bus operators are not adjusting their speeds based on weather conditions.
- Head-on collisions were twice as likely to occur on dry roads as on other road surface conditions. It appears that some drivers attempt risky maneuvers on dry roads that they perhaps avoid in less favorable conditions.
While on the Road:

- Use windshield wipers at all times in rain, snow, sleet, and heavy fog;
- Use of headlights is mandatory;
- Check brakes immediately after driving through deep puddles or standing water. If they fail to work properly, pump the brakes to help dry them while the vehicle is moving. For air brakes, cautiously apply steady pressure;
- Set a regular speed, and drive slower than posted speed limit or what you would normally drive in dry road conditions, especially on bridges and in tunnels;
- Start the bus in the lowest appropriate gear for better traction, if ice or wet snow is on the driving surface. Loss of traction due to spinning the wheels during starting may cause the drive wheels to become stuck even more firmly. If on a crowned road or hillside, the bus may start to slide or fishtail off of the road under these conditions;
- To avoid getting stuck or spinning the wheels, try to keep the bus moving slowly and steadily forward in gear. If the wheels start to spin, let up slightly on the accelerator to allow them to take hold. If the bus stops, do not continue to spin the wheels in the hope of pulling out. In mud and soft sand, this will only dig the wheels in deeper;
- When approaching intersections and when stopping, pump the brakes once or twice so the wheels won’t lock on the ice. With air brakes, use gentle, but steady pressure. Make turns smoothly and avoid applying the brake;
- Avoid skidding;
- Plan ahead for expected hazardous areas of the route. These include: icy bridges, stretches of road that have been slippery in the past, uphill stops, and intersections;
- For buses with manual transmissions, do not disengage the clutch until the bus is almost completely stopped;
- Maintain a greater than normal safe following distance from other vehicles; and
- When pulling onto the highway, allow for longer acceleration time required for school buses.

Estimate depth and extent of standing water partially or totally covering the roadway. When driving on snow- or ice-covered highways, judge the effect of traffic and temperature on road surface friction by noting whether other vehicles are skidding. Remember, bridges freeze before the road surface. If ice is melting on the highway, be alert for ice patches near underpasses, tree-lined areas, buildings or other shaded areas. Note spots where direct sunlight may have accelerated melting, and look for additional ice patches ahead on the highway.

You must drive slower to be able to stop in the same distance as on a dry road. Wet roads can double the stopping distance of your bus. Reduce speed by about one third (e.g., slow from 55 mph to about 35 mph) on a wet road. On packed snow, reduce speed by one half or more. If the surface is icy and impassable, stop driving as soon as you can safely do so and call for assistance.

**Black Ice** – Black ice is a thin layer clear enough you can see the road underneath it. It makes the road look wet instead of icy. Any time the temperature is below freezing and the road looks wet, watch out for black ice.
**Reduce Visibility**

Q: Is a sunny day a problem for driving?
A: Yes. Bright sun can cause glare that limits visibility.

Emphasize that rain, snow, and fog are not the only weather conditions that can limit visibility. Keep the windshield clean inside and out, adjust visors, and carry sunglasses for use when necessary.

Pennsylvania crash data does indicate that most crashes occur in daylight in clear weather conditions in urban areas.

**Night Driving**

Q: What are a few precautions that you can take when driving during hours of darkness?
A: Slow down; change your techniques; increase your following distance; exercise additional caution; don’t look directly at oncoming headlights; don’t look off into the darkness; use signs, pavement markings, and delineators as guidance devices; be aware that your eyes will need to adjust, and keep your headlights and windshield clean.

Distortion of your vision by headlights is fairly common. It takes about 7 seconds to recover. Remember in that amount of time, you travel 565 feet at 55 MPH, which translates to the length of almost two football fields.

When discussing this section, you may want to share some results of the quantitative analyses conducted on 10 years of crashes involving school buses in Pennsylvania:

- Fatalities were more likely to occur in dark than daylight or dawn-dusk conditions.
- Improper highway entrance/exit was least likely to be noted in daylight conditions and most likely to be noted in dark conditions. This might suggest that drivers may have difficulty pulling onto roadways in dark conditions.
- Failure to stop was less likely to be noted in dark conditions than in dawn-dusk or daylight conditions, perhaps because drivers are more cautious when visibility is poor.
- Improper turning was more likely to be noted in dark conditions than in daylight or dawn-dusk conditions.

**Quick Case Study**

You are driving a full load of students on a 300-mile bus trip late at night. The road is unfamiliar to you, and there is a constant stream of traffic in both lanes. You must concentrate hard the whole way. Finally, after 3 hours of continuous driving, you stop at an open fast-food restaurant and pull in for a 20-minute break. What precautions should you observe during this break?

1. You may want to wear your sunglasses inside to avoid losing too much of your dark vision capabilities.
2. Make sure you are able to relax during the stop.
3. Return to the outside darkness as soon as possible.
4. When starting out again, start slowly and cautiously, realizing your eyes must be readjusted to the darkness.
5. Obviously, do not wear sunglasses while driving, and don’t stare at oncoming lights.
6. Remember that it will be difficult to judge your speed and distance by looking at fixed objects along the road.
UNIT F - Safe Driving

Hydroplaning – In some weather, water or slush collects on the road. When this happens, your vehicle can hydroplane. Hydroplaning occurs when a layer of water builds between the rubber tires of your bus and the road surface, leading to the loss of traction, and thus preventing the vehicle from responding to steering, braking or accelerating. It becomes, in effect, an unpowered and unsteerable sled. It does not take a lot of water to cause hydroplaning. Hydroplaning can occur at speeds as low as 30 mph, if there is a lot of water. Hydroplaning is more likely, if tire pressure is low or the tread is worn. (The grooves in a tire carry away the water; if they aren’t deep, they don’t work well.) Be especially careful when driving through puddles. The water is often deep enough to cause hydroplaning.

Remember to inspect your tires as outlined in Unit E for a tread depth of 4/32” on the front tires and 2/32” on the rear tires as per Section 171.36 of Title 67, and avoid standing water.

After Your Trip:
- Sweep water or snow from the bus, including the steps;
- Clear mud or snow from windows, mirrors, lights, roof, and reflectors; and
- Don’t forget to complete your post-trip inspection procedures.

REDUCED VISIBILITY
Weather Conditions
When you think of bad weather you probably think of slippery road conditions, but rain, snow, fog, and smog also reduce visibility. Adjust your driving accordingly, and take the following precautions:
- Follow local pre-trip inspection guidelines;
- Keep the windshield clear. If snow or ice builds up on front or rear windows, stop the bus and remove it; and
- Don’t hesitate to leave the roadway at a safe spot to sit out a heavy shower, snow squall or thick fog. However, always remember to keep in contact with your supervisor.

Bright, Glaring Sunlight
While bright sun or glare may not be considered bad weather, they can create serious hazards for motorists. Don’t be caught unprepared. Take the following special precautions for safe driving in bright sun:
- Carry sunglasses and use them when necessary;
- Adjust visors to block out direct sun;
- Avoid looking directly at the sun, bright reflections, or glare since they can affect your vision for several seconds; and
- Clean the windshield inside/outside.

Night Driving
When examining national crash data for ALL vehicles, about half of traffic fatalities occur at night, although only about one quarter of travel occurs after dark. Although intoxication and fatigue contribute to the high rate of nighttime crashes, nighttime driving is inherently hazardous because of decreased driver visibility.

In Pennsylvania, approximately 6 percent of crashes involving a school bus occurred at night. While most of your trips as a school bus operator occur during daylight hours, there may be several times when you will be driving during hours of darkness. These may be during field trips or special events, or just early morning routes.
Instructor Notes:
during the winter. As nighttime hours increase, so does your exposure to the perils of night driving. Unlike the temporary hazards associated with snow and ice, the dangers of night driving exist all winter and, to a lesser extent, all year.

Why is night driving particularly challenging? The challenges are greater than during the day because many of the visual cues necessary for safe driving, such as warning signs and pavement markings, are harder to see. In addition, even drivers with the best visual acuity have reduced visual efficiency at night. Namely, your peripheral vision is sharply reduced, your depth of field is reduced and the low light makes it more difficult to focus on objects. Further, artificial light can’t compare in efficiency to natural light, and the narrow beams of light from headlights give you an automatic case of tunnel vision. Daytime visual cues, such as colors, are nearly worthless at night.

At night, take the following driving precautions:

- **SLOW DOWN.** Just because the speed limit is 40 mph, it doesn’t mean you have to drive that fast. Remember, the speed limit is an indication of the maximum safe speed during optimal driving conditions.
- Change other driving techniques. For example, don’t overdrive your headlights. If you are driving at 55 mph, it will take you up to 300 feet to stop, while the average headlights will illuminate only 250 feet ahead.
- Increase your following distance behind the vehicle in front of you because distance perception is more difficult to judge at night.
- Exercise caution. It takes time for the average eye to adjust to night vision. Drive with special caution during this critical adjustment period. Avoid highway hypnosis caused by prolonged and forced staring.
- Don’t look directly at oncoming lights. Visibility is affected considerably by oncoming headlights at distances of 3,000 feet or more. Staring at oncoming headlights will also distort your vision for up to seven seconds. That translates to a distortion lasting a distance of 565 feet when traveling at 55 mph.
- Don’t look off into the darkness, because your eyes will have trouble adjusting to the road lights again. You may be able to learn to steer by the side light cast by cars ahead of you.
- Use pavement markings and delineators as guidance devices. Often, they form a corridor of reflected light in which a stalled car or pedestrian will show up as a blank spot.
- Your eyes need to adjust to night lighting and driving in dark conditions. If you are exposed to bright sunlight during the day, it will take your eyes longer to adjust, and it can impair your night vision considerably. Therefore, wear your sunglasses, if exposed to bright sunlight during the day.

**EQUIPMENT ADJUSTMENTS**

- Keep headlights clean and make sure your windshield is clean inside and outside. Any reduction in the amount of light available to your eyes reduces your night vision.
- Always use low beams on sharp curves and when traffic is approaching. Your bright lights can blot out the warning glow of cars coming around the curve toward you. Also, keep headlights on low beam in cities or towns, and in fog or haze.
- Keep your instrument panel lights dim. If too bright, they produce unnecessary glare and distraction.
- If oncoming drivers fail to dim their lights, don’t blind them with your high beams. This creates a hazard to yourself and your passengers.
- Don’t tailgate.
Instructor Notes:

Highway Hazards
Emphasize that knowing something about highway geometry and construction can give school bus operators knowledge that can enhance their ability to scan for potential traffic issues.

Any point on the highway where drivers have to make a decision represents a potential point of conflict. Freeway entrances and exits are points of conflicts as well as intersections and places where the number of lanes change, such as two lanes funneling into one.

Road Geometry
Road geometry refers to visible features that affect the operational quality of a roadway.

Q: What are some examples of roadway geometry?
A: Hills, dips, curves, intersections, curbing, shoulders, and lanes.

School bus operators need to pay attention to how the roadway geometry contributes to points of conflict. For example, a hill or curve can limit the visibility of the roadway far enough ahead and limit your ability to make decisions in time. Pay attention to the shape of the road, and scan signs and pavement markings that give clues about what may be happening next.

Emphasize that 60% of school bus crashes occur at intersections. Points of conflict at intersections may be regulated by traffic control devices that assign right-of-way. When discussing this section, you may want to share some results of the quantitative analyses conducted on 10 years of crashes involving school buses in Pennsylvania:

- Drivers who crashed at T or Y intersections had fewer total training hours than drivers who crashed at mid-block or 4-way intersection locations. This suggests that navigating through intersections can be tricky and more experienced drivers have learned strategies to help. Along the same lines, TRAINING can help with this. Instructors should also emphasize this in the in-bus training.
- Compared to 4-way, T, or Y intersection crashes, school bus drivers identified as the prime unit in mid-block crashes were more likely to be noted for driving too fast for conditions, over- or under-compensation at a curve, improper highway entrance/exit crossing into the wrong side of road, illegal passing, tailgating, distracted driving, other improper driving, and/or affected by a physical condition.
- Adverse environmental conditions were more likely to be noted at mid-block locations than intersections.
- Intersection crashes were more likely to be in urban areas, perhaps due to greater exposure at high traffic locations.
- A greater number of injuries were sustained in mid-block than intersection crashes perhaps because of the speeds involved.
- A greater number of vehicles were involved in 4-way intersection than T or Y intersection or mid-block crashes (as is also true for crashes regardless of vehicle type).

Point out that right-of-way laws only describe the vehicle movement that must yield; it does not specify who must proceed ahead of others.

Emphasize the different kinds of intersections and draw trainees’ attention to the kinds of decisions to make for each.
• If it is necessary to stop the bus on the shoulder of an open highway, choose a spot visible for at least 500 feet to oncoming and following traffic (see Figure F-5). Turn off the headlights, but leave parking lights and/or hazard warning lights on.

Figure F-5. Parking on a Hill

HEAVY WIND
While loss of traction and limited visibility are the most common roadway and weather-related problems you will face, you should also be aware of and ready for potential hazards caused by heavy wind. Because of the height of a vehicle, the side of the bus acts like a sail, and a strong crosswind at the top of a hill or at the end of a tunnel, or even gusting winds on an open straight section of highway, can cause an unprepared driver to lose control of the bus. Passing large vehicles also may expose you to a sudden burst of a crosswind. Large vehicles can cause drafts; be careful when driving near them on the open highway.

HIGHWAY HAZARDS
The shape, surface and roadside conditions of the highways you drive on each day can cause potential hazards. Whether you drive on major highways, country roads, city streets, or some combination of these, you must be prepared for potential hazards arising from these conditions.

You should be able to identify potential hazards arising out of the interaction between vehicles and highway. Any point in the highway where drivers are confronted with decisions represents a potential point of conflict. For example, a vehicle starting to exit from a freeway may suddenly return to the freeway, or drivers unfamiliar with route signs may be in the wrong lane and change lanes suddenly as two major routes split. A point where the highway becomes narrower also represents a potential source of conflict. At points where four lanes become two, other vehicles may change lanes suddenly.

Road Geometry
The geometry of a highway describes features that affect or relate to its operational quality and safety. These features, which are visible to the driver and affect driving performance, include: roadway curvature; intersections and interchanges; number of lanes and lane width, presence of shoulders and curbs; channelization and medians; and other miscellaneous elements like driveways and bridges.

As a driver, pay attention to the shape of the road and the potential for unseen hazards around curves, over hills or in dips. By scanning the road ahead, and watching and heeding road signs and pavement markings, good drivers can detect and plan ahead, for such roadway geometric changes by slowing down to get a better view. When entering a curve or down shifting for a long downgrade, increase your following distance and travel at a reduced speed. Reduce speed and keep to the right when approaching the crest of hills and at highway dips.
Instructor Notes:

### Intersections

Angle collisions are common at intersections. In the quantitative review of Pennsylvania school bus crash data, it was determined that several factors contributed to angle collisions. Failure to stop was by far the most impactful. Drivers noted for this were 33 times more likely to be involved in an angle collision than drivers who were not. Angle collisions were 3 times as likely to occur in darkness as in other illumination conditions. Other contributing factors were: the absence of adverse environmental conditions (angle collisions were twice as likely to occur under no adverse conditions as when adverse conditions were present); and “Failure to Stop” violations on record (drivers with 1 or more fail to stop violations were slightly more likely to be involved in angle collisions than drivers with no such violations). It appears that these findings are consistent with a scenario whereby some drivers have a tendency to roll past stop signs when the way appears to be clear, fail to see an oncoming vehicle under low light conditions, and collide with the oncoming vehicle.

Rear end collisions are also more common at intersections. Drivers noted as tailgating were 61 times more likely to be involved in a rear-end collision than drivers involved in collisions who were not noted as tailgating. Other contributing factors to rear-end collisions were gender (males were 1.5 times more likely than females) and improper driving violations on record (drivers with 1 or more improper driving violations were 1.5 times more likely to be involved in rear-end collisions than drivers with no improper driving violations).

Drivers should be made aware that if they have a driving record with one or more fail to stop violations, they should be particularly vigilant when operating a school bus not to repeat this behavior.
Intersections and Right of Way
School buses often come into conflict with other vehicles and pedestrians because their intended courses of travel intersect, and thus interfere with each other’s routes. This occurs at points where roads and streets join, meet or cross — intersections.

Pennsylvania school bus crash data indicate over 60 percent of crashes, school bus the prime unit, occurred at intersections. One factor that might explain this is navigating through an intersection requires careful driving technique and experience, especially in a larger vehicle like a school bus. Another fact is simply there are many conflict points at an intersection, so your exposure is much higher.

Intersections can be different sizes and shapes depending on the angle(s) by which the roadways meet. Be prepared to stop each time you approach virtually any intersection.

The general principle establishing who has the right to go first at an intersection is called “right-of-way.” This concept legally establishes who has the right to use the conflicting part of the road and who has to wait until the other does so. Right-of-way laws are designed to prevent collisions by prescribing what vehicle must move last. The law only names the vehicle that must yield right of way; it never states any vehicle expressly has the right to proceed.

In terms of right-of-way, there are basically two types of intersections: regulated and unregulated. Regulated intersections have traffic control devices, such as a signal or sign. Unregulated intersections have no traffic signals or signs. Use caution, even if a signal or a stop sign controls other traffic. Remember the clearance your bus needs, and watch for poles and tree limbs. Know the size of the gap your bus needs to accelerate and merge with traffic. When pulling out, never assume other drivers will brake to give you room.

Unregulated Intersection
When approaching an unregulated intersection, you are required by law to reduce speed, check traffic to see you can proceed and continue to move only when others have yielded right of way to you. If another vehicle is already in or very near the intersection, you must yield right of way to that vehicle. When two vehicles arrive at an unregulated intersection at the same time, the vehicle on the left always yields right of way to the vehicle on the right.

Regulated Intersection: Yield Control
Because of the restricted visibility, slow acceleration and length of a school bus, you must use extreme caution as you approach a yield sign. Approach the intersection where you must yield at a speed reasonable for the existing conditions, but slow enough to allow you to stop the bus and yield right of way to another vehicle in the intersection or to avoid a collision.

Regulated Intersection: Stop Control
Drivers’ responsibilities at stop-controlled intersections are stated in Section 3323(b) of Title 75, The Pennsylvania Vehicle Code. This section states “Duties at stop signs -- Except when directed to proceed by a police officer or appropriately attired persons authorized to direct, control or regulate traffic, every driver of a vehicle approaching a stop sign shall stop at a clearly marked stop line or, if no stop line is present, before entering a crosswalk on the near side of the intersection or, if no crosswalk is present, then at the point nearest the intersecting roadway where the driver has a view of approaching traffic or the intersecting roadway before entering. If, after stopping at a crosswalk or clearly marked stop line, a driver does not have a clear view of approaching traffic, the driver shall, after yielding the right-of-way to any pedestrian in the crosswalk, slowly pull forward from the stopped position to a point where the driver has a clear view of approaching traffic. The driver shall yield the right-of-way to any vehicle in the intersection or approaching on another roadway so closely as to constitute a hazard during the time when the driver is moving across or within the intersection or junction of roadways, and enter the intersection when it is safe to do so.”
Regulated Intersection: Traffic Signals
The qualitative portion of school bus crash analyses indicate that school bus drivers should take extra precautions at signalized intersections in wet weather. Poor visibility affecting distance judgments may be a contributing factor in these crashes.

Circular Intersections
Roundabouts and other circular intersections are becoming more common on Pennsylvania highways. Point out parts of a modern roundabout and review the list of 9 tips on the opposite page which will help drivers navigate through them.

For example, one attribute of the modern roundabout is the truck apron. The truck apron is a raised section of pavement around the central island of a roundabout that acts as an extra lane or "overrun area" for large vehicles. The back wheels of the bus can ride up on the truck apron so the bus can easily complete the turn, while the raised portion of concrete discourages use by smaller vehicles.
Simply put, you must completely stop at every intersection where there is a stop sign for your lane of traffic. Stop at the stop line or four feet in advance of the crosswalk. If neither are there, stop at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway before entering the intersection. Enter only when you have the best line of sight and can move the bus without interfering with the movement of another vehicle. Before proceeding you should look in all directions at least twice to check for approaching traffic. If the intersection is clear, proceed to move ahead or turn with caution.

**Regulated Intersection: Traffic Signals**
Approach each traffic signal expecting it could change color at any moment. Always obey the color of the traffic signal:

- **Red light** – Stop completely at the stop line and wait for the green light before proceeding. Consult your district guidelines and procedures regarding making the “right on red”. This is a legal maneuver in Pennsylvania, but it might not be the safest to make in a school bus.
- **Yellow light** – Prepare to stop for the red light that will follow.
- **Green light** – Check to be sure approaching traffic is stopped and proceed with caution.
- **Flashing yellow light** – Slowly proceed with caution.
- **Flashing red light** – Stop completely, check for approaching traffic and proceed with caution when it’s safe to move (same as stop sign).

**Circular Intersections**
Circular intersections, such as the modern roundabout, are becoming more common on Pennsylvania highways.

Here are a few tips for travelling through circular intersections:

1. Slow down as you approach the intersection.
2. Keep to the right of the painted or raised island separating entering traffic from exiting traffic. There may be a truck apron on which you may operate your bus.
3. Look left for traffic approaching in the circle.
4. Enter the roundabout (circle) by turning right when there is a safe gap in traffic approaching from your left. Yield to traffic already in the roundabout. If there is no traffic approaching, you may enter without stopping.
5. Do not pass bicyclists or other vehicles when in the roundabout.
6. When in the roundabout, do not stop (except to avoid a crash) – you have the right-of-way over entering traffic.
7. Use your right turn signal to indicate where you plan to exit the roundabout. Turn it on after you have passed the exit just before the one you plan to use.
8. If you miss your exit, just continue around the circle until you reach it again.
9. As you exit, yield to pedestrians who are in the crosswalk or are waiting to cross the exit lane.
Instructor Notes:

**Roadside Hazards**

When a sample of individual run-off-the-road crashes involving school buses were qualitatively analyzed, all these crashes occurred because the school bus driver failed to properly control the vehicle. It appears that these crashes could have been avoided if the drivers exercised greater caution, in particular, driving at slower speeds in hazardous roadway conditions.

This was supported by the qualitative data analyses. These analyses indicate that it appears that hit fixed object collisions occur when drivers, perhaps overconfident in their ability to handle the vehicle in good weather, fail to properly control the vehicle while driving too fast for conditions. Driving too fast for conditions was the most impactful factor contributing to hit fixed object crashes – drivers noted for this were 4 times more likely to be involved in a hit fixed object collision than drivers who were not. Also, hit fixed object collisions were 1.75 times more likely to occur on dry roads and 1.25 times more likely to occur in clear weather.
Uniformed Police Officer
A uniformed traffic officer always has authority above regular traffic signs and signals. You must follow the officer’s instructions regardless of the regular traffic devices. When an officer is directing traffic, there is usually a specific problem or hazard. There could be a crash ahead, malfunctioning traffic signal or missing sign. Always obey the officer’s instructions, even if the regular traffic devices appear to be functioning properly.

Private Drive
When leaving a driveway, you must always yield right of way to the approaching vehicles on the roadway where you are entering. Check for approaching traffic and proceed with caution when it’s safe to move (same as stop sign). Whenever possible, never back out of a driveway onto a highway.

Crossing Main Highways
Use extreme caution while crossing or entering a major highway. When moving from a complete stop, a school bus normally requires at least six seconds to cross and clear an average two-lane highway. Multi-lane highways, especially divided highways, require even more time. An automobile traveling at 55 mph can move 485 feet in six seconds. Before you move the bus onto a highway be certain you have enough time to safely clear the intersection. Always check and recheck for approaching traffic, before entering or crossing any road. Look first to the left, where the hazard of approaching traffic is closer. The slogan for the school bus driver must be: “The school bus driver never has right of way.”

While driving the bus you must never take a risk. You should be a courteous driver, and remember the law requires you and all drivers to yield right of way to pedestrians and vehicles on narrow bridges, on the roadway, at intersections, and in any hazardous situation.

Road Surface
Another type of potential highway hazard is the road surface. Always scan ahead for changes in surface conditions that may require evasive maneuvering to avoid the loss of steering or braking control. The three most common problems are loose, rough and slippery surfaces.

- **Loose Surfaces** – Slow down for loose surfaces such as gravel, soft sand, soft shoulders, and wet leaves.
- **Rough Surfaces** – Detect surface irregularities on asphalt and concrete, such as potholes or cracked pavement. On a wooden surface, look for holes, bumps, cracks, loose boards, and slippery spots. Approach metal bridges slowly, as they tend to reduce steering control.
- **Slippery Surfaces** – Slippery surfaces were discussed earlier. Anticipate the smoothness of concrete or asphalt road surfaces at intersections, or other steering or stopping areas. Recognize areas of the highway soaked with oil or grease. Remember, the early part of a rainfall is the most dangerous.

Roadside Conditions
Another type of potential highway hazard is caused by conditions on the side of the road. Physical features of the roadside include: barriers (e.g., guiderail); obstacles (e.g., noise barriers, trees, utility poles, signs), and other miscellaneous features (embankment slopes, ditches, etc.). Under normal driving circumstances, these should pose no problem. They should, however, be included in your scanning as you drive and they should be evaluated for potential hazards, if you leave the highway suddenly.
Pedestrian Hazards
Greater numbers of fatalities were associated with hit pedestrian and head-on collisions with school buses than any other crash type. Pedestrians pose a particular hazard because their movements are difficult to predict – the school bus operator must be ready for anything – and a school bus does not stop or swerve quickly.

Q: What are some common situations where pedestrians might get in your path?
A: During the loading and unloading process; getting out of parked cars near a school or anywhere there is on-street parking; in crosswalks or crossing at midblock locations, and when the pedestrians are distracted talking on the phone or listening to music; among many others.

In the qualitative portion of the analyses of Pennsylvania school bus crash data, some school bus crashes involved pedestrians. Most of these pedestrians sustained minor or moderate injuries, though there were some fatalities. Some examples include:

• One crash occurred when a student exited the school bus and was standing near the front of the bus when the bus moved forward, struck and ran over the student – the crossing control arm was not deployed.
• One crash occurred as a school bus made a right turn through an intersection and a pedestrian at a crosswalk walked into the side of the bus, fell and was run over.
• Two crashes occurred as school buses traversed through intersections at green lights and struck pedestrians in crosswalks.
• One crash occurred as a pedestrian wearing dark colored clothing at dawn crossed a road mid-block without a crosswalk, and was struck by an oncoming school bus.

In the quantitative portion of the analyses, it was determined that hit pedestrian collisions were more likely to occur at dawn or dusk (visibility appears to be a key factor), and at intersection locations.

As an Instructor, a couple of points to make to drivers include:

1. As discussed in Unit C, school bus drivers should take extra precautions when loading/unloading passengers, making sure that all pupils and other pedestrians have moved safely away from the vehicle before moving.
2. School bus drivers should take extra precautions at intersections, especially intersections with crosswalks, as pedestrians often fail to heed traffic control devices.

Vehicle Hazards
Emphasize the need for school bus operators to scan 360 degrees. School buses share the road with other vehicles, often driven by people in a hurry and with a less sense of responsibility than the school bus driver. These drivers may behave aggressively, or fail to signal their intentions. The best defense against most poor driving behavior is to be especially vigilant, slow down, and allow more space between vehicles, thereby allowing for errors in judgment.
PEDESTRIAN HAZARDS

The presence of pedestrians, bicyclists, roller skaters, skateboarders, and animals on or near the highway increases the need for vigilant scanning. School bus stops are particularly dangerous areas as outlined in Unit C - approach them cautiously and alertly. When near playgrounds, residential areas and schools, be alert for children playing or darting into the path of your bus from behind vehicles, structures, or trees and bushes.

When driving on side streets, be alert for pedestrians entering or crossing your path from any direction. When making left and especially right turns at intersections, check carefully for pedestrians crossing the street into the path of the bus and for vehicles making right turns on red lights.

Be alert for animals that may cross into the path of the bus. Animals are much like children in their unpredictable behavior along roads. Wherever possible, slow down to avoid hitting animals; do not swerve to avoid them unless they are working horses pulling a buggy. Such action may cause partial or complete loss of control of the bus. (See Figures F-7 and F-8)

VEHICLE HAZARDS

In general, when sharing the road with other vehicles, observe the driving behaviors of the other drivers. Scan 360 degrees around your bus for clues to any potentially hazardous conditions.

Drivers in a Hurry

Drivers may feel your school bus is preventing them from getting where they want to go on time. Such drivers may pass you without a safe gap in the oncoming traffic, cutting too close in front of you. Other drivers entering the road may pull in front of you in order to avoid being stuck behind you, causing you to brake quickly. Be aware of these situations, and pay particular attention to drivers who are in a hurry.

Losing Control

Recognize clues indicating another driver may lose control of their vehicle. Surface conditions that are slippery, or have loose gravel, ruts, or deep snow might reduce the oncoming driver’s control (as well as your own). Notice movements of the other vehicles. For example, you notice if an oncoming driver turns too sharply after an off-road recovery, or a driver approaching too fast from the side to stop or turn. Movements of your bus or another vehicle also may affect other drivers (such as stopping too quickly to allow a following vehicle enough time to stop).
Instructor Notes:

Failure of Other Drivers to Observe

Q: What are some clues that another driver is not paying attention and has not observed the bus?

A: Other driver not responding to your signals, distracted by something in their vehicle, they have something obscuring their view.
Lack of Communication by Other Drivers
Look for clues to situations where the driver of another vehicle may execute a maneuver without signaling:

- A vehicle slowing down may be about to turn;
- A parked car with a driver in the driver’s seat, engine running, or turned wheels may be about to pull out from the curb;
- A parked car with a driver in the driver’s seat may be getting ready to exit his vehicle; and
- Pickup and delivery vehicles with backup lights on may be about to back into another street or driveway.

When another driver does signal, check other clues to verify it is the proper signal because a turn signal may have been left on from a previous maneuver. This is especially true of motorcycles.

Remember you, too, can fail to communicate. Always signal your intentions.

Failure of the Other Driver to Observe
Watch for clues another driver has not observed the bus and therefore may not be prepared to yield the right-of-way. These clues include the following:

- Other driver not responding to an upcoming intersection or to your signals;
- Other driver not looking at the road or what is in front of him/her (distracted by something in their own vehicle);
- Dirty windows, posts, trees, buildings, bright sunlight, or other objects obscuring or restricting the other driver’s view; and
- Other driver’s vehicle being detectable to you only by reflection, headlight glow or dust cloud.

Inadequate Adjustment by the Other Driver
Look for indications another driver is not adjusting properly to a situation. Be aware of hazardous situations arising when another driver fails to adjust for the following:

- Obstructions;
- Surface conditions;
- Pedestrians;
- Other vehicles; and
- Shape of the road.

Failure to adjust for these conditions may cause another driver to make potentially hazardous maneuvers. Know areas of your route where these situations are likely to occur, and exercise caution in these places.
Instructor Notes:

**Slow-moving or Stopped Vehicles**

Q: What sign helps identify a slow moving vehicle?

A: A reflective orange triangle bordered with red.
UNIT F - Safe Driving

Aggressive Driving by Other Motorists
NEVER take it personally when someone cuts you off or pulls in front of you. People don't want to be caught behind the school bus, so expect people to pull in front of you. Just let it go, and ignore it. If you encounter an aggressive driver, here are a few tips:

- Get out of their way and do not challenge them;
- Stay relaxed, avoid eye contact and ignore rude gestures;
- Don’t block the passing lane, if you are driving slower than most of the traffic;
- Put your pride in the back seat and DO NOT RETALIATE. Do not challenge them by speeding up or attempting to hold-your-own in your travel lane. It is a serious distraction to focus your attention on a "contest" with another driver. You are less able to respond to traffic signals, signs and the actions of other vehicles or pedestrians as needed to avoid a crash;
- Do not try to teach another driver a lesson and do not insist on being right, even if you are right;
- Wear your seat belt as required by Section 171.144 of Title 67 and federal law in 49 CFR Section 392.16 (Use of Seat Belts). It will hold you in your seat and behind the wheel in case you need to make an abrupt driving maneuver, and it will protect you in a crash;
- Report aggressive drivers to the appropriate authorities by providing a vehicle description, license number, location and, if possible, driver and direction of travel;
- If you have a cell phone, and can do it safely, pull to the side of the road and call the police and/or your supervisor – many have special numbers (e.g. 911); and
- Do NOT discharge any students, if an aggressive driver pursues you. Call for help.

While many people associate aggressive driving with road rage, they are two different behaviors. Road rage, which is a criminal offense, is often the result of aggressive driving behavior that escalates into an assault with a vehicle or other dangerous weapons.

Slow-moving or Stopped Vehicles
Watch for indications another vehicle is slowing or may stop suddenly. Examples of slow-moving vehicles are farm vehicles, under-powered vehicles, horse-drawn vehicles, and trucks on hills. Frequently stopping vehicles include: buses, trucks carrying flammables at railroad crossings, garbage trucks, and postal and other delivery vehicles. Also watch for vehicles engaged in turning, exiting or entering the roadway, merging with other vehicles, or approaching controlled intersections or railroad crossings.

Amish buggies are dark in color and difficult to see in poor light and bad weather. After stopping, a horse and buggy often roll backward. When you pass a horse, do not drive too fast or blow your horn, as this may spook the horse. Also, to avoid scaring the horse after passing, leave enough space between your vehicle and the horse before pulling back into the right lane.

Multiple Vehicle Hazards
You should be able to recognize clues in a traffic pattern that may indicate potential conflict. Vehicles entering the highway from side roads, driveways, ramps, or parking spaces may cause another driver to change lanes or stop suddenly. A vehicle slowing or stopping may prompt another driver to steer around it. One vehicle may limit another’s visibility, allowing the other driver to enter a potential conflict, as when an oncoming driver turns left.
Motorcycles
Q: What safety precautions can you take when operating your bus around motorcycles?
A: Look carefully, anticipate their maneuvers, allow plenty of following distance, double-check your blind spots (especially if you can hear motorcycles).

Controlling Speed
The most severe injuries associated with school bus crashes involve speed along with other factors causing those crashes. Emphasize the importance of adjusting speed to maintain safe following distances.

Based on a quantitative analysis of Pennsylvania school bus crash data, most school bus crashes do not cause injuries, but some school bus driver actions are more consequential than others with respect to crash outcomes. For example, the greatest number of injuries was in crashes attributed to other improper driving (typically coded by investigating officers when several factors are implicated in a crash), followed by failure to stop, tailgating, improper turn, speeding/driving too fast for conditions, and distracted driving.

When looking at rates of injuries by driver actions for school bus crashes in which the bus was the prime unit, actions with high injury rates, by far, were the combinations of speeding & distracted driving, and speeding & tailgating. Among single driver action categories, the highest injury rate was for tailgating.

For fatality rates, by far the highest fatality rate was for the driver actions of speeding & other improper driving, followed by driving on the wrong side of road.

The message for drivers is clear: SLOW DOWN!
Work Zones
Whenever people are working on the road, it is a hazard. Road construction may cause narrower lanes, sharp turns or uneven surfaces. Other drivers are often distracted and drive unsafely. Workers and construction vehicles may get in the way. Drive slowly and carefully near work zones. Use your four-way flashers or brake lights to warn drivers behind you.

There should be traffic control devices to help you navigate through work zones. These devices are typically repetitive in nature, especially signing practices. For example, in a typical road work sign series, the first sign, ROAD WORK AHEAD, is a general warning to motorists. The second sign, ONE LANE ROAD AHEAD, alerts drivers what exactly they should expect. The third sign, FLAGGER AHEAD, tells what they need to do.

Motorcycles
One vehicle you should pay particular attention to is the motorcycle. They are smaller and more narrow than a car, can be hard to see, and can hide in a blind spot. Keep these simple rules in mind:

1. Look for motorcycles…then look again. Look twice at intersections, especially when turning left;
2. Respect motorcyclists’ rights. Motorcycles have all the privileges of any vehicle on the road. Give motorcycles a full lane, and treat them with courtesy and respect;
3. Anticipate a motorcyclist’s maneuvers. Motorcyclists may change lane positions in response to road conditions, weather or other factors. Anticipate evasive actions. Small objects in a road you may not need to avoid in a bus may require evasive action by a motorcycle;
4. Allow plenty of following distance. Allow an extra second of following distance and room to respond to conditions on the road. Slow down in poor driving conditions; and
5. Check your blind spot. Make a visual check for motorcycles in your mirrors and check your blind spot before changing lanes.

CONTROLLING SPEED
Driving too fast is a significant cause of crashes. Pennsylvania school bus crash data indicates speeding and tailgating are listed as factors in 18 percent of crashes involving school buses as the prime vehicle. In addition, the highest fatality rates for school bus incidents were associated with crashes involving the combination of speeding and other improper driving action, and driving on the wrong side of the road (often associated with speeding). Not surprisingly, the highest rate of injury in school bus crashes involved crashes where drivers were speeding and distracted, and speeding and tailgating. The common theme here is speeding.

You must adjust your speed depending on driving conditions. These include: traction, curves, visibility, traffic, weather conditions and hills. Data shows school bus drivers in crashes were more likely to have speeding indicated as a factor during adverse weather conditions than if there were no adverse conditions. You must make adjustments when you drive – different conditions require different techniques. Similarly, bus drivers in rear-end crashes are significantly more likely to be noted as tailgating. Rear end collisions involving a bus tend to be associated with a high number of injuries per crash.

You must drive safely when operating your bus and that means not driving too fast for conditions.
Instructor Notes:

**Following Distance**

Q: What is the absolute minimum following distance (expressed in time)?

A: 4 seconds.

Q: What are some conditions that would cause you to increase your following distance?

A: Higher speed conditions (over 40 mph); poor roadway conditions; following motorcycles, large vehicles, or other buses; driving during hours of darkness; adverse weather conditions; and when you are being tailgated.
FOLLOWING DISTANCES

Knowing the stopping distances required for different road conditions and speeds will help you determine safe following distances when driving. You must keep adequate distance between you and the vehicle in front of you. A good general rule for determining a safe following distance on the highway is to allow an absolute minimum of four seconds between the bus and the vehicle ahead under normal conditions. For each additional adverse condition, add another second. So, add a second if:

- You are traveling over 40 mph;
- You are driving on a wet or loose surface or other poor roadway condition;
- You are following motorcycles or large vehicles;
- You are following another school bus;
- You are driving at night;
- You are driving in adverse weather conditions; and
- You are being tailgated.

To adequately judge this, select a fixed object on the road or roadside ahead. When the vehicle ahead of you passes that mark, start counting until you reach that same spot. If you reach the same spot before your count is complete, you are following too closely.

Also keep in mind that in a large vehicle, it’s often hard to see whether a vehicle is close behind you. You may be tailgated:

- **When you are traveling slowly** – Drivers trapped behind slow vehicles often follow closely, and
- **In bad weather** – Many car drivers follow large vehicles closely during bad weather, especially when it is hard to see the road ahead.

If you find yourself being tailgated, here are some things you can do to reduce the chances of a crash:

- **Avoid quick changes** – If you have to slow down or turn, signal early and reduce speed very gradually;
- **Increase your following distance** – Opening up room in front of you will help you avoid having to make sudden speed or direction changes that could surprise the driver behind you. Leaving room ahead also makes it easier for the tailgater to get around you;
- **Don’t speed up** – It’s safer to be tailgated at a low speed than a high speed; and
- **Avoid tricks** – Don’t turn on your tail lights or flash your brake lights. Follow the suggestions above.
Instructor Notes:

**Stopping**

Emphasize that stopping distance is the sum total of (Perception distance) + (Reaction distance) + (Braking distance). For buses with air brakes, the formula includes Brake Lag Distance, in addition to the other factors. At 55 mph, from the time the operator recognizes a hazard until the bus comes to a full stop, the bus will cover approximately 322 feet. And that is with an alert, clear-thinking operator under good conditions.
STopping

Stopping a school bus smoothly and within the limits of safety is the sign of an expert driver. Good drivers have their vehicles under control at all times and know braking distances increase greatly as speed and vehicle weight increase. In addition to knowing the distance required to safely stop their bus under all driving conditions, skillful drivers use correct stopping procedures, which increase bus life and lower maintenance costs.

STopping Distance

Three components comprise total stopping distance:

- Perception Distance;
- Reaction Distance; and
- Braking Distance.

It is important to note that for buses equipped with air brakes, there is additional brake lag distance to account for. This makes the formula:

\[
\frac{\text{Perception Distance}}{\text{Reaction Distance}} + \frac{\text{Braking Distance}}{\text{Brake Lag Distance}} = \text{Total Stopping Distance}
\]

Briefly, these components are:

- **Perception Distance** – The distance your vehicle travels from the moment your eyes see a hazard until your brain recognizes it. For an alert driver, that moment occurs in about three fourths of a second. The distance traveled in that three fourths of a second varies directly with the vehicle’s speed of travel. For example, a vehicle moving at 55 miles per hour travels about 60 feet in three fourths of a second. Therefore, the average perception distance for an alert driver moving at 55 mile per hour is 60 feet.

- **Reaction Distance** – The distance traveled from the time your brain decides what to do and tells your foot to move from the accelerator until your foot pushes the brake pedal. The average, alert driver has a reaction time of about three fourths of a second, which also translates to 60 feet at 55 mph.

- **Braking Distance** – The distance it takes to stop once you have pressed the brake pedal and engaged the brakes. Assuming good brakes in normal driving conditions (dry pavement, level roadway, etc.), a bus moving at 55 mph usually will require about 170 feet of braking distance (over 4 and a half seconds).

- **Brake Lag Distance** – For vehicles with air brakes, there is approximately a half second delay in brake response time from the moment when you press the brake pedal to the point when the brakes engage. At 55 mph, this translates to 32 feet.

This braking distance is higher than what you experience in a car. The reason for this is a heavy vehicle requires more braking power to stop than a lighter one because the heavier vehicle creates more friction and heat for the brakes to absorb. The brakes, tires, springs and shock absorbers for heavy vehicles are designed to work best when the vehicle is fully loaded.
Instructor Notes:

**Speed and Traffic Flow**

Q: When travelling in heavy traffic, what is the safest speed to go?
A: The speed of the other vehicles – not too fast, and not too slow.

One last note to remind drivers:

A great deal of data has been presented regarding crashes involving school buses. Remind drivers in the class that for collision types associated with favorable conditions (i.e., dry roads, clear weather, lack of adverse environmental conditions), driver overconfidence appears to be implicated. Drivers should be cautioned to drive as carefully in good weather as in bad (e.g., control speed, avoid backing and passing). Under unfavorable conditions (i.e., darkness, adverse environmental conditions), drivers should be cautioned to take even greater care. Drivers with a past history of violations should heed these precautions.

At the end of this unit, go over each of the Review Questions provided in the Lesson Summary at the start of the Unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What is defensive driving?
2. What factors affect your ability to drive?
3. How does alcohol affect your body with regard to driving?
4. How might your attitude affect your driving?
5. What are some of the driving offenses that are considered aggressive?
6. Discuss methods for effective monitoring of critical sources of information while driving.
7. What can you do to make sure your bus is in proper condition to drive?
8. How far ahead on the road must you be able to see clearly?
9. What are some things you can do to increase visibility?
10. What driving adjustments should you make for slippery roads?
11. What differences are there between nighttime driving and daytime driving?
12. At what locations should you be particularly cautious of heavy winds?
13. Why are man-made hazards particularly hazardous?
14. What three things can you do to identify hazards and changes in the shape of the road?
15. What effect does road surface have on stopping distance?
16. When is hydroplaning likely to occur?
17. Where should you be particularly alert for pedestrian hazards?
18. Why must you be observant of other vehicles’ behavior?
19. Explain the factors that make up total stopping distance.

Consider using the Case Study and Exercise provided earlier in this Unit.
Looking at the above figures, the total stopping time at 55 mph is at least six and a half seconds under the BEST conditions. More significantly, the total stopping DISTANCE is about 322 feet at 55 mph.

<table>
<thead>
<tr>
<th>Distance Type</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception Distance</td>
<td>60 feet</td>
</tr>
<tr>
<td>Reaction Distance</td>
<td>60 feet</td>
</tr>
<tr>
<td>Braking Distance</td>
<td>170 feet</td>
</tr>
<tr>
<td>+ Brake Lag Distance</td>
<td>+ 32 feet</td>
</tr>
<tr>
<td><strong>Total Stopping Distance</strong></td>
<td><strong>322 feet</strong></td>
</tr>
</tbody>
</table>

In other words, your bus will easily travel the length of a football field in this time. If you double your speed, it will take about four times as much distance to stop. The vehicle will also have four times the destructive power in a crash.

By slowing down, you can greatly decrease the stopping distance of a school bus, and greatly increase the safety of pupil transportation.

The bottom line is whenever you are driving, plan to keep enough space in front of you so you can stop quickly, if necessary. If brakes and/or tires are not in proper working order, the braking distance, and thus the stopping distance, will be greater. Because stopping distance increases as speed increases, you must leave more space at faster speeds. Adverse weather conditions also increase stopping distance. Stopping a vehicle on roads covered with ice or sleet requires a distance at least five times greater than required in dry conditions. When driving in bad weather, further increase your following distance to compensate for increased stopping distances.

**SPEED AND TRAFFIC FLOW**

When you’re driving in heavy traffic, the safest speed is the speed of other vehicles. Vehicles going the same direction at the same speed are less likely to run into one another. Drive at the speed of the traffic, if you can do this without going at an illegal or unsafe speed. Keep a safe following distance.

The main reason drivers exceed speed limits is to save time. But anyone trying to drive faster than the speed of traffic will not be able to save much time. The risks involved are not worth it. Going with the flow of traffic is safer and easier. If you go faster than the speed of other traffic:

- You’ll have to keep passing other vehicles. This increases the chance of a crash.
- It is more tiring. Fatigue increases the chance of a crash.
UNIT G LESSON SUMMARY
FUNDAMENTALS OF DRIVING A SCHOOL BUS

INSTRUCTOR’S PERSPECTIVE
While Unit F presented overall perspectives on safe driving, such as controlling speed and maintaining safe following distance, Unit G continues driving instruction by focusing on specific driving techniques for school buses including starting, stopping, and turning a bus. There are techniques that are specific to buses due to their size, weight, and construction, and they must be practiced diligently to perfect. Once these techniques are perfected to the degree that they are second nature, a bus driver can better focus attention on other traffic and student behavior. Much of the information in this unit will be practiced in the in-bus portion of the driver training.

TRAINEE OBJECTIVES
1. Be able to describe the basic techniques for mechanical operation of a school bus.
2. Be able to identify the basic driving maneuvers necessary for roadway scenarios such as railroad crossings, intersections, entrance and exit ramps, turnarounds, and mountain driving.
3. Be able to describe the proper techniques for ascending and descending steep roadway grades.

LOCATION
Classroom

DELIVERY MODE
Lecture and discussion

MATERIALS
• Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker, PowerPoint presentation.
• Handouts - Unit G Study Guide

RESOURCE PERSONNEL
A state or local police representative may assist with knowledge of law regarding other motorists and school bus drivers. Also, if you use separate instructors for the classroom and in-bus training, it would be useful to have them both present for this classroom training. In this fashion, the in-bus instructor can be sure to emphasize the techniques that trainees received during classroom training.

Also, you may consider using an Operation Lifesaver presenter in this session. There is no fee to use them as a resource.

SUMMARY AND REVIEW QUESTIONS
• Summary - This unit will be particularly important for new drivers, however, particular attention should be paid to negotiating railroad crossings or starting and stopping on a steep roadway for all drivers.
• Review Questions -
  1. What are some of the differences between driving a school bus and a car?
  2. Explain how to start a diesel vehicle.
  3. How should you hold and turn the steering wheel?
  4. What is reference point driving?
  5. When rounding a curve, where should you brake?
  6. At what point should you turn on your signal when making a left or right turn?
7. What are some of the ways to prepare for a field trip or athletic trip?
8. What steps should you follow when backing your bus?
9. If you must execute a turn-around at a loading zone, when should you load the students?
10. How much overhead clearance do you have while driving your bus?
11. Why do trains appear to be moving slower than they are?
12. What is the proper procedure for stopping at a railroad crossing?
13. How should you enter traffic at an entrance ramp?
14. What should you be particularly watchful for at intersections?
15. In general, in which lane should you travel on a four-lane highway?
16. What should you do if someone attempts to pass your bus?
17. How should you use your gears to your advantage when going down a steep downgrade?
18. What is the proper braking method on a long or steep downgrade?

REFERENCES

Websites

- Updates to road and weather conditions, traffic information, and construction reports for specific routes, regions, and cities, visit: http://www.511pa.com
- Environmental Protection Agency’s (EPA) Clean School Bus USA: http://www.epa.gov/otaq/schoolbus/antiidling.htm
- Pennsylvania Operation Lifesaver: http://paoperationlifesaver.org/index.html

PennDOT Publications


Laws and Regulations

- Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapters 71, 104, 171: http://www.pacode.com/secure/data/067/067toc.html
- The Pennsylvania Vehicle Code (Title 75): http://www.dmv.state.pa.us/vehicle_code/index.shtml

Form and Certificates


Other

- Local regulations and/or procedure guides, if available.
UNIT G STUDY GUIDE

FUNDAMENTALS OF DRIVING A SCHOOL BUS
The majority of school bus crashes are due to driver error. While many school bus driving skills are similar to automobile driving skills, the school bus is larger and heavier, and the driver must rely much more on the use of mirrors than when driving an automobile. Remember that your driving actions on a bus also require more planning than those when driving an automobile.

1. PREPARING TO DRIVE
   A. Complete your pre-trip inspection.
   B. Adjust your mirrors.
   C. Adjust your seat.
   D. Fasten your seat belt.
   E. Vehicle Types
      ✦ Type A (Cutaway Van).
      ✦ Type B (Integrated).
      ✦ Type C (Conventional).
      ✦ Type D (Transit type).
   F. Reference Point Driving
      ✦ A fixed point on the bus, visible by the seated driver, is used as a reference for maneuvering the bus.
      ✦ Position yourself in your seat.
      ✦ Pick an easily observable point on the hood or windshield of the bus.
      ✦ With the help of someone outside your bus (if possible), find the point on the ground where the edge of the hood lines up with the point on the ground directly in front of it.
      ✦ Note this point in your mind and remember it for future reference when operating your bus.
      ✦ Establish your reference points with the help of someone else who can take measurements, if possible.
      ✦ Do this for every bus you drive.

2. KNOW YOUR ROUTE
   A. Be aware of potential hazards along your route.
   B. Be aware of district policy for changing a bus stop location.
   C. Keep notes in the bus for use by substitute drivers.

3. FIELD TRIP / ATHLETIC TRIP CONCERNS
   A. Field trips present unfamiliar scenarios to a new driver.
   B. Use maps, 511, or drive the route in a car in advance, learn the route and plan an alternate route.
   C. Be sure you have the proper credentials if traveling out of state.
D. Prepare as you would for any trip.
   ✦ Full tank of fuel.
   ✦ Emergency telephone numbers.
   ✦ Communicate with the people in charge at your destination.
   ✦ Know your parking area.

4. STARTING AND OPERATING A DIESEL VEHICLE

A. Driving a Diesel
   ✦ Be familiar with the gear positions and shifting speed ranges for your bus.
   ✦ Be familiar with the engine shut-down procedure for your type of bus.
   ✦ Avoid running out of fuel with a diesel bus – doing so may damage the engine.

   ✦ In general, buses should be moving when the engine is on.
   ✦ Turn off engine as soon as possible.
   ✦ Do not restart bus until it is ready to depart.
   ✦ Exceptions when transporting students with special needs.
   ✦ Limit idling time during the early morning warm up to manufacturer’s recommendation.

C. Pedal Misapplication
   ✦ Occurs when bus operator applies the accelerator instead of the brake.
   ✦ Be familiar with your bus, especially the location and size of the accelerator and brake pedals.
   ✦ When at a location where you are boarding a large number of students at once, start your bus only after loading is complete.

5. STEERING AND TURNING

A. Steering Techniques
   ✦ Use proper hand position when gripping the wheel-hands on opposite sides of the wheel.
   ✦ When turning, use either push-pull or hand-over-hand methods.

B. Turning Procedures
   ✦ Always be sure to check traffic around you before making any turns.
   ✦ Keep the “big picture” of the road in mind when turning and remember the bus pivot point.
   ✦ Whether making a right or left turn, be aware that the rear of your bus will project outward as you are making the turn. Be careful if you are next to another vehicle.
   ✦ Rounding Curves
     • Slow down and look ahead to sharpest point in curve.
     • Brake, if necessary, before entering curve.
     • For curves to right, move closer to center line.
     • For curves to left, enter from right edge of lane.
     • At midpoint of curve, accelerate through remainder of curve.
Left Turn Procedures
- Get in proper lane well in advance of turn.
- Signal early (100’ if traveling at speeds of 35 mph or less, 300’ if traveling over 35 mph).
- Reduce speed and downshift.
- Check traffic conditions in front, rear, and sides.
- Position bus on left edge of travel lane.
- Re-check signals, signs, pedestrians, and/or vehicles for clear right-of-way. Use your mirrors.
- If you must stop before turning, keep the front wheels straight and brake pedal pressed.
- Check left mirror and execute the turn smoothly.
- After turn, check to make sure turn signal is off.
- If on a multilane highway, accelerate and move to right lane.

Right Turn Procedures
- Get in proper lane well in advance of turn.
- Signal early (100’ if traveling at speeds of 35 mph or less, 300’ if traveling over 35 mph).
- Reduce speed and downshift.
- Check traffic conditions in front, rear, and sides.
- Position bus on right edge of travel lane, about 4’ from curb.
- Re-check signals, signs, pedestrians, and/or vehicles for clear right-of-way. Use your mirrors.
- Check right mirror and execute the turn smoothly.
- Enter right-most lane available.
- Steer wheels back into position.
- After turn, check to make sure turn signal is off.

6. BACKING
   A. Backing is ALWAYS dangerous, even in the best circumstances.
   B. Avoid backing whenever possible.
   C. Keep students on the bus.
   D. Back and turn toward the driver’s side.
   E. Look at your path.
   F. Back slowly and smoothly.
   G. Use a helper whenever possible (a helper should never be a student).
   H. If no helper is available:
      ✦ Stop the bus in correct position and activate four-way hazard warning lights.
      ✦ Signal for quiet on the bus.
      ✦ Using mirrors, check to make sure that the way is clear to the rear and sides.
      ✦ Put transmission in reverse.
      ✦ Using mirrors, back slowly and smoothly.

7. MAKING A TURN-AROUND
   A. Try to make forward-moving turn-arounds.
   B. Load passengers before making a turn-around.
   C. Unload passengers after making a turn-around.
   D. Use a backing turn-around procedure only if necessary.
8. STOPPING

A. Antilock Braking Systems (ABS)
   ✦ ABS helps you avoid wheel lock-up and maintain control of your bus.
   ✦ ABS is intended to shorten stopping distances without pumping the brakes.
   ✦ Use only braking force necessary to stop safely and stay in control.
   ✦ Brake the same way, regardless of whether you have ABS.
   ✦ In an emergency, do not pump the brakes if you have ABS.
   ✦ If the ABS dash light is illuminated, the bus retains normal braking function.

B. General stopping technique
   ✦ Use the right foot for braking.
   ✦ A school bus is heavy – begin braking sooner.
   ✦ Gradually lighten pressure on the brake pedal as the bus rolls to a stop to make the stop smoother for passengers.

C. Stopping procedures for standard transmissions
   ✦ Low speed stopping.
   ✦ Stopping at speeds greater than 10 MPH.
   ✦ Stopping on an upgrade, and
   ✦ Stopping on a downgrade.

9. CHECKING OVERHEAD CLEARANCE

A. Always proceed slowly if you are unsure about overhead clearance; know your required clearance.
B. The heights of bridges and overpasses may be lower than posted.
C. Drive closer to the center of the road if the roadway is banked.
D. Always exit the vehicle and get a visual check of overhead clearance if you have to back up.
E. Consider reporting low overhanging hazards to your supervisor, who can report them to the appropriate authorities.
F. Know the height of your vehicle.

10. APPROACHING RAILROAD CROSSINGS

A. When a bus must stop at a railroad crossing
   ✦ A school bus, whether or not carrying passengers, must stop at railroad crossings.
   ✦ There are a few exceptions.
B. Procedures for stopping at a railroad crossing
   ✦ Prepare to stop and activate your four-way hazard lights.
   ✦ Stop the bus at least 15 feet away and at most, 50 feet away.
   ✦ Apply the parking brake and shift into neutral.
   ✦ Open service door and driver’s window.
   ✦ Look and listen.
   ✦ Close service door.
   ✦ Put bus in low gear and release the parking brake.
   ✦ Proceed across the track without shifting gears.
   ✦ Deactivate four-way hazard lights after clearing the tracks.
Approaching train
- Use parking brake to hold bus in position.
- Proceed across tracks after the train passes.

Multi-track crossings
- Check the crossbuck for a sign indicating the number of tracks at the crossing if there is more than one.
- Make sure no train is approaching on any of the tracks.
- Only make one stop – not one per track.
- After a train passes, wait until other tracks become visible before proceeding.

C. Other pointers for dealing with railroad crossings
- There are various types of highway/rail grade crossing warning devices.
- Never drive through, around, or under a crossing gate while it is closed or being closed.
- Always follow the directions of a police officer or flagger at a grade crossing.
- Cross tracks only after the train has cleared the position to cancel warning devices.
- When crossing tracks with a manual transmission bus, use the lowest gear.
- When crossing tracks with an automatic transmission bus, use the normal drive gear.
- Know the length of the bus – never drive across tracks unless you are sure the bus will clear.
- Never stop and back the bus while crossing tracks.
- Cancel hazard lights after clearing the tracks.

11. CROSSING DRAWBRIDGES
   A. Stop at least 50 feet before drawbridges without a signal light or attendant.
   B. You only need to slow down if there is a green signal light, or if there is an attendant.

12. ENTERING AND EXITING THE FLOW OF TRAFFIC
   A. General procedures for entering flow of traffic.
      - Turn on the appropriate turn signal well before the point of entry.
      - If appropriate, stop just before the point of entry.
      - Check your mirror to see that all passengers are seated.
      - Check that no pedestrians are in the path of the bus.
      - Look left and right to see if there are any moving vehicles on the road you will enter.
      - Check all mirrors for clear space around the bus, including behind you. If necessary, turn your head to check blind spots.
      - Yield the right-of-way to vehicles already on the road.
      - Look for a suitable gap in traffic and, with reasonable safety, accelerate smoothly into the roadway as quickly as possible.
      - Turn off the turn signal after you are safely in your lane.
B. General procedures for exiting the flow of traffic:
   ✦ Turn on the appropriate turn signal well before the point of exit.
   ✦ Look left and right to see if there are any moving vehicles on the road you will be merging onto, especially if it is a deceleration lane.
   ✦ Check all mirrors for clear space around the bus, including behind you. If necessary, turn your head to check blind spots.
   ✦ Decelerate smoothly. Remember that school buses will take longer to stop.
   ✦ Turn off the turn signal after you have safely exited.

C. Entrance and exit ramps

13. USING LANES AND POSITIONING ON THE HIGHWAY

A. Always drive in the lane of traffic that gives you the best maneuverability for your route and allows you the best defensive position for weather, traffic, and road conditions.
B. Stay within one lane for normal driving; do not straddle lane markers.
C. To maintain proper lane position, get the “big picture” of the road ahead.
D. Always aim high in steering; don’t use white lines or other steering guides too close to the bus.
E. Activate your four-way hazard warning lights when your speed is below the posted speed on open highways.
F. Use parking lane for stopping and parking only.
G. Where there is more than one lane for traffic in the same direction, travel in the right-most lane unless you intend to pass or turn left.
H. Do not drive in a parking lane.
I. Drive at a safe following distance from other vehicles.
J. Being overtaken and passed.
K. Stay in right-hand lane and maintain speed.
L. When on a narrow road, if following traffic builds up and a regular stop is not close by, you can consider pulling completely off the road, using the right turn signal, and stop.
M. Allow vehicles to pass, but never signal for them to pass.
N. Don’t direct traffic.
O. Don’t overtake and pass unless necessary.

14. MOUNTAIN DRIVING AND STEEP DOWNGRADES

A. Test brakes before doing downhill.
B. Using gears going downhill.
C. You may have to use lower gears going down a hill than would be required to go up the hill.
D. Be observant.
E. Proper braking-snubbing is safer than light, continued braking.
F. Use runaway truck ramps in extreme emergencies on steep mountain grades.
UNIT G -
FUNDAMENTALS OF DRIVING A SCHOOL BUS

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INSTRUCTOR’S NOTES

Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the driver’s manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Note that when discussing crashes in this unit, the manual references crashes where the school bus was the prime unit in the crash. This is in reference to the unit (vehicle) identified by the police as being associated with the first harmful event.

Introduction

While Unit F focused on general driving techniques, this unit focuses on specialized driving techniques that apply directly to school bus operation.

Emphasize that learning special driving skills requires that you practice.

As with all key points in each of the units, emphasize safety first, schedule second.

Preparing to Drive

Discuss with your trainees that school buses are designed to protect their passengers. The National Highway Traffic Safety Administration (NHTSA) has a legislative mandate under Title 49 of the United States Code, Chapter 301, Motor Vehicle Safety, to issue Federal Motor Vehicle Safety Standards (FMVSS) and Regulations to which manufacturers of motor vehicles and equipment items must conform and certify compliance. Here is a link:


These Federal safety standards are regulations written in terms of minimum safety performance requirements for motor vehicles or items of motor vehicle equipment. These requirements are specified in such a manner “that the public is protected against unreasonable risk of crashes occurring as a result of the design, construction, or performance of motor vehicles and is also protected against unreasonable risk of death or injury in the event crashes do occur.”

There are many FMVSS, and several which are JUST for school buses. To give your trainees an idea of how the school bus is constructed to maximize safety, it may be useful to give a quick summary of FMVSS 111, 131, 217, 220, 221, 222, 301.

FMVSS No. 111 - Rearview Mirrors. This standard specifies requirements for the performance and location of inside and outside rearview mirrors on motor vehicles. Establishes requirements for “cross view” mirror to see in front of and alongside the bus, and that the driver clearly sees specific areas to the ground along the sides and around the front of the school bus. The purpose of this standard is to reduce the number of deaths and injuries that occur when the driver of a motor vehicle does not have a clear and reasonably unobstructed view to the rear. The requirements for school buses were revised for driver visibility in front of and along both sides of school buses.
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FMVSS No. 131 - School Bus Pedestrian Safety Devices. This standard establishes requirements for devices that can be installed on school buses to improve the safety of pedestrians in the vicinity of stopped school buses. The purpose of this standard is to reduce deaths and injuries by minimizing the likelihood of vehicles passing a stopped school bus and striking pedestrians in the vicinity of the bus.

FMVSS No. 217 - Bus Emergency Exits and Window Retention and Release. This standard establishes requirements for the retention of windows other than windshields in buses, and establishes operating forces, opening dimensions, and markings for bus emergency exits. The purpose of this standard is to minimize the likelihood of occupants being thrown from the bus and to provide a means of readily accessible emergency egress.

FMVSS No. 220 - School Bus Rollover Protection. This standard establishes performance requirements for school bus rollover protection. The purpose of this standard is to reduce the number of deaths and the severity of injuries that result from failure of the school bus body structure to withstand forces encountered in rollover crashes.

FMVSS No. 221 - School Bus Body Joint Strength. This standard establishes requirements for the strength of the body panel joints in school bus bodies. The purpose of this standard is to reduce deaths and injuries resulting from the structural collapse of school bus bodies during crashes.

FMVSS No. 222 - School Bus Passenger Seating and Crash Protection. This standard establishes occupant protection requirements for school bus passenger seating, restraining barriers, and wheelchair anchorages. The purpose of this standard is to reduce the number of deaths and the severity of injuries that result from the impact of school bus occupants against structures within the vehicle during crashes and sudden driving maneuvers. This standard provides increased protection to passengers through a series of interior changes known as “compartmentalization” -- meaning high-backed, well-padded, and well-constructed seats. This standard only applies to school buses and covers all styles of school bus.

FMVSS No. 301 - Fuel System Integrity. This standard specifies requirements for the integrity of motor vehicle fuel systems. Its purpose is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes.

Types of School Buses
Point out that there are four categories of school buses, and each type may require different driving techniques. But also point out that no matter which category of bus layout and construction, they do have some things in common:

- Buses are bigger and heavier than cars.
- Buses require longer stopping distances.
- Buses accelerate more slowly.
- Buses have a wider turning radius.
- Buses have higher and wider clearances.

Driving a bus requires more reliance on mirrors than driving a passenger car.
UNIT G
FUNDAMENTALS OF DRIVING A SCHOOL BUS

INTRODUCTION
Unit F provided you with some basic safe driving techniques for school bus operators geared towards reducing the number of crashes related to driver error, vehicle failure and hazardous roadway conditions. As you well know, operating a school bus requires additional, often specialized knowledge and skills to transport your students safely and efficiently to and from their destinations.

In addition to learning a pattern of special driving skills, you must practice each skill correctly until it becomes a habit. If you can minimize and eliminate crashes resulting from driver error, safe student transport will continue to be a hallmark of the school bus mode of transportation. The following procedures have been developed to assist you in driving a school bus safely. Remember, as a professional school bus operator, you are entrusted with the lives and safety of human cargo that cannot be measured in financial terms. Study, learn and practice the techniques.

PREPARING TO DRIVE
As mentioned in previous units, your experience in driving automobiles can provide a basis for learning to drive a school bus. However, there is a significant difference in scale. To help prepare for this, you must recognize the differences in your vehicle and prepare to operate your vehicle BEFORE you pick up any student and remember safety is first and schedule is second.

VEHICLE TYPES
One factor as to why school buses are the safest means of ground transportation in the United States is the stringent vehicle body design and construction standards they are built under and must adhere to. School buses are built so they sit above the crash line, are compartmentalized with high seat backs with padding to absorb full body impact, and have emergency exits to provide added safety. As a school bus operator, you do not need to become an expert on the construction of the vehicle you operate, but a general working knowledge of how your bus is built and the standards it must meet will give you a greater understanding and assist you in answering questions from the general public concerning “how safe” your passengers really are.

TYPES OF SCHOOL BUSES
Type A (Cutaway Van)
A Type A school bus is a school bus converted from or having a body constructed upon a van-type truck or front-section vehicle chassis, with a left side driver's door and the entrance doors behind the front wheels. This definition includes two classifications: Type A1, with a Gross Vehicle Weight Rating (GVWR) less than or equal to 10,000 pounds; and Type A2, with a GVWR greater than 10,000 pounds.

Type B (Integrated)
A Type B school bus is a school bus constructed utilizing a stripped chassis with the entrance door behind the front wheels. This definition includes two classifications: Type B1, with a GVWR less than or equal to 10,000 pounds; and Type B2, with a GVWR greater than 10,000 pounds.

Type C (Conventional)
A Type C school bus is a school bus constructed utilizing a chassis with a hood and front fender assembly without a left side driver's door and with the entrance door behind the front wheels.
Reference Point Driving

The seating elevation of the bus can make judging the bus’s place on the roadway difficult. Reference point driving is using objects, lines, or points within the bus to line up with points outside the bus to help the operator know their place on the road. An example would be keeping the white line on the side of the road lined up with the centerline of the hood of the bus, or keeping the centerline of the roadway lined up with the lower left corner of the windshield while driving.

Reference points may change from bus to bus depending upon the bus type (A, B, C, D) and the elevation of the driver’s seat. Emphasize that operators may learn to establish reference points in a training bus, but should determine the reference points in the bus they drive regularly.

Q: Does anyone use reference point driving when driving your car?
Type D (Transit Type)

A Type D school bus is a school bus constructed utilizing a stripped chassis with the entrance door ahead of the front wheels.

Most differences between automobile and bus operation are due to the relatively large size and weight of the bus. Always remember a bus has a longer stopping distance, slower acceleration, wider turning radius, and higher and wider clearances. Another difference is while school bus drivers sit higher and have a better forward view, there is much more reliance on mirrors for adequate rear and side viewing.

In preparing to drive, refer to Unit E; “Preventive Maintenance” procedures for a detailed review of the pre-trip inspection. Getting the bus ready for your daily run is an important part of safe driving. Always check your vehicle for safety defects or problems. State law and regulation require passengers and drivers in vehicles equipped with seat belts to wear them whenever the vehicle is in motion.

In summary:
- Complete your pre-trip inspection;
- Adjust your mirrors;
- Adjust your seat; and
- Fasten your seat belt.

REFERENCE POINT DRIVING

A reference point is some fixed object or point on your bus that when lined up with points outside the bus will give you consistent reference to judge when to turn, move, stop, line up your bus, or judge the amount of space available around your bus. Any point on the bus such as the door, outside mirrors, windshield center post, bus hood, front and rear bumpers, etc., can be used as a reference point. These points are easily detectable and readily seen by you in the driving position. The distance or guidelines outside the bus are then predetermined by direct measurement or observation before you use your bus for the first time. Once these points are determined and you are comfortable with the understanding of what each reference point is telling you, these points should remain constant.

Here are a few simple steps for determining reference points on your bus (get some help at first, if possible):

1. Position yourself comfortably in your driver’s seat;
2. Pick an easily observable point on the hood or windshield of your bus;
3. With the help of someone outside your bus (if possible), on a conventional style bus, find the point on the ground where the edge of the hood lines up with the point on the ground directly in front of it. For a transit style bus, use some point on the windshield to mark your point on the ground in front of the bus;
4. Once you determine this point, note it in your mind and remember it for future reference; and
5. Remember to do this in your own bus, since the point of reference may change from bus to bus depending on the height of the driver’s seat and the model of the bus.
Instructor Notes:

Know Your Route
Emphasize that bus routes must go where student passengers are, not necessarily along the best roads. School bus operators need to know where potential hazards are so that they can be particularly vigilant at those locations. Also, conditions may change by season and weather, such as plowed snow covering a bus stop. School bus operators need to follow local policy regarding recommendations about changes in routes to mitigate hazards.

Field Trip/Athletic Trip Concerns
Q: What is the biggest difference between daily operation of a school bus and driving for a field trip?
A: Responses vary, but should center around the idea that daily driving results in high levels of familiarity and expectancy, while field trip driving can be unfamiliar and may include nighttime driving, unfamiliar parking/security issues, managing students for longer rides, directions to unfamiliar locations, and a need for vehicle service outside of normal operations area.
Focus on steps listed to prepare for the field trip.
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For example, if the distance from your reference point to your front bumper measures 18 feet, you will know that whenever you are sitting in the driver’s seat, the point on the ground you see directly in front of the hood of your bus is 18 feet from the front bumper. This will be helpful for determining the proper distance to stop at railroad grade crossings.

For determining reference points to the side or rear of your bus, make sure you are seated comfortably in your seat with seat belt attached. Then, mark points on the various outside rear view mirrors on either side of your bus.

To determine the point directly below your rear bumper, use a point in your left (or right) rear view mirror that lines up directly over the bottom of your left rear wheel well and your rear bumper. Now measure the distance from this point on the ground to the edge of your rear bumper. Remember this distance. You should use reference points on both left and right rear mirrors.

This rear reference point can be helpful when estimating the distance from your rear bumper to some point on the ground and can be especially helpful at a railroad grade crossing when determining the distance of your rear bumper from the track.

Finally, remember these measurements should be made and will only be applicable on level ground. Adjust your front and rear measurements when your bus is stopped on a sloped surface.

KNOW YOUR ROUTE

You’ll be more confident and be a safer driver when you become completely familiar with the route you drive. You must know what to do with hazards on your route. For example, some intersections are more hazardous due to limited sight or an area with poor drainage that floods.

Follow the local policy and procedures for reporting hazardous stops/routes. If possible, come up with a solution to the problem. Changing the bus route or bus stop location might solve the problem. The township road supervisor might be able to make some changes to the roadway to correct the problem. You could designate a place for your students to stand when the snow is piled up.

There are some hazards that are unavoidable. By being aware of the potential hazards on your route, you will be better prepared for the challenge.

On the route schedule you keep in your bus, make notes of the route hazards, so if there is ever a substitute bus driver on your route, they will have this knowledge, too.

FIELD TRIP / ATHLETIC TRIP CONCERNS

Field trips can present some new situations you haven’t experienced, if you are a new driver. Particular situations that might arise could include the following:

• Wondering if the bus will fit (on a street, in a parking area);
• One-way streets;
• Fueling;
• Tolls;
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- Parking areas;
- Loading/unloading areas;
- Food and rest room availability;
- Security of area to park bus;
- Weather;
- Chaperones;
- Discipline;
- Medical problems and first aid;
- Terrain;
- Nighttime driving;
- Directions;
- Low clearance;
- Weight limit on bridges;
- Laws in other states; and
- Break downs.

If you are traveling out of state, make sure you have the proper credentials. This includes that you be at least 21 years of age, have the U.S. DOT physical (if employed by a contractor), and carry your log book (if applicable).

Here are some steps to help you be prepared for the field trip/athletic trip.

1. Become familiar with the route.
   a. Look at a map, take a map with you, ask other drivers who have previously made the trip.
   b. Drive the route in a car prior to the trip.
   c. Find out if there are any detours or closed roads. You can call 511, which allows you to instantly access updated road and weather conditions, traffic information, and construction reports for specific routes, regions and cities. Also, refer to www.511pa.com.
   d. Plan an alternate route.
2. Know where parking is and ensure it is secure.
3. Have a full tank of fuel.
4. Make sure you cover the emergency evacuation procedures with students and chaperones.
5. Keep aisles and exits clear of baggage and equipment.
6. Carry emergency phone numbers for school personnel.
7. Know what to do and who to call, if you break down or have an emergency.
8. Communicate with the person in charge of the trip.
   a. Get the name of the person in charge and their cell phone number.
   b. Give the person in charge your name and cell phone number.
   c. Agree on loading and unloading places and times.
   d. Make sure you and the person in charge know how to get in touch with each other.
   e. Make sure the person in charge knows where the bus will be parked.
**Starting and Operating a Diesel Vehicle**

Q: Does anyone drive a diesel-powered car?

Depending upon responses, guide the discussion to the differences between a gasoline engine and a diesel engine, particularly as this applies to starting the engine.

Have a copy of the CDL Manual (Publication 223) handy and be prepared to discuss the specific step-by-step techniques if necessary. This will most likely be covered in the in-bus portion of the training.

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**Diesel-Powered Motor Vehicle Idling Act: Act 124 of 2008**

Point out that diesel engines run on heat and are able to idle for long periods of time without damage, so in the past were started and allowed to idle for long periods. Act 124 of 2008 draws attention to the environmental damage caused by idling diesels and limits the time diesels are to idle. This law impacts school buses.

As pointed out in Unit D, school buses transporting students with special needs are allowed to idle for an unlimited amount of time when it is necessary to maintain a safe temperature.

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**Two websites of interest include:**

Environmental Protection Agency’s (EPA) Clean School Bus USA: http://www.epa.gov/otaq/schoolbus/antiidling.htm


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**Pedal Misapplication**

While relatively uncommon, there have been reported incidents of crashes involving pedal misapplication in Pennsylvania. Be careful if you are wearing larger footwear than usual (e.g., boots in the winter), become familiar with your vehicle, and start your bus only after loading is complete.
STARTING AND OPERATING A DIESEL VEHICLE

Guidelines for starting and driving your diesel bus, as well as proper gear shifting techniques are detailed in The Commercial Driver’s Manual (Publication 223). Refer to this manual when practicing and refining your techniques. Keep in mind that smoothness in driving is one key to safe driving and good relations with your students. Gear shifting requires knowledge, skills and practice. You must learn the best range of speed for changing gears upward and downward, and you must shift gears without losing your view of the road. Over the course of your driving experiences, you may be required to shift gears in vehicles with standard transmissions and vehicles with automatic transmissions. No matter what transmission type you have, remember to always engage your parking brake when your vehicle is not in use.

DIESEL-POWERED MOTOR VEHICLE IDLING ACT: ACT 124 OF 2008

Diesel vehicles are a significant source of emissions that contribute to elevated ozone and fine particulate concentrations in Pennsylvania. Diesel exhaust from school buses poses a health risk, particularly to children and drivers. Diesel exhaust contains small particles as well as smog-forming and toxic air pollutants. Exposure to diesel exhaust can cause lung damage and respiratory problems and can exacerbate asthma and existing allergies. Buses that idle outside schools can pollute the air inside the school building as well as outdoors.

In 2008, Act 124 (Diesel-Powered Motor Vehicle Idling Act) was passed, which reduces unnecessary idling of the main propulsion engine in diesel-powered motor vehicles, including trucks and buses. Essentially, Act 124 prohibits the owners and drivers of any diesel-powered motor vehicles with a gross weight of 10,001 pounds or more engaged in commerce from allowing the engine of the vehicle to idle for more than five minutes in any continuous 60-minute period. However, 35 P.S. Section 4603(c)(10) allows a school bus to idle a total of 15 minutes in a continuous 60-minute period to provide heat or air conditioning to students. This section also allows school buses transporting students with special needs to idle for an unlimited amount of time when it is necessary to maintain a safe temperature.

Keep in mind that while Act 124 preempts and supersedes local anti-idling ordinances or rules, more stringent idling restrictions imposed by counties of the first and second class (Allegheny and Philadelphia counties), continue in full force and effect, provided they are not amended, suspended or rendered invalid. Here are a few good tips:

- As a general rule, buses should be moving whenever the engine is on;
- The engine should be turned off as soon as possible after arriving at loading or unloading areas;
- The school bus should not be restarted until it is ready to depart; and
- Limit idling time during early morning warm up to what the manufacturer recommends (generally no more than five minutes).

PEDAL MISAPPLICATION

Pedal misapplication occurs when the bus operator applies the accelerator instead of the brake. This error can result in serious crashes. The school environment presents a unique risk with respect to unintended acceleration from pedal misapplication. A typical loading or unloading operation at the school involves multiple vehicles and many children. Often, the children line up, wait or congregate near the buses exposing them to possible danger. Every bus at the loading area can introduce an opportunity for pedal misapplication, and the large number of children represents a potential increase in the severity of the outcome should pedal misapplication and unintended acceleration occur.
Instructor Notes:

Steering and Turning Your Bus
Emphasize that whether driving through curves, or making turns, the steering wheel is the interface between the bus and its operator. Do not take advantage of the steering wheel. Use it with purpose and precision.

Turning Procedures
Rounding Curves
Point out that when driving through curves, the forces on the bus tend to push the tires sideways. If allowed to roll, they will track as guided. But, if braking pressure is applied in the curve, the combination of that braking pressure and the tendency to push sideways could cause a skid. Brake before the curve, if a slower speed through the curve is necessary!

After explaining the procedures for rounding curves, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees to respond.

Note that this process will be practiced numerous times as part of the one-on-one in-bus training. Reviewing these procedures in the class before they practice will be important for trainee retention.
There are a few things you can do to help prevent pedal misapplication.

1. Become familiar with your vehicle. Be sure you practice operating your bus before picking up and dropping off students. This will give you familiarity with the location of your accelerator and brake. This is especially important if you are operating a bus that is not your regular bus. If you are unfamiliar with the pedal configuration of an alternate bus, practice first.

2. The National Transportation Safety Board (NTSB) recommends that at locations where you are boarding a large number of students at once (like a school), start your bus only after loading is complete.

### STEERING AND TURNING YOUR BUS

You must know the proper techniques for steering a school bus and must be able to make all turning maneuvers correctly and smoothly.

#### STEERING TECHNIQUES

Proper steering requires the proper positioning of your hands on the steering wheel. Grip the wheel securely with both hands, putting your hands on opposite sides of the wheel. For example, this may mean placing your hands at the ten o’clock and two o’clock positions. One hand on the wheel is less than half as safe. Your hands should be on the outside of the steering wheel with your thumbs on the front of the wheel.

Two steering methods are recommended for school bus drivers. In the push-pull steering method, one hand pulls, and the other hand pushes. The hand-over-hand method also may be used, but you should be careful not to catch your thumb on the safety chain of your wristwatch, bracelet or clothing while steering. Never palm the steering wheel or turn it with a finger or thumb. If you have to steer quickly or jerkily, you are going too fast – slow down.

#### TURNING PROCEDURES

To drive your school bus you must use the steering techniques described above while executing a number of different turning maneuvers. These maneuvers include rounding curves, and making left and right turns. The average speed limits on freeways and other roads on your route force you to use practiced skills and judgment to perform these maneuvers properly and safely. This includes being aware of the pivot or turning point of the bus while following the various turning procedures. For large school buses, the pivot point is located at the rear axle. The procedures described below are applicable in most driving situations. You always need to be aware of traffic around you before you make your turn.

**Rounding Curves**

Judge beforehand if you will be able to negotiate an upcoming curve at your present rate of speed. If you must brake, do so before entering the curve. Never plan to brake in the middle of a curve as this can cause skidding and loss of control. Use the following procedures when steering through curves (see Figure G-1):

1. Slow down, and look ahead for the sharpest point in the curve;
2. Brake, if necessary, before getting into the curve;
3. For curves to the right, move as close to the center line as is safe, and use the width of the lane while rounding the curve. This will help to smooth out the curve;
4. For curves to the left, enter the curve from the right edge of your lane; and
5. When you reach the midpoint of the curve, resume power and accelerate through the remainder of the curve.
Instructor Notes:

**Making Left and Right Turns**

Remember that when turning a school bus, the vehicle pivots at the rear axle. That means that care must be taken when steering the bus to be sure the front of the bus allows enough room for the rear to follow, and that the overhang of the rear of the bus from the rear axle to the rear bumper will project outward through the turn.

Walk through the step-by-step left and right turning procedures with the trainees that are provided on pages G-9 through G-10. The graphics will help to illustrate key points, and trainees will have the opportunity to practice these in the one-on-one in-bus training.

After explaining the procedures, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees to respond.

Note that this process will be practiced numerous times as part of the one-on-one in-bus training. Reviewing these procedures in the class before they practice will be important for trainee retention.

**Left Turn Procedures**

Q: Where do you position your bus in the lane before turning left?

A: Position the bus to the left edge of the traffic lane.
Making Left and Right Turns

The procedures listed below will enable you to prepare for and make turns and to reenter the traffic pattern while maintaining proper lane positions. When making either a left or right turn, start signaling at least 100 feet before turning, if you are travelling at speeds of 35 mph or less, and at 300 feet if you are travelling at speeds over 35 mph. (See Figures G-2 and G-3.)

WHETHER MAKING A RIGHT OR LEFT TURN, BE AWARE THAT THE REAR OF YOUR BUS WILL PROJECT OUTWARD AS YOU ARE MAKING THE TURN. BE CAREFUL WHEN MAKING A LEFT OR RIGHT TURN WHEN YOU ARE NEXT TO ANOTHER VEHICLE OR OBJECT.

Keep in mind that Pennsylvania school bus crash statistics show improper turning was indicated as the third most common driver action in crashes when the school bus was the prime unit. Data also indicates that 38 percent of school bus prime unit crashes were angle crashes, which most commonly occur at intersections.

Left Turn Procedures

Left turns in a school bus are generally not as difficult technique-wise to make as right turns, but they are more dangerous. Left turn collisions at intersections tend to be severe crashes. Be sure you have adequate gaps in opposing traffic to make your maneuver. Acceleration rates are different in a school bus than for a passenger vehicle, and you are driving a longer vehicle.

1. Get into the proper lane well in advance of the turn.
2. Give left turn signal early (at least 100 feet away, if you are travelling at speeds of 35 mph or less, and at 300 feet, if travelling at speeds over 35 mph).
3. Reduce speed and downshift to the proper gear needed to execute the turn. The speed through the turn will depend on the geometry of the intersection as well as traffic conditions.
4. Check traffic conditions to the front, rear and sides.
5. Position the bus to the left edge of the traffic lane.
6. Because you do not have the right-of-way (unless at a protected left turn phase at a signalized intersection), re-check traffic signals, signs, pedestrians, or vehicles for a clear right-of-way. Use both outside mirrors and check especially for vehicles attempting to pass the bus on the left side.
7. If you must stop before making the turn, keep the front wheels straight and the brake pedal pressed. This stopping procedure will prevent your bus from being shoved into the path of oncoming traffic, if you are struck from the rear. Also, leave a space of a few feet between your bus and the vehicle in front of you. You should be able to see the rear wheels of the vehicle in front of you. If not, you are too close.
Right Turn Procedures

Q: Where do you position your bus in the lane before turning right?

A: Position the bus to the right edge of the traffic lane about four (4) feet from the curb. The bus should not be far enough away from the curb to allow a vehicle to pass on the right between the bus and the curb.

Pennsylvania law does allow the “right turn on red” movement, but explain to your participants what your local policies are regarding this movement. Some systems do not want school buses making this maneuver because of the risk involved.
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8. Check your left mirror and execute the turn smoothly without strain on the engine. Enter the highway in the left-most lane available. If multiple left-turn lanes exist, be mindful of proper lane usage, and stay in your lane as you make the turn. Steer wheels back into position; do not let the steering wheel spin wheels back.

9. After completion of turn, ensure that your turn signal is off.

10. After completing a left turn onto a multilane highway, pick up speed and move into the right lane as soon as possible.

Right Turn Procedures
Right turns are more difficult because of the length of the bus and require practice. Knowing the pivot or turning point (located at the rear axle) of the bus is critical for right turns. This responsibility is the bus operators.

For right turns:
1. Get into the proper lane well in advance of the turn.
2. Give right turn signal early (at least 100 feet away, if you are travelling at speeds of 35 mph or less, and at 300 feet, if travelling at speeds over 35 mph).
3. Reduce speed and downshift to the proper gear needed to execute the turn. The speed through the turn will depend on the geometry of the intersection as well as traffic conditions.
4. Position the bus to the right edge of the traffic lane about four feet from the curb. The bus should not be far enough away from the curb to allow a vehicle to pass on the right between the bus and the curb.
5. Check for traffic signals, signs, pedestrians, and vehicles to determine clear right-of-way. Be sure to check for vehicles between right side of the bus and the curb. Use your mirrors!
6. Check your right mirror and execute the turn smoothly without strain on the engine. This is accomplished as soon as the front wheels pass the corner, turn wide to the right, swinging over the center of the side street (if necessary) in order for the rear wheels to clear the curb. Never shift gears during a turn. Keep an eye on the right mirror while turning. Be mindful of any pedestrians who may be standing at or near the curb. Also, watch out for parked cars.
7. Enter the right-most lane available, but leave enough room to make your turn. If your bus must cross into another lane in order to make the turn, make the lane crossover in the road that you are entering.
8. Steer wheels back into position; do not let steering wheel spin back.
9. Ensure your turn signal is off.

While Pennsylvania law allows all vehicles to make “right turn on red,” unless otherwise designated, this maneuver may not be recommended when operating a school bus because of the size of the vehicle and its acceleration characteristics. Check with your contractor or local school district guidelines and procedures.
Instructor Notes:

**Back up**

Q: Why is backing a school bus considered dangerous?

A: The operator cannot easily see what is behind the bus. If students are outside the bus, they could find their way into the path of the backing bus.

Emphasize that backing a school bus is dangerous and should be avoided whenever possible.

Q: What is the most important rule to remember about backing?

A: If possible, don't do it!

Quantitative analyses of Pennsylvania crash data indicate that in backing crashes involving school buses, careless backing was more likely to be noted under clear weather conditions than in adverse weather conditions. In fact, backing collisions were 4 times as likely to occur in clear weather as in other weather conditions. As noted above with respect to dry road conditions, it appears that some drivers attempt risky maneuvers in clear weather that they perhaps avoid in less favorable conditions.

School bus drivers are encouraged to avoid backing whenever possible – these results may indicate that clear weather fosters overconfidence in some drivers, believing they can back safely when visibility is good. Be vigilant!

State regulations require that if a bus must be backed near a loading or unloading zone, the students must be seated on the bus.

If possible, back toward the driver's side of the bus so that you can see the back of the bus through the side window or mirror.

If you cannot see the path along which the bus is moving, stop, get out, and look. Be sure of what is behind the bus.

Q: Can you use a student to help you back up?

A: No. It is never appropriate to use a student. They must remain on the bus.

After explaining the procedures for backing in different situations, ask for a trainee volunteer or two who can articulate the procedures without reading from the manual. Try to get different trainees to respond.

Reviewing these procedures in the class before they practice will be important for trainee retention.

Note that sometimes, a bus stop may be located at the end of a cul-de-sac which may require a bus to back up. Therefore, make sure to review this section carefully. Some school districts have implemented a policy to provide that bus stops on dead end streets and cul-de-sacs would be relocated if a bus could not turn around without backing up. If a driver is faced with an unsafe situation, work with the school district to determine whether moving a stop is appropriate.
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BACKING

Because you cannot see everything behind your vehicle, **backing is always dangerous, even in the best circumstances.** This is supported by Pennsylvania school bus crash data, which indicates backing is a crash cause in over 5 percent of crashes involving school buses as the prime vehicle. This seems high considering the number of times backing is required, which supports the notion it is a dangerous maneuver. Pennsylvania school bus crash data shows backing crashes are four times as likely to occur in clear weather conditions as in adverse weather conditions. This may indicate drivers are complacent with this maneuver when weather conditions are good. ANY time you have to backup, be careful and follow the recommendations below.

Avoid backing whenever you can and avoid backing a bus from a side road to a main road. Unfortunately, there may be situations where backing is necessary, such as when you are at the end of your route and there is no better designated turn around area, or if you get lost on a road and encounter a bridge weight limit. If you know of a better area to turn around that would avoid backing, talk to your transportation coordinator about modifying your route.

School buses are also most often parked by backing into their location. When you park, try to park, so you will be able to pull forward when you leave. When you have to back, follow these rules:

1. **Keep Students on the Bus** – Keep all students on the bus. State regulation (Section 104.3(d) of Title 67) requires that if backing is required at or near a loading or unloading zone, all students must be seated on the bus during the backing. Never back a bus when students are outside, so either back up before drop-off or after-pick up. Be particularly aware of students who may be late and running to catch the bus.

2. **Back and Turn Toward the Driver’s Side** – Plan your maneuver. Whenever possible, back toward the driver’s side, so you can see better. Backing toward the right side is very dangerous because you can’t see as well. If you back and turn toward the driver’s side, you can watch the rear of your vehicle by looking out the side window and in the mirror.

   When backing a bus, turn the top of the steering wheel toward the direction you want to go. This may take practice.

3. **Look at Your Path** – Look at your line of travel to be sure you know what is behind you before you begin. Don’t take chances. Sometimes you can’t see enough with your mirrors; it’s much safer to get out and look, even if it means walking to the rear of the bus to determine whether the way is clear. By so doing, you may prevent a serious incident. If you need to walk to the rear of the bus, set the parking brake, turn off the motor and take the keys with you. Walk to the rear of the bus to determine whether the way is clear. Also check your clearance to the sides and overhead both in and near the path your vehicle will take. Then reenter the vehicle, check your mirrors and start backing.

4. **Back Slowly and Smoothly** – Always back as slowly as possible so you may make corrections before you get too far off course. Go slowly, so you can correct any steering errors more easily before you get too far off course. Going slowly means you can also stop quickly, if necessary.
Instructor Notes:

**Making a Turn-around**

A turn-around is also a dangerous maneuver. A forward moving turn-around is preferred to backing.

Q: Should you load students before or after making a turn-around?
A: Before. Keep students on the bus when turning around.

Q: Should you unload students before or after making a turn-around?
A: After. Keep students on the bus when turning around.

Walk through the step-by-step turn-around procedures with the trainees that are provided on pages G-12 and G-13. Figure G-4 will help to illustrate key points, and trainees will have the opportunity to practice these in the one-on-one in-bus training.

After explaining the procedures, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees than responded previously. Reviewing these procedures in class before they practice will be important for trainee retention.
5. **Use a Helper Whenever Possible** – If possible, have an adult (not a student) stationed on the driver’s side rear of the bus, so you can see him/her at all times in your mirror to warn traffic and act as your guide. If a helper is available:
   - Agree on hand signals ahead of time, especially “Stop”;
   - Position the helper out of the travel path, so you can see the helper and the helper can see the path of travel;
   - Back slowly; and
   - Stop immediately, if you lose sight of your helper.

Verbally communicate with the helper before you begin and while backing.

6. **If No Adult Helper is Available** – It may be necessary to use portable emergency warning devices to block off the lane of traffic the vehicle is backing into. Use the following procedure:
   a. Stop the bus in the correct position to back and activate the four-way hazard warning lights. If the bus does not have automatic back-up signals, use the horn. Remember, approaching traffic may not know you are backing, so using the four-way hazard lights and blowing the horn will help alert them to your maneuver;
   b. Signal for quiet on the bus;
   c. Using mirrors, ensure the way is clear to the rear and sides;
   d. Put transmission in reverse; and
   e. Using mirrors, back slowly and smoothly.

**MAKING A TURN-AROUND**

Most bus routes are planned to eliminate turn-arounds and backing because they are extremely hazardous maneuvers. Unfortunately, there may be situations where turning around is necessary. Much like with backing, if you must turn your bus around at a loading zone, always load passengers being picked up before making the turn-around, and always unload passengers being discharged after making the turn-around. If at all possible, make a turn-around in twilight or darkness when an adult helper is present to stop traffic on any roadway used for the maneuver.

Because backing the bus is an extremely dangerous procedure, the safest way to turn around is to avoid backing and use a forward turn-around. Ideally, a turn-around should be made by selecting an adequately sized, safe area away from the road, such as a parking lot, where you can slowly move the bus forward in a wide circle to turn around. Otherwise, a turn-around should be made in the following manner (see Figure G-4):

1. Activate the four-way hazard warning lights at least 200 feet before your stopping point;
2. Stop the bus in the proper position on the highway, which is one full bus length ahead of the area into which you are backing;
Instructor Notes:

**Stopping**
Emphasize the weight of the bus and how much longer it takes to slow and stop that weight. Unit F covers this in more detail, including specific techniques.

**Braking with ABS**
Emphasize to the trainees that if their bus is equipped with ABS, do NOT pump the brakes in an emergency situation. This may be counterintuitive, and may require practice.
3. Check traffic to the front and rear, as well as roadside obstacles such as poles, trees, mailboxes and culverts. Clearance on all sides of the bus is important. You should have traffic visibility for at least 500 feet in either direction;
4. Use all mirrors and look carefully in all directions to observe traffic and obstacles, back slowly and cautiously into the designated area (see backing information above); and
5. Make sure to check traffic both ways, reenter the highway, deactivate the hazard warning lights, and proceed with extreme caution.

**STOPPING**

Unit F included detailed information on stopping requirements for school buses. Stopping a school bus smoothly and within the limits of safety is the sign of an expert driver. Good drivers have their vehicles under control at all times and know braking distances increase greatly as speed and vehicle weight increase. In addition to knowing the distance required to safely stop their bus under all driving conditions, skillful drivers use correct stopping procedures, which increase bus life and lower maintenance costs.

**Anti-lock Braking Systems**

The U.S. DOT requires that anti-lock braking systems be on air brakes vehicles, (trucks, buses, trailers, etc.) built on or after March 1, 1998 and hydraulically braked trucks and buses with a gross vehicle weight rating of 10,000 lbs or more built on or after March 1, 1999. Many buses built before these dates have been voluntarily equipped with ABS. Your school bus will have a yellow ABS malfunction lamp on the instrument panel, if it is equipped with ABS.

**How ABS Helps You**

When you brake hard on slippery surfaces in a vehicle without ABS, your wheels may lock up. When your front steering wheels lock up, you lose steering control. When your other wheels lock up, you may skid or even spin the vehicle. ABS helps you avoid wheel lock up and maintain control. You may or may not be able to stop faster with ABS, but you should be able to steer around an obstacle while braking, and avoid skids caused by over braking.

**Braking With ABS**

ABS is designed to help the driver maintain control of the bus during emergency braking situations, not make the bus stop more quickly. ABS may shorten stopping distances on wet or slippery roads, and many systems will shorten stopping distances on dry roads. On very soft surfaces, such as loose gravel or unpacked snow, an ABS system may actually lengthen stopping distances. In wet or slippery conditions, you should still make sure you drive carefully, always keep a safe distance behind the vehicle in front of you, and maintain a speed consistent with the road conditions.

When you drive a vehicle with ABS, you should brake as you always have. In other words:

- Use only the braking force necessary to stop safely and stay in control; and
- Brake the same way, regardless of whether you have ABS on the bus.

However, in emergency braking, do not pump the brakes on a bus with ABS.

As you slow down, monitor your bus and back off of the brakes (if it is safe to do so) to stay in control.
Braking if ABS is Not Working
Without ABS, you still have normal brake functions. Drive and brake as you always have. Vehicles with ABS have yellow malfunction lamps to tell you if something is not working. The yellow ABS malfunction lamp is on the bus’s instrument panel. As a system check on newer vehicles, the malfunction lamp comes on at start-up for a bulb check and then goes out quickly. On older systems, the lamp could stay on until you are driving over five mph. If the lamp stays on after the bulb check, or goes on once you are under way, you may have lost ABS control at one or more wheels. Remember, if your ABS malfunctions, you still have regular brakes. Drive normally, but get the system serviced soon.

Safety Reminders
- ABS does not compensate for bad driving habits, such as driving too fast, following too closely or driving less carefully;
- ABS won’t prevent power or turning skids – ABS should prevent brake-induced skids, but not those caused by spinning the drive wheels or going too fast in a turn;
- ABS won’t necessarily shorten stopping distance. ABS will help maintain vehicle control, but not always shorten stopping distance;
- ABS won’t increase or decrease ultimate stopping power – ABS is an “add-on” to your normal brakes, not a replacement for them;
- ABS won’t change the way you normally brake. Under normal brake conditions, your vehicle will stop as it always stopped. ABS only comes into play when a wheel would normally have locked up because of over-braking; and
- ABS won’t compensate for bad brakes or poor brake maintenance.

Remember: The best vehicle safety feature is still a safe driver.
Remember: Drive so you never need to use your ABS.
Remember: If you need it, ABS could help to prevent a serious crash.
Remember: If your bus is equipped with ABS, do not pump the brakes in emergency situations.

GENERAL STOPPING TECHNIQUE
Use the right foot for all normal braking. A school bus is much heavier than smaller vehicles and requires the driver to begin braking sooner in order to stop smoothly. Feather the brake by reducing pressure on the brake pedal slightly just before the wheels stop rolling. This creates a smoother stop and happier passengers. A good driver anticipates stops as much as possible. This increases the margin of safety and helps save brake shoes. Avoid sudden stops.
Checking Overhead Clearance

Emphasize that school bus operators should know the height of the buses they drive. Typically, school buses are less than 12 feet high, but they should know for sure, including the roof hatches and strobe lights.

Point out that operators should remember to consider the height of the bus when backing, pulling into a driveway, pulling into garages, or when pulling to the side of the road. Operators should look for low hanging utility wires or tree branches.
STOPPING PROCEDURES FOR STANDARD TRANSMISSIONS
Different procedures are required for stopping at low and high speeds or on an upgrade or downgrade. If you stop the bus for more than several minutes in a non-traffic situation, turn off the engine. This not only conserves fuel, but eliminates the possibility of poisonous carbon monoxide exhaust fumes entering the bus.

Low Speed Stopping
When you are in a low gear or are traveling 10 mph or less, use the following stopping procedures:

1. Release the accelerator and when speed decreases to 3 to 5 mph, press the clutch pedal;
2. Apply the brakes gradually by increasing pressure;
3. To prevent the bus from jerking, reduce the brake pressure slightly, but not completely just before coming to a stop;
4. Place the gear shift lever into the neutral position; and
5. Release the clutch and remove foot from the clutch.

Stopping at Speeds Greater than 10 MPH
When traveling in a higher gear, the procedure for stopping is as follows:

1. Release the accelerator and press the brake pedal;
2. When you reach the minimum speed for the next lower gear, downshift to that gear. Using the lower gear will reduce the buildup of heat and avoid excessive brake wear. This is also the case for automatic transmissions; and
3. Downshifting can be very effective and smooth if you use third gear for the slowing action in five-speed transmissions, and second gear in four-speed transmissions.

Stopping on an Upgrade
When coming to a stop on an upgrade, you should:

1. Be aware of the traffic behind you;
2. Apply pressure on the foot brake lightly for a smooth stop;
3. Press clutch with left foot; shift into neutral;
4. Hold bus with hand brake, if necessary. Don’t use the clutch as a brake; and
5. Allow an extra safety margin of space between the bus and the vehicle ahead.

Stopping on a Downgrade
When coming to a stop on a downgrade, stop as you would on an upgrade, except downshift to reduce speed as necessary. If the downgrade is quite long and/or steep, use the “snub” braking technique discussed later in this unit.

CHECKING OVERHEAD CLEARANCE
Hitting overhead objects is a danger. A typical school bus is not more than 12 feet in height, so make sure you always have enough room overhead. This not only includes on-the-road hazards, such as low hanging wires, overhanging branches, etc., but overhead hazards in your bus storage location such as wash bays and garage entrances. The clearance requirement for wires over a roadway is 18 feet, but over driveways is only 15 feet. This is a significant difference and one to be aware of if you have to turn a bus around, especially if the wires appear to be hanging low.
Instructor Notes:

Approaching Railroad Crossings

Q: When is a school bus required by law to stop at a railroad crossing?
A: Every time, loaded or unloaded. The only exceptions are listed on page G-16.

Crossing railroad tracks represents one of the greatest hazards in terms of mass injuries and fatalities for students riding in school buses. The 1995 Fox River Grove bus–train collision in Illinois provides a perfect illustration of this as seven students riding aboard a school bus were killed. The school bus driven by a substitute driver was stopped at a traffic light with the rearmost portion extending onto a portion of the railroad tracks when it was struck by a commuter train.

The crash involved a highway-rail grade crossing located very near a highway intersection which was regulated by traffic signals. The devices were connected and operations were supposed to be carefully timed and coordinated. Highway and railroad officials had each received numerous complaints from the public about the insufficient timing of the warnings provided by the signals in the year prior to the crash, and citizens later told of situations with vehicles unable to clear the tracks in a timely manner.

The National Transportation Safety Board (NTSB) investigation found that, while the bus driver was not aware of the fact that a portion of the bus was on the tracks as she should have been, the timing of signals was so insufficient that, even if she had identified the hazard as the train approached, she would have had to proceed against a red traffic signal into the highway intersection to have moved out of the train’s path.

The substitute school bus driver was apparently unaware of the exact length of the bus she was driving and she had a radio plugged in her ear which prevented her from hearing the crossing gate striking the top of the bus and also prevented her from hearing children in the back of the bus yelling at her to get off the crossing.
A few other points to keep in mind:

- If you aren’t sure you have safe space to pass under an object, go slowly and watch carefully. This will allow you to stop, if you cannot make it. If you doubt you can make it, take another route. Pay attention to warnings posted in advance of and on low bridges or underpasses. These should be posted where the vertical clearance is less than 14'6 feet. A typical school bus is not more than 12 feet in height, so pay attention.
- Don’t assume the heights posted at bridges and overpasses are correct. Repaving or packed snow may have reduced clearances since heights were posted.
- Some roads are narrow and are crowned such that it can cause a vehicle to tilt. This may result in problems for the bus clearing objects along the edge of the road, such as signs or trees. Where this is a problem, drive a little closer to the center of the road as long as you keep adequate side clearance from the center of the road. You do not want to sideswipe a vehicle travelling in the opposite direction with your mirrors or bus body.
- If you have to turn a bus around and back into an area, get out and check for overhanging objects, such as trees, branches or electric wires. It’s easy to miss seeing them while you are backing. Also check for other hazards like culverts or mailboxes at the same time. Remember to turn off the bus and remove the keys from ignition, if students are on board.
- If you notice low overhanging branches along your route, consider reporting them to your supervisor who can notify the proper entity responsible for removing them. This can be important, especially with dead limbs overhanging the route, which are typically the ones to fall on the roadway after the first snow/ice storm.
- Know the height of your vehicle, including roof hatches and strobe lights.

**APPROACHING RAILROAD CROSSINGS**

Crossing railroad tracks represents one of the greatest hazards in terms of mass injuries and fatalities for students riding in school buses. Planned safety procedures for vehicles crossing railroad tracks can help eliminate these crashes. Practice the procedures discussed below until they become automatic actions. At the same time, don’t let repetition create a false sense of security.

Trains cannot stop quickly as its response is limited by its size, weight and the engineer’s view down the track. A train cannot swerve to avoid a school bus. Also, due to their large size, trains appear to be moving more slowly than their actual speed. Drivers often mistakenly judge they have enough time to safely cross before the train reaches the crossing. Be aware of this fact and, whenever in doubt, wait for the train to pass. You have a number of young lives depending on you; always use extra caution when making decisions at railroad crossings.

**WHEN A BUS MUST STOP AT A RAILROAD CROSSING**

State law (Section 3342 of Title 75, the PA Vehicle Code) requires all school buses, whether carrying passengers, to stop at all railroad crossings. The exceptions are:

- Crossings controlled by a police officer or flagman;
- Crossings regulated by a functioning highway traffic control signal transmitting a green light;
- Any crossing marked by the former rail operator with a “tracks out of service” sign; and
- An industrial or spur line crossing marked with an “exempt” sign.
Instructor Notes:

**Procedures for Stopping at a Railroad Crossing**

Take some time with students to reinforce the stopping procedures on pages G-17 and G-18. After explaining the procedures, ask for a trainee volunteer or two who can articulate the procedure without reading from the manual. Try to get different trainees to respond.

Note that this process will be practiced numerous times as part of the one-on-one in-bus training in preparation for the skills test. Reviewing these procedures before they practice will be important for retention. If this is a recertification class, it is your opportunity to correct any mistakes you notice.

These procedures for stopping at a railroad crossing are taken directly from Chapter 71.4(b)(2)(ii)(B) of Title 67, which are the regulations outlining recertification skills testing. Please note in the driver’s manual that several phrases or steps are highlighted in underlined print. They have been identified as critical safety items and will result in an automatic failure if completed incorrectly during the skills examination for both new and recertifying drivers.

Instructors should emphasize that a simulated or actual railroad crossing is part of the skills exam. The following are considered automatic failures.

1. Not activating 4-ways in advance of railroad grade crossing.
2. Not completely stopping between 15’ and 50’ from the nearest rail, then pulling up to see.
3. Not looking and listening.
4. Not proceeding without shifting.

Drivers should be made aware of these. They should know that failure on this part of their exam can ALSO occur if they accumulate three or more errors.

Emphasize the importance of checking for another train on another set of tracks.

School bus operators should know the length of their bus and they should be sure there is enough room for their bus if traffic is stopped on the opposite side of the tracks.

For a free presentation about school buses and railroad crossings, visit Operation Lifesaver at http://paoperationlifesaver.org/index.html
PROCEDURES FOR STOPPING AT A RAILROAD CROSSING

When you must stop your bus at a railroad crossing, Pennsylvania regulations (Section 71.4(2)(ii)(B) of Title 67) require you to always follow these procedures:

1. When approaching, activate 4-way hazard lights;
2. Stop between 15 and 50 feet from nearest the rail;
3. Apply parking brake, transmission in neutral;
4. Open door and window;
5. Look and listen;
6. Close door;
7. If clear, put in gear and release parking brake;
8. Proceed across tracks without shifting gears; and
9. Deactivate four-way hazard lights after crossing tracks.

What follows is a more detailed discussion of these steps.

Prepare to Stop

1. Request complete silence from passengers, so you have minimal distractions. If necessary, turn off heaters to further reduce noise;
2. Turn off any AM-FM, 2-way or CB radios, or any other noise emitting devices not necessary for the safe operation of the bus;
3. As you approach, get the big picture: check traffic control devices; visibility of the crossing, tracks, terrain, and roadways on either side of the tracks; volume, type, and position of other traffic; sight distance down the tracks; and the amount of space on the other side of the track should you have to stop your vehicle shortly after crossing the track; and
4. Activate four-way hazard lights 100 to 200 feet in advance of the tracks.

Stop the Bus

1. Follow stopping procedures described earlier in this unit;
2. Stop in a position permitting you to have a clear view of the tracks in both directions. The front bumper must be clear of tracks, at least 15 feet away and at most 50 feet away from the nearest rail;
3. Pull up, so you can see the tracks in both directions, if needed;
4. Remember to allow extra distance at any railroad grade crossing since trains overlap the track by about three feet.
5. Apply the parking (emergency) brake and shift into neutral.

Look and Listen

1. Open service door and driver's window; make sure that you do not activate the eight-way light system;
2. Turn off any AM-FM, 2-way or CB radios, or any other noise emitting devices not necessary for the safe operation of the bus;
3. Look and listen through the open door and window; and
4. Never leave a bus to check for a train.
No Approaching Train
If you see and hear no signs of an approaching train, do the following:

1. Close service door;
2. Put the bus in low gear and release the parking (emergency) brake;
3. Look and listen a second time;
4. If clear, proceed across the track without shifting gears; and
5. Deactivate four-way hazard lights after clearing the tracks.

Approaching Train
A train cannot stop quickly. Trains always appear to be moving slower than they actually are. Follow these procedures when a train is approaching the crossing:

1. Hold bus in position and use the parking (emergency) brake;
2. After the train passes, proceed across the tracks as described above.

Multi-Track Crossings
At crossings with more than one set of tracks, do the following:

1. Check the crossbuck for a sign indicating the number of tracks at the crossing, if there is more than one;
2. Make sure no train is approaching on any of the tracks;
3. Only make one stop – not one stop per track; and
4. After a train passes, wait until other tracks become visible before proceeding. A second train may be approaching from the opposite direction.

OTHER POINTERS FOR DEALING WITH RAILROAD CROSSINGS
Here are a few additional safety tips to learn when driving over railroad grade crossings:

1. Learn about the various types of highway/rail grade crossing warning devices. Not only are you risking arrest, if you fail to respond properly to these devices, you are risking your life and the lives of your passengers. For example,
   a. The “crossbuck” is a passive or “non-active” sign identifying a rail crossing. Always use extreme caution when passing over a crossing. You may proceed across a railroad highway/rail grade crossing only after a train has passed and/or you determine no train is approaching.
   b. At multiple-track crossings, the number of sets of tracks governed by the crossing device is indicated by a number under the crossbuck sign. If there are multiple tracks, there will be a number to indicate how many sets of tracks will be crossed.
Instructor Notes:

**Crossing Drawbridges**

Procedures for crossing drawbridges are similar to railroad tracks. If there is a traffic signal or bridge attendant present, the operator may proceed with caution. In those situations where there is no traffic signal or attendant at the drawbridge, the school bus operator is to stop, look to be sure the draw is closed, and then proceed with caution.
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2. REMEMBER, no person shall drive any vehicle through, around or under any crossing gate or barrier at a railroad crossing while such gate or barrier is closed or is being opened or closed. If you encounter a situation where an automatic flashing light signal with gate is operating and no train has arrived after an extended period of time, report the lowered gate immediately, check for an alternate route or wait for assistance. No student can exit the bus to lift the gate.

3. Always follow directions of a police officer or flag person directing traffic at any highway/rail grade crossing.

4. Cross the tracks only after the train has cleared a position to cancel any warning devices activated, or at crossings with no automatic warning devices.

5. The drivers of manual transmission buses should place the gear in low starting gear. The driver should close the service door, look again in both directions, check for flashing signal lights, and then proceed across the tracks without stopping or changing gears.

6. The drivers of automatic transmission buses should proceed over the tracks using the normal driving gear. A good rule of thumb is to proceed in the lowest gear until you are clear of the tracks. This prevents the gear from changing while crossing the tracks.

7. Never drive onto a railroad track until you are certain there is adequate room ahead for your ENTIRE vehicle to clear the tracks completely. Know the length of your bus. It can be life threatening to begin to cross a set of tracks only to find you must stop your vehicle for traffic before you have completely cleared the tracks.

8. Never stop and backup the bus while crossing the tracks.

9. Hazard lights need to be activated approximately between 100 and 200 feet before and after stopping at the highway/rail grade crossing. Cancel your hazard lights when you have completely cleared the tracks, and your vehicle has traveled at least 100 feet from the tracks.

If for any reason your bus should become stalled on the tracks and a train is approaching, IMMEDIATELY EVACUATE your bus. The quickest method of evacuation would be the front- and rear-door method. The driver should assign a responsible student in each group to keep the children together. The driver must be able to see both groups of children. Students should be instructed to move away from the bus in a direction toward the train, but at a right angle to the train. (This is important, since upon impact, the bus and debris will be pushed down the track.) If the bus is stalled on the tracks and no train is in sight, the driver should evacuate the children from the front or back of the bus. The children should move to a safe place at least 200 feet away from the bus. They must not cross the tracks. All evacuation procedures need to be cleared by the district personnel.

CROSSING DRAWBRIDGES

School buses are required to stop at drawbridges without a signal light or traffic control attendant at the gate. Stop at least 50 feet before the draw of the bridge. Look to make sure the draw is completely closed before crossing. After stopping, proceed when it is safe to do so. It is recommended you cross in low gear, so there will be no necessity for changing gears while traversing the drawbridge. Therefore, like railroad crossings, do not shift gears while crossing the draw span of any draw bridge.

You do not need to stop, but you must slow down and make sure it’s safe when:

- A traffic light on the bridge is showing green; and
- The bridge has an attendant or traffic officer who controls traffic whenever the bridge opens.
Instructor Notes:

**General: Entering andExiting the Flow of Traffic**
Reinforce the procedures given on page G-20. Emphasize that due to its weight, the bus will accelerate and maneuver more slowly than a car, so more time, and bigger gaps in traffic have to be used to move the bus from lane-to-lane or across lanes.

Also emphasize that buses have blind spots, just like a car. Operators should use their mirrors, but also turn their head to check for vehicles in their blind spots. Refer to Unit E for important information on positioning mirrors.

Emphasize that ramp speeds and curve speed advisories are intended for cars, and that the bus should move at speeds slower than advisories suggest.
ENTERING AND EXITING THE FLOW OF TRAFFIC

While driving, you will frequently leave one traffic stream and become part of another or cross through a second stream of traffic. This may occur at intersections, or even simply picking up or discharging your students. In many cases, your vehicle movements will be regulated by traffic signs or signals. In other cases, the merging points will be controlled by your good judgment.

GENERAL

Observe the following procedures when entering the flow of traffic:

1. Turn on the appropriate turn signal well before the point of entry;
2. If appropriate, stop just before the point of entry. In many cases you will already be stopped. If you are on a freeway acceleration lane marked with a yield sign, see the next section on ramps;
3. Check your mirror to ensure all passengers are seated;
4. Ensure no pedestrians are in the path of the bus;
5. Look left and right to see if there are any moving vehicles on the road you will enter;
6. Check all mirrors for clear space around the bus including behind you. If necessary, turn your head to check blind spots;
7. Yield the right-of-way to vehicles already on the road;
8. Look for a suitable gap in traffic and, with reasonable safety, accelerate smoothly into the roadway as quickly as possible; and
9. Turn off the turn signal after you are safely in your lane.

Observe the following procedures when exiting the flow of traffic:

1. Turn on the appropriate turn signal well before the point of exit;
2. Look left and right to see if there are any moving vehicles on the road you will be merging onto, especially if it is a deceleration lane;
3. Check all mirrors for clear space around the bus, including behind you. If necessary, turn your head to check blind spots;
4. Decelerate smoothly and, remember, school buses will take longer to stop; and
5. Turn off the turn signal after you have safely exited.

ENTRANCE AND EXIT RAMPS

Observe the following procedures when driving on entrance or exit ramps. A school bus is slower to respond to changes in acceleration and deceleration, so you will need to adjust your driving habits accordingly. Enter or exit the expressway as safely and quickly as possible while accelerating or decelerating to the flow of traffic as needed.

1. Check and re-check the traffic ahead when entering the driving lane on an entrance ramp. Look specifically for vehicles stopped or slowing down.
2. When driving on a long entrance ramp with an acceleration lane marked with a yield sign, check the traffic ahead, and, if possible, allow the vehicles ahead to leave the acceleration lane before attempting to merge into the roadway. Use the acceleration lane to match speed with the main stream of traffic before entering a suitable gap.
3. Always use turn signals when merging.
Instructor Notes:

Using Lanes and Positioning on the Highway
Emphasize that school buses should use the right lane on multiple lane highways. Keep in mind that lane selection may be dictated by the bus’ route.
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4. If you are entering the main roadway from an entrance ramp without an acceleration lane or one with a stop control, stop before merging. Through the side window, observe the main stream of traffic and do not proceed until you detect a gap large enough for accelerating and merging safely and smoothly.

5. When approaching and entering an exit ramp, observe the speed of traffic and adjust your speed appropriately. Remember, posted speed limits for off ramps and on ramps are for automobiles, but may not be safe for larger vehicles. Watch for other vehicles that may be stopped or waiting in line at the end of the exit ramp.

6. Be prepared to stop.

USING LANES AND POSITIONING ON THE HIGHWAY

Changing lanes, being passed by other vehicles, and passing other vehicles are maneuvers you will execute often while driving a school bus. The size of a school bus and the safety of your passengers require the use of proper procedures when executing these maneuvers.

GENERAL

Follow these procedures:

• Always drive in the lane of traffic giving you the best maneuverability for your route (especially when making turns) and allows you the best defensive position for weather, traffic, and road conditions;
• Stay within one lane for normal driving; do not straddle lane markers;
• To maintain proper lane position, get the “big picture” of the road ahead. Always aim high in steering; don’t use white lines or other steering guides too close to the bus. Activate your four-way hazard warning lights when your speed is below the posted speed on open highways;
• Use parking lane for stopping and parking only;
• Where there is more than one lane for traffic in the same direction, travel in the right-most lane unless you intend to pass or turn left. Do not drive in the parking lane; and
• Drive at a safe following distance from other vehicles. A discussion of safe following distances can be found earlier in this unit.

CHANGING LANES

When you drive a school bus in an urban/suburban area, you may have to change lanes frequently. Changing lanes with a school bus requires greater concentration and more careful use of mirrors than changing lanes with a car. If a lane change is necessary, always use extreme care.

On highways and streets with multiple lanes of traffic in the same direction, use these procedures to change lanes:

• When changing lanes, always signal your intention to change lanes with your turn signal. You must always use your turn signals at least 100 feet before turning, if you are driving less than 35 mph. If you are driving 35 mph or more, you must signal at least 300 feet before turning. Look for traffic approaching from behind you in the new lane.
• If your vision in the mirror is obscured by a blind spot, move your head and look up and down (vertically) or back and forth (horizontally) until you can see around the blind spot. If it helps, turn your head to view any possible blind spots at your side and rear.
• On multilane roads, look for vehicles in your lane and adjacent lanes about to enter the lane you wish to enter. Note their speeds, and be sure you can execute your lane change maneuver safely.
Instructor Notes:

**Being Overtaken and Passed**
Buses will often be passed by other vehicles. This is appropriate so long as the bus does not have its stop signal arm extended and red warning lights activated.

**Overtaking and Passing**
Generally, little is gained by passing – buses should not pass other vehicles.

One common crash type involved with passing vehicles is a sideswipe. Based on a quantitative analysis of Pennsylvania school bus crash data, two factors contributed to sideswipe same direction collisions. Careless passing was by far the most impactful. Drivers noted for this were 157 times more likely to be involved in a sideswipe-same-direction collision than drivers who were not.
• Continually check your mirrors.
• Remember to disengage your turn signal.

BEING OVERTAKEN AND PASSED
State law (Section 3345 of Title 75, the PA Vehicle Code) prohibits motor vehicles from passing a school bus when the bus has their red four-way flashers activated. Refer to Unit C. However, school buses are often overtaken and passed by other vehicles while operating on a roadway. In this situation, keep the following in mind:

• When there is no potential hazard, stay in right-hand lane and maintain your speed. Shadow the brake pedal and be prepared to stop quickly, if a hazardous situation arises from the passing vehicle.
• When on a narrow road, if following traffic builds up and a regular stop is not close by, you can consider pulling completely off of the road, using the right turn signal, and stop. Allow vehicles to pass, but never signal for them to pass. Keep your four-way flashers off. When traffic has passed and there is a sufficient gap to reenter the flow of traffic, use your left turn signal and resume your position on the road. If you cannot pull completely off of the highway, use this procedure only in legal passing zones.

DON’T DIRECT TRAFFIC
Some drivers try to help out others by signaling when it is safe to pass. You should not do this; you could cause a crash.

OVERTAKING AND PASSING
Usually you won’t have to overtake and pass other vehicles, and school bus drivers should avoid passing other vehicles as much as possible. A driver usually will gain very little or nothing at all by passing, because any vehicle moving more slowly than a school bus is not likely to go very far before turning off. But, when it is necessary, use extreme caution and follow these procedures:

1. Observe the traffic ahead, and do not pass, if the lead vehicle is signaling a left turn, changing lanes in order to pass another vehicle, or passing pedestrians, cyclists, or animals;
2. Wait until your view of the road ahead and behind is clear and there is an acceptable gap in traffic;
3. On a two-lane road, check to be sure there is no oncoming traffic, and check traffic signs and road markings to determine, if passing is allowed;
4. Turn on the left turn signal at least 100 feet before turning, if you are driving less than 35 mph. If you are driving 35 mph or more, you must signal at least 300 feet before turning;
5. It is most dangerous to pass at night because you cannot see as far ahead, and it is more difficult to accurately judge distances and speed of approaching vehicles. If you can only see the headlights of an oncoming vehicle, you are likely to think it is further away than it really is. When clear, pull smoothly into the passing lane;
6. After moving past the vehicle at a safe speed, turn on the right turn signal, and then move back into the right lane when you are at least one and one-half bus lengths ahead of the passed vehicle; and
7. Turn off the right turn signal.
**Mountain Driving and Steep Downgrades**

Emphasize the effects of size and weight when a school bus is climbing or descending a hill. In both cases, gravity is pulling the bus down. Low gears need to be used to climb, and even lower gears need to be used when descending so that the engine may be used to assist the brakes.
MOUNTAIN DRIVING AND STEEP DOWNGRADES

In mountain driving, the force of gravity plays a major role. If you have a heavy load, you will have to use lower gears and go slower to climb hills. In coming down steep hills, gravity will tend to speed you up. You must go slow enough your brakes can hold you back without getting too hot. If the brakes become too hot, they may start to “fade.” This means you have to apply them harder and harder to get the same stopping power. If you continue to use the brakes hard, they can continue to fade until you can’t slow down or stop at all. You can avoid these dangers by going slow when going downhill.

BEFORE STARTING THE DOWNGRADE

Two key elements for your driving procedures before you start the downgrade are:

1. Downshift as necessary to help control engine speed; and
2. Test your brakes by gently applying the foot brake to ensure they are functioning properly.

USING GEARS GOING DOWNHILL

Use Lower Gears When Going Downhill

No matter how big your vehicle is, going down long, steep grades can cause your brakes to fail, if you go too fast. Using lower gears will help you keep from going too fast. Lower gears allow engine compression and friction to help slow the vehicle. This is true whether you have an automatic transmission or a manual transmission.

Be in the Right Gear Before Starting Downhill

If you have a large vehicle with a manual transmission, don’t wait until you have started down the hill to shift down. You might get hung up in neutral and lose the benefit of engine braking. You would find yourself coasting, which would be illegal and dangerous.

YOU MAY HAVE TO USE LOWER GEARS GOING DOWN A HILL THAN WOULD BE REQUIRED TO GO UP THE HILL.

With older buses, a rule for choosing gears is to use the same gear going down a hill you would need to climb up the hill. However, new buses have low friction parts and streamlined shapes for fuel economy. They may also have more powerful engines. This means they can go up hills in higher gears and have less friction and air drag to hold them back going down hills. Find out what is right for your bus.

Be Observant When Going Downhill

As your bus moves down the grade, continue checking traffic in all directions and stay in the right-most lane. Don’t forget to increase your following distance. Based on your observations of existing conditions, select a safe speed for going downhill based on the weight of your bus, length and steepness of grade, weather and road conditions. To maintain that speed, refer to the braking section below.
Instructor Notes:

Proper Braking
Reinforce the procedures for snub braking.

Using Runaway Truck Ramps
If an operator regularly drives in an area where runaway truck ramps have been placed, operators should learn the locations of these specialized ramps.

At the end of this unit, go over each of the Review Questions provided in the Lesson Summary at the start of the unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What are some of the differences between driving a school bus and a car?
2. Explain how to start a diesel vehicle.
3. How should you hold and turn the steering wheel?
4. What is reference point driving?
5. When rounding a curve, where should you brake?
6. At what point should you turn on your signal when making a left or right turn?
7. What are some of the ways to prepare for a field trip or athletic trip?
8. What steps should you follow when backing your bus?
9. If you must execute a turn-around at a loading zone, when should you unload the students?
10. How much overhead clearance do you have while driving your bus?
11. Why do trains appear to be moving slower than they are?
12. What is the proper procedure for stopping at a railroad crossing?
13. How should you enter traffic at an entrance ramp?
14. What should you be particularly watchful for at intersections?
15. In general, in which lane should you travel on a four-lane highway?
16. What should you do if someone attempts to pass your bus?
17. How should you use your gears to your advantage when going down a steep downgrade?
18. What is the proper braking method on a long or steep downgrade?
PROPER BRAKING
When going downhill, brakes will always heat up. They are designed so brake shoes or pads rub against the brake drum or disks to slow the vehicle, which creates heat. Brakes are designed to take a lot of heat. However, brakes can be made to fail from excessive heat by attempting to slow down from too high a speed too many times or too quickly. Brakes will fade (have less stopping power) when they get very hot, and they can get to the point where they will no longer slow the vehicle.

The right way to use your brakes for long downhill grades is to go slow enough (use your gears) that a fairly sparing use of the brakes will keep your speed from increasing. If you go slowly enough, the brakes will be able to get rid of the heat, and they won’t get too hot.

Forceful, intermittent braking (snubbing) is safer than light, continued braking. Letting up on the brakes from time to time will allow them to cool enough, so they don’t become overheated. Light, continued pressure causes hot-spotting and in general makes the brakes run hotter, leading to increased probability of brake fade. Light, continued pressure also causes the brakes to wear faster, which is both a safety problem and a maintenance problem.

Therefore, select the right gear, go slow enough, and use forceful, intermittent braking (snubbing). This can be summarized in the following steps:

1. Select the right gear;
2. Go slow;
3. Apply the brakes just hard enough to feel a definite slowdown;
4. When your speed has been reduced to approximately 5 mph below your “safe” speed, release the brakes; and
5. When your speed has increased to your “safe” speed, repeat steps 1 and 2. This is also known as “snub” braking.

USING RUNAWAY TRUCK RAMPS
Runaway truck ramps have been built on many steep mountain grades. These ramps are made to stop runaway vehicles safely without injuring drivers and passengers. Runaway truck ramps use a long bed of loose, soft material (pea gravel) to slow a runaway vehicle, sometimes in combination with an upgrade.

Know runaway truck ramp locations on your route. Look for signs indicating where ramps are located and use them if you lose your brakes. Also see the section “Loss of Brakes” in Unit H (Crash and Emergency Procedures).
NOTES:

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UNIT H LESSON SUMMARY
CRASH AND EMERGENCY PROCEDURES

INSTRUCTOR’S PERSPECTIVE
This Unit is divided into two sections: last efforts at crash avoidance, and crash and emergency procedures. Units F and G offered trainees the basic tools for developing driving skills that would help avoid crashes. This Unit, then, offers guidance for procedures when a crash is imminent or has occurred.

TRAINEE OBJECTIVES
1. Be able to describe the most common emergency conditions encountered by bus drivers and the emergency driving techniques to use where appropriate.
2. Be able to recite the recommended procedural steps to be followed when involved in a crash.
3. Be able to demonstrate what to do, how to do it, and recite when it should be done in case of mechanical failure or breakdown.
4. Be able to explain the factors to be considered in a decision to evacuate a bus and describe the sequential order of evacuation.
5. Be able to demonstrate the location and proper use of emergency equipment under various crash conditions.

LOCATION
Classroom

DELIVERY MODE
Lecture, discussion, and demonstration

MATERIALS
• Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker, PowerPoint presentation, seat belt cutter and scrap belt material, portable emergency warning devices (triangular reflectors), pry bar, fire extinguisher, first aid kit, Body Fluid Clean Up Kit, spare electrical fuses, if applicable
• Handouts - Unit G Study Guide

RESOURCE PERSONNEL
A state or local police officer could assist with all or part of this unit, especially the security and hostage sections. Also, a representative from a local fire or emergency response company could assist with demonstrating the proper use of emergency equipment.
SUMMARY AND REVIEW QUESTIONS

• Summary - This Unit should be emphasized in both new driver and recertification courses because of the critical nature of its content. For new driver courses, emphasis should be placed on crash avoidance and demonstrations of post-crash emergency procedures. For recertification courses, use trainees’ experiences as the foundation for discussions of the material in the unit.

• Review Questions -
  1. What are some of the causes of skidding and how can you control them?
  2. What procedures should you follow if a tire blows out?
  3. What should you do if your bus loses its brakes?
  4. Name several ways your visibility may be suddenly impaired?
  5. List the options you have when an obstacle appears in your path?
  6. What are the rules to remember if your bus is involved in a crash, represented by the word KNOW?
  7. What are the first actions you should take in a crash?
  8. What information should be given to the emergency personnel when requesting assistance?
  9. What should you do if a mechanical breakdown occurs?
 10. Under what circumstances must you evacuate the school bus?
 11. List the procedures for conducting each type of evacuation drill.
 12. Where should the reflectors be placed in an emergency?
 13. How should a fire extinguisher be operated?

REFERENCES

PennDOT Publications

Laws and Regulations
• Pennsylvania Code – Transportation (Title 67), Key Chapter is Chapter 171: http://www.pacode.com/secure/data/067/067toc.html
• The Pennsylvania Vehicle Code (Title 75): http://www.dmv.state.pa.us/vehicle_code/index.shtml

Form and Certificates
• School Bus Crash Report Form (DL-739).
• Emergency Report form used by local agency, if applicable.

Other
• Local regulations and/or procedure guides, if available.
CASE STUDY EXERCISES

All school bus operators have had experience driving a vehicle. Some have operated a school bus for many years, while others have only had experience operating other types of vehicles. Some may even have had experience managing students. Few, however, have had experience with crashes and emergency procedures. Pennsylvania statistics show that of the approximately 40,000 Pennsylvania school bus operators, about 13% have been involved in a crash.

Crashes with a school bus require different operating procedures than when you are operating your personal vehicle. In all cases, the first thing to consider is safety: your safety and that of your students.

To provide practice, this section contains several case studies. Specific discussion questions are provided after the case studies to help facilitate discussions.

Here are some procedural tips for presenting the case studies:

1. Have the class read the situations.
2. Give the class a few seconds to think about the situation, then ask for volunteers to explain to the rest of the class, in as much detail as possible, how the situation should be handled.
3. Have the rest of the class critique the driver’s response.
4. Take on the role of a facilitator and manage the discussion.

Another method for presenting the case studies is for you (the instructor) to read the case study out loud, and simply facilitate the discussion from there using the prompt questions to get the class involved.

Remember, the critique is a learning experience and there are no hard and fast rules. All critiques should be fair, and drivers should not be too defensive or take comments too personally.

TIRE BLOW OUT CASE STUDY

Lisa is a new driver for a small intermediate unit. She is a competent driver and feels that providing school transportation services to students with disabilities is an important responsibility. One afternoon, Lisa is transporting students home from school along a winding road in a rural area when her vehicle suddenly has a tire blowout. Lisa fights to keep control of the vehicle and bring it to a stop by slamming on the brakes. Eventually, she brings the vehicle to a stop partially off the roadway. In the process, one of the students hits his nose on the seat in front of him. The student is bleeding profusely, possibly from a broken nose, and Lisa goes back to comfort and assist him. After talking to the passenger and giving him a cloth to absorb the blood, Lisa calls to report the incident. She has trouble making radio contact and is on the radio for several minutes before completing her report on the incident. Just as Lisa ends her conversation, a vehicle comes around the corner behind Lisa’s vehicle. The driver of the vehicle sees the school bus, which is partially in the travel lane, and barely avoids a rear end collision with it. Lisa realizes she has made what could have been a serious error in her response to this emergency.

Discussion Questions

1. What mistakes did Lisa make while trying to control the vehicle after the tire blow-out? What did she do right?
2. What did Lisa do wrong when she shut off the vehicle where she did?
3. What should Lisa have done immediately after she stopped the vehicle?
4. What should Lisa have done to avoid the possibility of a rear end collision?
5. Since she was parking the bus on a curving two-lane road, what rules should Lisa have followed when placing portable emergency devices (triangles)?
6. Should Lisa have evacuated the bus?
7. How might Lisa’s natural concern for her student’s injury have affected her subsequent decisions?
INTERSECTION COLLISION CASE STUDY

Rick is a school bus operator in an urban area. He has an excellent safe driving record and has never been involved in a crash in any vehicle. On this morning, Rick is on his way to school with a full busload of students. He is driving through a signalized intersection near the center of town when a car full of high school students makes a left turn in front of him, trying to beat the light. Rick cannot stop his bus in time to avoid hitting the car on the right side.

Immediately after the crash, Rick checks to make sure that his students are uninjured, and then gets out of the bus to check on the passenger car. As he does, several of the students in the car yell at him that it was his fault. Rick knows that it wasn’t. Angered by the words being shouted at him, he yells back that it was the other driver’s fault. Soon a crowd gathers. Just as police are arriving on the scene, a representative of the local newspaper grabs Rick and starts asking questions about what happened. Rick says that he is a good driver, that he was not at fault, that the high school kids in the other car caused the crash, and that for all he knew they were probably drinking or under the influence of drugs to make such a stupid driving maneuver. Rick’s responses are written down. By the time the police get the situation under control and determine that the students on the bus are fine, no medical attention is necessary, and start working on the required paperwork, the story has leaked to the local TV station.

Discussion Questions
1. What was Rick’s first mistake? How might he have handled things differently?
2. What was Rick’s second mistake as he continued to react to the situation at the crash scene? Why?
3. What should Rick have said when the reporter began questioning him?
4. How could Rick have avoided responding to the reporter’s questions?
5. Even though Rick was found to have little fault in this crash, what could he have done to possibly avoid it? Would he face disciplinary action by this management?
6. Could Rick or his employer be in jeopardy of legal complications because of his actions?

EMERGENCY DRIVING CASE STUDY

Brian has been a school bus operator for about 10 years. One afternoon, he was following about 100 feet behind another school bus. Both buses were traveling about 25 MPH down a steep grade. At the bottom of a hill is a stop sign. The road comes to a T-intersection with a highway that has a moderate amount of traffic going in both directions. Across the highway is a field with a wooden fence. On his right is a concrete retainer wall, on the left side of the road there are houses. There are no vehicles in the oncoming lane. He applies his brakes and nothing happens! Consider the various possible actions and outcomes for this situation.

Discussion Questions
1. What should he do?
2. What if there were cars in the oncoming lane?
3. What if there were no retaining wall (right side) or houses (left side)?
4. What if there wasn’t a bus in front of his vehicle?
CASE STUDY CONCLUDED

In the actual case, the driver chose not to hit the bus in front, but to steer around it, cross the highway, and go through the fence into the field. Two cars on the highway were sideswiped, and the bus came to a stop beside a tree, without injuries. The driver combined a skilled decision with some luck, in this case. Because of the size and weight of the school bus, the driver could not swerve sharply to avoid an object without the danger of overturning the vehicle. Thus, the driver chose to:

- Quickly recognize the best escape route.
- Steer firmly and as gradually as possible.
- Avoid steering left into the opposing lane in case of traffic.
- Avoid a head-on collision in favor of a potentially less severe collision.
UNIT H STUDY GUIDE

CRASH AND EMERGENCY PROCEDURES

1. EMERGENCY DRIVING TECHNIQUES - A professional driver relies on his/her judgment to avoid emergency situations. In case an emergency situation does occur, this unit covers some “last ditch” procedures to minimize crashes and subsequent injuries.

A. Skid Control
   - Skidding may be caused by tire failure, brake failure, slippery road conditions, improper braking, hydroplaning, or driving too fast.
   - To recover from a skid, keep both hands on the steering wheel.
   - Stop braking to allow the rear wheels to begin rolling again.
   - Gradually lift pressure from the accelerator pedal.
   - Turn in the direction you want the bus to go.
   - Countersteer as the bus turns back on course.
   - Keep looking in the direction you want to go.
   - Hydroplaning can occur in a bus – weight does not matter.
     - If traveling straight, don’t turn the steering wheel or apply the brakes.
     - Instead ease off the accelerator and engage clutch (if applicable).
     - If the rear wheels hydroplane, steer in the direction of the skid until you regain traction, then rapidly steer in the other direction.
     - Learn what type of brakes you have and proper techniques for using those brakes.

B. Tire Blowout
   - Signs include sound, vibration, and feel.
   - Grip the steering wheel firmly, and steer straight down the center of the lane.
   - Accelerate for a short period to help maintain steering, if necessary.
   - Apply brakes very slowly after steering is regained.
   - If the bus starts to skid, follow skid control procedures.
   - Activate the right turn signal, move off the road, and stop.
   - Activate the hazard warning lights, not the eight-way warning system.
   - Set up portable emergency warning devices.

C. Loss of Brakes
   - In general, downshift to slow down, maneuver out of traffic, and evacuate the bus.
   - Sound the horn.
   - Do NOT turn the engine off.
   - If you are driving a hydraulic brake equipped bus, pump the brake pedal firmly and rapidly several times and/or use the parking brake.
   - If you are driving an air brake equipped bus, there is a possibility the rear wheels will lock up if air pressure is reduced to 30 psi or below.
Look for an escape route on level terrain or an upgrade. Turning uphill is a good way to slow and stop the bus, as long as the bus doesn’t roll backward.

On a downgrade, look for a runaway truck ramp.

If no upgrade or escape ramp is available, choose the least hazardous escape route you can find, and move quickly.

D. Sudden Loss of Visibility

For water splashed on the windshield, remove foot from accelerator, apply brakes slowly, activate wipers, and look out of side windows if necessary.

For wiper failure, immediately look out of side windows, apply brakes, and move off the road to stop. Once stopped, activate hazard warning lights.

For headlight failure, hit the dimmer switch. If there is still a failure, try to keep sight of the road, activate hazard lights, brake slowly, move out of traffic, and stop.

If your hood flies up, look out of left and right windows, apply brakes moderately, activate turn signal and move off road to stop. Once stopped, activate hazard warning lights.

For patches of dense fog, activate your low beams and hazard warning lights, slow down, and use the center and edge lines of the roadway. In severe fog, pull off the roadway as far as possible and activate strobe, if so equipped.

For white out from snow, remove foot from accelerator, turn on wipers, apply brakes cautiously, and look out the side windows to keep sight of the road. Steer out of traffic to stop, if necessary.

E. Objects in Path of Bus

Evasive action is the exercise of fundamental driving maneuvers under stress.

Common evasive maneuvers are:

- Proper use of brakes.
- Steering to avoid a collision.
- Quick maneuvering, with or without braking.
- Leaving the highway for an escape route free from more hazardous obstacles.
- Choosing a lesser collision.

Tips for making evasive maneuvers include:

- Keep both hands on the steering wheel.
- Know how to turn quickly and safely.
- Know where to steer.
- If you have to leave the road, avoid overbraking and try to keep at least one set of wheels on the pavement.
- When returning to the road, stop the bus first. Then return gradually and keep in mind that wheels may not ride over the edge drop off easily or smoothly.
- If a collision is unavoidable, try to reduce speed as much as possible. Try to avoid hitting anything head-on. Angle crashes reduce the force of impact.
2. Emergency Procedures

A. Remember to K-N-O-W:
   ✦ Keep students calm,
   ✦ Notify authorities,
   ✦ Move Off the road,
   ✦ Use Warning devices.

B. Crash Procedures
   ✦ Bus-related Procedures.
      • Assess the situation.
      • Be alert for fire.
      • Be alert for hazardous materials.
      • Assess the students.
   ✦ Crash Scene Procedures.
      • Notify authorities.
      • Protect the scene.
      • Cooperate with crash investigation.
      • Keep students at the scene.
   ✦ When speaking with others or bystanders, admit nothing, promise nothing, and do not argue. Cooperate fully with investigating law enforcement officials.

C. Reporting Procedures
   ✦ Every crash must be reported. There are no minor crashes involving a school bus.
   ✦ Report a crash within 24 hours to the chief school administrator or authorized representative, according to local policy.
   ✦ Complete form DL-739, School Bus Accident Report Form, within 5 days and submit it to PennDOT.
   ✦ Minor incidents, such as broken mirrors, should still be reported due to liability protection concerns.

D. Mechanical Breakdown Procedures
   ✦ Stop the bus as far as possible to the right of the road.
   ✦ Keep students on the bus, unless evacuation is required.
   ✦ Activate hazard warning lights.
   ✦ Place warning devices on the roadway.
   ✦ Contact proper school authorities.
   ✦ Oversee arrangements for delivering students to their destination.
   ✦ Complete necessary reports.
3. Evacuating the Bus

A. When to Evacuate
   - Existing or imminent smoke or fire condition.
   - Presence of hazardous materials.
   - Unsafe position.
   - Bus submersion of immersion.

B. Evacuation Drills
   - State law requires emergency evacuation drills in the first week of school and in March of every school year.
   - Safety of students is of the utmost importance.
   - All drills should be supervised by the principal.
   - During the drill, instruct students on procedures to follow when driver is incapacitated.
   - Front door evacuation drill.
   - Rear emergency door evacuation drill.
   - Front and rear door evacuation drill.
   - Other emergency evacuation procedures.
     - Through bus windows.
     - Through roof hatches.

4. Using Emergency Equipment

A. All school buses are required to carry:
   - First aid kit.
   - Portable emergency warning devices.
   - Pry bar.
   - Fire extinguisher.
   - List of student names with pickup and delivery times.
   - Spare electrical fuses (if applicable).
   - Seat belt cutter (web cutter).
   - Body Fluid Clean Up Kit.

B. Portable emergency warning devices are placed within 10 feet of the bus, 100-500 feet behind the bus, and 100 feet in front of the bus. Use good judgment based on existing traffic conditions.

C. Pry bar is located close to the driver’s compartment. Use it to pry open doors, windows, or other parts where crash damage prevents easy exit by normal means.

D. Fire extinguisher is also located close to the driver’s compartment. Only use it if you know how. Evacuate and see to the safety of the students before trying to extinguish a fire.
   - Engine fires: turn off engine and do NOT open hood.
   - Other fires: extinguish only if you know what you are doing and it is safe.
   - Practice in training if local procedures dictate.

E. List of student names must include appropriate pick-up and delivery times for each student. This list may be accompanied by a seating chart, if used.
F. Other optional equipment may be carried on the bus as well. These MUST be securely fastened in the driver's compartment and not blocking the aisle.
   ✦ Vomit odor absorbent, sponge, and plastic bags.
   ✦ Tissues or paper towels.
G. Blankets and sheets to use as protection in cold weather.

5. School Bus Security
A. Unfortunately, school buses can be targets for security concerns. Here are a few things that you can do as a bus driver to improve security:
   ✦ Learn state and school district security guidelines.
   ✦ Be aware of suspicious people, activity or behavior around buses.
      • Individuals taking pictures or videotaping your bus, bus stops, or bus facilities.
      • Individuals who appear interested in or are soliciting information on school buses, facilities, or schedules.
      • Individuals showing disruptive or potentially distracting behavior.
      • Individuals possessing a weapon around your bus or bus stop.
      • Individuals using a vehicle in a suspicious way.
   ✦ Notice and report any unusual conditions of vehicles.
   ✦ Be vigilant with respect to strange packages.
      • Items that are abandoned or hidden in an unusual place.
      • Items leaking gas, vapor, or a suspicious substance.
      • Items with a timer or threatening message.
   ✦ Have emergency contacts readily available.
   ✦ Recognize threats and how to handle them.
   ✦ Learn emergency operating plans and procedures.
   ✦ Inspect your bus whenever you have left it unattended for a time.
   ✦ Keep a clean bus.
B. Safety and security checklist.
   ✦ Seats.
   ✦ Floor surface.
   ✦ Passenger compartment.
   ✦ Exterior surface.
   ✦ Undercarriage.
   ✦ Engine compartment.
   ✦ Tires.
   ✦ Fenders.
C. Immediately report suspicious items, people, and unusual activities.
   - Remain alert and calm.
   - Learn state and school district security guidelines.
   - Immediately report the location, color, year, make, model and license plate if a vehicle is involved.
   - Never touch a suspicious item.
   - Do not use your radio or cell phone within 300 feet of a suspicious package.

D. You cannot identify suspicious behavior based on stereotypes of race, color, or ethnicity.

6. Hostage Awareness
   A. You may experience several feelings in a hostage situation, including denial and belief of immediate rescue. Stay with reality.
   B. Things “to do” in a hostage situation:
      - Bond with your captor.
      - Be human.
      - Take mental notes.
      - Expect to be arrested.
      - Keep a low profile.
      - Think pleasant thoughts.
      - Remain strong for your students.
      - Remember, you are a primary witness for investigators.
   C. Things “not to do” in a hostage situation:
      - Do not make any threats.
      - Do not stare or glance at your captor.
      - Do not interfere.
      - Do not negotiate for your own release.
      - Do not negotiate for the release of the students.
      - Do not be arrogant.
   D. Things to help in a hostage situation:
      - Keep the peace.
      - Be patient.
      - Remain calm.
      - Do not be confrontational.
      - Communicate.
      - Be a good witness.
      - Attempt to get along.
      - Cooperate with police and don’t get in their way.
      - Know your passengers – be there for them.
UNIT H - Crash and Emergency Procedures

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INTRODUCTION
Emphasize that using good judgment can help an operator avoid most potentially dangerous situations. However, sometimes good judgment is not enough and an operator is going to have to make a last minute decision to avoid or minimize a dangerous event, or manage an emergency.

The first part of this Unit covers emergency driving techniques, the second covers crash and emergency procedures. Handling student emergencies is covered in Unit I.

EMERGENCY DRIVING TECHNIQUES
Q: What factors might make driving more difficult and potentially cause a dangerous situation?
A: Sunlight, weather, roadway conditions, traffic, problems with the bus, condition of the operator.

Q: What can a bus operator do in these conditions to maintain the safety of the bus and its passengers?
A: Adjust speed to conditions, keep the bus clean and contribute to the maintenance of the bus, remain alert and ready. Emphasize that doing these things will avoid most potentially dangerous situations.

Emphasize that even when doing everything right, there are circumstances that may occur requiring a quick response. Knowing how to respond to these occurrences can help avoid disaster. Examples of these occurrences include:

- Skid
- Tire blowout
- Loss of brakes
- Sudden loss of visibility
- Obstructions in the path of the bus

SKID CONTROL AND RECOVERY
Q: What is a skid?
A: When the tires of the bus lose proper traction with the road surface.
UNIT H
CRASH AND EMERGENCY PROCEDURES

INTRODUCTION
Professional drivers don’t depend on their skills to get them out of potentially dangerous situations. They depend on their judgment to avoid these situations. It’s a lot easier to avoid of potentially dangerous situations than to get out of them. This was the focus in Units F and G. However, if you are involved in a crash or emergency situation, you will need to take certain emergency actions.

This unit is divided into two major sections. The first describes emergency driving techniques you can use as a last effort to avoid crashes. The second covers crash and emergency procedures, except for First Aid, which is covered in Unit I (Student Emergencies).

EMERGENCY DRIVING TECHNIQUES
As you learned in previous units, driving factors such as light, weather, road, traffic, vehicle, and drivers are not usually all adverse at the same time; they come at the driver in groups. Weather conditions affect the amount of light available and the condition of the road. Light, especially too much light, can irritate a driver, and traffic conditions can do the same. Weather can affect traffic, slowing it down and making it more congested. Weather can affect vehicles as well, with the possibility of overheating in summer heat or having brittle parts break in the cold of winter. The school bus driver who adjusts his speed to adverse conditions, inspects the bus, keeps his bus in top mechanical condition, and remains alert and ready, has a better chance of remaining safe.

As a safe driver, you will be able to avoid most potentially dangerous situations through good driving habits, use of safety equipment, and proper observation. However, you may find yourself confronted with one of these five emergency driving conditions:

• Skid;
• Tire blowout;
• Loss of brakes;
• Sudden loss of visibility; or
• Objects, pedestrians and obstructions in the path of the bus.

Under these conditions, you must know what emergency driving techniques to use. Your responses must become automatic – you will not have much time to think about what you should do. The procedures in this unit are “last ditch” measures to prevent a crash, if at all possible.

SKID CONTROL AND RECOVERY
Many factors can cause a school bus to go into a skid. During a skid, the tires lose proper traction with the road surface. Normal means of controlling the bus, including steering, braking and accelerating, won’t work as usual — you must learn specific anti-skid techniques. Therefore, you must be able to detect a loss of traction in time to maintain or regain control of the bus.
Instructor Notes:

**Skid Control and Recovery – continued**

Q: If the tires of the bus lose traction with the road surface, will steering, braking and accelerating work as usual?

A: No.

Q: What can cause a loss of traction?

A: Refer trainees to the list on page H-4.

Carefully guide trainees through the steps for regaining control of the bus.

Emphasize that control of the bus occurs through rolling wheels. In a skid, whatever the cause, the wheels are not rolling as they should. The key to controlling a skid is creating the conditions under which the wheels begin to roll again. When the wheels are rolling, normal control of the bus will return.

Also emphasize that when controls are not working properly, the intuitive response by most drivers is to try to regain control by applying the controls more or harder. Common reactions include pressing the accelerator harder to get the bus to go, or depressing the brake pedal harder to get the bus to stop. These increased applications make the condition worse by further preventing the wheels from rolling. The learned response is to gently decrease the application of normal control to allow the wheels to roll again.

**Hydroplaning**

Hydroplaning is a common condition that decreases traction whereby the bus’ speed is sufficiently high that the tires glide on a cushion of water, not coming into full contact with the road. Carefully guide trainees through the procedures on page H-4, making particular note that the bus needs to slow down enough that it no longer can be supported by water and the tires come into contact with the road surface again.

Keep those wheels rolling!
Loss of traction may include:

- Skids caused when tires fail from under-inflation or from a blowout;
- Front wheel skids resulting from faulty brakes, slippery road surfaces or driving too fast for conditions;
- Rear wheel skids resulting from faulty brakes, driving too fast, accelerating too quickly on curves, or rough or slippery surfaces;
- A four-wheel locked brake skid resulting from jamming too hard on the brakes;
- Hydroplaning resulting from traveling too fast on a water-covered highway or from driving in water with under-inflated or worn tires; or
- Skidding resulting from oil film, wet leaves, loose surfaces, ice, or other slippery conditions.

Once you lose traction and the bus goes into a skid, you must be able to regain directional control. Controlling a skid requires controlled steering, smooth deceleration and controlled braking. If your school bus has lost traction and begins to skid, you will need to do the following:

1. Keep both hands on the steering wheel;
2. Stop braking to allow your rear tires to start rolling again;
3. If you have your foot on the accelerator, gradually lift your foot from the accelerator smoothly, not suddenly;
4. Turn quickly in the direction you want the vehicle to go;
5. Countersteer as your vehicle turns back on course. If you do not turn the steering wheel quickly in the other direction, you will skid in the opposite direction; and
6. Keep your eyes in the direction you want to go.

**Hydroplaning**

Hydroplaning is a unique situation where your bus loses traction on a slippery surface. If your bus is traveling straight, it may begin to feel slightly loose. If there was a high level of road feel in normal conditions, it may suddenly diminish. If the drive wheels hydroplane, there may be a sudden audible rise in engine RPM and indicated speed as they begin to spin. In a broad highway turn, if the front wheels lose traction, the bus will suddenly begin to drift toward the outside of the bend. If the rear wheels lose traction, the back of the bus will begin to slide out sideways into a skid. If all four wheels hydroplane at once, the bus will slide in a straight line, again toward the outside of the bend if in a turn. When any or all of the wheels regain traction, there may be a sudden jerk in whatever direction that wheel is pointed.

To recover while traveling in a straight line, you should not turn the steering wheel of the bus or apply the brakes. Either action could put the bus into a skid from which recovery would be difficult or impossible. Instead, with no change in steering input, gently ease pressure off of the accelerator and engage the clutch. This will slow your vehicle and let the wheels turn freely; control should then return. If braking is unavoidable, lightly pump the brakes until hydroplaning has stopped.

If the rear wheels hydroplane and cause oversteer, you should steer in the direction of the skid until the rear tires gain traction, and then rapidly steer in the other direction to straighten the bus.

Do not accelerate again until you regain steering control.
Instructor Notes:

**Tire Blowout**  
Emphasize that a tire blowout is the opposite of a skid. In a skid, a wheel or wheels lose traction and do not roll correctly. In a blowout, a tire is unable to roll efficiently, but causes drag. The problem affecting control of the bus is that the drag is not equal around the corners of the bus, but is located at one corner, creating an unequal drag situation.

Carefully guide trainees through the indicators of a blowout. Follow that with the steps for handling the bus in case of a blowout. Emphasize that accelerator and brake controls are to be applied or reduced slowly, not suddenly.

**Loss of Brakes**  
Emphasize that if the brakes on the bus fail, the keys to getting the bus stopped safely are the amount of time the operator has due to roadway conditions, and the other systems on the bus that can be used to slow and stop the bus. Unfortunately, operators typically do not know the brakes are not functioning until they need to slow or stop, limiting the time to react to brake failure.
UNIT H - Crash and Emergency Procedures

Remember, on a bus with anti-lock brakes (ABS), don’t pump the brakes. Apply the brakes as needed, allowing the ABS system to automatically pump the brakes. If you don’t have ABS, don’t panic and jam on the brakes. Don’t brake at all or apply only light breaking pressure until you regain steering control. On a bus with hydraulic brakes, light braking requires you to pump the brakes softly to slow the bus in a controlled manner.

On a bus with air brakes, use no brakes at all in a skid if possible — never pump the brakes. The brakes may catch or come on too quickly, further adding to the problem. You should learn what types of brakes your bus has and the proper method of fanning the brakes to gain control.

TIRE BLOWOUT
You must recognize a tire blowout quickly because you only have a few seconds to react. If your front tire has a blowout, your bus will pull in the direction of the flat. If your rear tire blows out, the bus will swerve. Fortunately, most school buses have dual rear wheels, which can minimize swerving in case of a tire blowout, but you will still feel a pull. The major signs of tire failure are:

Sound – The loud “bang” of a blowout is an easily recognized sign. Because it can take a few seconds for your vehicle to react, you might think it is some other vehicle. But any time you hear a tire blow, you must assume it is yours and prepare to stop.

Vibration – If the vehicle thumps or vibrates heavily, it may be a sign one of the tires has gone flat. With a rear tire, it may be the only sign you get.

Feel – If the steering feels “heavy,” it is probably a sign one of the front tires has failed. Sometimes, failure of a rear tire will cause the vehicle to slide back and forth or “fishtail.” However, dual rear tires usually minimize this.

If a tire blows out:
1. Grip the steering wheel firmly and steer your vehicle straight down the center of your traffic lane;
2. Accelerate for a short period to help maintain steering. Once steering is controlled, let up on the accelerator and let the bus slow down;
3. Do not jam on the brakes – apply them slowly only after you have regained control of the steering;
4. If the bus starts to skid, follow skid control procedures outlined above;
5. Activate right turn signal, move slowly toward the right (out of the traffic lane), and stop;
6. Be sure to activate the hazard warning lights, not the school bus eight-way warning system; and
7. Set up portable emergency warning devices to warn other motorists of your position on the road. This is discussed below.

LOSS OF BRAKES
Anytime you lose your brakes, slow down as described below and attempt to maneuver the bus out of traffic before it comes to a stop, steering to avoid a crash. If this is impossible and the bus stops on the highway, activate hazard warning lights, place appropriate warning markers on the roadway, and evacuate the bus to a place of safety where the students can wait for help. Emergency parking and evacuation procedures are described later in this unit.

If you have brake failure:

• Downshift. Putting the bus into a lower gear will help to slow the bus;
• Sound the horn; and
• DO NOT TURN OFF THE ENGINE.
Instructor Notes:

**Loss of Brakes (cont.)**
If there is time, rapidly pumping the brake pedal may restore some pressure in the hydraulic system, allowing the operator to slow and stop the bus.

Emphasize that use of the emergency/parking brake can cause a skid because it is connected to the rear wheels only, and the release lever must be pulled to allow modulation of the pedal in case a skid does occur.

Point out the engine of the bus may be used to slow the bus.

**Finding an Escape Route**
Emphasize that when selecting an emergency route, the best path may not be a good path, but the goal is the safest available. Driving through a field will damage the bus, but is better than hitting other vehicles or a barn.
If your bus has a hydraulic braking system and you experience a partial or total loss of brakes:

- Pump the brake pedal firmly and very rapidly several times; and
- Use the parking brake. On a hydraulic brake bus, the parking brake is separate from the hydraulic brake system. It can be used to slow the bus, if the hydraulic system fails. Gradually apply the parking brake by pressing the release button or pulling the release lever at the same time you use the parking brake, so you can adjust the brake pressure and keep the wheels from locking up.

If your bus has air brakes, a warning buzzer will alert you to the loss of air pressure and to the possibility of the rear brakes locking when air pressure drops to approximately 30 psi. If locking should occur, causing the bus to go into a skid, follow skid control procedures.

**Finding an Escape Route on Level Terrain or Upgrades**

While slowing the bus, look for an escape route — an open field, wide shoulder, side street or escape ramp. Turning uphill is a good way to slow and stop the bus. Make sure the bus does not start rolling backward after you stop. Put it in low gear, apply the parking brake and, if necessary, roll back into some obstacle that will stop the bus.

**Finding an Escape Route on Downgrades: Runaway Truck Ramps**

Going slowly enough and braking properly will almost always prevent brake failure on long downgrades. Once the brakes have failed, however, you are going to have to look outside your bus for something to stop it.

Your best hope is a runaway truck ramp provided on many highways with dangerous downgrades (see Figure H-1). If there is one, there will be signs telling you about it. Use it. Every year, hundreds of drivers avoid injury to themselves, their passengers and others as well as damage to their vehicles by using these runaway truck ramps.

Some runaway truck ramps use soft gravel that resists the motion of the vehicle and brings it to a stop. Others turn uphill, using the hill to stop the bus and soft gravel to hold it in place. Be prepared to use the ramp if necessary. If your route includes a long downgrade with a runaway truck ramp, be sure you know where it is.

If there is an upgrade within the clear distance ahead, stay on the road and allow the upgrade to slow the bus; then select a path for leaving the highway. If no upgrade is within the clear distance ahead, select a path for leaving the highway that will minimize injuries and property damage.

If no runaway truck ramp is available, and no upgrade is within clear distance ahead, take the least hazardous escape route you can — such as an open field, or a side road that flattens out or turns uphill. Make the move as soon as you know your brakes don’t work. The longer you wait, the faster the bus will go and the harder it will be to stop.

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**Figure H-1. Runaway Truck Ramp**

![Runaway Truck Ramp Image]
Instructor Notes:

**Sudden Loss of Visibility**

Q: What kinds of things could happen to cause a sudden loss of visibility?

A: Guide trainees through the list on pages H-7 and H-8.

Emphasize that if the windshield becomes obscured, the side windows can be used to guide the bus to a stop. If vision is obscured by weather, the speed of the bus should be commensurate with the distance ahead the operator can see.

Q: As you are driving a bus on a rainy day on a narrow road, a tractor trailer heading toward you in the opposite lane splashes mud and slush over the windshield, completely obscuring your front view. What do you do?

A: Remove your foot from the accelerator, then turn on the wipers. Look out of the left side windows as you apply the brakes lightly and continuously. Try to clean the windshield, if you have a windshield washer, after your front view is regained.
SUDDEN LOSS OF VISIBILITY
The following can cause a sudden loss of visibility while driving:

- Water splashed on the windshield;
- Windshield wiper failure;
- Headlight failure;
- Hood flying up;
- Patch of fog; and
- White out from snow.

Until you regain normal visibility, you must use cues other than normal visual ones to help you control the bus.

**Water Splashed on Windshield**
If water is splashed on the windshield:

1. Remove your foot from the accelerator and turn on the wipers;
2. While doing so, apply the brakes cautiously; and
3. Look out the side windows to keep sight of the road.

**Windshield Wiper Failure**
If windshield wipers fail during rain, sleet or snow:

1. Look out the side windows to keep sight of the road;
2. Apply the brakes cautiously; and
3. Activate your turn signal to get off of the road and stop. Activate hazard warning lights.

**Headlight Failure**
If the headlights fail, immediately:

1. Hit the dimmer switch to determine if a portion of your lights may be functional;
2. Activate the hazard warning lights;
3. Try to keep sight of the road;
4. Brake slowly; and
5. Steer out of traffic lane, and stop.

Try to use available light along the way to keep sight of the road. In an extreme emergency, a good source of available light would be the flashing hazard lights on the school bus.

**Hood Flying Up**
If the hood flies up:

1. Look out the left and right windows to help keep your sense of direction;
2. Apply brakes moderately;
3. Activate your turn signal;
4. Steer out of the traffic lane to stop; and
5. When stopped, activate the hazard warning lights, not the school bus eight-way warning lights.
Obstructions in the Path of the Bus

Q: Is there a way to prevent unusual occurrences from forcing you to have to take evasive action?

A: A bus operator can reduce the need for evasive action by employing good scanning techniques. Learn to anticipate the anxious driver pulling out from a driveway or parking lot, or the child chasing a ball into the road.

Remind the trainees that they will be driving school buses and many other motorists will purposely drive aggressively to try to get out in front of the bus so that they don’t have to stop at each pickup or drop off location. Anticipating and scanning will be critical.

Emphasize the list on page H-8 of the types of evasive action, and guide trainees carefully through the discussion of each. Point out that whether steering or braking, care must be taken to avoid a loss of control by skidding or inducing oversteer or understeer. Keep those wheels rolling to maintain control!
Patch of Fog
If you enter a patch of thick fog limiting your vision:

1. Activate the low beams and hazard warning lights and slow down;
2. Use the center or edge lines on the highway to guide you;
3. If the fog is severe, stay in your lane, use your 4-ways, and proceed cautiously; and
4. Activate strobe light, if equipped.

Under no circumstances should you park your vehicle on the highway. In fog it is especially important to watch for other vehicles that have slowed abruptly or stopped on or near the road.

Whiteout from Snow
If snowfall is creating a condition where your visibility is severely restricted:

1. Remove your foot from the accelerator and turn on the wipers;
2. While doing so, apply the brakes cautiously;
3. Look out the side windows to keep sight of the road; and
4. Steer out of the traffic lane to stop, if necessary, and activate the hazard warning lights.

OBSTRUCTIONS IN THE PATH OF THE BUS
Occasionally, objects may suddenly cross your path while you are operating the bus, such as a pedestrian, vehicle, construction barrier, bicyclist, etc. If these are in your direct path, you must take evasive action. Always remember you are more likely to avoid hitting anything, if you have been practicing good scanning patterns, anticipating problem areas and mentally practicing taking effective evasive action repeatedly until it becomes completely automatic.

You must instantly choose between trying to stop in time and selecting an “escape route,” which is free from other, more hazardous obstacles. Evasive action is simply the exercise of your fundamental driving maneuvers under conditions of stress — limited time, space and distance.

You must decide which of the following evasive actions you should perform:

- Proper use of brakes;
- Steering to avoid collision;
- Quick maneuvering, with or without braking;
- Leaving the highway for an escape route free from other more hazardous obstacles; or
- Choosing a lesser collision.

Proper Braking
Generally, drivers tend to apply the brakes at the first sign of trouble. While effective in most instances, braking can lock the wheels and cause loss of steering control, making it impossible to steer away from a collision. For effective evasive action, you must sometimes avoid the temptation to jam on the brakes.

On the other hand, you may decide that braking to a stop is the best evasive action you can take to avoid the obstruction. This will depend on how fast you are going, how far away you are from the object, how good your tires are, and whether the road is wet or dry.

For example, if someone suddenly pulls out in front of you, your natural response is to hit the brakes. This is a good response if there’s enough distance to stop and you use the brakes correctly.
Instructor Notes:
UNIT H - Crash and Emergency Procedures

You should brake in a way that will keep your vehicle in a straight line and allow you to turn if it becomes necessary. Braking methods were discussed in Unit G.

With controlled braking, you apply the brakes as hard as you can without locking the wheels. Keep steering wheel movements very small while doing this. If you need to make a larger steering adjustment or if the wheels lock, release the brakes. As soon as the wheels start rolling, apply the brakes fully again. It can take up to one second for the wheels to start rolling after you release the brakes, Re-apply the brakes as soon as you can.

On a bus with anti-lock brakes (ABS), don’t pump the brakes. Apply the brakes firmly, allowing the ABS system to automatically pump the brakes.

**Steering to Avoid Collision**

Stopping is not always the safest thing to do in an emergency. When you do not have enough room to stop, you may have to steer to avoid a crash. In many cases, you can turn to miss a hazard faster than you can stop. Therefore, if it’s not instantly obvious you can stop in time; you must choose to steer the bus in an alternative path. In order to accomplish this, you must be able to quickly recognize the best escape route. At a glance, decide if a possible escape path is free from other, more hazardous obstacles.

You should avoid swerving the bus, as sudden swerves can be very dangerous, risking your passengers’ safety. Because the bus is so big and heavy, it can’t swerve sharply to avoid an object or leave the pavement with any great degree of control. Swerving risks overturning the bus. Steer firmly and as gradually as possible to clear the obstruction, and use the brakes, when necessary, as outlined in the previous sections. If possible, avoid steering left, into the opposite lane of traffic. Here are a few tips:

1. **Keep both hands on the steering wheel** – To turn quickly you must have a firm grip on the steering wheel with both hands. The best way to have both hands on the wheel in the event of an emergency is to keep them there all of the time.

2. **Know how to turn quickly and safely** – A quick turn can be made safely, if it is done the right way. Here are some points safe drivers use:
   a) Do not apply the brake while you are turning. It is very easy to lock your wheels while turning. If that happens, you may skid out of control;
   b) Do not turn any more than needed to clear whatever is in your way. The more sharply you turn, the greater the chances of a skid or rollover; and
   c) Be prepared to “countersteer,” that is, to turn the wheels back in the other direction, once you have passed whatever was in your path.

3. **Know where to steer** – If an oncoming driver has drifted into your lane, moving to the right is best. If that driver realizes what has happened, the natural response will be to return to his or her own lane.
   a) If something is blocking your path, the best direction to steer will depend on the situation;
   b) If you have been using your mirrors, you’ll know what lane is empty and can be safely used;
   c) If the shoulder is clear, going right may be best. No one is likely to be driving on the shoulder but someone may be passing you on the left. You will know if you have been using your mirrors; and
   d) If you are blocked on both sides, a move to the right may be best. At least you won’t force anyone into an opposing traffic lane and a possible head-on collision.
Instructor Notes:

**Leaving the Road**
Emphasize that when leaving the road, other surfaces will limit the operator’s ability to control the bus. Try to keep some of the bus wheels on the road. If you MUST leave the road, try to stop before returning to the road.

**Choosing a Lesser Collision**
If a crash is unavoidable, try to minimize the impact by reducing speed as much as possible, and try to steer away from hitting anything head-on.

**Emergency Procedures**
In the event of a crash, breakdown, or other emergency, the first priority of the school bus operator is the safety of their student passengers.

Emphasize the rules that can be represented by the word KNOW: Keep, Notify, Off, Warning

Repeat this to the trainees, including what each letter stands for. Some instructors may find it useful to put this memory aid on a card, laminate it, and provide it as a handout. Some may provide this in the driver’s packet of information that they have on board while others have this posted at the bus garage so that driver’s constantly are reminded.
4. **Leaving the road** — In some emergencies, you may have to drive off of the road. It may be less risky than facing collision with another vehicle. Most shoulders are strong enough to support the weight of a large vehicle and, therefore, may offer an available escape route. Here are some guidelines to follow if you do leave the road.
   a) **Avoid Overbraking** – If possible, avoid using the brakes until your speed has dropped to about 20 mph. Then, brake very gently to avoid skidding on a loose surface;
   b) **Keep One Set of Wheels on the Pavement if Possible** – This will help maintain control; and
   c) **Stay on the Shoulder** – If the shoulder is clear, stay on it until your vehicle has come to a stop.

5. **Returning to the road** — If you are forced to return to the road before you can stop, do the following:
   a) If at all possible, stop the bus first. Be careful of fixed objects such as utility poles, mail boxes and parked cars that may be blocking your path;
   b) Hold the wheel tightly and turn sharply enough to get right back on the road safely;
   c) Be aware your tires might grab unexpectedly and you could lose control; and
   d) When both front tires are on the paved surface, “countersteer” immediately. The two turns should be made as a single “steer-countersteer” move.

**Choosing a Lesser Collision**

In any case where collision is absolutely unavoidable, try to reduce speed as much as possible. Also, avoid a head-on collision; collision at an angle reduces the force of impact. Remember, you’re more likely to avoid hitting any obstruction in the path of the bus, if you always anticipate the unexpected. Mentally practice effective evasive action until it becomes automatic.

**EMERGENCY PROCEDURES**

Crashes are events that can cause injury, death or property damage. If you have a crash or find yourself in some other emergency situation, you should know the proper procedures to follow and the proper use of emergency equipment on the bus.

As a bus driver, you must be prepared for any kind of emergency situation. It doesn’t happen very often, but there is always the possibility of a crash, mechanical breakdown or other emergency. In any case, your first priority is to see all students are as safe as possible. It is important in an emergency to remain calm. Some rules to remember if your bus is involved in a crash are represented by the word “KNOW.”

**K** = **Keep** all students on the bus calm. It is safer for the students to remain on the bus if there is no other immediate danger.

**N** = **Notify** authorities. Always call for help. Use an available cellular phone, two-way radio or other communication device on your bus; know who you should call and how to do so. If you do not have any means of communication on the bus, you may need to identify a responsible bystander to make a call for assistance. **Only in EXTREME EMERGENCIES should older, responsible students be sent for help. Refer to your school district policy and Unit I for additional information.**

**O** = **Off** of the road. If you break down, try to position the bus completely off of the road and away from other dangers. If it is not possible to do this, remember to evacuate the students and take them to a safer location.

**W** = **Warning** devices. Use portable emergency warning devices that satisfy current state regulations (at least three portable emergency reflective triangles) to warn other motorists of your position on the road.
**Crash Procedures**

The company or school district that you work for will have specific policies and procedures for you to follow in the event of a crash. The procedures presented here are a guide. The Driver’s Manual outlines bus-related procedures and crash scene procedures. Be sure to review each of these in detail so that there are no questions from the bus operators in your class. Customize it based on your school district’s policies.

The trainees should notice similarities between the bus-related procedures and crash scene procedures: remaining calm, protecting your students, and getting help.

Essentially, the first thing is to remain calm-YOU are the leader. Second is to make sure the situation will not become worse by doing what you can to protect your student passengers. Get help and cooperate with authorities. If safe to do so, keep students on the bus. If students must be moved from the bus, keep them together.

Emphasize that only in **EXTREME EMERGENCIES** should older responsible students be sent for help.

**Drivers should remember the 4 C’s:**

- Calm always.
- Concern for passengers.
- Care for vehicle.
- Complete documentation.

K-N-O-W what to do!
CRASH PROCEDURES
The Pennsylvania Vehicle Code requires that the driver of a vehicle involved in an accident shall immediately by the quickest means of communication give notice to the nearest office of a duly authorized police department if the accident involves: 1) injury to or death of any person; or 2) damage to any vehicle involved to the extent that it cannot be driven under its own power in its customary manner without further damage or hazard to the vehicle, other traffic elements, or the roadway, and therefore requires towing.

With careful driving habits, you may never be involved in a crash. However, the fact remains a percentage of school bus drivers will be involved in a crash sometime in their driving career. Pennsylvania crash statistics show of the approximately 40,000 Pennsylvania school bus operators, about 13 percent have been involved in one or more crashes.

If you have a crash, CARRY OUT THE LOCAL POLICY AND PROCEDURES AS QUICKLY AS POSSIBLE. These include bus-related and scene-related procedures. The following should serve as a guide.

Bus-Related Procedures
Immediately after a crash, your first actions take place in and around the bus.

1. **Assess the situation.** You should immediately do the following:
   a. Stop the bus in as safe a place as possible;
   b. Set the parking brake, turn off all lights and electrical switches and turn off the ignition switch; and
   c. Remain calm, assess the situation, plan your actions, and reassure the students. Refer to Unit I on Student Emergencies.

2. **Be alert for fire.** If a smoke or fire condition is present or imminent, evacuate the students. Do NOT fight the fire unless all of your students have been evacuated safely, are in a secure location and you feel comfortable re-approaching the bus to fight the fire. Evacuation procedures and use of fire extinguishers are described later in this unit. In determining the potential for fire, check for the following:
   a. Ruptured fuel tank or fuel lines;
   b. Hot tires, which may catch fire;
   c. Presence of smoke; and
   d. Possible electrical fire or sparks.

3. **Be alert for hazardous materials.** Check for and identify any possible hazardous materials that present or may present a danger to you and your passengers. Evacuate the students, if a danger exists from the following hazardous materials:
   a. Chemicals;
   b. Vapors; and
   c. Other toxic substances.

4. **Assess the students.** Check for injury to students. Keep the students on the bus unless conditions such as the possibility of fire or other dangers warrant their removal. This is the easiest way to account for all students.
Instructor Notes:

**Cooperate with the crash investigation**
NOTE that different insurance carriers will have different emergency packets. Be sure you have one on your bus and it conforms to your local policies and procedures.

**Crash Scene Procedures**
When a crash does occur and you have assessed and controlled the situation, calmed your passengers and assured that they are safe, you may then be faced with a lot of people requesting information from you, trying to reach their children, possibly providing medical services, etc. Stay calm and work with law enforcement officials to keep the scene under control.

If you are speaking with bystanders or other motorists involved in the crash, never admit guilt, don’t promise to provide anything, and don’t get into any arguments about anything, especially who was at fault for the crash. Let law enforcement handle the crash scene once they arrive.

**Reporting Procedures**
Emphasize the list of information required for making a complete report, and that any crash involving a school bus must be reported. Review the DL-739 with the trainees.
CRASH SCENE PROCEDURES
Once you have taken the above procedures, your next steps should consider the crash scene.

1. **Notify authorities.** Notify state or local police and summon medical aid, if required; notify school administrators as required by local school policy. In most cases, you should not leave the bus unattended to go for help. Ask several passing motorists or pedestrians to notify the proper authorities, if necessary. In an emergency, always follow local school policy, especially in regard to sending students to obtain assistance. You should use the “Three W’s” when communicating:
   - **Who**: bus number, number of students and types of vehicles involved;
   - **Where**: location of bus or directions to the scene; and
   - **What**: what kind of help is needed and nature of the problem(s).

2. **Protect the scene.** Protect the students and the bus, from further crashes and injuries by placing warning devices to warn other drivers, and evacuate the bus, if necessary, or both. Protect the scene from traffic and people, so evidence is not destroyed.

3. **Cooperate with the crash investigation.** After you have handled all potential dangers to your passengers, cooperate with officials investigating the crash. You should ONLY discuss the facts of the crash with those officially concerned (police, school officials, insurance personnel). Do not discuss the crash with other motorists or passers-by. Be patient, evaluate questions, and give clear and concise answers to any questions asked by officials. Only respond to the questions asked; don’t add your own opinion.

   State law requires you to carry a list of every student passenger’s name on the bus in case of a crash or emergency. Provide this information, along with any relevant information about the school bus (e.g., make, model, vehicle number, owner, insurance information), to officials investigating the crash. All such information, including emergency telephone numbers, a seating chart of all passengers (if applicable), and local directives covering crashes and emergencies should be contained in an emergency packet carried on the bus. Contact your insurance carrier to obtain a proper packet.

   A driver involved in a crash is required to give his or her own name, address, driver's license number, and other pertinent information to any other driver involved, and to obtain the same information from any other driver(s) involved in the crash. Get the names, addresses and license numbers of all witnesses – both for and against you.

   A school bus driver involved in a crash meeting Federal Highway post-crash testing thresholds is also required to submit to testing for alcohol and controlled substances. Note: Pennsylvania state law requires testing after any reportable crash in a school bus.

4. **Keep students at the scene.** During the crash investigation, do not release any of your students to anyone unless instructed by school administration officials or unless medical aid is required. Always keep students on the bus unless the situation requires emergency evacuation.

Keep the following in mind when speaking with others involved in the crash or bystanders:

- **ADMIT NOTHING;**
- **PROMISE NOTHING; AND**
- **DO NOT ARGUE.**
Instructor Notes:

**Incident Reporting**

Also, emphasize the kinds of incidents that should be reported to a supervisor. If the operator has any doubt if an incident should or should not be reported, report to the supervisor and leave action on the report, or note, with them.
REPORTING PROCEDURES
Every crash must be reported to your supervisor. There are no minor crashes involving a school bus!

Remember the information you need for your crash report:

- School bus ID number;
- Driver’s name, address and driver’s license number;
- Date, time, weather, and direction of travel;
- Damage to vehicle;
- Name of owner of other vehicle or property, address, license number, make and model of vehicle, and damage to other vehicle;
- Injuries to persons involved, their names, addresses, extent of injuries;
- List of passengers on the bus and in other vehicle(s);
- Names and addresses of passengers in other vehicles;
- Name of insurance companies involved;
- Name of police at scene; and
- Diagram of crash scene.

In addition to any local crash reports, the owner or operator of any school bus involved in a crash is required by state law:

- Within 24 hours, to report the crash to the chief school administrator or the authorized representative of the school district, private school, or parochial school that either employs or contracts the service of the owner or operator.
- Within five days, School Bus Crash Report (DL-739) must be completed whenever there is any injury or property damage, regardless of how slight. Complete the form even when students aren’t on the bus at the time of the crash. After completing the form, submit it to PennDOT. You should check with your employer and school district regarding who will fill this form out. In some cases, the driver will fill this out, in others, the safety director.

Incident Reporting
Because of the possibility of liability suits, drivers are responsible for reporting all incidents occurring in or around their buses during their runs. Remember, your passengers are your first responsibility in any incident. You should report all incidents to your supervisor. He or she will take any appropriate action, if necessary.

MECHANICAL FAILURE OR BREAKDOWN
In the event of a mechanical breakdown, know what to do, how to do it and when it should be done.

The following is a suggested procedure:

1. Stop the bus as far to the right of the road as possible or on the shoulder of the road;
2. Keep the students on the bus. However, if the location of the bus is unsafe, evacuate the students to a safer location (see evacuation procedures in the next section);
3. Activate hazard warning lights and place warning devices on the highway (see the section on using emergency equipment later in this unit);
4. Contact the proper school authorities and give the location of the bus and a description of the breakdown; and
5. See that arrangements are made for all students to be delivered to their destination.
**Evacuating the Bus**

Point out that in most cases, students should remain on the bus. There are four situations in which students should be evacuated from the bus.

**Q:** What kinds of situations might force the evacuation of a bus?

**A:** The four situations are:

- Existing or imminent smoke or fire condition.
- Presence of hazardous materials.
- Unsafe position.
- Bus submersion or immersion.
EVACUATING THE BUS

In certain crash and emergency situations, you may need to evacuate the students from the bus. You should know when to evacuate the bus and the procedures for evacuating a bus. These procedures are practiced in required evacuation drills. In any situation requiring evacuation, remain calm and take charge of the situation. As the bus driver, YOU are the leader. Review procedures below for guidance in situations where you are incapacitated.

WHEN TO EVACUATE

Usually, students remain on the bus during an emergency. Four situations, however, require that you evacuate the bus — existing or imminent smoke or fire condition, presence of hazardous materials, unsafe position of the bus, or vehicle submersion or immersion.

Existing or Imminent Smoke or Fire Condition

Stop the bus and evacuate it immediately, if the engine or any portion of the bus is smoking or on fire. An existing fire near the bus or the presence of gasoline or other combustible material is considered as “danger of fire.” Evacuate students as described below.

- Evacuate students through the door farthest from the fire or potential source of fire;
- Evacuate students closest to the danger first;
- Give the students a specific location to go to that is far away from the bus but still within your visual range; and
- Give clear, concise and EXACT instructions.

Presence of Hazardous Materials

If any hazardous materials are present in or near the bus, evacuate the students. This includes vapors or fumes, which may enter the bus from outside sources and may be dangerous to the passengers.

Unsafe Position

In the event the bus is stopped due to a crash, mechanical failure, road conditions, or human failure, determine immediately whether it is safer for the passengers to remain in the bus or to evacuate. You must evacuate when:

- The final stopping point of the bus is in the path of any train or adjacent to any railroad tracks.
- The position of the bus might change and increase the danger. For example, evacuate if a bus comes to rest near a body of water or cliff where it could still move and go into the water or over the cliff.
- The location of the bus creates the danger of collision. In normal traffic conditions, the bus should be visible for a distance of 300 feet or more. A position over a hill or around a curve where such visibility does not exist should be considered reason for evacuation (see Figure H-2).

Bus Submersion or Immersion

In the very unlikely event the bus has driven off of the roadway and into a body of water and is submerged or immersed, evacuate students out of the nearest most usable exit.

In all these cases, carry out the evacuation as safely as possible.
Instructor Notes:

**Evacuation Drills**

Pages H-15 through H-18 provide step-by-step instructions for conducting evacuation drills. If your school district has other or additional drills, make sure you conduct those as well.

Emphasize that careful, orderly movement is faster than rushing. Not only do bus operators need to learn this, but their student passengers need to learn it as well. The best way to learn this is with practice.

Q: What is the main objective of an evacuation?
A: Getting students off the bus safely, quickly, and in an orderly fashion.

Q: What door is the best for evacuating students from the bus?
A: The one that is not blocked. Evacuation drills should be performed for several scenarios, using the front door only, rear door only, and both doors.

Emphasize to the trainees that in a real emergency, they might be incapacitated and unable to direct the student emergency evacuation. During the drill, be sure to review procedures with students so that they know what to do if you are unable to help.

Don’t assign a student as a leader without written consent from a parent or legal guardian. There may be concerns expressed by parents that an operator would ask their child to take on a position of leadership in the event of an emergency, which is why written consent is necessary. This is the responsibility of the school district, not the bus operator.

NOTE: While evacuation drills are required by law and practiced by operators to ensure that events can go relatively smoothly and safely in the event of a real emergency, safety during the drills is also of paramount importance. There have been incidents of serious injury to operators while conducting the drill. Be sure your bus is in a safe location and all drills are completed with safety as the top priority.

Remember, if you do evacuate, keep your students together!
EVACUATION DRILLS

In an emergency, the students may panic and rush to the exit causing the emergency door to become jammed by everyone trying to get out at the same time. So that students know what to expect during an evacuation, State law requires each student who is transported in a school bus to participate in emergency evacuation drills in the first week of school and in March of every school year. This includes all students even if they may only ride a bus on special trips. In fact, drills should be conducted more frequently. While state law does not require evacuation drills for school vehicles, they are highly recommended as a matter of safety preparedness for both students and drivers alike.

Everyone involved in drills should keep these points in mind:

- Safety of the students is of the utmost importance and must be considered first. Getting them off of the bus safely, quickly and in an orderly fashion is the objective.
- All drills should be supervised by the principal or by persons assigned to act in a supervisory capacity and held on school property. You are responsible for conducting the drill in an organized manner.
- In a real emergency, you might be incapacitated and unable to direct the student emergency evacuation. During the drill, be sure to review procedures with students, so they know what to do if you are unable to help. Don’t assign a student as a leader without written consent from a parent or legal guardian.
- During the drill, students should be instructed how and where to get help if the driver is unable to do so. Instructions and telephone numbers should be posted or otherwise carried in the bus. Students should be instructed to enlist several bystanders to go for help, since some of those asked might not want to get involved in the situation.
- Students should be instructed on how to use the radio, and the location of emergency equipment on the bus.
- Follow local policies in conducting evacuation drills and emergency procedures.
- Explain to all passengers the procedures to be followed if an evacuation is necessary. The following recommended procedures may be adapted to your local situation.

Front Door Evacuation Drill

In the interest of safety, all drivers should regularly conduct an emergency evacuation drill through the front door with each bus load of students, when they unload at school (see Figure H-3).

Follow these steps:

1. Stop the bus at the normal unloading location or pre-selected location on the school grounds;
2. Set parking brake, turn off engine and remove ignition key;
3. In buses with a manual transmission, select either the first gear or reverse position. In buses with automatic transmissions, select either the park position or neutral with the parking brake on;
4. Stand, open the front door, face the students, and get their attention;
5. Tell them, “Do what I say — remain absolutely quiet”;
6. Then say, “Front door emergency evacuation drill—remain seated”;
7. Direct two student helpers (appointed at the beginning of the year or each month) to their positions. Assign one helper to lead the students to a designated location away from the bus where the students quietly remain in order. Assign the other helper to stay outside the front door to count and assist passengers as they leave;
8. Instruct students to leave all belongings such as books and lunch containers on the bus and tell them they can be retrieved after the drill is completed;
Instructor Notes:

**Front Door Evacuation Drill**

When using Figure H-3 to set up your evacuation drill, keep in mind that students in seats 1 and 2 are the first out of the bus (not students in seats 21 and 22), and then walk the furthest away. Students in seats 3 and 4 follow, and so forth until the bus is evacuated. At no point do students pass each other, which could lead to panic and a rush for the door.
9. Turn and face the front of the bus, standing between the first row of occupied seats;
10. Starting with the right-hand seat, tap the shoulder of the student nearest the aisle to indicate that those occupants should move out. Say, “Walk — don’t run. Use hand rails.” At the same time, hold your hand before the occupants in the left-hand seat in a restraining gesture;
11. When the students in the right-hand seat have moved far enough to clear the aisle, dismiss the occupants of the left-hand seat;
12. Continue this procedure as described, right and left seats alternately, until the bus is empty;
13. When the last seat is empty, walk to the front of the bus and check to be sure everyone is out;
14. Leave the bus and take the helper at the front door with you and join the passengers and the other helper;
15. Evaluate the evacuation drill, pointing out improvements needed and commending students on activities well done;
16. Have students return to the bus in an orderly manner to retrieve their belongings before entering the school. Have students who are to continue to another school remain on the bus, and proceed on your route; and
17. Complete any reports as required by local policy.

Rear Emergency Door Evacuation Drill
The rear emergency door evacuation drill should be practiced as often as possible with elementary and secondary students (see Figure H-4). In some cases, the rear emergency door evacuation drill may be used for demonstration purposes only and not practiced by students in order to prevent unnecessary injury performing the drill.

1. Follow steps 1-3 of the Front Door Evacuation Drill;
2. Stand facing the students, get their attention and tell them, “Do what I say — remain absolutely quiet”;
3. Then say, “Rear door emergency evacuation drill — remain seated”;

Figure H-3. Front Door Evacuation

<table>
<thead>
<tr>
<th>Designates Helper</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 20 18 16 14 12 10 8 6 4 2</td>
</tr>
<tr>
<td>21 19 17 15 13 11 9 7 5 3 1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

100 Feet

Rear Emergency Door Evacuation Drill
The rear emergency door evacuation drill should be practiced as often as possible with elementary and secondary students (see Figure H-4). In some cases, the rear emergency door evacuation drill may be used for demonstration purposes only and not practiced by students in order to prevent unnecessary injury performing the drill.

1. Follow steps 1-3 of the Front Door Evacuation Drill;
2. Stand facing the students, get their attention and tell them, “Do what I say — remain absolutely quiet”;
3. Then say, “Rear door emergency evacuation drill — remain seated”;

Figure H-3. Front Door Evacuation

Designates Helper

100 Feet

1 3 5 7 9 11 13 15 17 19 21
2 4 6 8 10 12 14 16 18 20 22
Instructor Notes:

Rear Door Evacuation Drill
Similar to the Front Door Evacuation Drill. When using Figure H-4 to set up your evacuation drill, keep in mind that students in seats 21 and 22 are the first out of the bus (not students in seats 1 and 2), and then walk the furthest away. Students in seats 19 and 20 follow, and so forth until the bus is evacuated. At no point do students pass each other, which could lead to panic and a rush for the door.
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4. Instruct students to leave all belongings such as books and lunch containers on the bus and tell them they can be retrieved after the drill is completed;
5. Walk to the rear of the bus and face rear door;
6. Use left hand to restrain occupants of right rear seat;
7. Open the rear emergency door;
8. Assign two helpers to sit in the left rear seat. Have the helpers exit out the rear emergency door. Assign the helpers to assist passengers getting out of the bus: one helper assists the passengers as they exit the bus, and the other leads passengers to a designated location away from the bus where they remain quietly in order;
9. Face the doorway and move between the left rear seats to clear the aisle;
10. Instruct students in right rear seats to leave the bus. Have them assume a semi-squat position as they exit the bus. Instruct helpers to grasp a passengers’ wrist or forearm with one hand and to place their other hand under a passengers’ shoulder as the passenger exits the bus. Caution students not to bump their heads when leaving through the rear door;
11. Tell students in the next left seat to leave the bus. Keep control at the rear door to prevent any pushing or shoving. Students who are injured, disabled or in a condition that may be aggravated by exiting out the rear door (e.g., overweight, pregnant) should not be required to participate in the drill. They should leave the bus with the driver through the front door and join the other students when the drill is completed;
12. Continue the above procedure, alternating left and right seats until the bus is empty;
13. When the last student has exited, walk to the front of the bus and check to make sure everyone is out; and
14. Join the students and conclude the drill as described in steps 15-17 of the Front Door Evacuation Drill.

Figure H-4. Rear Door Evacuation

Designates Helper

100 Feet

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H-17
Instructor Notes:

**Front and Rear Door Evacuation Drill**
Similar to the Front and Rear Door Evacuation Drills described above, when using Figure H-5 to set up your evacuation drill, keep in mind that students in seats 1 and 2 (front door) and 21 and 22 (rear door) are the first out of the bus. They walk the furthest away. Students in seats 3 and 4 (front door) and 19 and 20 (rear door) follow, and so forth until the bus is evacuated. At no point do students pass each other, which could lead to panic and a rush for the door.
Front and Rear Door Evacuation Drill
A combination of the procedures used for the front door and rear door evacuations also can be used for an evacuation drill in which students leave the bus through the front and rear doors (see Figure H-5). Procedures for the front door evacuation are used for students in the front half of the bus; and procedures for the rear door evacuation are used for students in the rear half of the bus. The only exception to using these procedures as described above would be the command given at the beginning of the drill: “Front and rear door emergency evacuation drill — remain seated.” In a real emergency, this type of evacuation would require the shortest amount of time to get the passengers off of the bus. However, it is dependent upon both doors being available for safe evacuation. This drill should be used for elementary and secondary students. Student helpers should be properly instructed on how to assist students out of the rear of the bus. Helpers should reach up and lift students down as they exit the rear emergency door. Again, this drill may be performed as a demonstration only.

Figure H-5. Front and Rear Door Evacuation

Other Emergency Evacuation Procedures
In an actual emergency, it might be necessary to evacuate students through the bus windows or roof vent. Maintain order as much as possible in these situations and work to evacuate all passengers as quickly and safely as possible. Before leaving the bus, you should always check under all seats to make sure no students are on the floor. This applies to all types of evacuations. Also keep in mind the fastest way to evacuate the bus may be to have half the students exit through the front door and half through the rear, if feasible.
Instructor Notes:

**Use Emergency Equipment**

Emphasize the need for trainees to learn about the bus’ emergency equipment before an emergency. Trainees need to know:

- The kinds of equipment on the bus.
- The location of each piece of equipment.
- How to use each piece of equipment.

Refer to the Parked Bus Unit in the Instructor’s Manual, and try to have portable emergency warning devices, pry bar, and fire extinguisher at the training.
UNIT H - Crash and Emergency Procedures

USING EMERGENCY EQUIPMENT

When an emergency or crash happens, it’s too late to learn how and where to use emergency equipment. All school buses are required to carry the following:

- First Aid Kit;
- Portable emergency warning devices (at least three portable emergency reflective triangles);
- Pry bar;
- Fire extinguisher;
- List of student names with their assigned pick-up and delivery times;
- Spare electrical fuses unless the bus has circuit breakers;
- Seat belt cutter (also known as a web cutter) is required in every school bus equipped with passenger seat belts; and
- Body Fluid Clean-Up Kit.

You should know the location and operation of this equipment. The use of emergency devices is discussed below. The First Aid Kit is discussed in Unit I.

PORTABLE EMERGENCY WARNING DEVICES

Buses in service are equipped with at least three triangular reflectors, which serve as warning devices as per Section 171.83 of Title 67. They are encased in a container in the driver’s compartment. You will use three reflectors to warn oncoming vehicles of a disabled bus as per Section 167 of Title 67. Older buses may be equipped with round reflectors, red flags, or flares, which should be placed according to the procedures given below for reflectors (see Figure H-6). Use of flares is not recommended unless placed by first responders.

1. **First Reflector** – Place the first reflector along the roadway side of the bus within 10 feet of the front or rear corner to mark the location of the bus.

2. **Second Reflector** – Place the second reflector about 100 feet behind the bus on the shoulder or lane you are stopped in. If there is a hill or curve preventing oncoming traffic from seeing the bus, place the reflector up to 500 feet behind the bus.

3. **Third Reflector** – Place the third reflector about 100 feet in front of the bus again using greater distances if conditions warrant.
PRY BAR
The pry bar is located close to the driver’s compartment as per Section 171.65 of Title 67. Use it to pry open doors, windows or other parts in the event of a crash where damage to the vehicle prevents easy exit by normal means.

FIRE EXTINGUISHER
A portable fire extinguisher must be located in an accessible location in the driver’s compartment of every school bus as per Section 171.51 of Title 67. Fire extinguishers work by either cooling the burning substance or by cutting off the supply of oxygen to it. Before using a fire extinguisher, make sure it is properly charged. A gauge is mounted at the top of the extinguisher to indicate it is fully charged. If the needle on the indicator stays in the charged area, the extinguisher is properly charged. If the needle is in the overcharged or undercharged areas, report it to your mechanic. This should be checked as part of your pre-trip inspection (refer to Unit E).

Only try to extinguish a fire, if you know what you are doing and it is safe. Your first priority is to evacuate all students and quickly get them somewhere safe. Do NOT waste your time fighting a fire when you need to get students off the bus.

If you do have to fight a fire, here are a few tips:

**Engine Fires** – With an engine fire, turn off the engine as soon as you can. DO NOT open the hood, if you can avoid it. Aim extinguishers through louvers, radiator or from the underside of the vehicle.

**Other Fires** – Only try to extinguish a fire, if you know what you are doing and it is safe:
- If possible, stand upwind from the burning material to prevent standing in smoke and heat;
- Do not walk into unburned material that could catch fire in a back flash and cause injury to you;
- When using the extinguisher, stay as far away from the fire as possible;
- Point the fire extinguisher at the base of the fire and use a sweeping motion. Do not aim the extinguisher at the flames;
- Position yourself upwind. Let the wind carry the extinguisher to the fire rather than carrying the flames to you; and
- Continue until whatever was burning has been cooled. Absence of smoke or flame does not mean the fire is completely out or cannot restart.

**To operate a fire extinguisher:**
1. Remove it from the bracket;
2. Pull the safety pin by breaking the seal;
3. Hold it in an upright position;
4. Aim it at the base of the fire;
5. Squeeze the handle to discharge the extinguisher; and
6. Squeeze and release as necessary to control the fire.

The extinguisher will only last approximately eight seconds. No matter how much you use it, you must recharge the fire extinguisher or replace it with a substitute before the next run.

These instructions are applicable to most fire extinguishers, but you should check and be familiar with the instructions for the extinguisher on your bus. You should try to have actual hands-on use of the fire extinguisher during training.
Instructor Notes:

**Seat Belt Cutter**

While most seat belt cutters are limited use (use only when necessary), these can be an invaluable resource in an emergency.
LIST OF STUDENT NAMES
Every bus must have a list of names for all students who ride the bus and the appropriate pick-up and delivery time for each student. This list can be used to account for the students in an emergency. Although not required, a seating chart for students on the bus is strongly recommended. It can also be helpful in emergency situations.

SPARE ELECTRICAL FUSES
All buses should carry the proper spare electrical fuses in case a fuse is blown. The location of these varies by bus type and manufacturer. If the bus is equipped with circuit breakers, this is not necessary.

SEAT BELT CUTTER
If your school bus is equipped with one, the seat belt cutter will be mounted in a visible location in the driver's compartment. See Figure H-7.

OPTIONAL EQUIPMENT
Although not required, the following equipment may be carried on every school bus, especially those used to transport students with disabilities. This is not an all-inclusive list.

- Vomit odor absorbent, basin or pail (water in jug), sponge, and plastic bags;
- Tissues and paper towels;
- Plastic or other waterproof material for seats;
- Blankets and sheets to use as protection in cold weather;
- Sand or other substance for traction on ice; and
- Clean rags, gloves, or pads for motor check-up en route in case of suspected trouble.

These all must be securely fastened in the vehicle and not blocking the aisle way.
**School Bus Security**

Unfortunately, security from terrorist threat has become part of the school bus operators concern. Emphasize that the very same actions and procedures school bus drivers use to assist with bus maintenance and student safety, generally, are also the same activities and procedures useful for vigilance against potential attack. The specific characteristics to look for in the checklists on pages H-22 and H-23, can be checked during the morning walk-around and in-bus checks. The vigilance employed at bus stops for unusual activity helps protect against terror attacks, as well as more common criminal activity.
SCHOOL BUS SECURITY

WHY SCHOOL BUSES CAN BE TARGETS
1. They are relatively unprotected and vulnerable;
2. They have predictable routes and schedules;
3. They have the potential for a large number of casualties;
4. There are schools all over the nation;
5. They have unquestioned access to high-value destinations;
6. They represent an emotional target; and
7. The effects of a terrorist attack on school buses would be demoralizing.

SCHOOL BUS DRIVERS
You, as a school bus driver, are the eyes, ears and protectors of your communities the same as the Neighborhood Watch Program. You know your routes and know what is usual and unusual. Therefore, you need to be informed on how to react in security-related situations.

1. Learn state and school district security guidelines;
2. Be aware of suspicious activity or behavior in areas around school buses, school bus facilities and schools;
3. Notice and report any unusual conditions of vehicles, those belonging to the school district and those vehicles that may enter into parking lots or facilities. Pay attention to suspicious people or vehicles in the school bus area outside a school or at school bus stops;
4. Be vigilant with respect to strange packages, items or substances, which are brought on or around school buses;
5. Know who your supervisory contacts are in the school district and have their phone numbers immediately available;
6. Recognize threats and how to properly handle them;
7. Learn emergency operating plans and procedures, and stay familiar with the operation of emergency equipment. For example, remove keys from the ignition when your bus is unattended;
8. Inspect your bus whenever you have left it unattended for any length of time; and

CHARACTERISTICS OF SUSPICIOUS ITEMS
1. Items that are abandoned or hidden in an unusual place;
2. Items having leaking gas, vapor, odor, or suspicious substance, including excessive grease;
3. Any items containing exposed wires or timer;
4. Any items having an attached message with a threatening note or suspicious markings; and
5. Any canister, propane style tank, metal box, bottle, or out of place items.
UNIT H - Crash and Emergency Procedures

SCHOOL BUS SAFETY AND SECURITY CHECKLIST
You need to be vigilant when checking the following items in a pre-trip inspection, or anytime you have left the bus unattended for any length of time.

1. Seats: Look for lumps, bulges, damaged upholstery, and any suspicious packages on a seat;
2. Floor Surface: Look for modifications to material/unusual thickness;
3. Passenger Compartment: Smell for strange odors, raised floor, unusual welds, unusual items, or excessive weight;
4. Exterior Surface: Look for missing screws, unusual scratches, welds, signs of tampering, or recent paint;
5. Undercarriage: Look for items taped or attached to the frame or fresh undercoating;
6. Engine Compartment: Look for odd wires or liquids, unusual welds or new tape;
7. Tires: Look for unusual odor from air valve;

IDENTIFYING SUSPICIOUS BEHAVIOR OR ACTIVITIES
Suspicious activities are anything you may feel is unusual or out of place. In addition, pay particular attention to the following:

1. Anyone appearing interested in school facilities, vehicles or their surroundings;
2. Anyone who has been sighted within a school, or school bus stop numerous times;
3. Anyone who has put a package in a public place and left quickly;
4. Anyone soliciting information on school facilities, buses or schedules;
5. Anyone taking pictures or videotaping areas of school bus facilities, schools or school bus stops;
6. Anyone looking lost or wandering around at school bus stops or school grounds, or anyone who seems to be somewhere they are not supposed to be;
7. Anyone showing disruptive or potentially distracting behavior; anyone showing an unusual interest in employees or students, the school or school bus locations; anyone wearing a uniform who appears to not be part of the setting;
8. Anyone wearing clothing that is not appropriate for the weather;
9. Any person possessing a weapon or dangerous item; and
10. Using a vehicle in a suspicious way (illegally parked, erratic driving, following).

Reporting Suspicious Items and Unusual Activities

1. Remain alert and calm. Be as observant as possible, paying attention to the location of the item or device;
2. IMMEDIATELY report suspicious items and behavior to your dispatcher or local authorities. If you suspect a serious situation, call 911 right away;
3. Be able to report the location, color, year, make, model, and license plate number. Be sure to include the direction of any suspicious vehicles;
4. Never touch a suspicious item. You need to move as far away as possible and be aware you could be injured by flying glass or debris; and
5. DO NOT USE your radio or cell phone within 300 feet of the timer or device.

YOU CANNOT IDENTIFY SUSPICIOUS BEHAVIOR BASED ON STEREOTYPES OF RACE, COLOR OR ETHNICITY.
Instructor Notes:

**Hostage Awareness**

Carefully go over the lists on page H-24 and H-25. Emphasize that student passengers may look to the bus operator for behavioral cues. Demonstrate a calm, cooperative attitude, even submissiveness, and recognize that the event extending over a longer period of time is to the advantage of a peaceful resolution.
HOSTAGE AWARENESS

EMOTIONAL STAGES
If you find yourself in a hostage situation, you need to understand the feelings you will experience:

1. **Denial**: It is common for the victim to feel that “this can’t be”, “this is not happening to me,” or “it is just a joke.”
2. **Belief of immediate rescue**: Do not mislead yourself by thinking you will be rescued right away. It is to your advantage for the situation to take time to resolve. There is more of an opportunity for negotiation with the captor, which can lead to a peaceful resolution; and
3. **Loss of immediate reality**: Make a determined effort to stay focused. Avoid the temptation to let your thoughts center around your family/loved ones, and what might become of them if something should happen to you.

THINGS “TO DO” IN A HOSTAGE SITUATION

1. **Bond with your captor**: Try to relate to them and build a relationship of understanding and sympathy;
2. **Be human**: Do not allow the captor to view you as an object instead of a person. Let your captor know you are a father or mother and there are people who depend on you, even if there are none. Avoid having your face covered. This dehumanizes a person;
3. **Take mental notes**: Without being obvious to the captor, note hair color, any scars, tattoos, or other identifying marks. Estimate height and weight;
4. **Expect to be arrested**: Law enforcement personnel will detain everyone until identification can be verified. Captors have exchanged clothing with hostages in an effort to escape. Your district will have officials on the scene to identify you;
5. **Keep a low profile**: Speak only when spoken to; do not initiate conversation;
6. **Think pleasant thoughts**: The incident could go on for hours. Avoid falling into depression, and remain confident you will be released;
7. **Remain strong for your students**: Even though you may have had a difficult time with the students all year, they will look to you for leadership in an emergency. If you maintain your composure, it will help them to do the same; and
8. **Remember you are a primary witness for investigators**: It is vital you write down everything that occurred during the hostage situation from onset to resolution. Do this as soon as possible while the events are still fresh in your mind. Do not speak to the media. Your district officials on the scene should shield them from you. Follow district policy regarding any future media contact.

THINGS “NOT TO DO” IN A HOSTAGE SITUATION

1. **Do not make any threats**: Remember the captor is holding you against your will with some type of weapon. Do not behave, or speak in a manner that may be perceived by the captor as threatening;
2. **Do not stare or glance at your captor**: Keeping your eyes down will give the appearance of submission. Do not appear aggressive in your body language or facial expressions;
3. **Do not interfere**: Do not volunteer to assist the captor in any way. Do not interfere with the actions of the captor. For instance, he/she may be irritated with crying students and strike the students to quiet them. Remember you are being held at gun/knife point. Challenging the captor will increase the risk of further harm to yourself and/or the students;
Instructor Notes:

At the end of this unit, go over each of the Review Questions provided in the Lesson Summary at the start of the unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion. For your convenience, the questions are listed again below.

1. What are some of the causes of skidding and how can you control them?
2. What procedures should you follow if a tire blows out?
3. What should you do if your bus loses its brakes?
4. Name several ways your visibility may be suddenly impaired?
5. List the options you have when an obstacle appears in your path?
6. What are the rules to remember if your bus is involved in a crash, represented by the word KNOW?
7. What are the first actions you should take in a crash?
8. What information should be given to the emergency personnel when requesting assistance?
9. What should you do if a mechanical breakdown occurs?
10. Under what circumstances must you evacuate the school bus?
11. List the procedures for conducting each type of evacuation drill.
12. Where should the reflectors be placed in an emergency?
13. How should a fire extinguisher be operated?

Consider using the Case Studies provided earlier in this unit.
UNIT H - Crash and Emergency Procedures

4. **Do not negotiate for your own release:** Only the police will conduct negotiations. If you involve yourself, you may jeopardize a peaceful resolution to the hostage situation;

5. **Do not negotiate for the release of the students:** Do not make offers or promises of money or possessions in exchange for the release of the students. Only the police can negotiate; and

6. **Do not be arrogant:** Give the captor whatever they want. Do not resist. It could result in harm to yourself and/or the students.

**TIPS TO HELP YOU IN A HOSTAGE SITUATION**

1. **Help keep the peace:** Prevent anyone from getting hurt. Consider your actions, so as not to put yourself or your passengers at risk;

2. **Be patient:** If you as the driver show patience, then your students will be more prone to follow your lead;

3. **Remain calm:** Try not to show fear, the students are looking to you as an example;

4. Know that 99 percent of all situations are resolved through negotiations: **Negotiations may take time, but remember time is on your side;**

5. **Do not be confrontational:** Don’t be a hero, unnecessary harm to you or your passengers may result from your actions;

6. **Communicate:** If possible, try to make your location and situation known as soon as possible, if the hostage taker has not made contact. (Microphone keyed open);

7. **Be a good witness:** Make a mental picture of the hostage-taker(s) and any weapons. The driver preferring to stay with their students may not have the choice. This information may be vital for the police in determining the next move to help the remaining hostages;

8. **Attempt to get along:** You should cooperate with your captor and do as you are told. Comply with reasonable demands, but the key is not to offer help;

9. **If the police try to enter the bus:** Try to avoid giving away police positions or actions, by your actions or facial expressions. Captors could pickup on them. Be prepared for loud noise and follow instructions quickly;

10. **Help avoid getting caught in a hostage situation:** Report any suspicious person immediately. Do not wait for something to happen or get out of control;

11. **Call the police:** This is the best action a driver can do. Avoid becoming caught in the situation before it occurs; and

12. **Know your passengers:** Knowing your passengers and their needs can be vital in such emergencies. Their medical needs may allow for you to communicate with emergency medical personnel in a hostage situation.
UNIT I LESSON SUMMARY
STUDENT EMERGENCIES

INSTRUCTOR’S PERSPECTIVE
The role of school bus driver requires an ability to recognize and manage emergency situations. Emergencies are not common, which makes preparation for them all the more challenging. School bus drivers typically do not have the chance to develop practiced responses to real emergencies. So, the role of school bus drivers during an emergency is necessarily limited to managing and stabilizing a scene until first responders arrive. This unit will assist trainees with recognizing their role in an emergency, help them develop assessment skills which can contribute to their ability to stabilize a scene, and learn to discern what emergencies are manageable by the driver alone and what emergencies require professional assistance.

FOLLOW YOUR LOCAL SCHOOL DISTRICT PROCEDURES AND GUIDELINES REGARDING RECEIVING FIRST AID TRAINING AND ADMINISTERING FIRST AID ON YOUR SCHOOL BUS.

TRAINEE OBJECTIVES
1. Be able to describe his or her role in providing first aid in the event of a severe illness or injury to a student on their bus.
2. Be able to demonstrate good assessment skills in setting priorities when encountering a medical emergency while transporting students.
3. Be able to describe the required contents of the first aid kit and Body Fluid Clean Up Kit carried on the school bus, and procedures for keeping them properly stocked.

LOCATION
Classroom

DELIVERY MODE
Lecture and discussion

MATERIALS
• Classroom Aids - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker, PowerPoint presentation, first aid kit carried on-board school bus, Body Fluid Clean-Up Kit carried on-board school bus.
• Handouts - Unit I Study Guide and Pennsylvania Department of Health EMS Information Bulletin #051.

RESOURCE PERSONNEL
A certified first aid and Cardio-Pulmonary Resuscitation (CPR) instructor may assist as a resource for various sections of this Unit. If an instructor is available, they should be properly briefed regarding intent, scope, and time allotted for this Unit. The instructor should keep in mind that this is not a course that will certify drivers in emergency care by the American National Red Cross, the American Heart Association, or a course approved by the Pennsylvania Department of Health.
SUMMARY AND REVIEW QUESTIONS

• Summary - This unit should receive emphasis during in-service courses, as well as pre-service courses, due in part to the importance of the subject, and due in part to the infrequency in which school bus drivers are challenged with real emergencies. Emphasize that the driver’s primary responsibility is to manage an emergency scene, which means assessing the situation, calling for professional help if needed, moving students to a safe place, and stabilizing the scene until necessary help arrives.

• Review Questions
  1. What is the “Good Samaritan Act”?
  2. What are some of the factors you must consider in an emergency where one or more students are injured?
  3. Name specific hazards that could make an emergency situation worse.
  4. What information should be given to emergency personnel when you call for help?
  5. If you are certified in first aid, what should be your first actions following a crash?
  6. What is your main concern when a student is having a seizure?
  7. What signs might indicate a fractured bone?
  8. What should you do for a student in anaphylactic shock?
  9. What is the procedure for assisting a student who is choking?
 10. What are some of the items required to be in the first aid kit on every bus?

REFERENCES

PennDOT Publications

Laws and Regulations
  • Pennsylvania Code – Transportation (Title 67), Key Chapter is Chapter 171: http://www.pacode.com/secure/data/067/067toc.html
  • Pennsylvania Good Samaritan Act, Public Law 697, Number 122: http://www.concentric.net/~Maxfax/files/law2.htm

Form and Certificates
  • Pennsylvania Department of Health EMS Information Bulletin #051: http://www.dsf.health.state.pa.us/health/lib/health/ems/bulletin/emsib_51_state_recognized_cpr_programs.pdf

Other
  • Local regulations and/or procedure guides, if available
1. INTRODUCTION
   A. Contact your employer for a copy of your school district’s guidelines and procedures for handling student emergencies.
   B. THE INFORMATION CONTAINED IN THIS UNIT IS ONLY GENERAL GUIDELINES. YOU MUST FOLLOW YOUR LOCAL SCHOOL DISTRICT PROCEDURES AND GUIDELINES REGARDING RECEIVING FIRST AID TRAINING AND ADMINISTERING FIRST AID ON YOUR SCHOOL BUS.
   C. FIRST AID AND EMERGENCY CARE ARE ONLY TEMPORARY STEPS TAKEN UNTIL MORE ADVANCED TREATMENT CAN BE OBTAINED, EITHER AT THE SCENE OF AN INCIDENT OR AT A HOSPITAL.
   D. The first priority for a crash or sudden illness is to keep the situation from getting worse until professional assistance arrives.
   E. Drivers need to be able to control hazards, evaluate injuries, enlist others’ help, contact emergency medical services, control non-injured students, and control access to your students.
   F. This unit offers basic information. Further certification is strongly recommended.

2. MEDICAL LIABILITY
   A. The “Good Samaritan Act” MAY provide school bus drivers with protection from civil liability when rendering first aid or emergency care.
   B. The legal protection provided by Pennsylvania’s Good Samaritan Act requires that you be currently certified in emergency care by the American National Red Cross, the American Heart Association, or through a similar course approved by the Pennsylvania Department of Health.

3. FIRST AID PROCEDURES
   A. Report ALL incidents to your supervisor.
   B. Setting Priorities
      ✷ Hazards that could make the situation worse:
         • Existing or imminent fire,
         • Hazardous materials,
         • Unsafe site, or
         • Distractions.
      ✷ Obtain emergency medical assistance, if necessary.
         • Know what telephone number to call.
         • The exact location of the bus at the time of the call.
         • The number of people injured.
         • A description of the vehicles involved (in the case of a crash).
Use Responsible Helpers.

- Know your passengers.
- Adult bystanders.
- ONLY IN EXTREME EMERGENCIES SHOULD OLDER RESPONSIBLE STUDENTS BE SENT FOR HELP.
- FOLLOW LOCAL GUIDELINES AND PROCEDURES.

Assess the seriousness of injuries or illnesses.

- Prioritize injuries if more than one.
- Do not treat unless certified.
- Be organized and do one thing at a time.

Consider the safety of healthy, unharmed passengers.

Consider the driver's own safety.

C. Treatment Procedures.

Seizures

- Lay the student down, if not already on the floor.
- Cushion the student's head and remove dangerous objects.
- Monitor the student's airway.
- Do not put fingers or objects in the student's mouth during a seizure.

Fractures

- Any break or crack in a bone.
- Typically requires an X-ray to definitively diagnose.
- Fractures must be immobilized with a splint, or prevent the student from moving.
- Generally, fractures are not life threatening.
- If an extreme situation requires immediate removal of the student, drag them along the axis of their body on a coat or blanket.

Allergic Reaction: Bites and Stings

- Apply direct pressure over bitten area.
- Learn if student has allergies to stings or bites.
- Use cold compress, if available, to reduce swelling.

Allergic Reaction: Anaphylactic Shock

- Students may be able to tell the driver about the onset of symptoms.
- Allergic reactions can turn life-threatening quickly due to constricting airways.
- Student with known allergic conditions often carry medications.
- If no medications, seek professional assistance as quickly as possible.
- Follow local procedures regarding use of autoinjectors.
**Asthma**
- Can be life threatening.
- Students often carry inhalers.
- Sit a student having an asthma attack comfortably upright.
- Assist with inhaler, if necessary.
- Call for assistance if no inhaler, or inhaler is ineffective.

**Bites**
- One of the most common first-aid problems on a school bus.
- Clean the bites with an antiseptic wipe and cover with a band-aid.
- Report the incident to your supervisor.

**External Bleeding**
- Call for assistance for serious wounds.
- Take precautions to protect against bloodborne pathogens.
- Apply pressure to the wound with a sterile bandage.
- Raise and support the injured part above the level of the heart, if possible.

**Internal Bleeding**
- Internal bleeding requires expert medical help.
- Position a student with suspected internal bleeding on their back with legs elevated.
- Give nothing by mouth.

**Choking**
- Do not slap a choking student on the back.
- Check the choking student’s mouth for loose obstructions.
- Stand behind the choking student and wrap your arms around their waist.
- Make a fist and place the thumb side of the fist against the student’s abdomen slightly above the navel.
- Grasp the fist with the other hand and press the fist into the student’s abdomen with a quick upward thrust.
- Repeat until the student expels the obstruction.

**Dehydration**
- Prolonged dehydration can lead to shock and is potentially fatal.
- Drivers may see on afternoon runs.
- Give cool water to drink, if available.

**Diabetes**
- Students with diabetes may demonstrate hypoglycemia, a need for sugar.
- Drivers are not expected to give insulin injections or check blood glucose levels.
- Drivers may give a sweet drink, if available.
- Identify students with diabetes at the beginning of the school year, if possible.
- Be familiar with a student’s Quick Reference Emergency Plan.
Heat Stroke
• Potentially fatal.
• Give fluids and cool water.

Hyperventilation
• Stress-related or deliberate over-breathing.
• Reassure student.
• Remove cause of anxiety, if possible.
• If the student has fainted, lay student down with legs elevated.

Nose Bleeds
• Elevate the trunk of the student’s body.
• Tilt the student’s head forward and compress their nostrils for five to ten minutes.

4. REPORT ALL INCIDENTS
   A. Proper, timely reporting of incidents is important from a liability point of view.
   B. Observe students to determine if any long-term consequences from a crash or injury exist.
   C. Inform substitute drivers of any students’ medical problems on your route.

5. FIRST AID PROCEDURES
   A. State regulations dictate the content of your first aid kit.
   B. Your kit must at least contain the 10 items listed.
   C. The first aid kit must be in an accessible place and be able to be opened or removed without the use of a tool.
   D. The kit should be inspected each day, and items replaced as they are used.
   E. Body Fluid Clean Up Kits are required.
      ✦ ALWAYS protect yourself.
      ✦ Wear disposable gloves when cleaning up body fluids.
      ✦ Use paper towels followed by disinfectant for small spills.
      ✦ For larger spills use solution to solidify body fluids.
      ✦ Dispose of gloves when finished and place all clean up materials in a plastic bag.
      ✦ Be sure to wash your hands as soon as possible.
UNIT I - STUDENT EMERGENCIES

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INSTRUCTOR’S NOTES
Included below are several ‘prompt’ questions and notes corresponding to the text in the Driver’s Manual (Publication 117). These are meant to help stimulate discussion and to ensure that your trainees are retaining key information. The underlined title corresponds with the section in the driver’s manual on the opposite page. In some cases, additional descriptor text has been included after the title for more detailed topic depiction.

Introduction
Emphasize that the essence of the school bus driver’s responsibilities in an emergency is to keep the situation from getting worse until help arrives. How the bus driver accomplishes this is guided by school district policy and first aid training, if locally required or acquired.
UNIT I - STUDENT EMERGENCIES

INTRODUCTION

Part of your responsibility as a school bus driver requires you to be prepared to act appropriately in emergency and crash situations. Your actions in these situations can mean the difference between life and death for one or more of the students on your bus. Contact your employer for a copy of your school district’s guidelines and procedures for handling student emergencies.

CONTAINED IN THIS UNIT ARE ONLY GENERAL GUIDELINES. YOU MUST FOLLOW YOUR LOCAL SCHOOL DISTRICT PROCEDURES AND GUIDELINES REGARDING RECEIVING FIRST AID TRAINING AND ADMINISTERING FIRST AID ON YOUR SCHOOL BUS.

FIRST AID AND EMERGENCY CARE ARE ONLY TEMPORARY STEPS TAKEN UNTIL MORE ADVANCED TREATMENT CAN BE OBTAINED, EITHER AT THE SCENE OF AN INCIDENT OR AT A HOSPITAL.

You are not expected to be a paramedic; however, your company or district may require you to take First Aid courses, when available. Regardless, it is your responsibility to check the First-Aid Kit and Body Fluid Clean-Up Kit on a regular basis to assure it is present and sealed. Make sure to familiarize yourself with its contents and how each item is used. If you feel the medical emergency is beyond your knowledge, immediately call for emergency assistance.

First Aid is defined by the American National Red Cross as the immediate and temporary care given to the victims of crashes and sudden illness until the services of a physician can be obtained.

Emergency care is a process involving assessment, priority setting and continual reassessment. Other important aspects of emergency care include clearly describing what happened and knowing how to use the supplies and equipment used in performing this care.

Your top priority in the event of a crash or sudden illness is to keep the situation from getting worse until help arrives. You must perform only those emergency procedures for which you are properly trained, but remember your most important responsibility is to manage the overall scene until help arrives. In some situations, the time it takes for help to arrive may allow you to maintain the scene and provide emergency care to one or more injured persons. However, do not become so involved in specific problems you are unable to manage the entire scene. You need to learn procedures that will enable you to do the following:

• Control hazards at the scene;
• Evaluate injuries or illnesses;
• Enlist the help of others;
• Contact the emergency medical services system in your area;
• Maintain control of non-injured students during the crisis; and
• Control access to your students. Release students only to authorized persons. Keep students at the scene until evaluated.

While this unit provides a basic overview of emergency care procedures, local guidelines and procedures should always be followed.
MEDICAL LIABILITY
This Unit is intended as a guideline that informs school bus driver trainees about the kinds of emergencies to expect and prepare for. This is NOT a first aid course.

The Good Samaritan Act
The Pennsylvania Good Samaritan Act provides first aid providers with an exclusion from civil liability. That is, it essentially holds harmless for the well intentioned acts and omissions of those holding current certification in first aid training.

Obtaining first aid training is a personal decision, as well as one shaped by local policies and procedures. First aid training will prepare a school bus driver to respond appropriately, and it also addresses the issue of liability.
UNIT I - Student Emergencies

MEDICAL LIABILITY

THE GOOD SAMARITAN ACT
Anyone who gives First Aid should be concerned about their liability when emergency care is necessary. The basic legal principle, which most directly applies to you as a bus driver is the Good Samaritan concept. In Pennsylvania and many other states, specific legislation has been passed to provide first-aiders with an exclusion from civil liability. A copy of Pennsylvania’s Good Samaritan Act is reprinted here for your reference.

Figure I-1. Pennsylvania Good Samaritan Act

Pennsylvania Good Samaritan Act
Public Law 697, Number 122

Section 8332, Nonmedical good Samaritan civil immunity.

a) General Rule – Any person who renders emergency care, first aid or rescue at the scene of an emergency, or moves the person receiving such care, first aid and rescue to a hospital or other place of medical care shall not be liable to such person for any civil damages as a result of any acts or omissions in rendering the emergency care, first aid or rescue, or moving the person receiving the same to a hospital or other place of medical care, except any acts or omissions intentionally designed to harm or any grossly negligent acts or omissions which result in harm to the person receiving the emergency care, first aid or rescue or being moved to a hospital other place of medical care.

b) Exceptions –
   1) This section shall not relieve a driver of an ambulance or other emergency or rescue vehicle from liability arising from operation or use of such vehicle.
   2) In order for any person to receive the benefit of the exemption from civil liability provided for in subsection (a), he shall be, at the time of rendering the emergency care, first aid or rescue or moving the person receiving emergency care, first aid or rescue to a hospital or other place of medical care, the holder of a current certificate evidencing the successful completion of a course in first aid, advanced life saving or basic life support sponsored by the American National Red Cross or the American Heart Association or an equivalent course of instruction approved by the Department of Health in consultation with a technical committee of the Pennsylvania Emergency Health Services Council and must be performing techniques and employing procedures consistent with the nature and level of the training for which the certificate has been issued.

As you can see, the legal protection provided by Pennsylvania’s Good Samaritan Act requires you to be currently certified in emergency care by the American National Red Cross, the American Heart Association or, in a similar course, approved by the Pennsylvania Department of Health.

This unit is intended only to present some basic guidelines concerning your actions in a medical emergency; IT IS NOT A FIRST-AID COURSE. To meet the criteria described in the Good Samaritan Act, you need to successfully complete a course approved by the Pennsylvania Department of Health in consultation with the Pennsylvania Emergency Health Services Council (PEHSC) for Layperson and Good Samaritan.
FIRST AID PROCEDURES
First aid procedures can be divided into two areas: setting priorities and actual treatment procedures.

One of the most important skills that you can develop as a driver is the ability to assess everything that is happening in an emergency situation and develop a mental priority list of those situations that require immediate action.

You must be concerned with your own safety before you can help your students.

Setting Priorities
Q: In the event of a crash involving your bus, what are the potential factors you, as the driver, need to consider?
A: Hazards that could make the situation worse.
   Obtaining emergency medical assistance, if necessary.
   The seriousness of the injuries or illnesses.
   The safety of all healthy passengers.
   Your own safety.

Specific Hazards in an Emergency
There are specific hazards that the school bus driver must be aware:

- Fire – existing or imminent;
- Hazardous materials;
- Unsafe site; and
- Distractions.

Whenever possible and safe, keep passengers on the bus.
The following organizations offer approved courses:

- American Academy of Pediatrics
- American Red Cross
- American Safety and Health Institute
- Carey Program
- Coyne First Aid, Inc.
- EMS Safety Services
- Emergency First Care Program

- Hart Fitness Consulting
- Life Emergency Safety Training
- Medic First Aid
- National Safety Council of Western PA
- National Ski Patrol
- US Army, Department of Combat Medic
- Western PA Safety Council

It is recommended that you also refer to Pennsylvania Department of Health EMS Information Bulletin #051. This bulletin may be accessed via the following link:
http://www.dsf.health.state.pa.us/health/lib/health/ems/bulletin/emsib_51_state_recognized_cpr_programs.pdf

**FIRST AID PROCEDURES**

This section describes priority setting and procedures in emergency situations.

**SETTING PRIORITIES**

First Aid and emergency care are techniques applied to one or more victims of a crash or illness. As a school bus driver, you cannot focus all of your attention solely on the ill or injured student(s). You must consider many other factors including:

- Hazards that could make the situation worse;
- Obtaining emergency medical assistance, if necessary;
- The seriousness of the injuries or illnesses;
- The safety of all healthy passengers; and
- Your own safety.

**Hazard Control**

In Unit H (Crash and Emergency Procedures), you learned about many situations, which could affect the health and safety of everyone on your bus. Prevention and prompt action are the key elements in keeping minor emergencies from developing into serious problems. Remember what you have already learned about safely parking and evacuating the bus (if there is no other option), fire control and safety in maneuvering the bus.

**Specific Hazards in an Emergency**

Be aware of these hazards:

- **Existing or Imminent Fire** – Few crashes result in fire or explosion, but you must always be alert to the presence of combustible fuel and ignition sources. Electrical fires may also start in the engine compartment due to faulty wiring or conditions other than a crash;

- **Hazardous Materials** – Identify any chemicals, vapors or other toxic substances, which present a danger to you and the others involved. Refer to Unit E on Preventive Maintenance, which identify a few of these materials found in the engine compartment;

- **Unsafe Site** – If an injury or crash occurs, be sure to park the bus in the safest position possible to avoid another crash. If at all possible, get the bus off of the roadway; and

- **Distractions** – If other circumstances don’t prevent it, keep all passengers on the bus to make it easier to control them.
Instructor Notes:

**Obtaining Emergency Medical Assistance - Information to gather**
Q: Before calling for emergency medical assistance, what do you need to know?
A: You need to know (at a minimum):
   • Location of the incident;
   • Severity of the incident;
   • Number of persons injured; and
   • Relative severity of injuries.

Ascertain this information as quickly as possible so that an effective call can be made as soon as possible.

**Obtaining Emergency Medical Assistance - Calling**
Q: How are you going to call for help?
A: There are several options for calling for help:
   • Two-way radio in the bus;
   • Personal cell phone;
   • Student passenger’s cell phone;
   • Responsible bystander or bystanders.

Using a cell phone is a good choice if service is available, as emergency personnel can use the GPS signal from the cell phone to locate you if you are unable to give your location.

**Use Responsible Helpers**
Emphasize following school district policy with regard to using student helpers in an emergency situation. If policy allows, do so only in an EXTREME emergency. If appropriate to use student helpers:

   • Use older students.
   • Do not use elementary students.
   • If sending students for help or to call emergency services, send two together.

Q: If, in an extreme emergency, you did send high school students for help, why send two?
A: It increases the chances of sending correct information to first responders and also provides a small level of security for the students.
UNIT I - Student Emergencies

**Obtaining Emergency Medical Assistance**

Once hazards have been identified and controlled to the best extent, you need to get an idea of the nature of the crash, a rough estimate of how many students or others are injured, and the relative seriousness of their injuries. You should do this quickly and call for help, so it can get to the scene as soon as possible. Just about every school bus should be equipped with a two-way radio, and most likely there will be a cellular phone in your bus (your own or a student’s). You may need to use these to call for ambulance, rescue, fire, or police services.

If you don’t have one of these in your bus or if they have been damaged in a crash, or if you are in a “dead spot” with no service, calling for help can be more difficult. Who is going to make the call? Where will the call be made and what will be said? Since you should avoid leaving the bus and its passengers, you may need to identify a responsible bystander to make a call for assistance. Sometimes it’s a good idea to send two bystanders to call the emergency services system. This increases the chance an accurate call will be made. Sometimes the second person may provide a calming influence.

It may be helpful to use your cell phone to call 911 for help so that emergency personnel can pinpoint your location using GPS. When calling for help, give specific instructions concerning the items below. The following is a priority listing:

1. The exact location of or precise directions to your location;
2. The exact nature of the problem, illness or injury (to the extent possible);
3. The number of people injured; and

**Use Responsible Helpers**

It should be clear by now you have many areas of concern in an emergency situation. Adult bystanders and responsible students can be very important resources you may need to use. Knowing your passengers can be a big advantage, if you find yourself in a situation requiring immediate assistance. Make it a point to know the students on your bus. Selecting the right helper in an emergency is always difficult, but the more you know about your students, the better your chances are of making a good choice. **You should follow local School District procedures and guidelines when using student helpers in emergency situations. This is especially important when making the decision to send students to get assistance in an emergency. Do so only if local procedures and guidelines permit and the situation warrants it. Only in EXTREME EMERGENCIES should older responsible students be sent for help.**

Never send an elementary school student. You should also consider sending two students, rather than just one. This will increase their safety and security, they can support each other, and the chances of accurate information being passed on are increased. Ambulance crews often need the help of bystanders, so it is reasonable to think you might need help, too.
Instructor Notes:

### Treatment Priorities
Q: What are the two basic rules of setting emergency medical treatment priorities?
A: 1. If a person has multiple injuries, treat the worst injury first.
   2. If multiple people have injuries, treat the persons with the worst injuries first.

### Performing Triage
Q: If you are faced with many injured students, and you have to decide which are worse, what do you need to do before beginning treatment?
A: Assess every injured person. If you have more than two or three injured students, limit assessment time to 15 to 20 seconds each so that the assessments are done quickly and you can get to treating the worse as quickly as possible.

### Report ALL Incidents
Whatever happens, whether large or relatively minor, report all incidents to your supervisor/dispatcher!

### Quick Case Study
Q: You’ve been driving your bus on snow covered, slippery roads, and you’ve had a crash. No other vehicle was involved. You’ve evaluated the scene and found that no one is bleeding severely and no one is having difficulty breathing. What should you do now?
A: Manage the situation by first securing the bus so there is no further damage. Keep students calm and on board the bus. Unless you are certified in first aid or emergency care, you generally are not trained to render first aid. You may want to notify authorities by calling them on a cell phone and notifying your dispatcher using your two way radio. Sending a responsible driver who is passing by to obtain help is also an option. Have him or her call an emergency number and describe your exact location. Pay close attention to your students to ensure the situation is well controlled.

### ALWAYS FOLLOW LOCAL PROCEDURES!

### Treatment Procedures - Seizures
If a student passenger is having a seizure, three responses are important:
1. Place the student in a position that protects them, as much as possible, from injury.
2. Make sure their airway remains open and clear.
3. Encourage them or their parents/guardians to check with their physician afterwards.

Q: Has anyone (in the class) had a student have a seizure on your bus or had another person have a seizure nearby you? If so, what happened and what did you do?
Treatment Priorities
Once help has been summoned, assess the injuries or illnesses of each student. **YOU MUST FOLLOW YOUR LOCAL SCHOOL DISTRICT PROCEDURES AND GUIDELINES REGARDING RECEIVING FIRST AID TRAINING AND ADMINISTERING FIRST AID ON YOUR SCHOOL BUS.** Keep in mind, provisions of the Good Samaritan Act may not apply if you are not certified through one of the previously mentioned courses.

You will find two situations where it is necessary to help set treatment priorities:

- When you have one student with more than one injury, the injury treated first may be important; and
- When you have more than one student injured, you must select the order in which you can begin to help everyone in need. You must be organized and do one thing at a time.

Performing Triage
In either case, you need to evaluate all injuries or illnesses quickly to determine where help is needed most. This process is called triage and is necessary in evaluating multiple problems in one individual or in evaluating multiple injured/ill persons. After a brief evaluation of each injury or illness, you can decide what to do first.

While performing triage, it is important you do not treat any injury until you have found all problems requiring help. If more than two or three students are injured, you should spend no more than 15 or 20 seconds in the evaluation of each injured person.

**DON’T FORGET TO CALL YOUR SUPERVISOR/DISPATCHER TO REPORT ALL INCIDENTS.** Use your best judgment when following local school district procedures and guidelines. In general, if injuries are minor, treat them yourself; when in doubt, call. If they are major, get emergency medical help. The following procedures should help you recognize issues and provide you with some basic procedures to follow. Remember, reporting incidents is important from a liability point of view as well.

**TREATMENT PROCEDURES**
Contact your employer for a copy of your school district’s policies and procedures for handling student emergencies and your role in treatment. **WHAT IS CONTAINED IN THE FOLLOWING SECTION ARE ONLY GENERAL GUIDELINES. YOU MUST FOLLOW YOUR LOCAL SCHOOL DISTRICT PROCEDURES AND GUIDELINES REGARDING RECEIVING FIRST AID TRAINING AND ADMINISTERING FIRST AID ON YOUR SCHOOL BUS.**

**Seizures**
Seizures often are a symptom of a variety of central nervous system problems including epilepsy. There are several levels of seizure activity, but the type of seizure most important to you is when the student becomes unconscious. In addition to losing consciousness, the muscles of the person experiencing the seizure alternately flex and contract. This creates the jerking, sometimes violent, motion often described as “fits.”

Your main concern is to maintain an open airway so the student can breathe and to protect the student from injuring themselves or others around them. If a student has a seizure, allow it to run its course and perform the following steps:

1. Lay the student down if they are not already on the floor;
2. Protect them from injury as much as possible by moving any possible objects the student could injure themselves on, and cushion their head;
3. Monitor their airway and position their body to permit the adequate exchange of air; and
4. Do not put fingers or other objects in the student’s mouth during a seizure.
Instructor Notes:

Fractures
The only way to confidently diagnose a bone fracture is with an X-ray.

If a fracture is suspected:
1. Keep the injury from worsening by keeping the injured person still.
2. Call your dispatcher or emergency medical services for assistance.
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Most seizures are brief and may only last a minute or two. After the seizure is over, check their breathing if they are still unconscious.

When consciousness returns after a seizure, the student may be quite confused and disoriented. Be very considerate of their emotional state by providing as quiet and private a recovery environment as possible, given the circumstances. It is important to manage the other students around them.

After the seizure, always call your dispatcher. They will help determine whether further medical treatment is necessary. If the student has a history of seizures, they may be quite familiar with their own seizures and post seizure behaviors and may be able to help you.

Fractures
Any break or crack in a bone is defined as a fracture. While fractures may cause other complications like bleeding and shock, any fracture by itself is not a life threatening emergency. The location of a fractured bone may complicate other important body functions like breathing. When any part of the spine is fractured, there is a danger of paralysis as a result of associated spinal cord damage.

If you see any of the following signs or symptoms, suspect the underlying bone might be fractured:

- Pain at the site of injury;
- Pain on movement;
- Swelling;
- Discoloration; and
- Crooked or misaligned bones.

Remember, even if someone can walk on an injured ankle or move an injured arm, a bone may still be fractured. The only sure way to determine if a bone is fractured is to X-ray the area of injury and to have the X-ray and the injury evaluated by a physician.

If you suspect a fracture of a bone, which makes it difficult or impossible for the individual to move, always call your dispatcher and 911 for emergency medical help. Without proper training and splint materials, your options are limited until further help arrives.

Since fractures are not generally life threatening, you have time to take control of the situation and to keep it from worsening. The basic objective of fracture care is to prevent the movement of joints above and below a fracture site. In most cases, you don’t need splint materials to accomplish this, as long as you do not have to move the injured person. If help is on the way and the injured person is in a safe location, there is no immediate threat to life and no reason to move them.

If there is great urgency to move an injured student, as in the case of a fire, drag them along the long axis of their body. Pull the student by their outstretched hands or shoulders. If possible, place the injured person on a coat or blanket to make dragging him or her easier.
Instructor Notes:

**Allergic Reaction: Bites and Stings**

If a student is bitten or stung:

1. Apply direct pressure to the site, preferably with a cold compress, if available; and
2. Find out if the student has allergies to stings or bites.

**Allergic Reaction: Anaphylactic Shock**

Anaphylactic shock is a dangerous condition with many possible causes, including extreme allergic reactions. The danger is swelling of the student’s airway, limiting the ability to breathe.

A school bus driver needs to:

1. Get professional help quickly. Minutes count. This means having appropriate emergency numbers ready in advance.
2. Know your school district’s policy about procedures in such cases.
3. Know your school district’s policy about the use of autoinjectors.
4. Not allowing food on the bus can help limit the possibility that a student will go into anaphylactic shock due to a reaction caused by a food allergy.
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Allergic Reaction: Bites and Stings
Bites and stings are treated as ingested poisons and can result in allergic reactions. Snakes, bees, spiders and wasps are some of the creatures that can bite or sting a student. These bites and stings can sometimes cause violent reactions in some students who may be allergic to them.

1. Signs and symptoms:
   - Puncture marks;
   - Anxiety;
   - Pale, cool skin with progressive onset of sweating;
   - Rapid, weak pulse;
   - Rapid, shallow breathing or breathing difficulties;
   - Difficulty swallowing and speaking;
   - Blurred vision;
   - Abdominal pain;
   - Nausea and/or vomiting;
   - Headache;
   - Intense pain at site of bite; and
   - Localized redness and swelling.

2. Care and treatment:
   - Apply direct pressure over bitten area;
   - Find out if the student has any allergies to stings or bites; and
   - Use cold compress, if available, to reduce swelling.

Allergic Reaction: Anaphylactic Shock
There are many types of shock, caused by a variety of circumstances ranging from emotional crisis to massive blood loss. One of the most unusual and fast-acting types of shock is the type occurring after an extremely allergic reaction. This type of shock is called anaphylactic shock and is commonly caused by bee stings.

If a student experiences an allergic reaction of any kind, it may quickly turn into a life threatening emergency. Anaphylactic shock can cause, within minutes, swelling in the airway to a degree an individual will not be able to breathe. The only way this condition can be corrected is through medication. Many seriously allergic people always carry their own medication with them. If this medication is not present, you must do everything possible to see the allergic person immediately gets to an emergency department or to paramedics. A few minutes may mean the difference between life and death. Learn local procedures and guidelines regarding what to do in the case of allergic reactions.

One method of treating anaphylaxis is injection of epinephrine using an autoinjector. Each school district and employer should have their own procedures and guidelines on your role in the use of an autoinjector – if you don’t know your district/employer’s procedures and guidelines, ask. What you CAN do is the following:

   - Know all appropriate emergency numbers to call and request an Advanced Life Support Unit, if a reaction occurs;
   - Use those numbers as quickly as possible, if you have not been trained on the use of an autoinjector or it is not within your district’s procedures and guidelines for drivers to use them;
   - Consider having the food-allergic child sit near the driver;
   - Enforce the “no food on the bus” policy;
   - If you have received training, know which children carry an autoinjector and where they carry it; and
   - Consider working with your school district to implement an epinephrine hand-off system. Some parents pass the epinephrine to the driver who gives it to the school nurse once the bus arrives at school. The process is reversed for the ride home in the afternoon. CAUTION NOTE: Due to the number of hand-offs and people involved in this process, there is a greater risk of leaving the epinephrine either at school or on the bus.
Instructor Notes:

**Allergic Reaction: Anaphylactic Shock**
Emphasize the symptoms of anaphylactic shock and the importance of knowing that time is essential.

Make the point that this is something a school bus driver may not see in their entire career, but if they do, the consequences of time spent trying to learn what to do instead of doing the right thing can be extraordinary. Know what to do in advance.

**Asthma**
Asthma is a relatively common condition, but the condition can worsen suddenly. Generally, you will have more time to manage the situation. Students with asthma are often aware of their condition and carry inhalers.

Emphasize recognizing the symptoms of asthma, as well as the care and treatment outlined in the unit.

Again, know school district policy in advance.
Anaphylactic shock is somewhat unusual as compared to most other shock conditions you may encounter. Most shock conditions are more gradual in their onset and should be anticipated in all injuries. Listen to your students, if they warn you of an onset of symptoms. By being aware shock may develop; you may be able to prevent it before you see clear signs or symptoms. In summary:

1. Signs and symptoms:
   - Itching;
   - Red, raised, blotchy skin (hives);
   - Wheezing;
   - Confusion;
   - Weakness;
   - Pale color;
   - Unconsciousness;
   - Unable to speak more than one or two words;
   - Sitting straight up or with hands on knees;
   - Gasping for breath;
   - Pursing lips to breathe; and
   - Using neck muscles to take breaths.

2. Care and treatment:
   - Call your dispatcher and report the situation;
   - Call 911 immediately; and
   - If you district procedures and guidelines allow, you are qualified and you have received training administer epinephrine.

**Asthma**

Asthma is a respiratory condition in which the student suffers constricted passages in the lower airway and it becomes progressively more difficult to breathe. Asthma can be a life threatening condition that may develop suddenly, or over several days.

Students with asthma are subject to unexpected severe attacks. Minor respiratory infections such as colds, flu and seasonal changes can cause the condition to worsen.

1. Signs and symptoms:
   - Pale, cool, clammy skin;
   - Shortness of breath, using all the chest and diaphragm muscles to breathe;
   - Wheezing-a high pitched raspy sound when breathing;
   - Anxiety, exhaustion, a rapid or weak pulse; and
   - Severe asthma attack-collapse, leading to eventual respiratory arrest.

2. Care and treatment:
   - Call your dispatcher and report the situation;
   - Sit the student comfortably upright;
   - Be calm and reassuring;
   - Assist the student with locating their inhaler and allow them to use inhaler, if they are able; and
   - Know and follow your school district procedures and guidelines!
Instructor Notes:

**Bites**
The best treatment for human bites is antiseptic. Be sure to remind drivers to report the biting incident according to school district policy.

**External Bleeding**
The response to bleeding injuries depends upon the severity. Generally:

- Apply pressure using sterile bandages;
- Protect yourself from exposure to blood;
- Raise the bleeding limb above the level of the patient’s heart; and
- Call for professional help and report incidents according to school district policy.

**Internal Bleeding**
Internal bleeding is serious, so call for professional medical help quickly. If possible, elevate the legs of the injured.
Bites
Bites from other children are one of the most common First-Aid problems on a bus. For care and treatment:

1. Clean bite with antiseptic wipe and place a band aid on the bite; and
2. Report biting incident to your supervisor.

External Bleeding
After a serious incident like a crash, there are several types of bleeding that can occur. External bleeding is associated with wounds caused by cutting, perforating or tearing the skin. Serious wounds involve damage to blood vessels.

1. Types of wounds:
   • An incision – is the type of wound made by “slicing” with a sharp knife or sharp piece of metal;
   • A laceration – is a deep wound with associated loss of tissue;
   • An abrasion – is a wound where the skin layers have been scraped off;
   • Puncture sore – wounds are perforations, and may be due to an object like a pencil; and
   • Amputation – is the loss of a limb by trauma.

2. Care and treatment:
   • Make sure you have called your dispatcher and emergency medical personnel for serious wounds;
   • Use universal precautions to protect yourself from bloodbourne pathogens;
   • Apply pressure to the wound to stop bleeding by using a sterile bandage; and
   • Raise and support the injured part above the level of the heart. Elevation of an injured limb forces the blood to flow to the heart and keeps the blood from pooling in the lower part of the affected limb.

Internal Bleeding
Internal bleeding can be visible or concealed, and may occur after a crash. If there is no evidence of bleeding, this can be very serious and medical attention is required immediately.

• Visible internal bleeding: Self evident;
• Bleeding in the lungs: Frothy, bright red blood coughed up by the student; and
• Bleeding in the stomach: May look like dark coffee grounds or red blood in vomit.

1. Signs and symptoms (if none of the above are present):
   • Pale, cool, clammy skin;
   • Thirst;
   • Rapid, weak pulse;
   • Rapid, shallow breathing;
   • Guarding of the abdomen, in fetal position;
   • Pain or discomfort;
   • Nausea and/or vomiting; and
   • Swelling.
Instructor Notes:

**Choking**
Emphasize that while slapping a choking person on the back seems a natural first response, **DO NOT DO IT!**

Helping a choking person dislodge their airway restriction using the described procedure is more effective and minimizes the risk of worsening the problem.
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2. Care and treatment:
   • Get expert medical help.
   • If you can, position the student on his/her back; elevate legs, if possible;
   • Give nothing by mouth.

Choking

Younger children often put things in their mouth, which may result in choking. The first sign may be coughing. Coughing with an object in the airway will generally dislodge it. If you have a student who is choking, do not slap them on the back.

1. Signs and symptoms:
   • Difficulty or absence of breathing;
   • Inability to speak or cough;
   • Agitation and distress – grabbing the throat and eventual collapse.

2. Care and treatment:
   • Check mouth and clear any obstructions that may have come loose.
   • Stand behind the student and wrap your arms around the student’s waist.
   • Make a fist with one hand.
   • Place the thumb side of the fist against the student’s abdomen in the midline and slightly above the navel.
   • Grasp the fist with the other hand and press the fist into the student’s abdomen with a quick upward thrust.
   • Each new abdominal thrust should be a separate and distinct movement.
   • Repeat thrusts until student expels the obstruction.

Dehydration

Dehydration is a condition caused by the loss of fluids from perspiration and prolonged exposure to heat and humidity. Sometimes a student may be dehydrated on your bus, especially in your afternoon runs when students are returning home and/or returning from field trips. When fluid loss exceeds input through drinking, dehydration occurs. Prolonged dehydration will lead to shock and could be fatal.

1. Signs and symptoms:
   • Pale, cool, clammy skin;
   • Rapid breathing;
   • Profuse and prolonged sweating;
   • Thirst;
   • Loss of skin elasticity;
   • Sunken eyes in children.

2. Care and treatment:
   • Give cool water to drink, if available.
Instructor Notes:

**Diabetes**

Students with diabetes generally know how to manage their condition. But, they may occasionally forget or be distracted from what they need to do, leading to problems.

The school bus driver is not expected to manage student passengers’ diabetes by checking their blood glucose levels or administer medication. However, if a student shows signs of trouble, a school bus driver can assist as described in the unit.

School bus drivers should be able to recognize the symptoms of hypoglycemia and the ways to assist student passengers in this condition.

If possible, school bus drivers should identify students with diabetes at the beginning of the school year and become aware of individual emergency care plans, if available, and where these students keep their supplies.
Diabetes
Diabetes is a condition caused by an imbalance of sugar or glucose in the blood. Because all human cells require sugars as food, the body takes in complex sugars in a normal diet. So the body’s cells can use these sugars, the body, through an organ called the pancreas, secretes a protein hormone called insulin, which attaches to the sugars. This allows the cells to recognize the sugars as food and absorb the necessary glucose. Unfortunately, this condition is becoming more and more prevalent among school-aged children. Students with Type 1 diabetes and some students with Type 2 diabetes require insulin to survive. It is not expected that you check students’ blood glucose levels or administer insulin or glucagon, but you may be able to recognize students for symptoms of high and low blood glucose, and assist the student in an emergency.

Understand and be aware that although hypoglycemia normally occurs at the end of the day, it may happen at the beginning of the day, if the student has not eaten breakfast.

1. **Signs and Symptoms:**
   - Hot, dry skin;
   - Smell of acetone (nail polish remover) on the breath;
   - Drowsiness or change in mood;
   - Unconsciousness, progressing to coma;
   - Profuse sweating;
   - Grayish skin color;
   - Hunger;
   - Confused or aggressive behavior;
   - Rapid pulse;
   - May appear drunk;
   - Seizures.

2. **Care and treatment:**
   - If conscious, give sweet drink, if available (avoid diet sodas).
   - Repeat, if student responds.
   - Assist with medication and encourage ingestion of food high in carbohydrates.
   - **DO NOT** attempt to give an insulin injection.
   - At the beginning of the school year, identify any students on the bus who have diabetes, if possible.
   - Sometimes you will be provided a copy of the student’s Quick Reference Emergency Plan, which a parent or school nurse may have. This can contain important treatment information that can help a student in distress. Keep it on the bus in a known, yet secure, place, and work with your school district to make sure substitute drivers know about the plan.
   - Be aware of where the students with diabetes normally keep their supplies.
   - Treat the student with diabetes the same as other students, except to respond to medical needs and perhaps allowing them to eat snacks on the bus.
   - Provide input to the student’s school health team when requested.
   - Communicate with the parents, school nurse and/or trained diabetes personnel regarding any concerns about the student.
   - Respect the student’s confidentiality and right to privacy.
Instructor Notes:

**Heat Stroke**
Emphasize that irrational or aggressive behavior is among the symptoms of heat stroke, as well as many of the maladies discussed here. While easy to immediately think of behavioral causes for poor behavior, remember that physical conditions may be the cause. Look for other symptoms before disciplining students.

Heat stroke is dangerous, but the care is not complex – cool the student.

**Hyperventilation**
School bus drivers should be aware that hyperventilating can be a real, stress-induced malady. Again, the care is not complex.

However, school bus drivers also need to be aware that hyperventilating can be deliberate and such behavior should be discouraged. The difficulty is knowing the difference between a case of stress-induced hyperventilating and an attempt to have fun. Knowledge of student passengers and their moods can be helpful.

**Traumatic Brain Injury or Concussion**
Hitting bumps along the road is an unavoidable part of driving a school bus. However, it is particularly important for drivers to be aware of the severity of any impact or jarring to the bus and the injuries that may be caused that may not be immediately obvious.

Q: What are the two types of head injury?
A: Open head injury and closed head injury.
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Heatstroke
Heatstroke should not be confused with sunstroke. Sunstroke is a common ailment suffered by those who remain in the sun too long. Heatstroke is potentially fatal. The body's temperature regulation center in the brain has been rendered inoperable, and the temperature continually rises, causing eventual brain damage. Be aware of this on your bus runs in warmer weather, especially in the afternoon.

1. Signs and symptoms:
   • Flushed, hot, dry skin;
   • The student has stopped sweating;
   • Rapid pulse, gradually weakening;
   • Irrational or aggressive behavior;
   • Staggering;
   • Fatigue;
   • Visual disturbances, headache, vomiting; and
   • Collapse and seizures.

2. Care and treatment:
   • Give fluids and water, if the person is conscious.
   • Cool the student as much as possible.

Hyperventilation
Hyperventilation can be stress related or deliberate over-breathing. By deliberately over-breathing, the student causes the blood's carbon dioxide level to fall, resulting in distressing symptoms. There have been incidents of students hyperventilating on purpose for the “rush.” Be aware of this behavior, and put a stop to it.

1. Signs and symptoms:
   • Rapid respirations;
   • Rapid pulse;
   • Shortness of breath;
   • Pressure, tightness or pain across the chest;
   • Anxiety;
   • Blurred vision;
   • Tingling in fingers and toes;
   • Hand and finger spasms;
   • Fainting.

2. Care and treatment:
   • Reassurance;
   • Remove the cause of anxiety, if possible;
   • If the student has fainted, lay the student down with their legs elevated.

Nose Bleeds
When a student's nose bleeds, there are some immediate things you can do to stop the bleeding: Keep the trunk of the body so it is higher than the heart, tilt the head forward, and compress the nostril for five to 10 minutes.

Traumatic Brain Injury or Concussion
Traumatic brain injury is characterized as either closed head injury or open head injury. Open head injuries occur when the skull has been fractured or the tissue around the brain has been pierced. Closed head injuries or concussions, which can be harder to detect, do not pierce the tissue around the brain or fracture the skull. Closed head injuries or concussions generally occur from an impact to the head.

Traumatic brain injuries or concussions can result from a sudden jarring or impact within the bus, regardless of whether or not the student strikes their head. However, it is of particular concern if a student hits his or her head during the jarring or impact. Any time a student hits his or her head, traumatic brain injury or a
Instructor Notes:

**Report All Incidents**
When dealing with student passengers’ medical conditions, there are legal and liability issues that must be considered:

- Always follow school district policy.
- Recognize that “treating” medical conditions could expose you and the school district to liability issues. Report every incident, even if it seems trivial at the time. Let your supervisor tell you if you are over-reporting or reporting incidents that are too minor.
- Recognize that gaining knowledge of students’ medical conditions carries confidentiality requirements founded in law. Be discreet.
- If unsure how to proceed with regard to obtaining knowledge of medical conditions, or reporting after an incident, seek the guidance of your supervisor.

**First Aid Kit**
Maintaining a fully stocked first aid kit is required by state regulation. Learn what is required to be in the kit as outlined in the Unit and in the regulations (Chapter 171), and replace or request the replacement of items after their use.

Be sure the first aid kit is accessible, but secure and removable without the use of a tool. In the event of an emergency that requires an evacuation, you need to be able to grab your kit and go!
concussion may occur, such as in a crash, or if the bus has run over a curb or large rock, or has been on an extra bumpy road and has been violently jarred.

Depending on the severity of the injury, damage to the brain can be mild, moderate or severe. A key point is that a person suffering from traumatic brain injury may show no symptoms at all, but if symptoms are present, they can vary and may include headache, slurred speech, dilated pupils, hearing loss, seizures, paralysis, loss of consciousness, memory loss, coma, nausea or vomiting, dizziness, confusion and blurred vision.

If the bus you are driving has been impacted or intensely jarred, it is important to stop the bus in a position of safety, ask the students if anyone was hurt and if anyone hit their head during the incident. Any time a student indicates to you or a fellow student that they hit their head on the bus, call for medical assistance. Do not move the student or your bus -- unless you need to move your bus to a safer location -- to prevent possible further injury to the student, as traumatic brain injury, no matter how slight, could have serious, life-altering effects. It is extremely important not to ignore instances where a student has hit his or her head while on your bus.

REPORT ALL INCIDENTS

It is critical to report all medical problems, which occur on your bus to the proper authorities as dictated by local procedures and guidelines. Reporting incidents is important from a liability point of view because students may fail to tell the school nurse or their parents of problems requiring attention. Know your students and any pre-existing problems, which they might have so you may be better prepared to deal with them. Careful observation of your students may indicate the presence of medical problems of which you have not been informed. While many parents will inform you of their child’s medical problems, others wish to keep such information confidential. Follow local procedures and guidelines when trying to obtain information about student medical conditions. When possible, inform substitute drivers of any medical problems of students on your route, but keep confidentiality in mind. Work with your supervisor regarding the release of information.

FIRST-AID EQUIPMENT

First-aid supplies and equipment are important in providing the best care possible. Remember to follow your local school district procedures and guidelines regarding administering first aid on your school bus.

FIRST-AID KIT

The First-Aid Kit on your bus should be removable and supplied with anything you might need in an emergency. The contents of your First-Aid Kit may vary according to local procedures and guidelines; however, current state regulations (Section 171.52 of Title 67) require that the First-Aid Kit on a school bus must contain at least 10 items including:

1. Two, 1-inch x 2 1/2-yard rolls of non-latex adhesive tape;
2. 24 sterile gauze pads, 3 inches x 3 inches;
3. 100, 3/4 inch x 3 inches adhesive bandages;
4. Eight, 2-inch bandage compresses;
5. Ten, 3-inch bandage compresses;
6. Two, 2 inches x 6 yards sterile gauze roller bandages;
7. Two, non-sterile triangular bandages approximately 40 inches x 36 inches x 54 inches with two safety pins;
**Body Fluid Clean Up Kit**

Like the first aid kit, a school bus is required to carry a Body Fluid Clean Up Kit. Be aware of the kit’s location, make sure it is properly stocked, and re-stocked when necessary.

The Body Fluid Clean Up Kit is there for your protection, and the protection of your student passengers. Emphasize to ALWAYS protect yourself.
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8. Three sterile gauze pads, 36 inches x 36 inches;
9. Three sterile eye pads;
10. One pair rounded end scissors.

In addition to the items above, the First Aid Kit or Body Fluid Clean-up Kit (discussed below) must contain:

1. One pair of non-latex surgical gloves;
2. One mouth barrier.

The kit should be mounted in accordance with manufacturer’s instructions in full view and in an accessible place in the driver’s compartment. Its location should be clearly marked, and you should check its contents often. The pre-trip inspection described in Unit E (Preventive Maintenance) calls for a daily check of the First Aid Kit. It is your responsibility to replace any of the contents immediately after you use them or after noticing something has been removed. Consult your supervisor about procedures for obtaining new First Aid supplies.

**BODY FLUID CLEAN UP KIT**

Every school bus is required to have a removable and moisture proof Body Fluid Clean Up Kit. It must be securely placed or mounted in an easily accessible location and labeled as a Body Fluid Clean Up Kit. Take all steps to protect yourself from exposure. Keep in mind that you are not automatically infected, if you are exposed to blood or other bodily fluids; the amount needs to be large enough to overcome your immune system. If you feel you have been exposed, consult a medical professional.

**Cleaning Body Fluid Spills**

Thorough hand washing is the best tool to prevent the spread of infectious diseases. When cleaning up body fluid spills, you need to do the following:

1. Always wear disposable gloves. You need to wear disposable gloves whenever you might come in contact with blood or potentially infectious materials. If gloves are not available, or unanticipated contact occurs, hands and other affected areas should be washed with soap and running warm water immediately after contact. If not possible, wipe your hands thoroughly with the germicidal wipe provided in the Body Fluid Clean Up Kit.
2. Small spills can be cleaned with paper towels or tissues. After the bodily fluid is removed, use clean paper towels, soap and water or disinfectant wash to clean the area. For larger spills you can use the packet of solution to solidify body fluids in your Body Fluid Clean Up Kit.
3. Remove gloves and place into the plastic bag with the waste and other cleaning materials. Upon returning to the bus garage, remove the plastic bag and dispose in accordance with school district procedures and guidelines.
4. The driver must wash their hands with soap and running warm water for at least 30 seconds.
5. It is always a good idea to carry hand sanitizer, extra gloves and band aids as long as they are properly secured in the bus.

**WHEN HANDLING BODY FLUIDS, ALWAYS REMEMBER TO PROTECT YOURSELF!**
Instructor Notes:

At the end of this unit, go over each of the Review Questions provided in the Lesson Summary at the start of the unit. To encourage participation, you can go around the room or just ask the question to the entire class to generate discussion.

For your convenience, the questions are listed again below.

1. What is the “Good Samaritan Act”?
2. What are some of the factors you must consider in an emergency where one or more students are injured?
3. Name specific hazards that could make an emergency situation worse.
4. What information should be given to emergency personnel when you call for help?
5. If you are certified in first aid, what should be your first actions following a crash?
6. What is your main concern when a student is having a seizure?
7. What signs might indicate a fractured bone?
8. What should you do for a student in anaphylactic shock?
9. What is the procedure for assisting a student who is choking?
10. What are some of the items required to be in the first aid kit on every bus?
UNIT PB LESSON SUMMARY
PARKED BUS

INSTRUCTOR’S PERSPECTIVE
The Parked Bus Unit (Unit PB) is an opportunity for you, the instructor, to step outside of the classroom and provide trainees with several hands-on exercises which put into practice the concepts covered in lecture and discussion. This will emphasize many key points and increase retention of critical information. Trainees will also have an opportunity to use some of the equipment described throughout the Driver’s Manual (Publication 117). This unit is divided into five (5) sessions as follows.

1. **Vehicle and Equipment Familiarization (Units E and G).** An introduction to each type of bus the trainee may have to drive, including similarities and differences between autos and buses, safety features, and mechanical equipment features.

2. **Pre-Trip Inspection and Preventive Maintenance Procedures (Unit E).** Supervised practice on conducting a pre-trip inspection with a definitive statement on each trainee’s responsibility for preventive maintenance, includes a demonstration of preventive maintenance check to be made by the trainee, showing the location and describing the function of all equipment to be checked, as well as showing correct checking and reporting procedures for each. Each trainee will practice on each type of bus he or she may have to drive.

3. **Fire Extinguisher Procedures (Unit H).** A demonstration and hands-on practice are provided to the trainees.

4. **Roadside Emergency Procedures (Unit H).** Proper procedures for safely parking the bus on a roadside are demonstrated, including placement of portable emergency warning devices.

5. **Bus Evacuation Procedures (Unit H).** Front and rear door evacuations are demonstrated, using the trainees as passengers. Discussion includes setting up evacuation drills for students.

**TRAINEE OBJECTIVES**

1. Describe unique features of the buses he or she may drive.
2. Locate and use common emergency equipment.
3. Demonstrate a pre-trip inspection.
4. Recognize proper preventive maintenance identification and reporting procedures.
5. Observe and demonstrate the proper use of a fire extinguisher.
6. Demonstrate proper procedures for safely parking a bus on a road side and setting up portable emergency warning devices.
7. Participate in front and rear door evacuations and demonstrate proper set up of evacuation drills for students as mandated by state law.

**LOCATION**
Parked bus in closed area.

**DELIVERY MODE**
Demonstration and discussion with supervised self-practice. Note that this lesson does NOT count toward the required one-on-one, in-bus training (6 hours for new drivers and 3 hours for recertification). Time on this unit is applied toward classroom training requirements.
MATERIALS
- **Classroom Aids** - School bus or buses, seat belt cutter and scrap belt material, portable emergency warning devices (triangular reflectors), pry bar, fire extinguisher, first aid kit, Body Fluid Clean Up Kit, special equipment (e.g., rags to wipe dip sticks, rags to clean windows, etc.).
- **Handouts** - Local Daily Inspection form, pre-trip checklist, post-trip checklist as applicable. Study Guides for Units E and H

RESOURCE PERSONNEL
An experienced school bus driver with instructor training is required. Additional school bus driver helpers may be required in larger classes.

SUMMARY AND REVIEW QUESTIONS
- **Summary** - The entire lesson should be covered for a new driver course, and a recertification course should quickly review each topic or skill. Emphasis should be on proper execution of the pre-trip inspection for a recertification course. A group training session is sufficient for the familiarization and demonstration topics, but the pre-trip inspection should be performed in pairs. Some of these procedures are covered in Unit H. If these demonstrations and practice sessions are conducted before they are covered in the classroom, it will be valuable for trainees to have step-by-step instructions in handouts. These may be copied directly from Unit H.
- **Review Questions** - (N/A for this unit.)

REFERENCES
**PennDOT Publications**

**Other**
- Local regulations and/or procedure guides including local pre-trip inspection form, if available.
UNIT PB INSTRUCTIONAL PROCEDURES

GENERAL POINT
However the practice is set up, make sure that you observe that each trainee correctly performs each check and is able to show or verbally explain the limits of acceptable conditions and the proper procedures to follow if these are not satisfied. Make sure you have enough certified instructors in case of large training classes.

VEHICLE AND EQUIPMENT FAMILIARIZATION (UNITS E AND G)
The purpose of the first area of “Parked Bus” instruction is to familiarize the trainees with the vehicle or vehicles they will be driving. Examples of all bus types to be used by the trainees should be available for examination during this instruction.

For each bus type, the information shown in the following table should be obtained beforehand and written in the appropriate places in a lesson plan for that bus, arranged as shown in the table at the end of this section.

Or, it might be a worthwhile exercise for the Instructor to have this information filled in on their table, and provide blank copies of the form to the trainees. They can then enter the bus and start a discussion with the trainees regarding each part of the Table. Have the trainees fill the table out for themselves, and then keep it for their reference. Having the trainees take ownership of gathering the information and filling in the information will help them retain it.

During the vehicle and equipment familiarization, make sure to point out the location of key safety equipment such as the first aid kit, Body Fluid Clean Up Kit, seat belt cutter (if applicable), portable emergency warning devices, pry bar, and fire extinguisher. It is also recommended that you open the first aid and Body Fluid Clean Up Kits to show the contents to the trainees. A quick demonstration of how the seat belt cutter works would also be appropriate.

PRE-TRIP INSPECTION AND PREVENTIVE MAINTENANCE PROCEDURES (UNIT E)
Start instruction with a definitive statement on the local preventive maintenance responsibilities of each trainee. This statement may be presented separately or may be combined with the demonstration of the pre-trip inspection. But whenever it occurs, make sure that trainees are made aware of what they need not check, as well as what they must check.

A demonstration of the pre-trip inspection should follow the order on the inspection checklist given to each trainee during the classroom preventive maintenance instruction. Or, use a local checklist, if available. A sample checklist is included at the end of this Unit.

Each different bus type should be available for this demonstration and later used for practice by trainees. Each item on the checklist should be located, identified as to name and function, and checked in the exact manner the drivers are to follow. In addition, the minimum acceptable conditions and the proper corrective and/or reporting procedures must be explained and demonstrated for each item checked, regardless of the item’s condition during your demonstration check.

If special equipment is used during your demonstration, such as rags to wipe dip sticks, damp rags to clean windows, and a hammer to check tires (if not using the pry bar), be sure to inform trainees where these items may be obtained.

After completion of the demonstration, conduct practice sessions. Depending on the size of the class and the availability of additional instructors, the trainees can practice independently, or the class may be subdivided into small (three to four person) groups, each assigned to their own instructor. Within each of these groups, trainees may find it beneficial to check each other’s performance.
Once the trainees have obtained confidence and proficiency, a rigged bus with certain defects may be used to test their ability. For training purposes, it is desirable to rig the bus with five or six easily correctable deficiencies to check the trainee’s attitude toward the inspection and attention to detail in detecting and reporting deficiencies. Inspection is an important safety procedure and should not be treated in a casual or offhand manner. You should review each trainee’s checklist for completeness and accuracy, and deficiencies should always be corrected prior to moving on. Suggested rigged deficiencies include missing emergency equipment (e.g., portable emergency warning devices, first aid kit), dirty windshields, mirrors out of alignment, open emergency door, or books, bags and other obstacles in the aisle.

The second phase of preventive maintenance involves discussing the proper on-the-road checks and proper corrective procedures for each check. Again, follow procedures given in the classroom instruction.

The final phase covers the post-trip inspection and should be conducted in the same manner as the pre-trip inspection.

It is recommended that trainees be required to inspect the instructional buses each time they are later used in subsequent in-bus exercises.

Remind the trainees that a passing score in the exam is 12+ correctly inspected items. If they fail to perform their air brake check correctly (or at all), it is considered an automatic failure.

**FIRE EXTINGUISHER PROCEDURES (UNIT H)**

Hands-on practice in the use of a fire extinguisher should be provided for each of the trainees. You should first explain the characteristics and use of the extinguisher, including the limits of a portable fire extinguisher and why they should only be used in certain circumstances. For example, some portable fire extinguishers have only 8 to 10 seconds of use before they are fully discharged. It is important to emphasize that they are not designed to put out large or spreading fires.

Trainees should each be allowed to discharge a fire extinguisher. A backup extinguisher always should be used for this demonstration, and a fully charged extinguisher should always be on the bus.

In this training, emphasize that there is a right way to handle a fire extinguisher and a wrong way. The wrong way is to read the fire extinguisher instructions as you are headed to the fire, then blindly approach the fire while swishing the nozzle in every direction. This not only wastes the extinguishing agent, but is usually ineffective.

The right way can be summarized using the memory aid **PASS**, as follows:

**P** is for pulling the pin located at the top of the extinguisher, and typically comes in at a 90 degree angle on the handle itself. Removing the pin unlocks the handle so it can be squeezed. Note that not all fire extinguishers have a pin.

**A** is for aim at the base of the fire instead of aiming for the flames. To stop the fire, you have to aim at the source of fuel.

**S** is for squeeze the lever slowly, which will release the extinguishing agent inside the canister. As long as your hand is on the lever, the agent will continue to release. Once the lever is released, the fire extinguisher will stop working. Operate the extinguisher at a safe distance of at least several feet away, moving in only if the flames are diminishing.

**S** is for sweep from side to side. As you move toward the fire, the nozzle should be kept low and swept back and forth until the flames appear to be out. Once the fire looks to be out, keep an eye on the area for several minutes in case it re-ignites.

It is highly recommended that you have a representative from a local fire or emergency response company to assist with demonstrating the proper use of emergency equipment. They might use a controlled fire as part of the practice. They can also customize their training according to the fire extinguishers on the bus.
ROADSIDE EMERGENCY PROCEDURES (UNIT H)
The emphasis in this area should be on procedures to ensure the safety of a bus parked on the roadside. You should cover use of parking lights and hazard warning lights, securing the bus, and proper positioning of portable emergency warning devices. Following this demonstration and discussion, based on the information in Unit H, have trainees practice setting emergency markers at the correct locations around the bus. As an aid in estimating the 100 foot front and rear distances, explain that 200 feet is approximately 40 paces, or three bus lengths, and run a contest to see who can most accurately estimate the distance.

BUS EVACUATION PROCEDURES (UNIT H)
Briefly review the situations requiring evacuation (existing or imminent smoke or fire condition, presence of hazardous materials, unsafe bus position, and bus submersion or immersion) and discuss evacuation procedures for both an upright bus, as discussed in class, as well as for a bus on its side or roof. Evacuation procedures in the latter cases are not covered in class and require the use of common sense to fit the emergency. Points to consider might include the use of a pry bar, verbal instructions to passengers, and so forth.

Using the class members as passengers, demonstrate the proper evacuation procedures used during required semi-annual evacuation drills (see Unit H for exact step-by-step procedures). As appropriate, try to conduct both front and rear door evacuations.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPECIFICATIONS</th>
<th>DISCUSSION POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make of Bus</td>
<td>Company:</td>
<td></td>
</tr>
<tr>
<td>Overall Dimensions</td>
<td>Length:</td>
<td>Curbing, general longitudinal clearance, parking, following distance, merging.</td>
</tr>
<tr>
<td></td>
<td>Width:</td>
<td>General side clearance, for example lane use, narrow bridges.</td>
</tr>
<tr>
<td></td>
<td>Height:</td>
<td>General vertical clearance, low bridge, overhead power lines, leaning trees and poles.</td>
</tr>
<tr>
<td></td>
<td>Weight:</td>
<td>Weight loaded and unloaded, structural strength of bridges, roads, and shoulders.</td>
</tr>
<tr>
<td></td>
<td>Wheelbase:</td>
<td>Turning radius, minimum space requirements (effective turn radius depends on wheel position).</td>
</tr>
<tr>
<td>Seating Capacity</td>
<td></td>
<td>Thirteen-inch seat width per student, limited to capacity shown on Pennsylvania inspection sticker. NO STANDEES! DO NOT BLOCK AISLE!</td>
</tr>
<tr>
<td>Fuel</td>
<td></td>
<td>Type, tank size, range, location.</td>
</tr>
<tr>
<td>Engine</td>
<td>Type:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horsepower:</td>
<td>Type, horsepower, power on hills.</td>
</tr>
<tr>
<td>Transmission</td>
<td>Type:</td>
<td>Type, use in slowing.</td>
</tr>
<tr>
<td>Brakes</td>
<td></td>
<td>Parking and service.</td>
</tr>
<tr>
<td>Steering</td>
<td>Type:</td>
<td>Type.</td>
</tr>
<tr>
<td>Suspension</td>
<td></td>
<td>Handling characteristics, loaded and unloaded.</td>
</tr>
<tr>
<td>Color</td>
<td>National School Bus Glossy Yellow</td>
<td>Unique for school buses.</td>
</tr>
<tr>
<td>Lights</td>
<td></td>
<td>Controls on school bus eight-way light system.</td>
</tr>
<tr>
<td>Two-way Radios</td>
<td>(if available)</td>
<td>Normal and emergency use.</td>
</tr>
</tbody>
</table>
UNIT IB LESSON SUMMARY

IN-BUS

INSTRUCTOR’S PERSPECTIVE
The In-Bus Unit (Unit IB) school bus driver training comprises 6 hours of the 20-hour new driver course and 3 hours of the 10-hour recertification course. Important driver skills are introduced and practiced during this session, so it is important that each trainee receive ONE-ON-ONE INSTRUCTION by a certified school bus driver instructor during the in-bus portion.

This unit is divided into two (2) sessions as follows:

1. Closed Practice Course - An introduction to driving a school bus including basic familiarity with the bus, and closely supervised practice with starting, shifting, braking, stopping, and maneuvering the bus.
2. On-The-Road Driving - Closely supervised practice driving a school bus in “live” traffic conditions. This includes practice with basic monitoring, concentration and maneuvering skills, loading and unloading procedures, railroad grade crossing procedures, and conducting a pre-trip inspection. Note that the pre- and post-trip inspections are covered in the Parked Bus Unit, but can be reinforced in these sessions. Each trainee should practice on each type of bus he or she may have to drive.

TRAINEE OBJECTIVES
1. Experience driving characteristics, clearances, and general handling of a bus as compared to an automobile.
2. Practice and demonstrate mastery of basic bus driving techniques.
3. Develop basic skills for driving in normal traffic conditions.
4. Develop personal techniques for monitoring important sources of information.
5. Practice loading and unloading procedures to mastery.
6. Practice railroad grade crossing procedures to mastery.

LOCATION
In-bus on closed course for the first session, and in-bus on the road for the second session.

DELIVERY MODE
Demonstration and discussion; supervised self-practice.

MATERIALS
• In-Bus Aids - School bus or buses, traffic cones, area sufficient for closed course work, road network with typical conditions for the service area, Instructor’s Checklist
• Handouts - Local Daily Inspection form, pre-trip checklist, post-trip checklist, as applicable.

RESOURCE PERSONNEL
An experienced school bus driver with instructor training is required. The training provided must be ONE-ON-ONE INSTRUCTION during the in-bus portion. Often, this unit is completed by a different instructor than the one who completed the classroom portions, but it is recommended that the instructors work together to ensure consistent information is being provided.
SUMMARY AND REVIEW QUESTIONS

• **Summary** - The in-bus instructor(s) should work closely with the classroom instructor (if different) to ensure that Units F and G have been adequately covered. The entire lesson (both Closed Practice Course and Practice Driving-On-The-Road sessions) should be covered for a new driver course. For a recertification course, the Closed Practice Course session is not required, but additional time is recommended on the road, as this is the only opportunity to closely observe and correct any skill deficiencies. If an experienced operator has expressed difficulty with specific driving maneuvers, it may be useful to complete this session, but focus should be on the Practice Driving On-The-Road session. All in-bus driving instruction and practice should be delivered on a one-on-one basis, with an instructor carefully supervising and monitoring a trainee's driving performance. Detailed feedback should be provided to the trainee during the entire session.

Trainee skill development should be progressive. Emphasis should be placed on:

• Proper starting, stopping, and turning techniques in a closed course, then on the road;
• Maintaining the proper following distance;
• Loading and unloading procedures;
• Highway rail grade crossing procedures; and
• Supervised development and practice of driving and monitoring skills in a broad range of traffic, roadway, and environmental conditions.

• **Review Questions** - (N/A for this unit.)

REFERENCES

Websites

• For a comprehensive resource on virtually all aspects of becoming a school bus operator, visit: http://www.dmv.state.pa.us/centers/SchoolBusCenter.shtml
• PennDOT’s website for online driver and vehicle services: http://www.dot3.state.pa.us/centers/OnlineServicesCenter.shtml
• PennDOT’s website for commercial driver information center: http://www.dmv.state.pa.us/centers/commercialDriversCenter.shtml

PennDOT Publications


Laws and Regulations

• Pennsylvania Code – Transportation (Title 67), Key Chapters are Chapters 71, 104, 171: http://www.pacode.com/secure/data/067/067toc.html

Other

• Local regulations and/or procedure guides including local pre-trip inspection form and local driver in-bus evaluation form, if available.
INSTRUCTOR INTRODUCTION
The in-bus portion of school bus driver training comprises 6 hours of the 20-hour new driver course and 3 hours of the 10-hour recertification course. Important driver skills are introduced and practiced during this Unit, so it is important that each trainee receive ONE-ON-ONE INSTRUCTION by a certified school bus driver instructor in each session of this Unit.

In-bus instruction covers demonstration and practice of loading and unloading procedures, railroad grade crossing procedures and behind-the-wheel driving. The actual content of each in-bus session is discussed in further detail in this unit, with suggestions for scheduling, set-up, and delivery. However, because conditions vary from one school district to another, the responsibility for logistics ultimately rests with the instructor.

The following material provides a general introduction to in-bus training techniques. Although the basic teaching principles and methods of instruction detailed earlier in the Instructor’s Guide portion of this manual (Unit IG) still pertain, there are a few specialized techniques required for in-bus instruction.

INSTRUCTOR APPROACH
It is natural for a new driver to be apprehensive about operating a school bus. They will have many new responsibilities, including several that differ from those encountered while driving an automobile. Classroom training will have emphasized the challenging balance of driving and monitoring student behavior. The manner adopted by the instructor should be calculated to counteract this nervousness as much as possible.

Start off by asking the trainee if he or she has any experience driving large vehicles, and positively reinforce his or her ability to drive. At all times, you should avoid sarcasm or anger and avoid giving the impression of frustration or boredom.

You must be prepared for errors that the trainee will make, and be flexible in your teaching methods to help individuals overcome particular problems. When a number of trainees experience difficulty with a particular point, you should examine your teaching methods. Review these five points (adapted from article by Dan Petterson, Ed.D.)

1. Students of most motor skill tasks need to focus on three elements: perception, decision making, and motor control. As a school bus instructor, you are sometimes aided in making decisions about how to help the learner by asking what type of struggle the learner is having—perception, decision-making, or motor control.

2. With no prior experience in a topic or skill, verbal explanation can have little or no value to the beginner. Fortunately, a school bus driver trainee has experience driving their own personal vehicle, so they enter into training with a degree of experience. As an instructor, you should still remember that when talk interrupts needed practice time, the learning may be delayed.

3. Lots of positive feedback is important for beginning students, but feedback that is the same as the information the student can gain on his own has little value and may even interfere with learning. Feedback given occasionally is more effective than feedback given after every performance event. Feedback from the instructor has more benefit after the student has had time to try out the skill. That is why the controlled course portion of training is important for new drivers.

4. Guidance should be “loose” unless the individual produces an error that could result in danger to the driver or students on the bus. Students should experience early success and much more success than failure. Errors are expected and at some level the student must be allowed to make errors in order for learning to occur. Major errors that could result in injury should be corrected immediately, but minor errors should not be corrected in the early stages of learning. As the bus operator moves onto a road with actual traffic conditions, and/or skill advances (driving down steep grades, navigating crossing railroad grade crossings), the student will adapt the big framework to his or her own abilities.
5. More learning occurs with more practice. Frequent rest periods seem to facilitate performance. Random practice of a variety of movements results in higher performance in the long run, rather than practicing more specific movements in one block.

**WORD CHOICE WHEN INSTRUCTING IN-BUS**

As indicated above, as an instructor, you should remember that when talk interrupts needed practice time, the learning may be delayed. Also, be careful about giving detailed instructions while on the move; otherwise, a misunderstanding leading to dangerous situations can easily occur. You could be distracting the driver. Usually the method used for giving instructions on the move, particularly routing instructions, should be based on the sequence:

1. **Alert** - A warning will gain the trainee’s attention, preparing him or her for the instruction to follow.
2. **Direct** - Give the direction in a clear and unmistakable manner.
3. **Locate** - Pinpoint the place at which the maneuver is to be carried out or state that the choice of locations remains with the trainee.

Examples of this method are as follows:

- “We are going to [alert] take the third turn on the right [direct] at the next stop light.” [locate]
- “I would like you to [alert] take the third turn on the left [direct], just beyond the telephone booth.” [direct]
- “I would like you to [alert] pull up on the left [direct] just behind that parked van ahead, leaving yourself room to pull out again.” [locate]
- “Would you [alert] pull off to the right [direct] at the first convenient place?” [locate]

The following are examples of potentially misleading instructions that could lead to dangerous situations:

- “Turn right at. . .” without an alert can result in the trainee taking a turn that is immediately available before the instruction is completed and without time for precautions or signals.
- “Take the third turn. . .” without pinpointing the location can result in the wrong turn being taken, possibly leading to difficulties with driving a bus.
- “Straight ahead. . .” can lead to the trainee ignoring stop or yield signals.
- “Stop on. . .” can result in the trainee braking sharply and causing difficulties for following traffic, particularly if the instructor’s voice is raised. The instruction “stop” should be reserved for emergencies only!
- Phrases such as “right now” used as a preliminary to any conversation or instruction could lead to the trainee turning or moving right. Such phrases should be avoided.

**COMMENTARY DRIVING**

In the in-bus lessons, a beneficial driver training technique is commentary driving. Commentary driving requires the student to express his or her thoughts about his or her driving, the vehicle, and road conditions as they occur. For the trainee, expressing thoughts encourages clearer thinking and it gets them to notice their own thoughts (or lack thereof) while driving. For you, it provides an opportunity to know what is going on in the mind of the trainee and to correct errors at the thinking stage. Without the technique, the instructor can only give remedial training after physical errors have been made and may not be aware of the trainee’s mental errors.

You should begin this exercise by giving a 10-minute demonstration. Before starting, you should explain the technique as follows:

“While I am driving, I shall from time to time, be giving commentary. During these periods I want you to listen carefully to my commentary and, to watch my actions and the road carefully. Not only shall I be describing what I am doing, but also what I am thinking about. Because I may not be actually doing anything other than holding the steering wheel and pressing the accelerator doesn’t mean that my mind should be idle or switched off. When driving, your attention must be 100 percent concentrated on what you are doing and what you might be doing in the next minute or so.”
While demonstrating this technique, you can emphasize the observations and thinking that are essential to defensive driving. A commentary might sound something like this:

“Car turning right ahead...approaching roundabout check mirrors... reduce speed...change down to second... mirrors... clear... car overtaking in the left lane...second exit.,” etc.

Having performed the demonstration, you should then have the trainee take the wheel and carry out the commentary driving technique. Keep in mind that only the time the trainee spent driving can be credited toward the minimum number of in-bus training hours!

Situations should be selected carefully when giving the commentary. It will not prove efficient if attempted in traffic conditions that are too dense, since the trainee will quickly become accustomed to spotting things that are not commented upon. It is desirable that at least one period be given to the trainee in quieter conditions to demonstrate what is considered when these conditions exist (e.g., glancing at or reaching for dashboard instruments).

When there is little to talk about, it is advisable to terminate the commentary.

To be effective, the commentary must be fluent and accurately reflect the thoughts and actions of the trainee. Needless to say, the driving itself must be of the highest possible standard. A good commentary is not easy to carry out; it requires much practice. Although a “dry run” rehearsal is probably not advisable (conditions are very rarely duplicated), it does help if the commentator is familiar with the route and fixed conditions such as position and type of road signs, bus stops, and turns. Such familiarity, however, should not become apparent in the commentary. For example, one should not say, “I am slowing down because there is a bus stop around this blind corner.”

Experts agree that the most desirable characteristic in a driver is the ability to concentrate. This means thinking continually about driving when at the wheel. How, what, and when to think is demonstrated in a good commentary driver.

Commentary driving can help you evaluate a student’s abilities to:

• Recognize and practice problem solving;
• Recognize the vast number of things a driver should be watching for and that driving is a full time job;
• Implement the knowledge and driving skills previously learned;
• Judge how far ahead one should observe and how early to start taking action;
• Use eyes efficiently; and
• Recognize hazardous situations in time.
IN-BUS INSTRUCTIONAL METHOD SUMMARY

While providing in-bus instruction, each skill should be systematically taught by following several steps: Explanation, Demonstration, Practice, Discussion, and Confirmation.

EXPLANATIONS

Your explanations to trainees should be simple and should include the reasons for the actions to be undertaken. Such reasons should be capable of proof by demonstration or reference to an authoritative source (e.g., manufacturer’s handbook or manual).

DEMONSTRATIONS

When you demonstrate a skill in the bus, you must be accurate in every way. If you make a mistake, point it out as soon as you realize it to avoid confusing the trainees. The demonstration should be accompanied by further, but more condensed explanation punctuating your actions (e.g., “mirror, signal, handbrake, mirror look behind”).

PRACTICE

After you demonstrate a skill to a trainee, they need to practice it until they are reasonably proficient. As skills are cumulative in the sense that each lesson contains the skills already learned, it is not necessary to achieve perfection before moving to the next stage. For example, when learning to steer, the trainee must start the engine, start and stop the vehicle, and stop the engine as taught in earlier lessons, but the emphasis should be on steering techniques.

Except in the interest of safety, you should not physically interfere with the trainee’s vehicle control, since this undermines confidence. Similarly, in the early stages of a particular lesson, criticism should be avoided while the vehicle is moving, although some prompting or “talking through” may be necessary. In more advanced stages, constructive criticism while in motion could be advantageous. For example, “Don’t forget to check your side mirror.” Keep your guidance positive and “loose” as described above.

Also keep in mind that trainees should be restricted to relatively short periods at the wheel at any one time during the early stages of their learning. As their training advances, the duration of driving periods should gradually be increased.

Remember that only the time the trainee spent driving can be credited toward the minimum number of hours required by Chapter 71.

DISCUSSION

After practice, a discussion of the session should be used to analyze weaknesses, appraise progress, and confirm understanding. Discussions can occur at any stage during the lesson; since as a trainee should not be permitted to continue an incorrect sequence without discussion and correction. Lengthy discussions should not take place with the vehicle in motion since trainee may be distracted, or his or her concentration on the task at hand may prevent him or her from absorbing what is said.

CONFIRMATION

After each session of in-bus training, confirm the key learning points and skills with the trainees. Answer any questions they may have.
UNIT IB IN-BUS
CLOSED PRACTICE COURSE

This session is conducted on a closed practice course and provides an introduction to driving a school bus, including basic familiarity with the bus, and closely supervised practice with starting, shifting, braking, stopping, and maneuvering the bus. This is an important session for new drivers, but not required for a recertification course.

BUS FAMILIARIZATION AND DRIVING BASICS
Four exercises are to be explained, demonstrated, and practiced in order. Discussion and confirmation of knowledge can occur afterward. Specific procedures for the operations in each exercise should be taught the same way they were covered in the classroom Units F and G. The content of each exercise and the sequence is described below.

Closed Course Selection and Layout
A closed course should be selected that is reasonably level, long enough to allow buses to accelerate to at least 20 miles per hour and come to a controlled stop, and wide enough to allow a complete U-turn to be made without backing. No specific course layout is required, but it may be helpful to use several road cones to outline a general route and provide reference markers for stopping and turning.

Exercise 1
1. Pre-trip inspection. (This can be a refresher of Unit PB. Also refer to Unit E for details.)
2. Starting the bus.
4. Slowing in gear.
5. Gradual stop.
6. Securing the bus.

Exercise 2
1. Starting the bus.
2. Gear selection and moving off.
3. Upshifting.
4. Slowing and downshifting.
5. Gradual stop.
6. Securing the bus.

Exercise 3
1. Starting the bus.
2. Gear selection and moving off.
3. Upshifting.
4. Steering (left and right).
5. Fast, controlled stop.
6. Securing the bus.
Exercise 4
1. Starting the bus.
2. Gear selection and straight backing.
4. Securing the bus.
5. Post-trip inspection (Refer to Unit E for additional details).

For each exercise, you should first fully explain all procedures. This is to be followed by a demonstration of the entire exercise. Tell the trainee what he or she is going to do and how they are going to do it before actually performing the operation. Finally, the trainee should be allowed to practice the exercise as many times as required to become reasonably proficient, remembering that future exercises will improve driving proficiency.

After completing each exercise, a short discussion of related procedures and confirmation that key skill points are understood is suggested before starting the next exercise. Possible discussion topics are as follows:

Exercise 1
- Starting the bus in cold weather.
- Gear selection when loaded or on hills.
- Slowing in gear (good) versus feathering the clutch (bad).

Exercise 2
- Downshifting to slow the bus.

Exercise 3
- Lane use when rounding curves.
- Steering a bus versus steering a car (clearance).
- Pivot point of the bus (location of rear wheels).
- Stopping in emergencies.

Exercise 4
- Proper checking before backing.
- Working with helpers.

DRIVING MANEUVERS
Under normal traffic conditions, the trainee will be occasionally called upon to execute maneuvers that require both tight clearance judgments and smooth vehicle handling. In the following exercises, the trainee should be required to negotiate a planned driving course that incorporates skill tests similar to those required in “bus rodeos.”

Closed Course Selection and Layout
As a minimum, the driving course should be designed to give the trainee practice in judging each of the following:
- Side clearances on straight-aways and curves;
- Tire position on the roadway;
- Intersection clearances for right and left turns forward;
- Clearances for right and left turns while backing;
- Location of front bumper and service door while making a controlled forward stop; and
- Location of back bumper while stopping in reverse.

Beyond these, additional practice may be added if there are local conditions requiring extra training (e.g., parallel parking, curb stops in urban areas, hairpin turns in rural areas).
The actual course layout is your responsibility, since it will depend largely on the size and shape of available parking lots, garage aprons, or other surface areas. The layout should consist of a convenient (in terms of space available) combination of the maneuver diagrams shown later in this Unit.

The size and shape of the closed course may require that the suggested maneuver diagrams be modified (e.g., a T-intersection in place of a cross intersection) or used several times in sequence to practice different skills (e.g., the intersection may be used first for forward cornering, later for cornering while backing, and finally for bumper stops).

In addition, it is important to note that the clearance dimensions on the maneuver diagrams were obtained from school bus rodeos and thus are very tight. Keep in mind that the maneuvers should be designed so that not only can each trainee perform them (although perhaps not on their first try), but that instructors can perform them in their demonstrations.

In setting up the course, a variety of materials may be used. On the maneuver diagrams, circles with a dot in the center indicate a standing marker such as a road cone. Circles without dots used in the tire location diagram are low (less than six inches) pavement markers such as blocks of wood. Markers should be selected that will allow trainees to know if they have hit them, but it is advised that fixed rigid and metal markers not be used, since they can be broken or may scratch or dent the bus. Once the markers have been properly positioned, mark their locations with chalk so that they may be reset if knocked over, moved, or removed at night. On the first several attempts by trainees, it will probably be helpful to have an extra person available to reset markers along the course.

The presentation of this area of instruction will generally follow the same pattern used in the driving familiarization section of the course. The course layout should be explained first (a diagram may be helpful) and then demonstrated. During the demonstration, the instructor should briefly review the basic driving skill procedures (e.g., starting, moving off, shifting), and offer hints on techniques for judging clearances and tire position, use of mirrors in backing, and other driving procedures.

The trainee should practice the course until reasonably proficient. Instructor coaching should be kept to a minimum after the initial attempts.

**Diminishing Clearance**

In this maneuver, trainees are required to drive the bus in a straight line with diminishing clearances and to drive in a smooth and continuous manner.

To conduct this maneuver, four pairs of standards need to be set up. The distance between each pair of standards will be 25 feet. The width of each pair will vary as follows:

- The first pair of standards will be equal to the widest part of the bus, plus 8 inches;
- The second pair of standards will be the width of the bus, plus 6 inches;
- The third pair of standards will be the width of the bus, plus 4 inches; and
- The fourth pair of standards will be the width of the bus, plus 2 inches.

The trainee will be expected to proceed through this lane in a smooth and continuous manner without touching any of the marker standards.
Serpentine
This maneuver is designed to determine the trainee’s ability to steer a school bus in close limits. The bus must pass the markers, alternately to the right of the first, to the left of the second, and so forth. The bus must be operated in continuous motion during the maneuver except for the stop made before beginning the forward motion.

![Serpentine Diagram](image)

Tire Location
This maneuver is designed to determine the trainee’s ability to judge the location of a school bus’ tires and to negotiate a path through a series of narrow gaps. The tires of the bus must travel the path without striking or moving the markers with any wheel. The bus must be operated in a continuous forward motion. The distance between the markers is the width of the bus’ dual wheels plus 3 inches.

![Tire Location Diagram](image)

Offset Alley
An offset alley is set up to determine the trainee’s ability to drive a bus through two offset lanes with a minimum of hesitation and without touching the barriers. Two sets of parallel barriers, 10 feet long, are set up 10 feet apart. The right-hand barrier of the first set is placed in a direct line with the left-hand barrier of the second set (the offset barriers). The distance between the two sets of barriers (from the end of the first set to the beginning of the second set) will be the length of the bus, plus 3 feet.

![Offset Alley Diagram](image)
Intersection
This maneuver will allow the trainee to estimate clearances when making right and left turns.

The driver must stop in proper lane position, signal, observe, and correctly negotiate the turn. This maneuver should be practiced going forward and while backing. A T-intersection may be used for this maneuver using the same layout distances as shown in the diagram.

Stop Line and Simulated School Bus Stop
This maneuver is designed to determine the trainee’s depth perception, ability to use cross view mirrors, and ability to bring the bus to a smooth, complete stop while in the process of loading or unloading students.

A stop line, 4 feet long, is established at the end of a straight line. The trainee is expected to bring the bus to a complete stop with the bumper as close to the stop line as possible and adjacent to a school bus stop sign. Trainees approach the stop line at any desired speed, but only one stop should be made. The trainee can use the front crossover mirror to observe how close the front bumper is to the stop line. Thus, the adjustment of the crossover mirror can be checked during this maneuver. Once stopped, proceed with normal bus stop procedures.
**Backing Stall**

The purpose of this maneuver is to determine the trainee’s ability to back the bus into an area with limited space.

A backing stall, 10 feet wide and 40 feet long, is set up. To limit the trainee to established maneuvering room, a front wheel limitation line will be placed on the pavement perpendicular to the parallel stall marker lines. The approach to the backing stall should be made from the right- and left-hand sides. The trainee has two attempts at backing into the stall.

**BACKING STALL**

Approximate overall dimensions: L = 50’    W = 10’

**NOTES:**
UNIT IB IN-BUS
ON-THE ROAD DRIVING

The on-the-road portion of the in-bus instruction has two main objectives: to provide practice of basic maneuvering skills in real roadway situations, and to emphasize in those situations the application of defensive driving techniques. Specific emphasis needs to be given to each trainee on student loading and unloading procedures, driving at a safe legal speed, and railroad grade crossings. You should structure the on-the-road session to conform to these objectives. All in-bus instructors must have a valid license classification and endorsement(s) for the bus being driven and be a certified school bus instructor.

Emphasis in this lesson should be placed on careful supervision of each trainee. Skills initially introduced on a closed course (Unit IB. In-Bus – Closed Practice Course) should now be transferred to the open road under normal traffic conditions. In addition, the trainee should practice simulated student loading and unloading procedures by stopping at the side of a lightly traveled roadway. Remember, all instructions in this lesson must be one-on-one – one certified instructor to one driver.

As training progresses with the trainee and they acquire and become more comfortable with their skills, broaden the range of roadway, environmental, and traffic conditions that the trainees must negotiate. Close supervision must be made of the trainee’s monitoring and concentration skills as the driving lessons become more difficult. Areas of difficulty for the trainee should be focused and retrained as needed.

ROUTE SELECTION

Perhaps the most important feature of your preparation for on-the-road maneuvers is in choosing a local route(s) that can be completed within the scheduled time. Route selection is a local responsibility because many of the situations that should be considered will vary between school districts and even over time. Factors to be considered in determining the route(s) include, among other things:

• The expected average speed (e.g., rural versus urban);
• The expected volume of traffic;
• The total time available; and
• Exposure to all significant roadway situations.

In considering exposure to significant roadway situations, the instructor should base selection of situations, in part, on what was provided in the closed course exercises. Care should be taken to ensure that maneuvers which were not practiced because of closed course space limitations or time constraints are represented in the on-the-road route. It should be noted that starting and stopping on grades, both uphill and downhill, and at railroad grade crossings should be included.

Situations that are not typical within your school district may be given a lower priority in route selection, but they should not categorically be eliminated. The rationale for their inclusion is that special runs for athletic events, field trips, or other activities will often present the driver with unfamiliar situations.

As the trainee progresses through the in-bus training, the route(s) selected should contain a broader variety of conditions. Examples could include steeper hills, more highway rail grade crossings, narrow bridges, obstructed views, etc. The sessions should progress from low volume roadways to roadways that are moderate to busy with traffic, such as early morning or late afternoon.
SKILLS TO PRACTICE ON THE ROAD

Keep in mind that to start, it is recommended that the trainees start on lightly traveled roads. This allows the driver to concentrate more on developing his or her own skills than on negotiating hazards. More complex driving situations can follow as the trainees master required skills. While it is the instructor’s responsibility to develop the road course used for this lesson, the following procedures should be included:

1. PRE-TRIP INSPECTION (Reviews of Units E and PB).
2. BASIC DRIVING SKILLS (Units F and G).
   A. Starting.
   B. Stopping.
   C. Shifting (where possible).
   D. Maintaining appropriate following distance.
   E. Maintaining appropriate speed.
   F. Maintaining proper lane position.
   G. Aiming high in steering.
   H. Left/right turning technique and positioning.
   I. Backing up.
   J. Turning around.
   K. Crossing railroad tracks (where applicable).
   L. Negotiating narrow or low clearances.
   M. Negotiating stoplights and intersections.
   N. Highway merging.
   O. Overtaking other vehicles.
   P. Winding roads.
   Q. Steep and/or long hills.
3. MONITORING AND CONCENTRATION SKILLS (Units B, E, F, and G).
   A. Left/right sides.
   B. Left/right mirrors.
   C. Crossview mirrors.
   D. Rear-view mirrors.
   E. Bus interior.
   F. Dashboard controls.
   G. Frontal view.
   H. In-bus preventive maintenance.
4. LOADING AND UNLOADING PROCEDURES (Unit C)
   A. The trainee should conduct a closely supervised stop to drop off and pick up “imaginary” students.
5. RAILROAD GRADE CROSSING PROCEDURES (Unit G).
6. OTHER LOCALLY IMPORTANT PROCEDURES.
LOADING AND UNLOADING PROCEDURES PRACTICE
Each trainee should be able to correctly complete two loading and unloading simulations. This could be done by simulating loading and unloading at the start and at the end of the trainee’s driving session and by stopping the bus twice along a simulated route to practice additional loading and unloading procedures. These simulated routes may include edges of parking lots, which have the advantage of allowing the trainee to pull completely off the road to practice. The simulated student loading and unloading maneuvers should require the trainee to execute all procedures he or she would normally use with students, even though no students are present. Simulated loading and unloading procedures should not be practiced on a highway or roadway, unless loading or unloading actual students.

The step-by-step instructions presented in Unit C (Student Loading and Unloading) should serve as guides for both the trainee and the in-bus instructor. The trainee should be encouraged to comment on his or her intentions and procedures at each step. As an instructor, it may be helpful to have a copy of Chapters 71 and 104 of Title 67 and a copy of the CDL Manual (Publication 223). Links are provided in the Lesson Summary at the start of this unit.

During these simulations, the instructor should pay special attention to the following:

**Sequencing of Actions**
Were any steps missed or performed in the wrong order? Consider the requirements of slowing the bus before entering designated loading/unloading zones and whether the trainee is watching students and checking for potential violators of the school bus stopping law.

**Attention to Students**
Is the trainee watching students on the bus as well as those entering and exiting the bus? Are appropriate cross-view and rearview mirrors being used in addition to the windows?

**Awareness Around the Bus**
Before pulling away from the stop, is the trainee attempting to look for students who may have returned to the bus after reaching a point of safety? Is the trainee aware of traffic patterns around the bus as the students are crossing the street in front of the bus?

**Automatic Failures**
Keep in mind that a simulated or actual student discharge is part of the driver recertification skills exam. The following are considered automatic failures:

1. Not activating amber lights 150’-300’ in advance of discharge;
2. Not completely stopping, applying the parking brake, and putting the transmission in neutral;
3. Not checking traffic;
4. Not checking all mirrors around the bus; and
5. Not checking child safety and rechecking mirrors before proceeding.

Drivers should be made aware of all of the steps in the loading and unloading processes. They should know that in addition to the above automatic failures, a failure on this part of their exam can also occur if they accumulate three or more errors.

Based upon your experience, you should develop your own checklist of important items to watch for in loading and unloading simulations.

RAILROAD GRADE CROSSING PROCEDURES PRACTICE
Much like practicing student loading and unloading, each trainee should practice simulated railroad grade crossing procedures until the trainee is comfortable with the procedure before practicing during the actual on-the-road portion of the training. The step-by-step instructions presented in Unit G (Fundamentals of Driving a School Bus) should serve as guides for both the trainee and the in-bus instructor. The trainee should be encouraged to comment on his or her intentions and procedures at each step. As an instructor, it may be helpful to have a copy of Chapters 71 and 104 of Title 67 and a copy of the CDL Manual (Publication 223). Links are provided in the Lesson Summary at the start of this unit.

During these practices, the instructor should pay special attention to the following:
**Sequencing of Actions**
Were any steps missed or performed in the wrong order? Consider the requirements of slowing the bus and activating 4-ways in advance of railroad grade crossing and whether the trainee is starting early to look for trains. Are they stopping far enough in advance of the rail crossing? Are they opening the door, looking, and listening?

**Attention to Students**
is the trainee asking students on the bus for silence during the crossing?

**Awareness Around the Bus**
Before proceeding, did the trainee open the door, look, and listen? When safe, did they proceed across the tracks without shifting gears? Were they aware of the number of tracks to cross?

**Automatic Failures**
Keep in mind that a simulated or actual railroad crossing is part of the driver recertification skills exam. The following are considered automatic failures:

1. Not activating 4-ways in advance of railroad grade crossing;
2. Not completely stopping between 15’ and 50’ from the nearest rail, then pulling up to see;
3. Not looking and listening; and
4. Not proceeding without shifting.

Drivers should be made aware of these. They should know that failure on this part of their exam can occur if they accumulate three or more errors.

**DRIVER EVALUATION**
The final portion of the in-bus instruction is the evaluation of a trainee’s performance. Read this carefully before each evaluation. It provides an important glimpse into the CDL road test requirements. It is recommended that an evaluation form be used for this purpose. You can use the Driver In-Bus Evaluation Form handout found at the end of this unit if your local district does not have one. Use of driver evaluation forms provides the following advantages:

- Written documentation of a trainee’s skill level;
- A means of determining possible weak areas in different topics of classroom instruction (e.g., safe driving, preventive maintenance, fundamentals of driving a school bus); and
- A communication link between in-bus instructors and classroom instructors that will aid course coordination.

These forms should be used for both new driver and recertification courses since experienced drivers may fall into poor driving habits or be weak in certain skill areas.

The Road Test is one of the three required parts of the CDL skills test requirements. A Pre-Trip Inspection and Basic Control Skills Test must be completed to fulfill the skills test requirement. Additional information regarding the Pre-Trip Inspection is contained in Unit E.
Automatic Failures
A driver will receive an automatic failure during the road test for any one of the following:

1. A crash.
   A. Any crash, however slight, that the applicant could have prevented.

2. Lack of Cooperation.
   A. Refusing to follow the instructions of the examiner.
   B. Refusing to complete a maneuver.
   C. Offering bribes or a gratuity.

3. Failure to Exhibit Knowledge of Controls.
   A. Unable to start engine.
   B. Insufficient knowledge of controls.
   C. Failing to start the engine with the standard transmission in neutral.
   D. Beginning a maneuver from the left side of the street.
   E. Interfering with traffic unnecessarily.
   F. Making more than three backups.
   G. Failing to look in both directions.

4. Improper Backing.
   A. Failing to check the area before backing.
   B. Improper steering, such as one-hand driving when not required, allowing the steering wheel to “spin back” after turns, jerky motions or failing to use the hand-over-hand method or the push-pull method.
   C. Excessive weaving while backing.
   D. Failing to use the mirrors properly.

5. Any Traffic Offense.

6. Pre-Trip.
   A. Incomplete or incorrect air brake check.
   B. Accumulation of points.
   C. Lack of cooperation.
   D. Vehicle does not pass safety inspection.

7. Skills.
   A. Accumulation of points.
   B. Lack of cooperation.

8. On-Road Test.
   A. Failure to properly verbalize simulation of downhill procedure.
   B. Lack of cooperation.
   C. Accumulation of points.
   D. Any traffic violation.

   A. Failure to operate 8-way lights.
   B. Failure to engage seat belt.
   C. Accumulation of points.
   D. **Refer to the previous section for automatic failures regarding simulated loading and unloading of students and railroad grade crossings.**
COMMERCIAL DRIVER LICENSE ROAD TEST
The following procedures detail a typical Commercial Driver License (CDL) Road Test. All initial applicants for a CDL must pass an on-road driver test while being observed by an authorized examiner. The purpose of the road test is to evaluate the applicant’s ability to drive safely in actual on-the-road situations. To schedule an exam, use the following link:

http://www.dmv.state.pa.us/centers/commercialDriversCenter.shtml
or
https://www.dot4.state.pa.us/exam_scheduling/eslogin.jsp#top?20091024102338908=20091024102338908

Driver’s licensing sites are provided at the following link:
https://www.dot4.state.pa.us/locator/locator.jsp#top?20091024102515486=20091024102515486

The examiner will instruct the driver over a predetermined route that contains various maneuvers. In order to evaluate the driver’s skills, the examiner will instruct the driver to turn, stop, and start at various points on the road test route.

The driver must be able to correctly complete the following:

• Left turns.
• Right turns.
• A railroad crossing (see section above).
• A start and stop on a grade.
• Driving up a hill or grade.
• Stopping at and going through intersections.
• Driving on straight sections of urban/rural roads.
• Changing lanes.
• Driving around curves.
• Driving under an underpass or across a bridge.
• Driving on an expressway.
• General driving skills.

Throughout the test, the driver will be rated on his or her general driving behaviors:

• Using space management.
• Using the clutch or automatic transmission properly.
• Using gears properly.
• Using brakes properly.
• Obeying traffic signs.
• Operating the vehicle safely.
• Steering safely.

The examiner will watch for certain actions throughout the test. Your trainee should practice each of the test items to make sure he/she can do them correctly.
1. LEFT/RIGHT TURNS -

A. Approaching each turn, the examiner will check to see if the driver:
   - Checks traffic – Looks ahead, left, right, and to the rear using the mirrors.
   - Signals – Turns on the turn signal at least 100 feet before the turn.
   - Slows down – Slows smoothly and changes gears as needed to keep power; does not coast with the foot on the clutch.
   - Positions the bus – Gets into the correct lane and positions the vehicle to make the turn.

B. The driver should time the arrival so stopping isn’t necessary. If the driver must stop prior to the turn, the examiner will check to see if he or she:
   - Maintains a gap – Stops far enough back so he or she can see the rear wheels of the vehicle in front.
   - Stops in correct place – Stops so the vehicle is not in the intersection, not over the stop line, and not past the crosswalk.
   - Stops fully – The bus must not coast – it must come to a full stop.
   - Keeps wheels straight – The wheels must be straight ahead while stopped.

C. While turning, the examiner will check to see if the driver:
   - Checks traffic – Keeps both hands on the wheel.
   - Changes gears during the turn – Gear changing is only allowed to get started from the stop prior to turning.
   - Maintains smooth speed – Makes the turns smoothly without stops.
   - Turns correctly – The bus must not turn too wide, nor too short, and should not go over or touch the curb or cause other traffic to back up.

D. As the driver completes the turn, the examiner will check to see he or she:
   - Checks traffic.
   - Finishes the turn in the correct lane. For a left turn, uses the left lane.
   - For a right turn, uses the right lane, cancels the signal. The driver must turn off the turn signal.
   - Accelerates and moves to the right for left turns. The bus must accelerate smoothly and move into the right lane when traffic is clear.

2. RAILROAD CROSSINGS

A. At railroad crossings, the driver must stop. The examiner will check that the driver:
   - Checks traffic.
   - Moves to the right-most lane and, activates right turn signal.
   - Stops no farther than 50 feet nor closer than 15 feet from the nearest rail and activates 4-way flashers, puts the bus in neutral, and activates brakes.
   - Selects the proper gear.
Does not change gears while crossing the tracks.
Deactivates the 4-way flashers.
Shifts to proper gear.
Does not stop or brake on the tracks and does not make lane changes or pass on the tracks.
Drives the posted speed limits.

3. START ON GRADES
A. The examiner will tell the driver to continue and watch that he or she:
   - Checks traffic.
   - Turns 4-way flashers off and left turn signal on.
   - Releases the parking brake, puts vehicle in gear, and does not turn the steering wheel before the vehicle moves.
   - Does not stall engine or roll backward when starting.
   - Continues to check traffic.
   - Accelerates smoothly and blends with traffic.

4. STOP ON GRADES
A. The examiner will have the driver stop and/or start on a grade, off the road. When stopping on a grade, the examiner will check that the driver:
   - Checks traffic prior to stopping.
   - Activates turn signals.
   - Positions the vehicle toward the right side of the roadway.
   - Slows down smoothly, changing gears to keep power – does not coast.
B. Once stopped, the examiner will check that the driver:
   - Has positioned the vehicle parallel to the curb.
   - Does not let the vehicle roll forward or backward.
   - Cancels the turn signal and turns on 4-way flashers.
   - Puts on the parking brake, puts the gear shift in neutral, releases the foot brake, and takes foot off the clutch.
5. DRIVING UP GRADES
   A. As the driver drives up a grade, the examiner will check that he or she:
      ✦ Selects the proper gear, changes gears to maintain speed, and does not lug the engine.
      ✦ Stays in the right-most lane.
      ✦ Keeps hands on the steering wheel.
      ✦ Uses 4-way flashers if too slow for traffic.
      ✦ Checks traffic using the correct mirror (especially to the left and rear).

6. DRIVING DOWN GRADES
   A. As the driver drives down a grade, the examiner will check that he or she:
      ✦ Selects the proper gear (lower gear) before the crest of the grade. (Only gentle to moderate
        braking should be needed to control speed and engine RPMs).
      ✦ Does not ride the clutch.
      ✦ Tests brakes by applying them before the crest of the grade.
      ✦ Maintains a steady speed. Does not ride or fan the brakes.
      ✦ Stays in the right-most lane and maintains the correct following distance.
      ✦ Checks traffic, especially to the left and rear, using mirrors.

7. DRIVING THROUGH INTERSECTION
   A. As the driver drives through an intersection, the examiner will check that he or she:
      ✦ Checks traffic.
      ✦ Yields to pedestrians and other traffic as required.
      ✦ Does not change lanes in the intersection.
      ✦ Does not change gears in the intersection.
      ✦ Does not lug or rev the engine.
      ✦ Drives smoothly through the intersection without disrupting traffic.
      ✦ If the driver must stop at the intersection, the tester will check the same items as when the
        driver stopped for a turn.

8. STRAIGHT ROADS
   A. As the driver drives down a straight city or county road, the examiner will check that he or she:
      ✦ Regularly checks traffic, watches for hazards, and looks far enough ahead (7 to 15 seconds).
      ✦ Selects the proper lane and stays to the center of the lane without wandering back and forth.
      ✦ Maintains correct speed and avoids continual slowing, stopping, and accelerating.
      ✦ Maintains correct following distance. Counts 1 second per 10 feet of vehicle length plus 1
        additional second for speeds over 40 MPH as the front of the bus passes stationary roadside
        objects.
9. CHANGING LANES

A. When the driver must change lanes, the examiner will check that he or she:
   - Does not change lanes in intersections.
   - Checks traffic from front and rear; especially blind spots.
   - Signals the lane change early enough.
   - Does not tailgate while waiting to change lanes.
   - Makes a smooth lane change, maintains speed, and allows the correct distance between vehicles.
   - Cancels signals.

10. CURVES

A. In curves, the examiner will check that the driver:
   - Reduces speed before the curve.
   - Does not brake while in the curve.
   - Maintains speed during the curve without a strong pull to the side.
   - Keeps all vehicle wheels in the lane.
   - Continually checks traffic and uses the mirrors to watch the tracking of the bus.

11. UNDERPASSES/BRIDGES

A. As the driver goes under an underpass or over a bridge, the examiner may ask the driver:
   - The posted height of the underpass.
   - The weight limit of the bridge.

12. EXPRESSWAY DRIVING

A. As the driver merges onto the expressway, the examiner will check that the driver:
   - Checks traffic.
   - Checks blind spots.
   - Signals at least soon enough that expressway traffic can see the signal.
   - Merges without stopping unnecessarily.
   - Uses acceleration lane to accelerate to traffic flow.
   - Merges smoothly while maintaining following distance.
   - Moves to the center of the driving lane and cancels signal.
B. When the driver changes lanes on the expressway, the examiner will check that he or she:

- Checks traffic from front and rear, especially blind spots.
- Signals the lane change.
- Does not tailgate while waiting to change lanes.
- Makes a smooth lane change, maintains speed, and allows correct distances between vehicles.
- Cancels signal.

C. As the driver exits the expressway, the examiner will check that he or she:

- Checks traffic from front and rear, especially to the right and in blind spots.
- Signals the exit.
- Smoothly enters the exit lane at the start of the exit lane.
- Slows down in the deceleration lane.
- Does not exceed the ramp speed and has no noticeable pull to the side of the ramp curve.
- Does not tailgate on the ramp.
- Cancels signal.

13. General Driving Skills

A. The examiner will check the driver’s general driving behaviors throughout the test. Make sure the driver:

- Uses the clutch properly – Doesn’t coast with the clutch in, doesn’t ride the clutch, and doesn’t snap the clutch.
- Uses gears correctly – Selects the correct gear and doesn’t lug or over rev the engine.
- Doesn’t grind or clash gears – Doesn’t coast on automatic shift, chooses proper ranges, doesn’t over-rev engine, and doesn’t select forward gears while in reverse, etc.
- Uses brakes correctly – Brakes smoothly with steady pressure, doesn’t ride the brakes, and doesn’t brake hard or fan air brakes.
- Steers correctly – Keeps both hands on the wheel and doesn’t under or over control the steering.
- Obeys all traffic signs and laws.
- Drives safely without a crash – Does not run over curbs or sidewalks. Stays in correct traffic lane. Drives to never force an evasive action.
- Wears his or her seat belt.
# DRIVER IN-BUS EVALUATION FORM

Driver’s Name: ______________________________ Bus. No.: ______________________________

Date: __________________ Trip: __________________

<table>
<thead>
<tr>
<th>RATING SCALE</th>
<th>EXCELLENT</th>
<th>GOOD</th>
<th>FAIR</th>
<th>POOR</th>
<th>UNACCEPTABLE</th>
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<td>Turning</td>
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<td>Attitude Toward Other Drivers</td>
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<td>Following Distance</td>
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<td>Intersection Behavior</td>
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**TOTALS:**

COMMENTS:

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Evaluator’s Signature
INSTRUCTOR’S PERSPECTIVE
This Unit concludes the School Bus Driver’s course. It provides the instructor the opportunity to review the highlights of the 14 hours of classroom instruction (or 7 for recertification classes). A post-test of general and school bus driving procedures is recommended here. Instructors should also distribute the course/instructor evaluation forms.

TRAINEE OBJECTIVES
1. Review key learning elements from each of the training units.
2. Provide feedback for course and instructor improvement.
3. Take a brief post-test to evaluate the relative effectiveness of the instruction and training.

LOCATION
Classroom

DELIVERY MODE
Lecture, discussion, and test.

MATERIALS
- **Classroom Aids** - LCD Projector (screen optional), chalkboard, chalk and eraser, or flipchart and marker
- **Handouts** - Course/Instructor evaluation form post-test

RESOURCE PERSONNEL
This unit should be presented by the head course instructor. Supporting instructors and resource personnel may be present for this unit, but it is not required.

SUMMARY AND REVIEW QUESTIONS
- **Summary** - This unit should be presented in the same manner for both new driver and recertification courses. The instructor can either use the post-test at the end of the unit or make his or her own version to fit local needs. A representative of the local school district or Intermediate Unit may be used to pass out the Certificate of Completion Cards, if applicable.
- **Review Questions** - (N/A for this unit.)

REFERENCES
PennDOT Publications

Other
- Local regulations and/or procedure guides, if available.
COURSE SUMMARY

This course has covered a broad range of material that is important in the day-to-day transportation of students. These topics have included:

- Your role and responsibilities as a school bus driver.
- Requirements for becoming a Pennsylvania school bus driver.
- Requirements for renewing your Pennsylvania school bus endorsement.
- Important concepts in student management and discipline, including management techniques and general characteristics of student behavior.
- Student loading and unloading procedures.
- Your responsibilities and methods used for transporting students with disabilities.
- Preventive maintenance guidelines to keep your school bus running, including pre-trip inspection, on-the-road monitoring, and post-trip inspection procedures.
- Basic safe driving fundamentals, including methods of starting, shifting, turning, backing, and stopping the bus.
- Techniques of negotiating railroad crossings, methods of entering the flow of traffic, use of lanes, and mountain driving.
- Consideration of your driving fitness, including health, attitude, and skills.
- Hazards involving your bus, as well as those in the broader environment.
- Emergency driving techniques, emergency procedures, bus evacuations.
- An introduction to student emergencies, including medical liability and basic emergency procedures and equipment.
- Information required for your CDL endorsement. (Optional)

After learning all this information, you may feel that you are an expert in school bus driving. However, the reality of the situation is that you will encounter many situations that are unique. Therefore, your practice and experience are the most important determinants of your school bus driving success.

Discuss or address any comments about the course.

POST-TEST ADMINISTRATION

Hand out the course post-test. You can use the one provided at the end of this unit, or you can develop your own post-test.

The post-test, which is located at the end of this summary, is the same as the test taken at the start of the course. This enables an evaluation of course success and content. Areas where students have difficulty point to areas where instruction can still be improved.

With this pretest/post-test process, you can assess in a general sense where group deficiencies exist and the overall effectiveness of the instructional program. You can then adapt your presentation accordingly, emphasizing areas of demonstrated weakness while giving less attention to topics that the class as a whole seems to understand.

The true test of effectiveness could be measured in the number of crashes in which your drivers are involved. However, from an immediate training standpoint, you are in a position to make a close comparison of related items and pinpoint areas that might benefit from an improvement in instructional technique (e.g., where no change or a loss in performance occurs between the pretest and post-test administration). Significant gains would, of course, indicate that the instruction was effective and that the method or technique used should be retained.
As an instructor, you may even consider creating pre- and-post tests for each individual Unit to measure training effectiveness per unit. This may be particularly effective if multiple instructors are providing training (different instructors for each unit).

Emphasize to the trainees that you are interested in the performance on the post-test of the class as a group, not in individual performances.

It should take trainees about 25 minutes to complete the test.

**COURSE/INSTRUCTOR EVALUATIONS**

Take a few minutes and have your trainees fill out the evaluation form(s) provided at the end of this unit, or the evaluation form(s) used in your local area. The evaluation form provided at the end of this unit is two-sided. At a minimum, participants should fill out the first side, which provides an opportunity for feedback on the course and the head instructor.

In many courses, there are several instructors who might have a specialized area of expertise and who may provide instruction on one or two units. For example, there may be one in-bus Instructor and one classroom Instructor. Or, there may be several classroom instructors and one in-bus instructor. So, on the back of the evaluation form are additional instructor evaluation sections. Trainees have a space to identify each instructor and to provide feedback on each one. If there are more than three total instructors, copies of the back side of the evaluation form can be made so that enough sections are made to correspond to the total number of instructors.

**CERTIFICATES OF COMPLETION**

Hand out certificates of completion, if applicable.
SCHOOL BUS DRIVER POST-TEST

1. The Pennsylvania School Bus Driver's Physical Examination Certificate is valid for ____ year(s).
   a. 1
   b. 3
   c. 4
   d. 5

2. According to federal standards, each state must have regulations to ensure that all school bus drivers are in good physical condition, of good character, and skilled in the operation of their vehicles. How can a driver demonstrate he or she is of good character?
   a. Have a clean criminal history record as evidenced by Pennsylvania State Police Criminal History Check.
   b. Have a clean child abuse history record.
   c. Complete FBI clearance checks (fingerprinting).
   d. All of the above.

3. You have been hired as a new school bus driver and are receiving your new driver training. After completing 14 hours of classroom training, the instructor takes you and your 2 fellow trainees on the road for in-bus training. Over the course of the next few days, you and your trainees spend 6 hours training in the bus, evenly distributing the time behind the wheel between trainees so that you each get to drive two hours and observe and critique the others the rest of the time. At the end, you are asked to sign the DL-714 documenting your 6 hours of in-bus training time. What should you do?
   a. 14 hours of classroom plus 6 hours of in-bus training satisfies the 20 hours of training for new drivers. Sign the form.
   b. Don't sign the form until you receive 6 hours of one-on-one, in-bus training.
   c. Contact PennDOT’s Special Driver Training Unit indicating you did not receive the required training.
   d. B and C.

4. The best general rule for managing students on the bus is:
   a. Be very strict or the students will take advantage of you.
   b. Be pleasant, firm and consistent in requiring all students to follow your rules.
   c. Make the bus ride fun.
   d. Ignore student behavior and get them to their destinations as quickly as possible.

5. Kindergarten/elementary students are most likely to:
   a. Be very concerned with personal dignity and image.
   b. Be sensitive to adult criticism.
   c. Gossip frequently.
   d. Resent authority.
6. You transport students from grades K-9 on the same bus. When the season changes to winter, some of the middle school students steal the winter hats off of the younger children’s heads and throw them around the bus. What do you do?
   a. Watch the interior mirror, determine the perpetrators, and yell at them by name to give the hats back or you will kick them off the bus.
   b. Nothing. Let the students work it out themselves. It will be a good lesson for the younger kids.
   c. Stop the bus in a safe location and make sure the hats are returned to the owners.
   d. Pick the older student who usually starts these problems, and tell him to get the hats or the whole bus will be reported to the principal.

7. Where is the school bus danger zone located?
   a. The area right around your tires where students are in the most danger of being run over.
   b. The 10 foot area right in front of the bus that you cannot see through the front windshield over your hood.
   c. The blind spots on the sides of the bus.
   d. A 10 foot band completely around the school bus.

8. When stopped at a loading zone loading passengers, which of the following should you monitor the least amount of time?
   a. The dashboard controls.
   b. Late students rushing to catch the bus.
   c. Your crossview mirrors.
   d. The number of students boarding the bus.

9. When stopped to load or unload students, your automatic transmission must be placed in:
   a. Neutral.
   b. Second gear.
   c. First gear.
   d. Reverse.

10. During the course of the year, you have continuously had problems at one particular student loading/unloading zone. The main issue is that other vehicles ignore your eight-way lighting system and side stop arm and drive past your bus, putting you and your students in danger. What should you do?
    a. When stopping your bus, position it so that a portion is in the opposing traffic lane. That way, traffic will have to stop so they don’t hit the bus.
    b. Work together with the students who use this stop and come to consensus on the best location to move it. Start using this new location as soon as possible.
    c. Deliver a signed, written report to local or state police that includes the vehicle’s license number, color, and type of the vehicle; time and location of the incident and any information about the driver. Work with your supervisor to start the process of possibly moving the stop.
    d. All of the above.
11. Transporting students with disabilities is only completed by certain drivers using specialized vehicles.
   a. True
   b. False

12. At the start of the school year, you are called into a meeting with a new student’s parents and teacher who provide you with some information relating to the student. You learn that the student has autism, and will exhibit some unique behavior as a result of this condition. You should:
   a. Share this information with other student ‘helpers’ on the bus so that they can assist you with your duties.
   b. Share this with all other students on the bus so that they may be prepared for unusual behavior.
   c. Keep this information confidential.
   d. Share this information with all other drivers in case they are a substitute driver for you when you are sick.

13. A student sitting in the seat behind you says they are feeling weak. They then start to have a seizure in which their eyes roll back and body spasms violently. Which of the following actions should you take?
   a. Put a soft object in their mouth.
   b. Hold them down tightly so they don’t hit someone or something.
   c. Continue on your route as the seizure will eventually pass.
   d. If possible, move anything the student may strike against with his or her head, arms, or legs.

14. When does preventive maintenance take place?
   a. Only at the beginning of the day.
   b. Before, during, and after each run.
   c. Only at the beginning of each run.
   d. Only when there is a reported problem, and the mechanic takes care of it.

15. What is the chief reason for maintaining the correct air pressure in all tires at all times?
   a. Make the bus easier to control.
   b. Make the ride smoother.
   c. To keep the bus from swaying when brakes are applied.
   d. To keep the tires from squealing on turns.

16. During your pre-trip inspection you notice that the edge of one of the front tires is becoming chewed up. What should you do?
   a. Be aware of any shimmying in the steering and report the problem to your mechanic or supervisor according to local procedures.
   b. Change the tire.
   c. Nothing. This is normal on school buses.
   d. Diagnose the problem as poor alignment and have the mechanic perform a front-end alignment.

17. If your school bus is hydroplaning on a shallow layer of water, you should:
   a. Steer to the right side of the road while braking rapidly.
   b. Accelerate the bus.
   c. Rapidly brake without steering.
   d. Release the accelerator and push in the clutch.
18. What determines Blood Alcohol Concentration (BAC)?
   a. The amount of alcohol consumed, how fast it is consumed, the weight of the drinker.
   b. Whether or not food is consumed with the alcohol BAC is lower if drinking with food.
   c. The kind of alcohol consumed – a few beers are better than a shot of whiskey.
   d. Drinking indoors or outdoors – fresh air can keep the drinker’s head clear.

19. When driving a school bus, how far ahead should you scan?
   a. 4 to 6 seconds.
   b. 6 to 8 seconds.
   c. 8 to 12 seconds.
   d. 12 to 15 seconds.

20. Another driver aggressively cuts you off in traffic. In response, you should:
   a. Contest your place in traffic – after all, your bus is bigger than their car and you have an important reason to be on the road.
   b. Help the other driver by teaching them what they did wrong with hand signals.
   c. Stay relaxed, avoid eye contact, and ignore any rude gestures.
   d. Block the passing lane to keep aggressive drivers behind you.

21. Watching the brake lights of the vehicle directly in front of you is the safest driving strategy to avoid road hazards ahead of you.
   a. True
   b. False

22. Reference point driving is:
   a. Lining up fixed objects inside the bus with points outside the bus to give consistent reference when driving the bus.
   b. Placing stickers on the windshield of the bus to line up with points outside the bus.
   c. Having known places along your route where you can check the time and be sure you are on schedule.
   d. Great for driving different kinds of buses. Once you learn some reference points, you can use them on other buses.

23. When preparing to turn, how far in advance of the turn should you signal?
   a. 50 feet at speeds lower than 35 MPH and 100 feet for speeds greater than 35 MPH.
   b. 100 feet at speeds lower than 35 MPH and 300 feet for speeds greater than 35 MPH.
   c. 150 feet at speeds lower than 35 MPH and 400 feet for speeds greater than 35 MPH.
   d. 200 feet at speeds lower than 35 MPH and 500 feet for speeds greater than 35 MPH.

24. When driving a bus with Antilock Braking System (ABS), you should:
   a. Pump the brakes.
   b. Push harder on the pedal as the bus slows to a stop.
   c. Brake as you normally would, using only the braking force necessary to stay in control.
   d. Be careful, you can stop faster.
25. When driving a bus on a very steep downhill grade:
   a. Brake smoothly, consistently, and lightly.
   b. Select the right gear and use ‘snub’ braking.
   c. Move to the left lane, as gravity will tend to make the heavy bus go faster.
   d. Shift to a higher gear as you are going downhill.

26. When the right wheels of the bus get off the pavement, what is the correct way to get them back on?
   a. Slow down and then gradually turn the front wheels to the left.
   b. Slow down and then turn the front wheels sharply to the left.
   c. Continue at present speed and turn the front wheels sharply to the left.
   d. Continue at present speed and gradually turn the front wheels to the left.

27. A school bus must stop how far back from a railroad grade crossing?
   a. 10 to 12 feet.
   b. 25 feet.
   c. 15 to 50 feet.
   d. 40 feet.

28. If the bus loses traction and goes into a skid, the most important thing to do is:
   a. Apply hard pressure to the brakes to get the bus to stop.
   b. Apply hard pressure to the accelerator to get the bus to go.
   c. Move the steering wheel back and forth to get the front wheels to find traction.
   d. Slowly remove pressure from the gas and brake pedals to allow the wheels to start rolling again.

29. You have had a crash. The bus is upright, but you smell smoke and see it start to leak from under your hood and into the area near the driver’s seat. Your first priority is to:
   a. Find the fire to see if it is dangerous.
   b. Retrieve the bus’ fire extinguisher and put out the fire.
   c. Evacuate the student passengers and move them away from the bus.
   d. Dial 911 and report the fire.

30. There are many ways you could lose visibility, such as slush being splashed onto the windshield or the hood flying up. There are many actions to take, but one is consistent for almost every such incident:
   a. Activate your four-way hazard flashers.
   b. Activate your strobe light.
   c. Activate your turn signal.
   d. Look out the side windows and use the center or edge lines on the road to keep your sense of direction.

31. The school bus driver’s top priority in event of a crash or illness is to:
   a. Perform emergency medical help.
   b. Contact parents.
   c. Contact their employer.
   d. Keep the situation from getting worse until help arrives.
32. The “Good Samaritan Act” exempts a school bus driver from civil liability for rendering emergency care only if the bus driver:
   a. Is currently certified in first aid or emergency care.
   b. First drops off all remaining school bus passengers.
   c. First attempts to locate a physician or other health professional.
   d. Has had at least 2 year’s bus driving experience.

33. When may you send students to get help in an emergency?
   a. If local guidelines permit and the situation is extreme and warrants it.
   b. If you know the students and they seem sufficiently mature.
   c. Your cell phone is not working.
   d. The radio in the bus is broken.
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PENNSYLVANIA SCHOOL BUS DRIVER TRAINING COURSE
COURSE/INSTRUCTOR EVALUATION FORM

Please indicate your impression of each of the following aspects of the course you have just completed. Circle one number for each aspect.

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<tr>
<th>Aspect</th>
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<td>Usefulness of course content for performing your job</td>
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<td>Helpfulness of teaching aids</td>
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<td>Appropriateness of training facilities</td>
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List any additional comments about the overall course or specific lessons in the course:
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Please indicate your impression of the instructor for each of the following items. Circle one number for each aspect.

INSTRUCTOR NAME: ________________________________________________________________

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<td>Overall impression of instructor</td>
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Please list any additional comments you have about the instructor for this course.
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Please indicate your impression of the instructor for each of the following items. Circle one number for each aspect.

INSTRUCTOR NAME: ____________________________________________

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Please list any additional comments you have about the Instructor for this course.
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Please indicate your impression of the Instructor for each of the following items. Circle one number for each aspect.

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<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Presented material in an interesting manner</td>
<td>.4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Provided clear explanations</td>
<td>.4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Used teaching aids effectively</td>
<td>.4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Provided sufficient opportunities for student participation</td>
<td>.4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Responsiveness to needs of students</td>
<td>.4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Overall impression of instructor</td>
<td>.4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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</tbody>
</table>

Please list any additional comments you have about the Instructor for this course.
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________________________________________________________________________

NAME (Optional): __________________________