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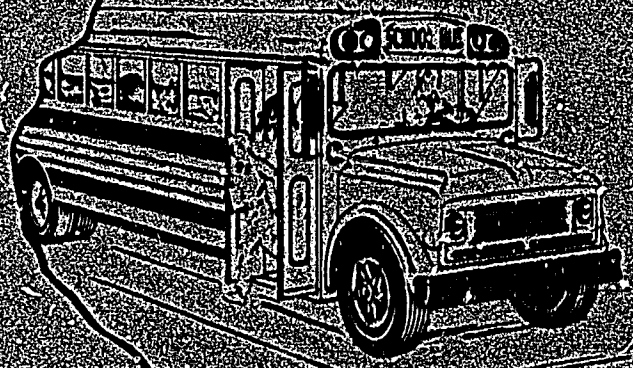
ABSTRACT

Four units are provided for formal classroom instruction in advanced competencies for school bus drivers in Illinois. Units cover passenger control, accidents and emergencies, detecting hazards, and first aid. Each unit contains some or all of the following components: table of contents; a list of objectives; informative material, including an overview and information on the topics covered in the unit; worksheets; exercises; and review questions. (YLB)

ADVANCED COMPETENCIES FOR SCHOOL BUS DRIVERS



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1863 A CENTURY OF PROGRESS IN ILLINOIS SCHOOLS

EDUCATION IS EVERYONE'S FUTURE

GENERAL TABLE OF CONTENTS

**Units I through IV will be presented in a formal classroom setting with competency tests provided by the regional superintendent and administered by the classroom instructor.*

UNIT I

PASSENGER CONTROL

Table of Contents

Objectives

By the end of this unit, the students should be able to:

1. List the procedures for controlling the bus and students during loading and unloading.
2. Describe general rules of student conduct and discipline procedures.
3. Identify types of disorder requiring immediate attention and describe procedures for controlling them.
4. Report student control problems.

A. OVERVIEW

The primary responsibility of the school bus driver is to transport a group of individuals from one point to another, *safely*. This requires that your fullest attention be given to the driving task. However, you must be able to control the pupils entrusted to your care, as well as the vehicle, to assure the safest possible conditions. Pupils aren't always as predictable as your vehicle. In this unit, you will learn to apply effective control systems. This unit will also demonstrate the importance of developing and maintaining a productive and formal communication link between school bus drivers, school officials and parents.

One of the most important maneuvers you make is the loading and unloading of students. Experience shows that this is a point where students and drivers are exposed to many hazards. Therefore, you must do it a certain way to prevent accidents.

You must learn proper procedures for controlling traffic, aiding pupils who must cross the roadway, unloading pupils, and properly seating pupils.

First, consider the equipment on the bus necessary to accomplish these purposes.

B. LOADING PROCEDURES

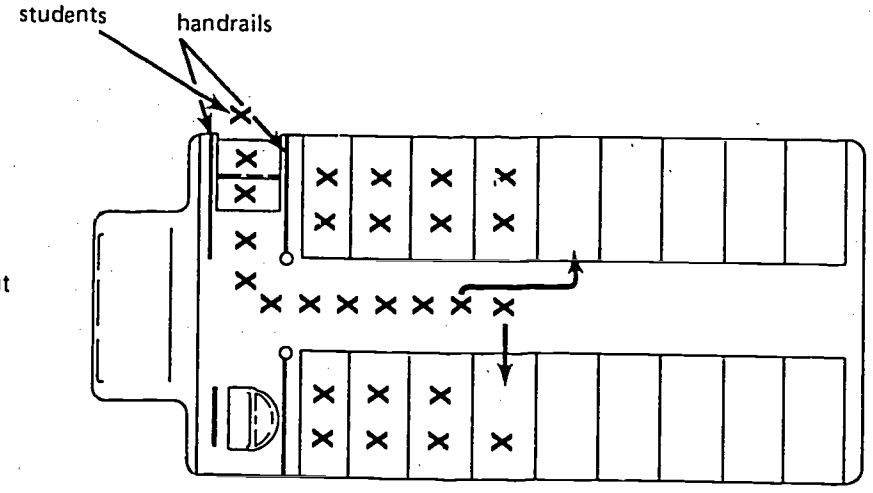
A typical stopping and loading procedure is:

1. Activate the prewarning.
2. When approaching the designated stop, start slowing down in preparation for the stop.
3. Apply brakes hard enough to light up the brake lights so that vehicles following will have an indication you are about to stop.
4. Check all mirrors to see that 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: dry, slippery, dips sharply to the right, rough ground, etc.
6. If possible, do not pull up any closer than 6 feet from the waiting students.
7. *Place transmission in neutral.*
8. Open the front door when you are ready to board the students. They should be trained not to move toward the bus until the door opens.
9. Have students go directly to their seats as prescribed by local district policy.
10. Check to make sure students are properly seated, then prepare to close the front door.
11. Close door deactivating red flashing warning lights.
12. Check traffic, use mirrors; turn on left turn signal and when safe, pull back into the lane of traffic; cancel turn signal; retain road speed; and proceed to your next stop.

a. Typical student policy:

(1) Students use handrails when boarding bus.

(2) Students fill up seats from front to rear of bus.



Typical Seating Policy

b. Angel Seating Policy:

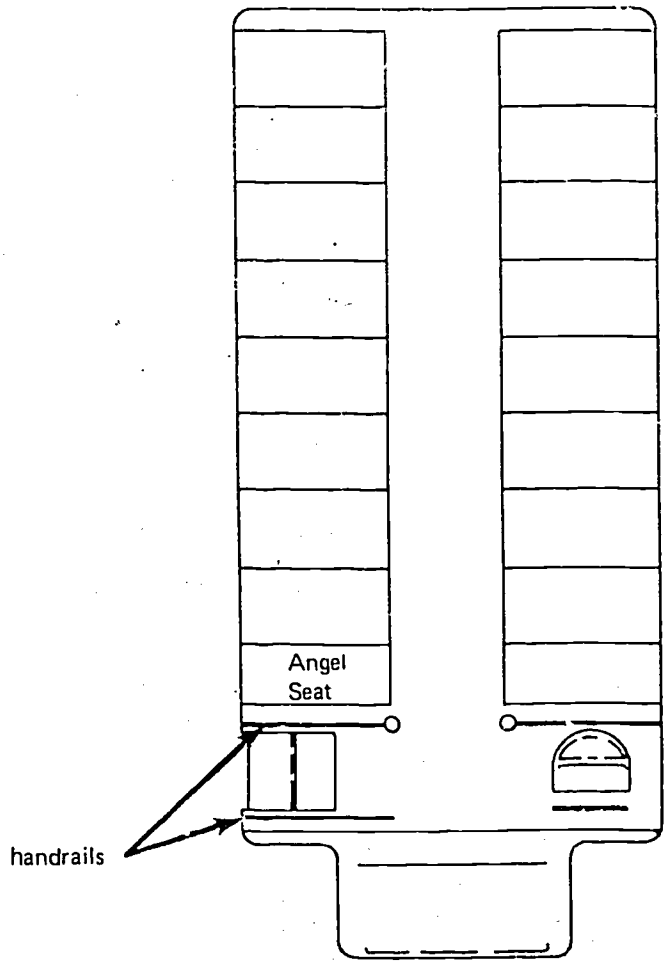
(1) Students use handrails when boarding bus.

(2) Students fill up seats from front to rear of bus, but they leave the front seat opposite the driver (the "Angel Seat") vacant for the last two students who board at each stop.

(3) At next stop, the students in the angel seat get up and take another seat toward the rear.

(4) The last two students to board again sit in the angel seat.

(5) When unloading, the process is reversed; the last two to get off at the next stop sit in the angel seat. As the seat is vacated, two students who get off at next stop move up to the angel seat.



Angel Seating Policy

C. UNLOADING PROCEDURES

Unloading students poses added problems; problems especially on the return trip home. Follow the LOADING procedure with these additions:

1. You are responsible for the safety of all students crossing the roadway, regardless of their grade level.

2. Give the motoring public a chance to react to the flashing red warning lights. In most cases, you shouldn't allow students to get off the bus until passing cars have stopped.

3. Students who must cross the road should line up in front of the bus (approximately 10 feet) and look up at you; no one should be beyond the left front fender.

4. You must check traffic in both directions before allowing students to cross the roadway.

5. While performing this operation, remember that you are not a traffic officer and have no rights other than a regular motorist. In other words, do not signal any motorist to do anything. If a driver of a motor vehicle violates the law requiring vehicles to stop when the 8-lamp flashing signal system and stop-arm are activated, write down and turn in the license plate number to the transportation supervisor as local school district policy dictates.

6. Once you have determined that it is safe for students to cross the roadway, give them a prearranged signal.

7. When students have safely crossed the road, immediately cancel the red flashing warning lights to allow stopped traffic to move on.

8. Activate left turn signal and check rearview mirrors before pulling back onto the roadway.

9. Always try to count the students leaving your bus and account for where they are before moving.

D. GENERAL GUIDELINES FOR STUDENT CONDUCT

Certainly it cannot be denied that your passengers are affected by the school transportation program. Their experiences on the bus — good and bad — become a part of their education.

This is an aspect of public school transportation which has not received the attention which it deserves. You can do much to control students for their safety and yours.

Formal classroom behavior need not, of course, be required of pupils in a school bus. An informal atmosphere which encourages pupils to relax and enjoy the ride is desirable. There are, however, certain limits within which pupil activity must be confined. What are these limits?

Your control over pupils should be sufficient to assure that:

1. Students will enter and leave the bus at school loading stations and at designated bus stops in orderly fashion and in accordance with instructions.

   This requires pupils to proceed at all times:

   a. without haste and loitering,

   b. without crowding and pushing,

   c. with each pupil showing due regard for his/her own safety and the safety of others.

2. Students will remain quiet enough not to distract you.

   Pupils must, at all times

   a. refrain from shouting and other boisterous activity,

   b. refrain from talking to you while the bus is in motion,

   c. be absolutely quiet when approaching a railroad crossing,

   d. show due consideration for you and your problems.

   In general, any activity which worries or distracts you as the driver is objectionable. You need to keep your mind on the driving and the traffic situation. If you are worried about the activity in the bus, you cannot be a safe driver.

3. Students will remain seated while the bus is in motion.

   a. Each pupil must go directly to a seat upon entering the bus.

   b. Each pupil must remain seated until the bus has stopped.

4. Students must always observe safety precautions at discharge point. Where it is necessary to cross the highway, proceed to a point at least 10 feet in front of the bus on the right shoulder of the highway. They must remain there and wait for a signal from the bus driver permitting them to cross.

5. Transportation equipment represents a large capital investment. Pupils can be expected to cooperate in its maintenance and preservation.

   a. Orderly behavior in the bus, at all times, is essential. Roughhousing is not only hard on seats and interior finish, it also makes it difficult for you to drive safely.

   b. Pupils should keep feet off the seats.

   c. Pupils should keep sharp objects off the upholstery.

   d. Pupils should assist in keeping the bus safe and clean at all times.

6. Students should never extend arms or other parts of body out through windows.

   a. It is important that no object protrude through an open window.

   b. Pupils should leave windows alone. You should attend to ventilation.

7. Students should never throw objects about in the bus or out through windows.

   a. Waste paper and other refuse shall not be scattered along the highway. Provision should be made inside for such material and it should be disposed of at the end of trip.

   b. Books and other property should be properly stowed on laps.

   c. Leave no books, lunches, or other articles on the bus.

   d. The aisle should be clear.

   e. Shooting "paper wads" or other material in the bus is not permissible.

In addition to items listed above, you should instruct and encourage students to:

1. Follow your instructions promptly and cheerfully.

2. Be on time at the bus stop location.

3. Be on time at the school loading station.

4. Avoid playing or loitering on the highway when waiting for a bus which is late.

5. Follow correct safety procedures when walking on the highway to and from a bus stop. In some instances, pupils must meet a school bus some distance from the horne driveway. Procedures for walking on the highway should be clear to pupils.

6. Refrain from smoking while on the bus.

7. Avoid eating or drinking on the bus.

E. DRIVER'S RESPONSIBILITY FOR DISCIPLINE

Local school district policy concerning student behavior should be well known and clearly understood by:

1. Bus drivers,

2. Students,

3. Parents.

Obviously, you cannot be solely responsible for proper student behavior. Teachers should have direct responsibility for training and instructing transported pupils. Teachers, as well as bus drivers, should supervise loading stations at the school grounds.

Mimeographed lists of rules and regulations covering pupils' behavior should be prepared by the administration and distributed to pupils and parents. However, a mimeographed list is not adequate as a means of instruction by itself. Pupils cannot be expected to react to printed materials covering rules affecting their behavior without establishing a basis of interaction for acceptable communication covering not only how the pupil should act, but why a particular action is necessary.

Illinois statutes require instruction at least twice during each year in safe bus riding practices including emergency evacuation drills. Student safety assemblies can be an effective approach toward the motivation of safety awareness on the school bus.

You must, of course, accept responsibility for supervising and controlling pupils out on the route. You cannot escape the fact that you are in charge. Establish and discuss acceptable discipline procedures. Understand and apply the local school district policy and the administrative support systems available.

F. STUDENT MANAGEMENT

As a potential bus driver, you are by now aware of the need to understand and properly manage the students under your care. Although your main function is to carry the pupils to their destination and discharge them safely, it is of paramount importance that you have some basic understanding of individual human behavior patterns and their effect on others. Following are some basic points of information and assumptions that will assist you in better understanding your students and hopefully provide the basis for establishing honest and trusting relationships with them.

Some basic assumptions:

1. Behavior patterns are learned and, therefore, can be unlearned or changed.

2. Attitudes are learned and, therefore, can be unlearned or changed.

3. Children psychologically seek limits or controls; they expect them and look to adults for guidance concerning these limits.

4. Each student is an individual and, therefore, different with a unique set of strengths and weaknesses.

5. Every child has the potential for learning.

6. Praise and other forms of positive reinforcement produce better long-range results than punishment or discouragement.

These basic assumptions about human behavior and human potential are necessary for you to adopt in order to deal successfully with children under any situation. These assumptions should form the basic attitudes and values upon which you build your relationships with the students you serve.

The keys to behavior and attitudinal management are threefold:

a. Consistency in action and follow-through;

b. Positive response to appropriate behaviors, rather than positive or negative response to inappropriate behavior;

c. Modeling (behaving) yourself as you wish others to behave.

Given the initial assumptions and these three keys with which to act upon them, you are ready to implement appropriate student management.

Implementation:

Remember that behavior is learned. Some of that behavior is appropriate in your situation and within the limits or rules you have cooperatively set with the students. Some of that learned behavior is not appropriate. What is important for you, from the beginning, is to discriminate which behaviors are appropriate and which are not, and then to establish a consistent pattern and attitude for yourself to deal with both.

The easiest way to deal with all of this is to begin by establishing the limits or rules that will govern the environment of your school bus. Remember, most children seek limits and expect them, but children will also test those limits or rules first to see if you really mean what you say.

Begin establishing your limits for acceptable and nonacceptable behavior from the beginning, the first afternoon that you have all your students on the bus. (Repeat this process each night for the first 3 or 4 nights and then periodically once a month or so.) You have a choice, however; you can impose these limits in an authoritarian manner or you can explain your role, the limits and the responsibility that all of you have as well as why they are necessary (i.e., the safety aspect). You will definitely get the best results with the latter. Encourage questions from the students. When students do understand or ask important questions, praise them for their participation and attention.

You will probably not get through everything the first or even the second night since you will only be spending about 10 minutes in dialog with the children each night. However, you will have a whole school year to build an open and trusting relationship with the children.

Limits and how to use them:

First, limits for behavior should be developed cooperatively with the students. They will have suggestions. Listen to them and write them down along with yours. Limits should not be tyrannically imposed. If they are, this will only breed defiance and you will have to live with it.

Second, the limits or rules should be specific, not general, and must deal with specific behavior. (i. e. "Standing in the aisle while the bus is moving could cause you serious injury if I have to stop suddenly." versus "You all have to be good.")

Third, limits or rules should be stated in a positive, rather than a negative way. (i. e. "It is helpful to me if you will talk in a normal tone of voice," versus, "Don't yell, scream and make a lot of racket.")

Fourth, limits that you develop cooperatively should be posted in a conspicuous place on the bus where they can be referred to with ease by all involved.

Fifth, review the limits periodically with the students and praise them, pointing out specific situations when they acted appropriately as a group and also individuals who acted appropriately. Even the child who often violates the limits doesn't do it all of the time.

Remember that every child has the potential for learning and that a child learns most rapidly with praise. Inappropriate behavior can be ignored for the most part simply by focusing on positive or appropriate behavior. It takes less energy to reinforce a positive behavior than to engage a negative one. When an inappropriate behavior occurs, ignore it and look for a student who is exhibiting the opposite appropriate behavior (i. e. sitting down versus standing up, talking normally versus, yelling, keeping hands to self versus

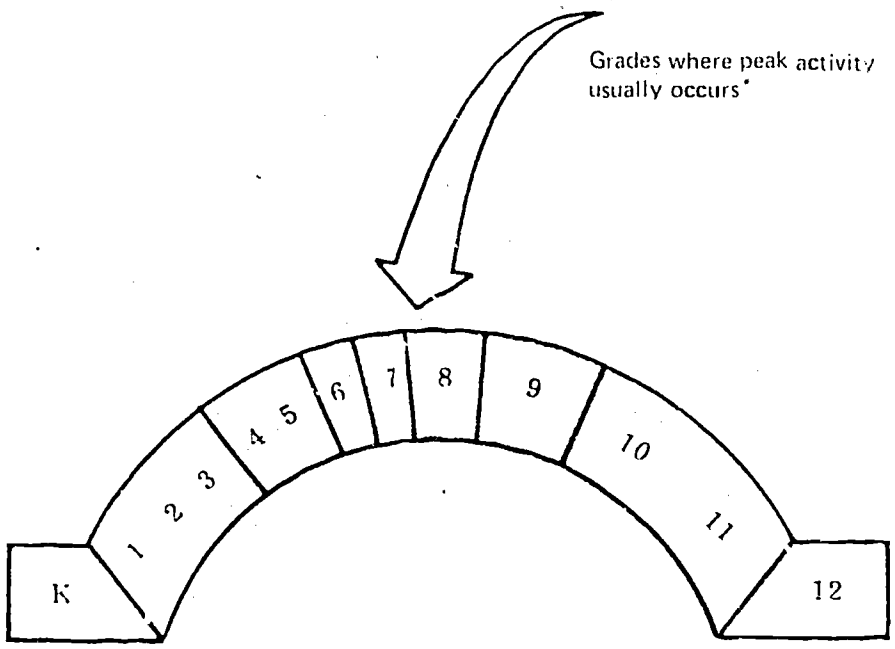
hitting or pushing others. Praise the appropriate behavior and name the student who is exhibiting it loudly enough so that the student who is misbehaving can hear it.

If a student is exhibiting an inappropriate or negative behavior that possibly could bring injury to himself/herself or another student, then deal with it calmly by pointing out the written/posted limit, the fact that it was established cooperatively and the position that the inappropriate behavior puts both you and the student in. Never do this while the bus is moving; wait until the next stop. When the student stops exhibiting the inappropriate behavior, immediately praise him/her for the new appropriate behavior; don't wait — remember, you are teaching.

How you handle behavioral situations, both appropriately and inappropriately, will be watched closely by the students for consistency, fairness, understanding, etc. This is called modeling on your part. "Act and you shall receive." If you yell, expect yelling back, if not at you then at someone else. If you praise, expect it to be picked up by others. Expect and encourage discussion and openness with the students and you will get it. Expect trouble because "kids don't know how to behave" and you'll get it.

Your attitude toward given situations and your interactions with persons govern your behavior and directly or indirectly affect the attitudes and behavior of others. You have control over your attitudes and behavior, but you do not have control over the attitudes and behavior of others. However, you can influence the attitudes and behavior of others through the establishment of a trusting, honest and open relationship with the individuals for whom you provide services. Consistency, positive response and modeling are the keys to this relationship. Your attitude towards children is the basis upon which the relationship is built.

Strive to build morale and cooperation in your busload. This can be done by being friendly, courteous, and helpful. In the course of time, pupil morale will be a great source of help in controlling pupils who are the worst offenders. When pupils discover that improper conduct is not acceptable to the group, offenders will hesitate to do things which cause them to lose "face" with the group. One of the best approaches to building pupil morale is to give the pupils a chance to participate in drafting the rules and regulations for maximum safety on the school bus. Practice all approaches which create better driver-pupil relationships.



Behavior Curve Showing Grade Levels and Student Activity Tendency

G. WHEN YOU HAVE DISCIPLINE PROBLEMS

You must maintain order on your bus. Keep in mind the following simple rules:

1. Stop the bus if the behavior problem is a serious one. If it is a minor infraction, a word of warning over the speaker system (if available) or a remark directed to the offender may be enough. If the infraction is more serious in nature, stop the bus. The fact you have taken this action makes the pupils realize the situation is one that is out of the ordinary.

2. Stand up and speak to the offenders in a courteous manner, but in a firm voice. Don't show anger, but all pupils must realize you "mean business."

3. If a change in seating is needed, move the pupil to a seat near the driver so you can more closely observe the behavior.

4. You have no legal right to put a pupil off the bus except at the pupil's regular bus stop or at the school. However, if an emergency situation develops in which you feel very drastic action is needed, stop the bus and send a responsible pupil or adult to notify the supervisor or principal of the happening. Do not start the bus until one of these persons responds to your call. You, alone, cannot deny the pupil the right to be picked up in the morning; check with your supervisor or principal regarding the proper procedure to follow.

   Always report major disturbances to the proper school official as immediately as possible.

H. REPORTING DISCIPLINE PROBLEMS

You are responsible for the conduct of pupils on your bus, but you must have the backing of the school administration to effectively discharge this responsibility. In cases of continued misconduct, report the pupil to the supervisor or principal and ask that some action be taken.

In many school districts, the first action taken is a reprimand or a withdrawal of bus privileges for a short time. If the pupil's behavior does not improve upon returning, the pupil may be denied the right to ride the bus for a longer period or may be transferred to another bus. This is usually done after all other measures have failed to improve the situation.

I. REVIEW QUESTIONS

Check whether the statement is mostly True or False.

1. A parent or teacher relieves the driver of half of the responsibility for student behavior.	T	F
2. Being liberal in your praise when students are on good behavior is a wise move.	T	F
3. Conduct of pupils aboard the bus is the direct responsibility of the principal.	T	F
4. A driver who is lenient gains respect and control over the busload.	T	F
5. The businesslike attitude of the driver has a great deal to do with pupil psychology.	T	F
6. A student who misbehaves on the bus may be kicked off any place the driver feels it is safe.	T	F
7. "Troublemakers" or youngsters likely to misbehave on the bus may often be identified by the way in which other pupils act toward them.	T	F
8. Favoritism is a good way to gain control of your students.	T	F
9. Seat your troublemakers near the center of the bus.	T	F
10. It is good practice for drivers to understand the growth problems as well as behavior patterns of the children in their care even for the short period the drivers will be with them.	T	F
11. Vehicles traveling in both directions on an undivided highway must stop for a school bus which is loading or unloading passengers.	T	F
12. After unloading passengers, the driver may proceed as soon as the last student steps on the ground or pavement.	T	F

13. On highways having dual or multiple lanes separated by safety islands, a vehicle overtaking a school bus which is loading children has to stop. T F

14. Illinois regulations state that there be no standees on school buses. T F

15. There is no penalty for a motorist who passes a school bus while it is loading or unloading passengers. T F

Briefly describe, in your own words:

1. How you control the bus (including red flashing warning lights) as you approach and stop to load passengers.

2. How you control students as they enter the bus.

3. How you control the bus as you approach and stop to unload passengers.

4. How you control students as they leave the bus.

List three examples of disorders requiring immediate attention and describe the procedure you would use to control each.

DISORDER	PROCEDURE
A.	A.
B.	B.
C.	C.

UNIT II

ACCIDENTS AND EMERGENCIES

Table of Contents

Objectives

By the end of this unit, the students should be able to:

1. Identify the major causes of school bus accidents and describe actions to avoid accidents.
2. Identify their legal responsibilities and required action in case of an accident.
3. State the school's policy on eight accident/emergency issues.
4. Describe and demonstrate emergency procedures to follow.

A. GENERAL CONCLUSIONS ABOUT SCHOOL BUS ACCIDENT FACTORS

On a national level, certain factors influence school bus accidents. Your local statistics may vary. School bus drivers are at fault about half the time; failure to yield the right of way is the most common driver violation. Collision between a school bus and another vehicle in traffic is the most common type of accident.

Young drivers and elderly drivers tend to have a higher accident rate than the intermediate age group.

Defective brakes on the bus is the most common mechanical factor in accidents. (But mechanical failures cause a very low percentage of accidents.)

More students are killed approaching or leaving the bus than while riding on the bus.

SCHOOL BUS DRIVER LIABILITY FOR PUPIL INJURIES:

You may be held liable for injuries to school children resulting from your negligence. All four essential elements or grounds for negligence must be present. Courts generally consider these to be:

1. Your legal duty to conform to a standard of conduct for the protection of others against unreasonable risks.
2. Your failure to conform to the standard.
3. A reasonably close causal connection between your conduct and resulting injury.
4. Actual loss or damage resulting to the interest of others.

The consideration that most courts use in determining driver negligence are:

1. The degree of care which drivers must use ranges from "ordinary" and "reasonable" to "extraordinary" and "highest degree." The degree required depends on type of duty. The tendency of the courts is to require more care from people with a duty involving younger children.
2. The approximate age of a child considered to be capable of recognizing traffic dangers is 10 to 11 years.
3. You and your district are both accountable for maintaining a safe vehicle.
4. Most cases involving accidents while boarding and alighting from a bus use the factors of "reasonable care" and "safe places" in determining negligence.
5. You are expected to keep order on a bus and may use any normally accepted means.
6. You are not automatically guilty of negligence if injury occurs. You have the opportunity to refute the charge by proof that proper care was used.
7. You may generally be held accountable for your acts separately from any decision regarding district liability.
8. NEGLIGENCE IS FOR JURY DETERMINATION.

B. ACCIDENT PROCEDURES

If you have an accident, there is a procedure to follow that will meet the requirements of the state law. No two accidents are the same. The sequence of things in the suggested procedure may not be practical in every case. At times, good common sense will be the rule.

STATE LAW REGARDING ACCIDENT—NOTES:

Your primary responsibility is to your passengers. Therefore, your first responsibility is to remain calm. If you are unable physically to perform your duties, direct others to do them for you. Should this be the case, ask your oldest and most capable student to help.

The following procedure is recommended:

1. Turn off ignition switch and take keys.
2. Set brakes.
3. Remain calm and reassure students.
4. Use warning devices to "protect the scene."
   a. Protect the students and the bus from further accidents and injuries: place flags, flares, or fusees in accordance with state law.
   b. Protect the scene from traffic and people so that evidence is not destroyed.
   c. Under normal circumstances, the vehicle involved should not be moved until law officers advise you to do so.
5. Be alert to a fire or the possibility of fire.
   a. Check for ruptured fuel tank and fuel lines. A bus can be a potential furnace.
   b. Check for electrical fire.

c. Look for smoke.

d. Check for hot tires which may catch fire — caused by metal rubbing against a tire from point of impact to final resting place.

e. Extinguish fire, if any.

6. Check for injury to pupils.

   a. If pupils are injured, follow first-aid procedures.

7. Keep all students in the bus, except in three cases:

   a. Conditions which might lead to a possible fire.

   b. Danger of further collision.

   c. Danger of drowning.

8. Account for all students.

9. Notify school administrators of the location of the bus accident.

10. Notify the appropriate law enforcement agency.

11. Do not discuss the facts of the accident with other motorists, but give information only to investigating officers and school officials.

    a. To provide necessary information for all concerned—law enforcement officers, school officials, etc.

       (1) List all students' names, ages, and addresses.

       (2) Information about the school bus, such as insurance, make, model number, owner, etc. An emergency packet should be carried on the bus which includes bus information, emergency telephone numbers, and any additional local directives covering this subject.

    b. While being investigated, be patient, evaluate questions, and give clear and concise answers.

    c. A driver involved in an accident is required to give his/her name, address, driver's license number, and vehicle information. Be ready to give this information to the other driver and also write down the same information regarding him/her.

    d. If witnesses were present, other than your students, get names, addresses, and license numbers.

12. Cooperate with school administration.

    a. During the investigation of the accident, do not release any of your students to anyone unless told to do so by the school administration.

    b. If students are injured and need to be removed from the scene, follow policy adopted for this purpose at the local level, if applicable. If not, send someone to call for aid, such as hospital, ambulance service, or fire department—wherever help can be summoned quickly. The injured should be transported by proper means to a hospital for care.

13. Continue the transporation of students by:

    a. The present bus if released.

    b. Another bus.

    c. Some other means, again following local policies of the district, but not until authorized to do so.

C. REPORTING AN ACCIDENT

We will now go over forms and how they are to be filled out.

D. MECHANCIAL FAILURE/BREAKDOWN PROCEDURES

Despite good design, engineering, and/or preventive maintenance programs, you may have mechanical failures occasionally. You must know what to do, how to do it, and when it should be done in case of a breakdown while on the road.

Let's begin by studying legal requirements as far as equipment is concerned.

Here is a suggested procedure for mechanical failure.

1. Stop the bus as far to the right of the road as possible, or on the shoulder of the road.

2. Secure the bus; activate 4-way hazard lights and place chock under wheel.

3. Keep children in bus unless this is unsafe.

4. If location of the bus is unsafe, remove the children to a safer location (see EVACUATING THE BUS).

5. Place flags, flares, fusees, etc., in accordance with state law.

6. Telephone, radio, or send bus patrol (or capable student) to call the proper school authorities, giving location of the bus and description of breakdown.

7. See that all pupils are delivered to their destination.

8. Complete maintenance report(s).

E. EVACUATING THE BUS

Usually students remain on the bus during an emergency. But, the following situations require that you evacuate the bus:

1. Fire or danger of fire. A bus should be stopped and evacuated immediately if the engine or any portion of the bus is on fire. Passengers should move a distance of 100 feet or more from the bus and remain until the driver of the bus has determined that no danger remains. Being near an existing fire and unable to move the bus away or near the presence of gasoline or other combustible material should be considered as "danger of fire," and students should be evacuated.

2. Unsafe position. In the event that a bus is stopped due to accident, mechanical failure, road conditions, or human failure, the driver must determine immediately whether it is safer for passengers to remain in the bus or to evacuate. You must evacuate if:

   a. the stopping point is in the path of a train or adjacent to any railroad tracks.

   b. the stopping position of the bus may change and increase the danger. If, for example, a bus should come to rest near a body of water or precipice where it could still move and go into the water or over a cliff, it should be evacuated. The driver should be certain that the evacuation is carried out in a manner which affords maximum safety for the children.

   c. the stopping of the bus is such that there is 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 visibility does not exist should be considered a reason for evacuation.

In an emergency it is possible for children to jam the emergency door by all trying to get out the door at the same time. To help avoid this situation, you should organize and conduct emergency exit drills for all students who ride the school buses.

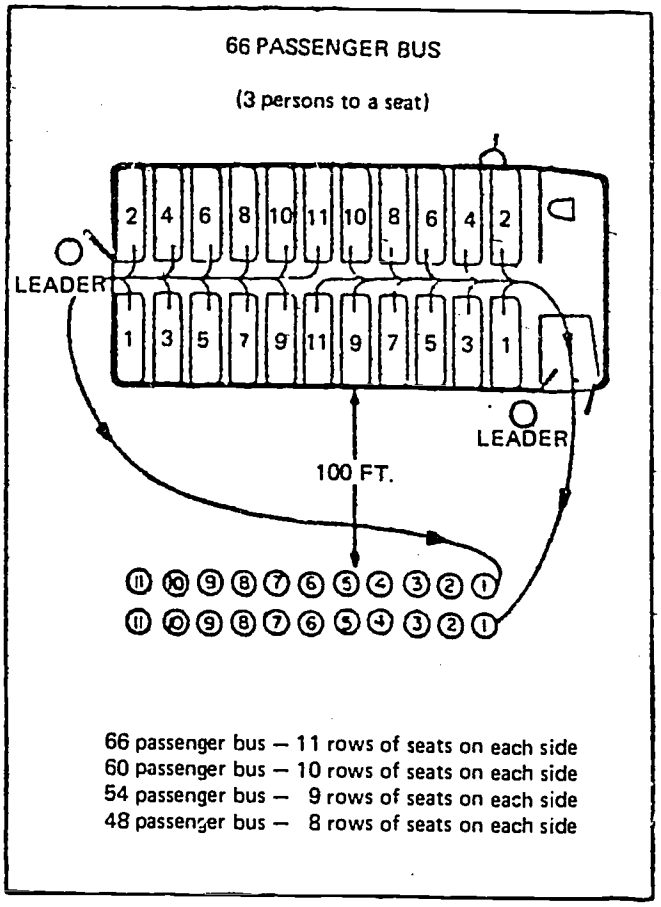
There are several ways to evacuate:

1. Everyone exits through the rear emergency door.

2. Everyone exits through the front entrance door.

3. Front half exits through the front door and rear half exits through the rear door.

4. Students exit through side door alone or in a combination with 1-3 above.



*If applicable to your type of bus.

Front and Rear Door Evacuation Drill

F. EVACUATION PROCEDURE

Explain to all students who ride the bus the procedures to be followed if it is necessary to evacuate a bus. The following is one recommended procedure that may be adapted to a local situation.

Suggested Front Door Evacuation Drill Conducted on School Grounds

In the interest of safety, all drivers should conduct an emergency evacuation drill through the front door when they unload at the schools, at least once a month with each busload of elementary-age children. This approach does not take any more time than the regular unloading procedures. Follow these steps:

1. Stop the bus, set parking brake, and turn off engine (remove key).
2. Stand, open the door, face the children, and get their attention.
3. Give the command: "Emergency drill, remain seated, front evacuation."
4. Advise bus captain or designated student to guide passengers to assigned place of safety.
   a. A helper or a bus captain can be appointed each month to assist the driver in leading the students to a designated location on the grounds.
   b. A second helper can be appointed to stand outside the front door to count and assist passengers as they leave the bus.
5. Standing between the first occupied seats, you will then turn and face the front of the bus.
   a. Starting with the right-hand seat, tap the shoulder of the student nearest the aisle to indicate that those occupants shall move out. Say, "Walk—don't run. Use handrails."
   b. Hold your hand before the occupants of the left-hand seat in a restraining gesture.
6. When the pupils in the right-hand seat have moved forward far enough to clear the aisle, dismiss the occupants of the left-hand seats.
7. Continue evacuation procedure as described, right and left seats alternately, until the bus is empty.
8. When the last seat is empty, walk to the front of the bus checking to see that everyone is out.
9. After you leave the bus, go to students and advise them of improvements to be made or tell them of the job well done, then immediately dismiss them for class. If there are students who are to continue on to another school, reload them and continue run.

Rear Emergency Door Evacuation or Side-Door Evacuation

Rear emergency door evacuation or side-door evacuation works in reverse of the one just explained. Explain how the doors work and instruct students not to open them until you give the command to do so.

G. IMPORTANT FACTORS IN EVACUATION DRILLS

Safety of children is of the utmost importance and must be considered first.

All drills should be supervised by the principal or by persons assigned by him/her to act in a supervisory capacity.

You are responsible for the safety of the pupils; however, in an emergency the driver might be incapacitated and not be able to direct the pupil emergency evacuation. School patrol members, appointed pupils, or adult monitors should assist in these drills. It is important to have regular student leaders available who know how to:

a. turn off ignition switch;
b. set emergency brake;
c. summon help when and where needed;
d. kick-out windows;
e. set flags and flares;
f. open and close doors, account for all pupils passing the driver's station;
g. help small children off bus;
h. perform other assignments.

Written consent from parent should be obtained before assigning a pupil as a leader.

"Emergency drills" for school buses should be organized beforehand in a manner similar to fire drills held regularly in schools. School bus drills should be held more often during fall and spring months, preferably when the bus arrives at the school building with the pupils.

Drills should be held on school property and not on bus route.

Types of bus drills held should be varied.

Drivers should stay in bus during evaucation drills. Be sure that the emergency brake is set, ignition is off, keys are removed, and transmission is in gear.

Do not permit children to take lunch boxes, books, etc., with them when they leave the bus—getting the child off safely in the shortest time possible and in an orderly fashion is the objective of a school bus evacuation drill.

The pupils should go to a distance of at least 100 feet from the bus in an "emergency drill" and remain there in a group until given further directions by the leader.

All children should be given an opportunity to participate, including those children who only ride a bus on special trips.

Each pupil should be instructed in the proper safety precautions while riding the bus and in drill procedure.

Instruct students in how and where to get help. Instructions and telephone numbers should be posted or otherwise carried in the school buses.

H. USING EMERGENCY EQUIPMENT

When an emergency or accident happens, it's too late to learn how and where to use the emergency equipment. You should know the location and operation of:

FLAGS/REFLECTORS
HAZARD FLASHERS
FIRST-AID KIT
FIRE EXTINGUISHER

1. Red flag and red reflectors as warning devices:

   a. Three red flags and three red reflectors are located in the driver's compartment.

   b. The flags are for daytime use.

   c. The reflectors may be used both day and night.

   d. Follow the same directions for placement of fusees as explained above.

2. Use four-way hazard flashers with good judgment.

3. First aid kit:

   a. The first aid kit should be located in the driver's compartment, be dustproof and well-labeled, and conform to federal standards.

Replace any item used from emergency equipment supplies as soon as possible.

5. Fire extinguisher:

   a. Fire extinguishers are located in the driver's compartment.

   b. Classes of fires; different types of extinguishers.

      Portable fire extinguishers work by either cooling the burning substance or cutting off the supply of oxygen to the burning substance. Which type you use depends on what class of fire occurs. Most buses are equipped with a dry chemical, stored pressure type of extinguisher.

Classification of Fires

Accepted standard practices separate fires into three general classes. Study the chart.

Most buses are equipped with extinguishers large enough to have an 8-B-C rating ; 8-B-C means to be large enough to extinguish a fire of B or C class covering 8 square feet of surface.

The two basic fire extinguishers commonly used are the CO^2 and dry powder type.

CO^2 Extinguishers. CO_2 stands for carbon dioxide and these extinguishers are effective on small surface fires of Class A, on moderate fires of Class B, and on electrical fires of Class C since the gas is a nonconductor.

Class A	Class B	Class C
Fires of ordinary combustible materials where the "quenching" and "cooling" effects of quantities of water, or of solutions containing large quantities of water, is of first importance. EXAMPLES: Fires in wood, textile fabrics, rubbish, etc.	Fires in flammable liquids, petroleum products, etc., "smothering" effect of the extinguishing agent is of first importance. EXAMPLES: Fires in gasoline, oils, and greases in tanks or containers, open vats, or running freely on floors or ground.	Fires involving electrical equipments where the use of a "non-conductor" extinguishing agent is of first importance. EXAMPLES: Fires involving electrical switchboards, motors, or wiring.

They are particularly effective on flammable liquid fires—alcohol, carbon bisulphide, and similar liquids—which will not support foam. However, they are not effective on deep-seated fires of ordinary combustible materials due to the lack of moisture. The gas or "snow" these extinguishers put out is non-injurious to material. But note that, due to the extremely cold temperature it reaches upon discharge, it will, if held too closely to the skin, cause a burn or frostbite effect. The duration of continuous discharge ranges from one-half to one minute, depending upon size of extinguishers.

This type of extinguisher has a maximum range of 8 feet, but best results are obtained by playing the discharge as close to the fire as possible. The discharge should be applied first to the bottom edge of the fire and gradually progress forward or upward, moving the discharge cone very slowly from side to side.

The discharge should continue to be directed on the burned substance or surface to deposit carbon dixoide snow even after the fire has been distinguished. This will prevent possible reflash or backflash by cooling the hot surface and any glowing material or hot spots present.

To operate:

1. Remove from bracket.
2. If possible, stand upwind from burning material to prevent standing in the smoke and heat. This also will give you better advantage using the wind, if any, to carry the discharge material over the burning area.
3. Hold extinguisher in upright position. Due to construction of the cylinder, extinguisher should not be laid on side to operate.
4. Remove hose or point horn toward the fire.
5. Remove safety lock pin by breaking the seal.
6. Squeeze to operate discharge valve.
7. Direct cone nozzle as desired. Care must be taken to prevent reflash. Care also must be taken not to walk into unburned material that could catch fire in a backflash and cause injury to you.
8. Close nozzle as soon as conditions permit.
9. Continue to pin and close valve as desired.
10. Replace safety lock pin. Any fire extinguisher, regardless of how long or how much discharge was used out of it, should be recharged or replaced with a substitute after use.

Dry-Powder Extinguisher (CO^2 Pressurized). The dry powder type of extinguisher consists of a charge of specially prepared dry powdered sodium bicarbonate with a cartridge of inert gas, such as carbon dixoide, to provide the expelling force. Discharge is in the form of a cloud of powder together with gas.

The range of the cloud may extend up to 25 feet horizontally depending on the size of extinguisher and type of nozzle. In contact with fire, the powder gives off additional carbon dioxide gas with its smothering effect. Discharge should be directed at the base of the flames. On flammable liquid fires, best results are obtained when the discharge is directed in a sweeping motion as with carbon dixoide extinguisher.

Dry chemical extinguishers are effective on small fires of Class B and electrical fires of Class C, and may be effective on small surface of fires of Class A. Again, it is best to be upwind whenever possible so as to get greater coverage and protection for the operator.

To operate:

1. Remove from bracket.
2. Approach fire upwind.
3. Hold extinguisher in upright position. Due to construction of the cylinder, extinguisher should not be laid on side to operate.
4. Remove safety lock pin by breaking seal.
5. Push lever down to break seal in cartridge.
6. Squeeze nozzle handle. Direct flow of chemical to base of fire.
7. Use at will and release and resqueeze nozzle as needed.
8. Replace safety pin.
9. Replace or recharge immediately after use.

Dry Chemical Extinguisher (Air Pressurized). There is another type of dry chemical extinguisher which is commonly used. Again, they are filled with dry powder, finer than face powder in some cases. A gauge is mounted at the top of the extinguisher indicating the air pressure. The gauges are usually divided into two areas of green and red indicating low and high pressure. If the needle on the indicator stays in the green area, it is properly charged.

To operate:

1. Remove from bracket.
2. Hold in upright position. Due to construction of the cylinder, extinguisher should not be laid on side to operate.
3. Pull safety pin by breaking seal.
4. If possible, stand upwind from burning material to prevent standing in smoke and heat.
5. Squeeze handle to discharge the powder.
6. Do not walk into unburned material that could catch fire in a backflash and cause injury to you.
7. Turn on and off as desired to control the fire.
8. The fire extinguisher, regardless of the extent of use, should be recharged or replaced with a substitute immediately after use.

HOW TO GET FIRE EXTINGUISHER SERVICED

Fire extinguishers are required to be serviced each year, preferably before school starts in August. The servicing must be done by a properly licensed person.

WHAT TO DO AFTER THE FIRE IS OUT

Who to call—

How to report damage—

I. LOCAL POLICIES

You are in full charge of the bus at all times. Knowing proper emergency procedures, emergency evacuation procedures, and accident scene procedures is a must! These areas of responsibility deal directly with the safety and care of your passengers in the event of an accident, as well as other emergency situations which may arise.

As the school bus driver, you must know:

A. what to do.

B. how to do it.

C. when to do it.

For example:

WHAT: BUS EVACUATION

HOW: EXACT PROCEDURE FOR EVACUATING PASSENGERS

WHEN: IN CASE OF FIRE, OTHER IMMEDIATE DANGER TO PASSENGERS

Obtain your district's policies on what the driver is to do about eight issues which may arise in an accident/emergency situation.

ISSUE 1. Accidental death/injury of bus passenger.

ISSUE 2. Death by natural causes while riding the school bus.

ISSUE 3. Property damage to/by school bus.

ISSUE 4. Arrangements for tow/repair of school bus.

ISSUE 5. Arrangements for transportation of passengers from scene of bus accident or breakdown.

ISSUE 6. Reporting procedures for disciplinary action, accidents/breakdowns.

ISSUE 7. Interactions with pupils and their parents for purposes of discipline.

ISSUE 8. Procedures for reporting to police regarding accidents, drug use, etc.

J. REVIEW QUESTIONS

1. When you are involved in an accident, under what circumstances must you submit an accident report to state enforcement officers?

2. What emergency devices are carried on your bus?

3. When and where should school bus emergency evacuation drills be conducted?

4. When you operate a fire extinguisher, where should you direct the discharge? What type of motion should you use in directing the discharge? In what position should you hold the extinguisher?

5. What is the major cause of school bus accidents?

6. What is the most dangerous part of the bus trip in terms of potential student injuries?

7. How does driving at night increase the potential for accidents?

8. What is the most common mechanical failure on school buses?

9. As a school bus driver, the law says you have a duty to conform to a standard _____ which will protect your passengers from harm.

10. If you fail to conform to the standard of conduct, and your conduct is connected to someone's injury, you could be liable for _____

11. The bus driver's standard of conduct is the same as the care used by "a reasonable, careful person," except when he/she is transporting very young children. Then he/she may be expected to act with a (higher or lower?) degree of care.

12. Name two emergency conditions when you must evacuate the bus.

    a.

    b.

13. Why should you not discuss an accident with anyone except school officials and law enforcement officers?

14. How should you arrange for the transportation of your passengers from the scene of a bus accident or breakdown?

15. A gasoline fire is a Type ____ fire.

    A fire in the seat upholstery is a Type ____ fire.

    An electrical fire is a Type ____ fire.

UNIT III

DETECTING HAZARDS

Table of Contents

Objectives

By the end of this unit, the students should be able to:

1. Use clues to detect potential hazards.
2. Determine degree of actual hazards.
3. Select what action they should take to avoid hazards.

A. OVERVIEW

You've heard it said that every time you get into the bus, you take your life in your hands — yours and every one of your passengers. With the recent emphasis on defensive driving, more and more drivers are becoming aware that just about every driving situation has potential hazards. It's not enough just to know what you're doing. You have to know what everyone else is doing, too. If you've been driving a school bus for any length of time, you are aware of some of the hazards involved in your daily run. Some hazards are obvious; some aren't. Some are always there, like the sharp curve, and some appear out of nowhere, depending on the changing situation. Do you consciously search for hazards as you drive?

In this unit, you'll practice a systematic technique for detecting hazards. You'll use most of your senses to pick up clues that indicate potential and actual dangers. And, you'll make decisions about how you should adjust your driving to minimize or avoid hazards. You should get into the habit of being an "automatic hazard detector." Expert school bus drivers drive well because they find the hazards before the hazards find them.

1. ROADWAY HAZARDS
2. OFF-ROAD HAZARDS
3. SINGLE-VEHICLE HAZARDS
4. MULTIPLE-VEHICLE HAZARDS
5. OTHER ROAD-USERS HAZARDS
6. COMBINATION VEHICLE/ROADWAY HAZARDS

You should develop a "mental image" of the clues associated with each hazard. The habit of detecting clues must be strong enough that you can:

1. Distinguish clues within a complex, changing traffic situation.
2. Identify them within the short period of time your eyes are focused upon the situation in normal scanning.
3. Detect them even when you are not consciously looking for them.

Failure to recognize hazards in time is a major cause of accidents.

Distraction by passengers, inattention, and misinterpretation of traffic sounds have caused drivers to react late to auditory clues of an impending crash.

Safe drivers tend to assure themselves of information 8 to 12 seconds ahead. The smallest lead time experienced drivers tend to allow is 1-3/4 seconds.

Even after several months, new drivers tend to spend more time monitoring only the road straight ahead than experienced drivers.

Accident fatalities and rear-end collisions can be expected to be high in urban areas as a result of the increase of pedestrian and motor vehicle traffic. Approximately 12-15 percent of all urban school bus accidents are rear-end collisions.

B. SEARCHING FOR CLUES

Scan the environment for clues of potential hazards.

1. Continuously scan surroundings on and off the roadway, shifting your gaze frequently. Look well ahead in the lane to focus distance relative to the bus' speed and the roadway location. Specifically:
   a. Focus at farther distances as your speed increases.
   b. View the road ahead one full block in a city.
   c. Focus at farther distances down the road in rural areas than you would in urban areas.
2. Avoid fixing your eyes on the road surface immediately forward of the bus hood. Keep your eyes moving.
3. An unobstructed view is important.
   a. In a moderate number of accidents, collisions occurred at intersections where vision was reportedly obstructed or limited by buildings, vegetation, or parked cars.
   b. Roadside features that obscure your vision at intersections should be treated as if they were traffic lights and signs requiring you to stop. By stopping, you have an opportunity to study the traffic situation more carefully before proceeding, rather than haphazardly continuing.
4. Observe other drivers. It is very difficult to improve upon good perception habits by experience alone. Development of good scanning procedures will help build a foundation for future safe school bus driving.

a. Accidents related to overtaking vehicles have been caused frequently by the driver's failure to note the actions of vehicles ahead. For example, a moderate number of accidents are caused by a driver's failure to note traffic stopped ahead for a left turn.

b. Another cited cause is failure to check traffic in the adjacent lane prior to entering it to pass and/or to avoid impact with a stopped vehicle.

5. You must know how to gather critical clues.

a. The two-second following distance is that part of the intended path of travel which extends for a distance of two seconds in front of the driver's vehicle. It is that distance or space interval you should follow behind an ongoing vehicle. Since an ongoing car is moving at about the same speed as you are, this distance provides you with adequate space for stopping should the ongoing car stop suddenly. It also provides you with good visibility. Since this distance varies with the speed of cars, it is adequate for all speeds under normal roadway conditions. Of course, when traction is reduced, the time should be incresed to three or more seconds.

b. The four-second stopping zone is that part of the intended path of travel that extends for a distance of four seconds in front of the driver's vehicle. It is that minimum distance you will usually need to stop for a fixed object in the roadway or for other traffic moving across your path of travel. This could be an intersecting or entering car, a pedestrian, or an animal. It should be obvious that you should never allow a hazard to move or remain in the four-second stopping zone. Otherwise a collision would be most difficult to avoid.

c. The twelve-second travel path is the distance that extends for a total of twelve seconds ahead of your vehicle and along the intended path of travel. This should be considered the minimum sight distance you need ahead of your car. Under ordinary conditions, this should give you time to identify, evaluate and decide what to do about a hazard before your four-second stopping zone is reached.

There will be situations, such as bumper-to-bumper rush hour traffic, when these timed distances may not be practical. However, they should be goals that a driver should always strive for.

You should better understand now why we usually think of distance in terms of time. Timing is extremely important for avoiding traffic hazards. Time is easier and more accurate to estimate than distance. Also, you have better control over time because of your ability to control the speed and placement of your car.

d. The driver, by continuous surveillance of traffic, traffic controls, and the surrounding environment, will be more likely to recognize hazards while there is time to avoid them.

e. You receive the vast majority of the clues you use through your eyes. The more intently you fix your central vision on a particular object, the less aware you will be of clues from your larger field of indirect vision.

6. You must know the demands imposed on you when driving in urban or congested areas.

a. Visual demands on the driver appear to be about three times as much at 20 miles per hour in the city as at higher speeds on a modern divided highway. The mere presence of pedestrians and children increases your surveillance requirements.

b. The greater need for surveillance in the city is partially due to the greater concentration of other vehicles. Traffic controls and pedestrian traffic also contribute to making city driving a difficult task.

7. You must know the primary sources of potential trouble and their clues to be prepared for sudden actions by others.

a. Driving alongside parked vehicles is potentially hazardous because your view is limited and hazards can appear when there is little time or space for evasive action.

b. Three key sources of hazards are:

The spaces between parked vehicles through which pedestrians and animals may dart into the street.

The parked vehicle that may suddenly move into the bus' path.

Occupants of parked vehicles who may open the vehicle doors to get out without first checking the traffic situation. Positioning the bus at least four feet out from the parked vehicle

will place it beyond the arc of a door being opened.

People stepping out from between parked vehicles.

8. Usually, there are clues from parked vehicles of impending entry into a driving lane. Among the clues you will find useful are:

   a. Exhaust fumes. These indicate the engine is running.

   b. Back-up lights. For these lights to be activated, the ignition must be on and the gearshift lever in reverse. The appearance of back-up lights is often followed by a shift to a forward gear.

   c. Brake lights. Most drivers depress the brake pedal, thus activating the brake lights, just prior to shifting to a forward gear.

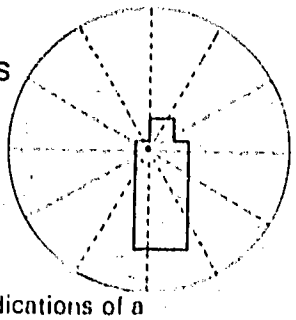
   d. Front wheels. The direction toward which the front wheels are pointed may indicate whether the vehicle is ready to leave the space or still manuevering into a good position for leaving.

   e. Steering wheel. The steering wheel of vehicles parked to the right of the bus can be seen from some distance. If a steering wheel is not visible, it may mean the driver is behind the wheel.

   A separation of at least a car width from a vehicle that is being parallel parked is recommended to accommodate the wide leftward swing of the vehicle's front end as it backs to the right.

9. You should know that you have an active, not passive, role when being passed. Continuously assess the chances for the other driver to safely complete the pass within the distance available. Make adjustments in the bus' speed and position to accommodate the passing vehicle.

10. Develop the surveillance habit of scanning 360^0 around the bus.



C. DETECTING ROADWAY HAZARDS CLUES

ROADWAY HAZARDS

1. Slight Distance Limitations

   a. Curves

      (1) Watch the road ahead for indications of a curve.

      (2) When approaching a curve, estimate a safe speed (if not posted) from the degree of curvature and banking.

   b. Hills and Dips

      (1) Watch the road and roadside conditions (e.g., trees and poles) for signs of hills.

      (2) In approaching a downgrade, identify a grade which is steep enough to require downshifting.

      (3) Identify the presence of dips which may obscure another vehicle.

2. Manoeuvring Limitations. Detect the following potential manoeuvring limitations:

   a. Narrow or narrowing lanes.

   b. Roadway construction that is difficult to detect.

   c. When road surface ruts are present in gravel or dirt roads, you will:

      (1) Assess the road surface characteristics adjacent to the rut.

      (2) Assess the depth of the rut.

3. Traction Limitations

   a. Rough Surfaces

      (1) Detect surface irregularities on asphalt and concrete, such as potholes, cracked pavement, etc.

      (2) On a wooden surface, look for cracks, holes, and nails.

      (3) On a brick road, look for holes, bumps, cracks, loose bricks, and slippery spots.

      (4) "Washboard" conditions, e.g., continuous ruts.

   b. Slippery Surfaces. Anticipate potentially slippery surfaces.

      (1) Anticipate the smoothness of concrete or asphalt road surfaces at intersections.

      (2) Recognize areas of the roadway which are soaked with oil or grease.

      (3) Estimate depth and extent of deep water which partially or totally covers the roadway.

      (4) When driving on snow or ice-covered roadways:

(a) Judge the effect of traffic and temperature on road surface friction.

(b) Observe closely the movement of vehicles approaching on side streets.

(c) Note whether vehicle wheels are skidding.

(5) If ice is melting on the roadway:

(a) Be alert for ice patches near shaded areas (e.g., underpasses and buildings).

(b) Note spots where direct sunlight may have accelerated melting.

(c) Look for additional ice patches ahead on the roadway.

c. Loose Surfaces. Detect the signs of the following loose surfaces:

(1) Gravel

(2) Soft Sand

(3) Wet Leaves

4. Traffic Conflict Points

a. Recognize potentially hazardous roadway conditions when approaching and emerging from toll plazas.

(1) Look for erratic driving from other drivers whose attention may be diverted while fumbling for money.

(2) When emerging from the toll plaza, look for other drivers accelerating rapidly and cutting in to get ahead of the "pack."

b. If driving on an entrance ramp, be alert for vehicles which are stopped or slowing down on the on-ramp.

c. If driving on a long entrance ramp with an acceleration lane that continues on as an off-ramp or deceleration lane, be aware that vehicles may leave the main roadway and cross over to merge onto the acceleration lane. Out-of-state drivers may be unfamiliar with exits and merge at the last minute.

d. When approaching and entering an off-ramp:

(1) Be alert for vehicles entering the deceleration lane, if that lane is also part of the acceleration lane from which vehicles enter the roadway.

(2) When nearing the end of the off-ramp, look for other vehicles which may be stopped or waiting in line at the end of the off-ramp.

e. When approaching and passing interchanges on the freeway, note vehicles in the deceleration lane swinging back into the lane at the last minute.

f. Look for lead vehicle deceleration at the following locations:

(1) Uncontrolled intersection;

(2) Entrances to highway (e.g., on-ramps), including short acceleration lanes and left-hand entrances;

(3) Highway exits (e.g., off-ramps), including short deceleration lanes and left-hand exits;

(4) Divergence points (forks in the road).

LOCAL ROADWAY HAZARDS:

D. DETECTING OFF-ROAD HAZARDS CLUES

OFF-ROAD HAZARDS

1. Sight Limitations

a. When driving on general highway, be alert for hidden traffic, pedestrians, or animals obscured from view by nearby roadside structures, trees, or dense vegetation.

b. When driving in urban areas:

(1) Minimize distractions from the environment by seeking out traffic lights possibly "embedded" in lights from neon signs.

(2) In commercial areas, be alert for vehicles emerging from driveways and alleys obscured by buildings, parked vehicles, or pedestrian traffic on the sidewalk.

2. Manuever Limitations. When driving on roads with shoulders, periodically observe the conditions of the shoulders, including:

a. Width.

b. Surface Condition.

c. Alignment with Pavement.

d. Presence of Obstructions (e.g., signs, guardrails).

e. Pitch of the Roadbed.

3. Traffic Entry Points

   a. Vehicle Entry Points

      (1) When approaching entrances to driveways, alleys, and parking lots, look ahead to determine their locations.

      (2) When driving in off-street areas, be alert for vehicles in or crossing the car's path.

      (3) Be alert for vehicles backing up to the exit or entering a parking space.

   b. Pedestrian Entry Point

      (1) When approaching a commercial bus stop:

         (a) Look for pedestrians crossing the street to board the bus or streetcar.

         (b) Check to see that pedestrians have reached safety before starting.

      (2) Near playground, residential areas, schools:

         (a) Be alert for children playing or darting into the path of your bus from behind vehicles, structures, or vegetation.

         (b) Look for children sledding or otherwise playing in the snow or on the ice.

         (c) When driving in an off-street, be alert for vehicle and pedestrian traffic that may be entering or crossing the traffic aisle from any direction.

LOCAL OFF-ROAD HAZARDS:

E. DETECTING SINGLE-VEHICLE HAZARD CLUES

SINGLE-VEHICLE HAZARDS:

You should be able to recognize clues predictive of traffic hazards involving the motions of an individual vehicle.

1. In general, when surveying traffic, observe other drivers' driving behavior so that you can watch for clues to how they react.

   a. Note drivers who frequently change lanes as opposed to those who remain in the lane.

   b. Note drivers who operate their vehicles with frequent changes in speed as opposed to those who maintain a steady speed.

   c. Note those drivers who do not signal prior to a maneuver as opposed to those drivers who do signal consistently.

   d. Note those drivers who stop suddenly in nonemergency situations as opposed to those drivers who decelerate gradually to stop.

2. Losing Control — Recognize clues indicating that another driver may lose proper control of vehicle.

   a. Surface conditions that might adversely influence oncoming vehicle control (e.g., slippery surface, ruts, deep snow, etc.)

   b. Movements of the other vehicle including the following:

      (1) Turning too fast, e.g., if oncoming driver is turning too sharply after an off-road recovery;

      (2) Approaching from the side too fast to stop or turn;

      (3) Closing too fast from the rear.

   c. Movements of your bus, e.g., stopping too quickly to allow a following vehicle to stop.

3. Lack of Communication by Other Drivers - Look for clues or situations in which the driver of another vehicle may execute a maneuver without signalling.

   a. Whenever a turn may be made, e.g., an oncoming car may suddenly turn left, particularly when:

      (1) the vehicle is slowing, or

      (2) the other driver is not attending to your oncoming bus.

   b. When a stopped vehicle gives an indication of imminent movement, e.g., parked car with driver in seat, exhaust, or turned wheels.

   c. When a driver may be giving a false indication, e.g., moving to the left near an intersection when he or she intends to turn right. Any turn signal may be uncancelled from previous maneuver.

4. Failure of the Other Driver to Observe — Look for clues indicating that another driver may not have observed the bus and, therefore, may not be prepared to yield the right-of-way. These clues include the following:

   a. Driver not responding, e.g., approaching intersection from the side without slowing;

   b. Driver's vision obscured, e.g., posts, windows;

c. Driver's view restricted, e.g., the vehicle is partially hidden by trees, detectable to you only by reflection or dust;

d. Your bus may not readily be seen, e.g., when sun is in the other driver's eyes, etc.

5. Inadequate Adjustment by the Other Driver - Look for indications that another driver is not adjusting properly to a situation. Impatience causes many improper actions. He or she may execute a maneuver that will cause hazard to you, including the following:

a. Other driver isn't adjusting to an obstruction, such as a pothole or barrier.

b. Other driver isn't adjusting to a surface condition such as ice or snow.

c. Other driver isn't adjusting to a pedestrian, e.g., turning a corner into a street blocked by pedestrians.

d. Other driver isn't adjusting to another vehicle, e.g., passing vehicles forced to cut back abruptly.

6. Slow Moving or Stopping Vehicles - Watch for indications that another vehicle is slowing or may stop suddenly.

a. Slow-moving vehicles:

Farm vehicles,

Underpowered vehicles,

Trucks on hills.

b. Frequently stopping vehicles:

Buses, including other school buses;

Buses and trucks carrying inflammables at railroad crossings;

Postal delivery vehicles.

c. Vehicles that are engaged in the following maneuvers:

Turning or exiting,

Entering the roadway,

Merging with other vehicles,

Approaching controlled intersections or railroad crossings.

F. DETECTING MULTIPLE-VEHICLE HAZARDS

MULTIPLE-VEHICLE HAZARDS

You should be able to recognize the clues in a traffic pattern that are predictive of a potential conflict.

1. Traffic Convergence. One or more vehicles converging on a traffic stream may force another vehicle into a conflict.

a. May force another vehicle to change lanes, includes entering from side of road, driveway, freeway ramps, etc.

b. May cause other vehicles to stop suddenly.

2. Vehicle Obstructions. A vehicle slowing or stopping may cause another vehicle to drive around it, causing a conflict.

a. Drivers tailgating indicate a chance of a sudden pass.

b. Slow-moving or stopped vehicles encourage other vehicles attempt to pass.

c. A vehicle entering into the roadway may force other vehicles around it.

3. Limited Traffic Visibility. One vehicle may limit another's visibility, allowing the other driver to enter a potential conflict, e.g., an oncoming driver turning left.

G. DETECTING OTHER ROAD-USERS HAZARDS

OTHER ROAD-USERS HAZARDS

You should be able to recognize clues of potential conflict with other road users, including pedestrians, cyclists, and animals. Clues will include the following:

1. Position of Road User Relative to Roadway

a. Pedestrian near roadway.

b. Cyclist in roadway.

2. Motion of Road User

a. Pedestrian running toward roadway.

b. Children at play.

c. Cyclist moving toward roadway.

3. Road User's Ability to See

a. Road User's vision, e.g., pedestrian carrying packages, umbrella.

b. Line of sight, e.g., driver alighting from a parked vehicle.

4. Attentiveness of Road User

   a. Activity, e.g., child chasing ball.

   b. Attention, e.g., pedestrian looking the other way, talking, etc.

5. Lack of Control, e.g., motorcyclist turning on a slippery surface, gravel, etc.

H. DETECTING COMBINATION VEHICLE/ROADWAY HAZARDS

You should be able to identify potential hazards arising out of the interaction between vehicles and roadways.

1. Decision Point. Any point in the roadway at which drivers are confronted with decisions representing a potential point of conflict, e.g., a vehicle starting to exit from a freeway may suddenly return to the freeway; drivers unfamiliar with route signs may be in the wrong lane for their destination and change lanes suddenly as two major routes split.

2. Compression Point. Any point at which the roadway is compressed represents a potential source of conflict, e.g., a vehicle approaching a point where four lanes become two may suddenly change lanes.

I. PRACTICE ON PAPER

Now you'll practice detecting hazards "on paper" before actually going out on the road for "real life" practice. Use the HAZARD DETECTION WORKSHEETS which follow. You'll find a numbered worksheet for each of the six types of hazards. Follow these steps:

1. Read the hazard situation in the left column.
2. In the second column, read the usual and unusual clues that indicate the hazard.
3. Decide how bad the hazard is and write your judgment in the third column.
4. Write in YOUR ACTION—what you'd do to avoid or minimize the danger of the hazard.

The first few have been done for you as examples. Use these as a take-off point for discussion before you fill in the rest of the worksheets.

Discuss your completed worksheets with the entire class.

HAZARD DETECTION WORKSHEET #1

dway Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Distance Limitations			
re coming up to a blind ection.	There is no traffic light or stop sign. A building on the left corner is under construction, blocking your view of traffic coming from the left. Traffic is heavy in both directions.	Moderately bad, but not impossible to negotiate safely.	Stop at intersection. When there's a gap in traffic from left, edge forward until you can see around building. When gap in traffic from both sides, sound horn and proceed.
ıvering Limitations			
re directed by a detour ɔnto an unfamiliar road has a hairpin curve.	You can see a road sign illustrating the direction and angle and a caution sign.	Not too serious.	Slow down to 6 mph and be sure to start the turn with enough room to clear it safely.
: Conflict Point			
re approaching a traffic that is fed by four roads, ɔm each direction.	Cars are entering the circle from every road and there is a truck in the circle approaching from the left.	Potentially bad.	Wait for an acceptable gap in traffic from the left. Also, wait for vehicles coming from the left. Also, wait until vehicles coming from the left and signalling to turn right into your road have actually started to turn. Then proceed.

HAZARD DETECTION WORKSHEET #2

Off-Road Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Sight Limitations			
You are approaching a hidden driveway 65 feet ahead on your right.	You are going 20 mph. You see a vehicle backing out onto the road; the car is half-hidden by hedges. You've noticed other driveways along this road. The car doesn't have the brake lights on.	Pretty bad. the driver's view of the road is blocked, and the driver is still backing.	Sound horn. Take evasive action to avoid hitting the backing car; brake. You should stop within about 60 feet.
Maneuvering Limitations			
You must pull into the museum driveway.	The driveway is a narrow semi-circle. There are two cars stopped in the driveway, blocking passage of a vehicle the size of your bus.		
Traffic Entry Points			
You are approaching a shopping center on your left.	There is no traffic light to control the flow of traffic in and out of the shopping center. Several cars are waiting to enter the road. The car nearest the road has the left turn signal on and the driver is looking to the left.		

HAZARD DETECTION WORKSHEET #3

Single-Vehicle Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Loss of Control			
There is a car ahead driven by an intoxicated person. The car is partially out of control.	The vehicle's left wheels keep going over the center line into oncoming lane. The car then crosses back to the right lane with a weaving motion. Car scrapes the right retaining wall and keeps going. Driver does not respond to bus' horn or the blinking of the bus headlights.		
Lack of Communication			
There is a motorcycle slowing down in front of you. The motorcyclist gives no hand signal.	You are approaching an intersection. The cycylist pulls left close to the center line and the lights come on.		
Lack of Observation			
A car that has passed you starts to cut back in front of you.	There is a car about one car length in front of you, going 40 mph. You are going 40 mph. The passing car is going 45 mph.		
Inadequate Adjustment			
The car behind you is closing.	You are going 30 mph. It looks like the car is traveling much faster. You are on a two-lane road and a truck is in the oncoming lane.		
Slow Moving or Stopped Vehicles			
You are following a tractor.	The tractor looks like it is traveling 15 mph. The driver has the flashers on.		

HAZARD DETECTION WORKSHEET #4

Multiple-Vehicle Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Traffic Convergence			
You are on an expressway approaching an entrance ramp.	You see a MERGE sign. Several cars are stopped on the entrance ramp looking for a gap in traffic. You are 100 feet from the entrance.		
Vehicle Obstructions			
A car that has overheated is stopped ahead in your lane on a four-lane road.	Several cars ahead are stopped with left turn signals on, waiting to merge into the passing lane.		
Visibility Limited by Traffic			
An ambulance is approaching but you can't see it.	There is a truck behind you and a steady stream of oncoming traffic. You can hear the siren. Cars in the oncoming lane are pulling to the side of the road.		

HAZARD DETECTION WORKSHEET #5

Other Road Users Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Road User's Position			
You are approaching a school zone and see a police officer in the middle of the road.	You have passed a flashing yellow sign saying 15 mph. The police officer directing traffic waves everyone to go straight. You have your turn signal on.		
Road User's Motion			
A woman on a bicycle is traveling with traffic in the same direction you are going.	You are closing on the bicycle which is to your right. She gives a left-hand signal and starts to swerve left.		
Road User's Ability to See			
A child is waiting to cross the street.	The child turns his head right and left but the hood on his snowsuit partially blocks his view. He is not at a cross walk. He steps off the curb.		
Attentiveness of Road Users			
An elderly man is crossing the street.	You have the green light. He is not at a crosswalk. He steps off the curb.		
Road User's Lack of Control			
A car is pulling a boat and trying to pass you.	The boat begins to fishtail as the car picks up speed. The car's brake lights go on.		

HAZARD DETECTION WORKSHEET #6

Vehicle/Roadway Hazards	Usual and Unusual Clues	How Bad Is It?	Your Action
Decision Points			
You are coming to an unmarked fork in the road.	Your route takes off to the left road in the fork. You are following a car with an out-of-state license plate. The brake lights go on.		
Compression Points			
You are traveling on a four-lane road. The road ahead goes from a four-lane road into a two-lane road.	You see a sign like this: You are in the right lane.	Could be confusing.	Look for specific direction from other signs, i.e., RIGHT LANE ENDS, FORM SINGLE LANE TO LEFT, FORM SINGLE LANE TO RIGHT, DO NOT PASS.

J. REVIEW QUESTIONS

Check the letter of the answer that best completes the statement or answers the question:

1. Accident fatalities and rear-end collisions can be expected to be in _____ areas as a result of the increase of pedestrian and motor vehicle traffic.

   a. expressway
   b. rural
   c. urban
   d. all of the above

2. To detect hazards, you must be able to distinguish _____ within a complex, changing traffic situation.

   a. clues
   b. tailights
   c. accidents
   d. rules

3. You should develop a(n) _____ of the clues associated with each hazard.

   a. avoidance pattern
   b. "mental image"
   c. peripheral vision
   d. distraction habit

4. You should focus your eyes at farther distances ahead on the roadway as your speed _____

   a. decreases
   b. stabilizes
   c. increases
   d. none of the above

5. Many collisions occur at intersections where _____ is obstructed or limited by buildings, vegetation, or parked cars.

   a. hearing
   b. stopping
   c. path
   d. vision

6. The more intently you fix your central vision on a particular object, the _____ aware you will be of clues from your larger field of indirect vision.

   a. less
   b. more
   c. better
   d. more directly

7. Driving alongside parked vehicles is potentially hazardous because your view is limited and hazards can appear when there is little time or space for

   a. accelerating quickly.
   b. evasive action.
   c. parking maneuvers.
   d. both a. and c. above

8. An example of a single vehicle hazard is

   a. an army convoy.
   b. traffic at turnpike toll booths.
   c. a slow moving tractor.
   d. a car passing you when there is a vehicle in the oncoming lane.

9. Multiple vehicle hazards include

   a. vehicles tailgating the bus.
   b. a driver on an on-ramp entering the flow of traffic on a freeway.
   c. vehicles that limit another vehicle's visability.
   d. all of the above

10. Any point in the roadway at which drivers are confronted with decisions are potential

   a. single vehicle hazards.
   b. combination vehicle/roadway hazards.
   c. off-road hazards.
   d. none of the above

Check whether these statements are mostly True or False.

11. Any point at which the roadway is compressed (for example a four-lane road narrows into two lanes) represents a conflict point. T F

12. Lack of communication by other drivers on the road is not a hazard to your safe driving. T F

13. A driver who frequently changes lanes should be watched as a potential hazard. T F

14. Drivers who do not signal prior to a maneuver are potentially hazardous. T F

15. There are certain locations on any route where you can anticipate that other vehicles will decelerate. T F

16. The condition of the shoulder of the road shouldn't concern you if you don't intend to pull off the roadway. T F

17. In urban areas, you have to be more alert for traffic lights because of neon lights and other lights on the street. T F

18. The primary hazard around playgrounds, residential areas, and schools is that other drivers tend to tailgate. T F

19. You should depend on other drivers to signal their intentions just as you signal yours. T F

20. You can use usual and unusual clues to assess how bad a hazard is before you take action. T F

UNIT IV

FIRST AID

Table of Contents

Objectives

By the end of this unit, the students should be able to:

1. Set priorities for treating severe injuries.
2. Recognize and treat symptoms of severe bleeding, stoppage of breath, and shock.

A. OVERVIEW

The first objective of first aid is to save life. You must know how to apply the principles of first aid. First aid is the immediate and temporary care given to the victim of an accident or sudden illness until the services of a physician can be obtained. A victim will respond much more readily to treatment if he/she realizes that a competent person is administering that treatment. Practicing the procedures in this unit will increase your competence in rendering first aid. However, it is strongly suggested that you complete the American Red Cross Multimedia Course.

Common sense and a few simple rules are the keys to effective first aid. It is as important to know what not to do, as to know what to do. In case of an emergency, making mistakes could be disastrous to the injured person. You are more likely to act promptly and correctly if you learn only a few simple principles, but learn them well.

Emphasis is placed on problems you may confront on the road. The procedures in this unit include:

1. Evaluation of injury and setting priorities for treatment.
2. Maintenance of airway and respiration.
3. Evaluation and treatment of bleeding.
4. Evaluation and control of shock.

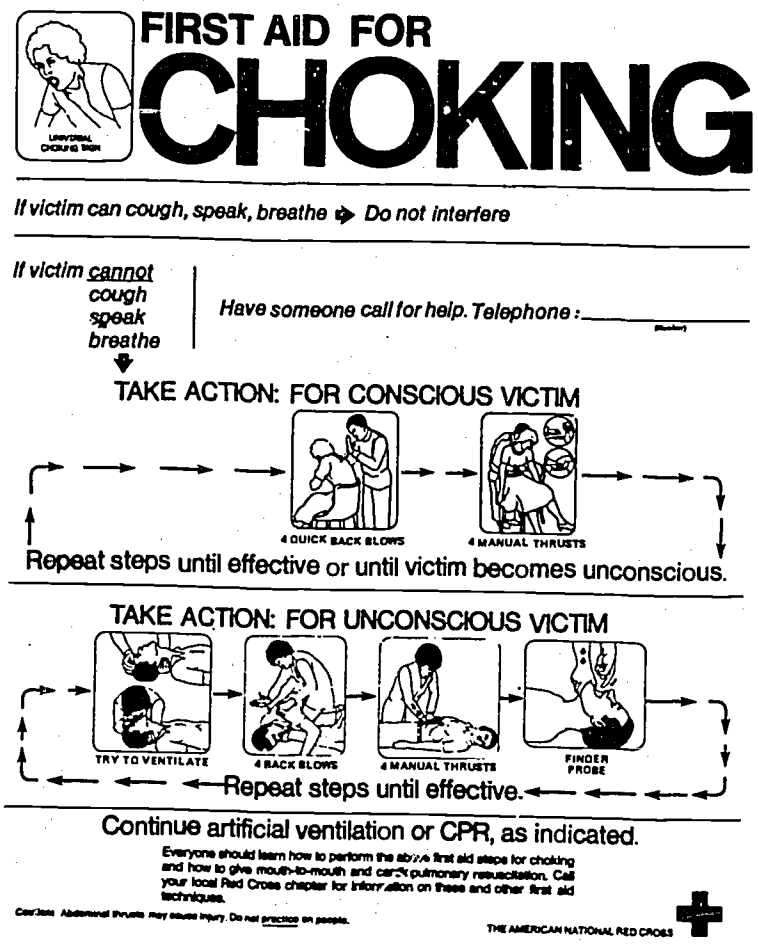
Other first aid topics that are important but not urgent in the saving of life will be discussed only briefly to provide you with a general knowledge of first aid. Little attention has been given the contents of the first aid kit and its use because the most important equipment you have is your knowledge of first aid, not the number and types of bandages in the first aid kit.

Where references are made to bandages or other equipment, use the cleanest materials available, but do not delay first aid if clean bandages are not available. However, the first aid kit should contain a supply of 4" x 4" pads and similar clean bandages for covering wounds and stopping bleeding.

This information is similar to that found in the brochure, *Recommendations for Temporary Emergency Care in Schools*, developed as a cooperative effort between the Illinois Department of Public Health and the Illinois State Board of Education.

Priority of Action for All Emergencies

1. Keep calm.
2. Give immediate attention to:



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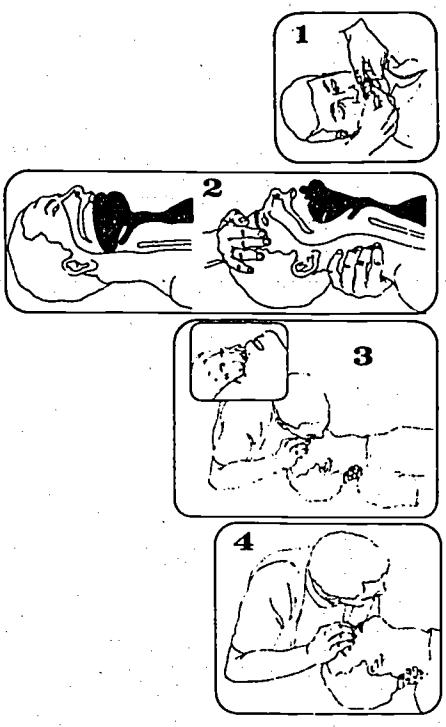
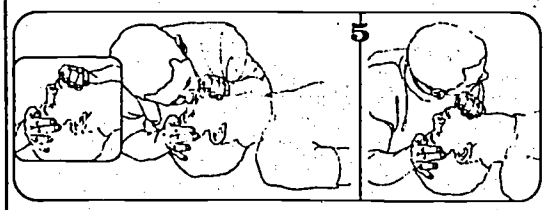
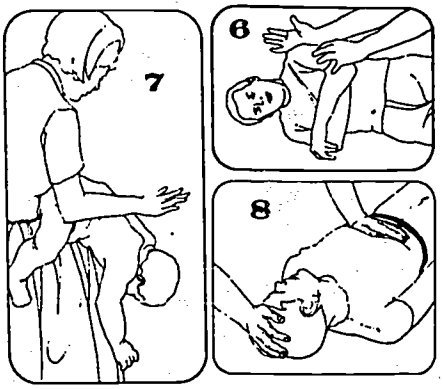
WHEN BREATHING STOPS
SECONDS COUNT
SAVE A LIFE BY ARTIFICIAL RESPIRATION







MOUTH-TO-MOUTH METHOD

1. If foreign matter is visible in the mouth, wipe it out quickly with your fingers, wrapped in a cloth, if possible
2. Tilt the victim's head backward so that his chin is pointing upward. This is accomplished by placing one hand under the victim's neck and lifting, while the other hand is placed on his forehead and pressing. This procedure should provide an open airway by moving the tongue away from the back of the throat.
3. Maintain the backward head-tilt position and, to prevent leakage of air, pinch the victim's nostrils with the fingers of the hand that is pressing on the forehead.

   Open your mouth wide; take a deep breath; and seal your mouth tightly around the victim's mouth with a wide-open circle and blow into his mouth. If the airway is clear, only moderate resistance to the blowing effort is felt.

   If you are not getting air exchange, check to see if there is a foreign body in the back of the mouth obstructing the air passages. Reposition the head and resume the blowing effort.
4. Watch the victim's chest, and when you see it rise, stop inflation, raise your mouth, turn your head to the side, and listen for exhalation. Watch the chest to see that it falls.

   When his exhalation is finished, repeat the blowing cycle. Volume is important. You should start at a high rate and then provide at least one breath every 5 seconds for adults (or 12 per minute).

   When mouth-to-mouth and/or mouth-to-nose resuscitation is administered to small children or infants, the backward head-tilt should not be as extensive as that for adults or large children.

   The mouth and nose of the infant or small child should be sealed by your mouth. Blow into the mouth and/or nose every 3 seconds (or 20 breaths per minute) with less pressure and volume than for adults, the amount determined by the size of the child.

   If vomiting occurs, quickly turn the victim on his side, wipe out the mouth, and then reposition him.

MOUTH-TO-NOSE METHOD

5. For the mouth-to-nose method, maintain the backward head-tilt position by placing the heel of the hand on the forehead. Use the other hand to close the mouth. Blow into the victim's nose. On the exhalation phase, open the victim's mouth to allow air to escape.

RELATED INFORMATION

6. If a foreign body is prohibiting ventilation, as a last resort, turn the victim on his side and administer sharp blows between the shoulder blades to jar the material free.
7. A child may be suspended momentarily by the ankles or turned upside down over one arm and given two or three sharp pats between the shoulder blades. Clear the mouth again, reposition, and repeat the blowing effort.
8. Air may be blown into the victim's stomach, particularly when the air passage is obstructed or the inflation pressure is excessive. Although inflation of the stomach is not dangerous, it may make lung ventilation more difficult and increase the likelihood of vomiting. When the victim's stomach is bulging, always turn the victim's head to one side and be prepared to clear his mouth before pressing your hand briefly over the stomach. This will force air out of the stomach but may cause vomiting.

   When a victim is revived, keep him as quiet as possible until he is breathing regularly. Keep him from becoming chilled and otherwise treat him for shock. Continue artificial respiration until the victim begins to breathe for himself or a physician pronounces him dead or he appears to be dead beyond any doubt.

   Because respiratory and other disturbances may develop as an aftermath, a doctor's care is necessary during the recovery period.

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a. establishing an open airway, if this is blocked, and starting mouth-to-mouth resuscitation if the individual has stopped breathing;

b. stopping bleeding;

c. treating shock (see fainting).

3. Where immediate medical attention is indicated, first priority goes to contacting the physician. Otherwise, where possible, contact the school official first. Under no circumstances should a sick child be sent home without the knowledge of the parent, guardian, or other responsible person.

B. BREATHING DIFFICULTIES

If child is not only unconscious but has stopped breathing, use mouth-to-mouth resuscitation.

1. With the child lying flat on his/her back, tilt the head back and hold jaw up firmly in the jutting-out position to keep tongue from falling back and closing off the airway.

2. Then start mouth-to-mouth breathing. (See illustration.)

C. BLEEDING

In case of accidents, control of external bleeding generally demands first priority after being sure the victim is breathing through an adequate airway (i.e., open passage for air to reach the lungs). Obviously, the more rapid and extensive the bleeding, the more urgently is control indicated. Bleeding may be of one of the following three types, or may be due to a combination of these types.

1. General oozing: Oozing in a small area is best controlled with firm pressure applied over the area with the fingers or hand covered with sterile gauze, if available.

2. Bright red, pulsating bleeding: This is arterial bleeding and is often profuse. To control, apply firm pressure with fingers or hand on the side of the wound closest to the heart or over the wound itself. If this doesn't stop the bleeding, it may be necessary to apply, at the appropriate "pressure point," firm enough pressure to compress the pulsating artery at this point. These "pressure points" are the points in the groins and midway up the inner aspect of the upper areas where pulsating arteries can be felt. Do not use a tourniquet. If it is necessary to apply a tourniquet, a physician should be contacted immediately and should see the student as soon as possible. Be sure the physician knows the tourniquet is in place and when it was applied. Tourniquets should only be applied to traumatic amputations.

3. Steady, dark bleeding: This is generally venous and is controlled by direct pressure on the wound.

A combination of the methods of control for the various types of bleeding may be indicated. Use as much cleanliness in control as possible (i.e., clean hands, sterile compresses, etc.). If bleeding is more than mild oozing, medical care is indicated as soon as possible.

NOTE: Shock may accompany bleeding and, if so, treat this. Shock may be due to internal bleeding particularly after blows to the abdomen.

Lacerations, Abrasions:

1. For all bleeding: apply direct pressure over wound. Use sterile gauze pad, handkerchief or hand.

2. Deep wounds which require stitching or involve bone should receive a physician's attention promptly. Do not try to wash and cleanse deep wounds — particularly wounds that go down to bone and particularly deep wounds on the head. Control bleeding, cover with sterile gauze, and seek medical care.

3. In case of small superficial abrasions and cuts, control bleeding, cleanse gently with water and soap, and cover with a sterile gauze upon arrival at school or at home.

4. In case of puncture wounds or wounds made by a dirty or rusty agent apt to cause tetanus, advise school officials and/or parents immediately.

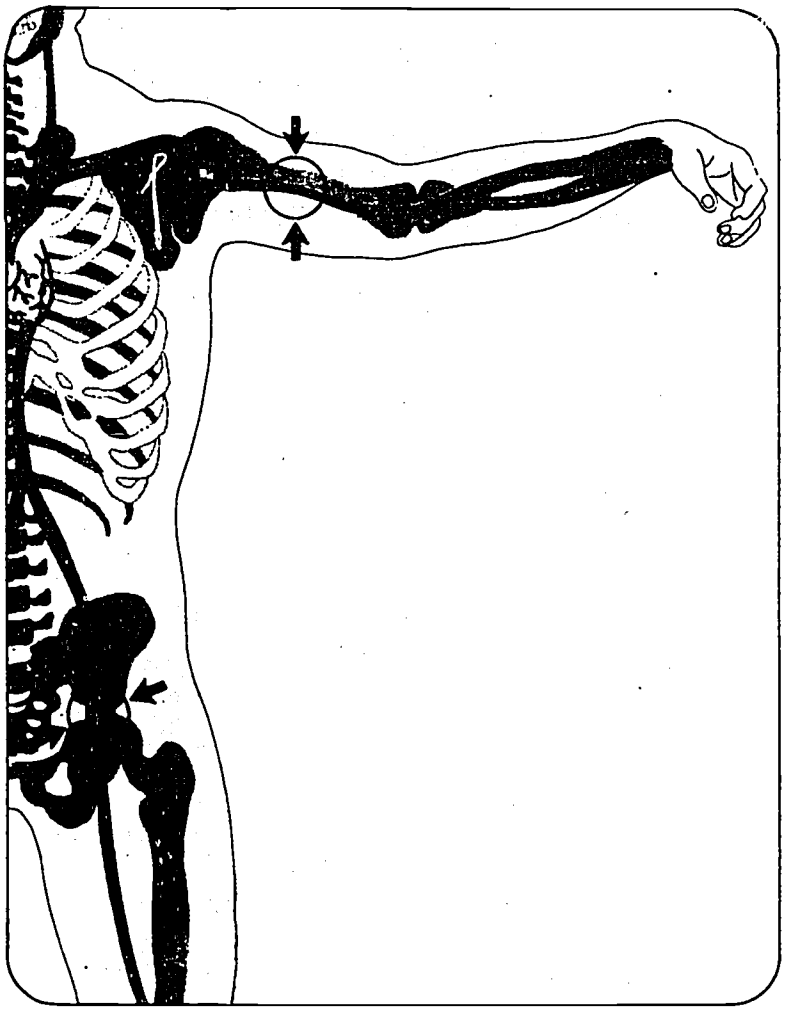
5. Find out how the cut or abrasions occurred and inform school officials and/or parents so that they have this information when they contact the student's physician. The school health record should reveal pupil's tetanus immunization status.

Pressure Points:

a. Use the brachial artery for control of severe bleeding from an open arm wound.

1. Apply pressure over the brachial artery, forcing it against the arm bone. The pressure point is located on the inside of the arm in the groove between the biceps and the triceps, about midway between the armpit and the elbow.

2. To apply pressure on the brachial artery, grasp the middle of the victim's upper arm, your thumb on the outside of his/her arm and your other fingers on the inside. Press your fingers toward your thumb to create an inward force from opposite sides of the arm. Use the flat, inside surface of your fingers, not your fingertips. This pressure inward holds and closes the artery by compressing it against the arm bone.



b. Use the femoral artery for control of severe bleeding from an open leg wound.

1. Apply pressure on the femoral artery by forcing the artery against the pelvic bone. The pressure point is located on the front, center part of the diagonally slanted "hinge" of the leg, in the crease of the groin area, where the artery crosses the pelvic bone on its way to the leg.

2. To apply pressure on the femoral artery, position the victim flat on his/her back, if possible, and place the heel of your hand directly over the pressure point. Then lean forward over your straightened arm to apply the amount of pressure needed to close the artery. Keep your arm striaght to prevent arm tension and muscular strain while you apply this technique. If bleeding is not controlled, it may be necessary to compress directly over the artery with the flat of the fingertips and apply additional pressure over the fingertips with the heel of the other hand.

D. SHOCK

This is a severe body reaction to some stress such as hemorrhage, a severe fracture, or burn. The student is anxious, cold, pale, sweating. Pulse is weak and rapid. He/she does not improve after a brief period as he/she would in case of fainting.

1. Make student warm (not hot) and as comfortable as possible. Keep calm. Place blanket beneath child.

2. Student should be horizontal with head flat. (NOTE: In case of possible severe fractures or spinal injuries, do not change the injured students' position. A physician should be called immediately.) If a person trained in Emergency Medical Care (EMT-A) is available, he/she should be in charge until the physician arrives.

3. If there is bleeding, control it by direct pressure.

4. If there is a burn, handle this as indicated under "Burns."

5. Do not give anything by mouth.

6. School official and/or physician should be called immediately.

7. Shock may be delayed and therefore not immediately observable.

E. OTHER CONDITIONS

(a) Spinal Injuries:

If the injury has been severe, if the student thinks he/she has felt a bone break, or if there is physical deformity or swelling, suspect a fracture or dislocation. Medical attention as soon as possible is indicated. Call school official for someone trained in emergency medical care.

In the meantime:

1. Keep the student quiet and warm.

2. Do not move the bone which may be fractured or dislocated. Do not try to straighten it. Do not move the fragments or the adjacent joints.

3. Do not move or twist the spine or neck if you suspect fractures or dislocations there.

4. Do not attempt to move the student. Any transportation should be conducted by professional or paraprofessional personnel.

5. Treat shock or bleeding if present.

(b) Nose Bleeds:

1. Keep calm. Take immediate action to control the bleeding.

2. Apply cold compress to the side or sides of the nose from which blood is coming, and press side of nose tightly against midline partition for several minutes.

(c) Burns:

1. Treat for shock if present (see section on shock).

2. Clothing, rings, necklaces, etc., are superheated items and should be removed. Superheated items continue the burning process even though no flame is present.

3. Do not apply ointments or absorbent cotton. Try to keep dirt and dust out of the raw area. If sterile dressings are not available, a clean sheet, clean towel, or clean plastic bag around or over but not on the burned area should be used to protect and cover the burn while the patient is awaiting medical care.

4. Seek medical care immediately.

5. Give nothing by mouth.

(d) Head Injuries

Head Injuries — Call for ambulance.

1. Have student lie down with head slightly elevated.

2. Keep under close observation and notify school officials and/or parents. Advise them to contact their physician.

3. If there is deformity, marked swelling, loss of consciousness, vomiting, changes in rate of breathing, difference in size of the pupils of the eyes, or bleeding from scalp, nose, or ear, immediate care by a physician is indicated. Notify school official and/or parent.

4. All head injuries should be treated also as neck injuries.

5. Student should not be moved.

(e) Loss of Consciousness:

Fainting:

Simple, brief loss of consciousness generally due to excitement or anxiety, responds best to calm waiting. Loosen clothing around neck and waist. Do not crowd around student. Let student lie down until fully recovered. (See Shock.)

(f) Convulsions and Seizures:

Each bus driver should know of any pupil who is subject to seizures, should have learned from the parent any signs the child may show before a seizure, and how long the seizure usually lasts. He/she should know any actions found by the parents to be useful in preventing the seizure, or handling the child while it lasts.

When a seizure occurs:

1. Be calm. With proper care and precautions the child is not going to injure himself/herself during the convulsion.

2. If there is a sign of a seizure coming on, try to get the child to a place to lie down.

3. Loosen clothes around the neck and waist.

4. Gently try to place the child on his/her side so that the head turns to the side, and the tongue does not fall back in the throat and block off the airway. With the head to one side, chances of aspiration are lessened.

5. Wait for the seizure to subside. If it does not subside in a few minutes, call the school official and/or parents, or if they are not available, the physician.

(g) Abdomen:

1. Mild abdominal pain may be due to constipation, menstrual periods, diarrhea, etc.

2. Vomiting may be present and nothing should be given by mouth.

3. If a child has recurrent pain, contact the school official.

(h) Eyes:

Foreign bodies:

1. Tell child not to rub eyes.

2. Pull down lower lid to see if the foreign body is on the inner surface of the lid. If so, remove by lifting off with a moistened sterile cotton ball. Do not use dry cotton around the eye.

3. Foreign bodies on the inside of the upper lid may be dislodged by grasping the lashes of the upper lid and pulling upper lid forward and down over the lower lid while the child looks up.

4. If these measures do not remove the foreign body, take the student to the school offical and/or parents and advise medical care.

Abrasions, lacerations, and penetrating wounds of the eyeball:

1. Student may complain of pain, light hurting eye, clouding of vision.

2. Do not attempt to treat or to remove penetrating object if present. Gently "pad" eye to protect it.

3. Take student to school official and/or parents. Immediate medical care is indicated.

Blows to the eye:

1. If severe or if there is clouding of vision, immediate medical care is indicated.

2. Keep child flat and quiet.

(i) Insect Stings:

Note: Each driver should seek identification of any student with known severe allergy reaction to insect stings.

1. Scrape out stinger with fingernail if present — do not pull out. Apply cold compresses.

2. Physician should be consulted immediately if there is any reaction such as hives; generalized rash; pallor; weakness; thick tongue or lips; tingling of tongue or lips; nausea; vomiting; "tightness" in chest, nose or throat; or collapse.

3. Institute mouth-to-mouth and/or cardiopulmonary resuscitation as indicated.

(j) Foreign Bodies:

Splinters:

If the splinter is not easily removed, notify school official and/or parent.

Ears:

Foreign bodies in the outer ear sometimes may be removed by tilting the head to that side. Be sure school official and/or parents know about the foreign body so they can seek medical care. Foreign bodies in the ear should be removed as soon as is practical, but removal is not usually an emergency procedure. However, it is important to remove vegetable material such as peas, seed, etc., soon because these absorb water and swell, making removal more difficult the longer they are present. School officials and/or parents should be contacted when the foreign body is noted so they can arrange for removal by student's physician.

Nose:

The recommendations for handling foreign bodies in ears apply similarly for handling nasal foreign bodies.

Throat:

If a child coughs and chokes when he/she has had some small object like a nut, small piece of candy, pea, etc., in his/her mouth, the object may be lodged above the wind pipe. If coughing does not dislodge the object, place the child so the head is down (turn upside down if he/she is small child, or have him/her bend over,) and slap sharply on the back between the shoulder blades as the child coughs out. If symptoms persist, contact school official and/or parent. Child should be taken to physician immediately.

In the event that a child swallows a foreign body, it will generally be passed without difficulty. However, if the foreign body is relatively large or sharp, it may lodge in the esophagus in which case the child will generally have some difficulty or discomfort swallowing liquids. The school offi-

cial and/or parent should be informed of any swallowed foreign body.

(k) Broken Teeth:

1. If a tooth is fractured (part broken off), notify the school official and/or parents so they can contact the student's dentist.

2. If a tooth is completely knocked out, *save the tooth* and have the school officials and/or parents *take this with the child to the dentist immediately.*

(l) Fractures, Sprains, and Strains:

A: IMPORTANT PRIMARY INFORMATION

There are two major types of fractures: 1) closed (or simple fracture) where the skin has not been broken by bone ends, and 2) open (or compound fracture) where bone has broken through the skin, or where a wound exists between the broken bone and through the skin. The wound may be small, or either or both ends of the broken bone may protrude through the skin.

Because a compound fracture is more serious than a simple fracture (i.e., greater blood loss, potential contamination and subsequent infection), it is quite important to know the type of fracture that has occurred. A compound fracture is readily recognized. If injury occurs wherein the possibility of simple fracture exists (especially where deformity, tenderness, grating sound, swelling or inability to move an extremity are present), the victim should be treated as if a fracture does exist until he/she can be transported to a hospital for medical diagnosis.

B: TREATMENT

1. All open fractures should be treated by covering the wound with a sterile dressing (this is best done by "dropping" the dressing over the wound without actually touching it) and by applying direct pressure to stop bleeding (see section on bleeding).

2. Protruding bone ends must never be pushed, pulled, or manipulated in any manner in any direction for any reason!

3. Elevate the extremity and do not allow student to bear weight on it.

4. Notify school officials and/or parents and advise them to contact their physician.

(m) Emergencies Concerning Frostbite:

1. Putting clothing over the frostbite will help prevent further injury. The part should never be rubbed, chafed, or manipulated.

2. Once a frozen limb has been thawed, the student becomes a stretcher case. Attempts to walk on the thawed limb, with the resulting exposure to refreezing, are extremely painful and dangerous. The student must be transported supine with the limb protected.

3. The following DON'TS should be observed:

a. Don't make matters worse. Treat injured parts extremely gently to prevent further damage of the tissue.

b. Don't apply pressure or constriction on the injured area; the tissue should be bandaged lightly to protect it from contamination.

c. Don't under any circumstances rub the tissue. Frozen cells contain ice crystals which can cut or destroy the tissue.

d. Don't apply snow or thaw the part in cold water. This is no more sensible than treating a burn by putting it in a fire.

F. REVIEW QUESTIONS

Complete these sentences:

1. Before you can set priorities for treatment, you must evaluate:
   a. the scene for
   b. types of
   c. need for immediately
2. Two types of injuries that require prompt treatment are:
   a. _____ bleeding, and
   b. blocked _____ or stoppage of _____
3. When might you have to move an injured person before you administer first aid?

4. With any serious injury, you should also treat the person for:

Check A, B, or C:

5. Treating for shock, you should:
   ___ a. place a coat, jacket, etc., under victim.
   ___ b. put coat, jacket, etc., under and over the victim sparingly according to temperature.
   ___ c. put coat, jacket, etc., under and over the victim and apply external heat.
6. If a car hits a power pole, what would you check for first?
   ___ a. Hot wires
   ___ b. Injuries
   ___ c. Victims to be removed
7. If a victim is not breathing, you should:
   ___ a. Call a doctor and wait
   ___ b. Check airway, give artificial respiration
   ___ c. Take victim to hospital
8. If a victim has possible chest injuries and is not breathing, what method would you use?
   ___ a. Back-pressure arm-lift
   ___ b. Mouth-to-mouth
   ___ c. Rush to hospital

True or False:

9. To minimize the effects of shock, keep the victim lying down and comfortable. T F

10. The tourniquet should be used only for severe life-threatening hemorrhage that cannot be controlled by other means. T F

11. Whenever possible, a person should be treated where that person is found. T F