

DOCUMENT RESUME

ED 086 878

CE 000 915

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TITLE Manual for the Instruction of School Bus Drivers.  
INSTITUTION New York State Education Dept., Albany.  
PUB DATE 73  
NOTE 77p.; Revised edition by Anthony E. Terino  
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS \*Driver Education; First Aid; Instructional Films;  
\*Manuals; Program Administration; \*School Buses;  
\*Teaching Guides; \*Traffic Safety

ABSTRACT

In answer to requests from numerous school and safety officials throughout the State, a manual for the instruction of school bus drivers was prepared; with 2,000,000 pupils in 20,000 vehicles being transported daily during a school year, the State of New York realizes the necessity for correct safety procedures to be well defined for those transporting children to and from school safely. Units in the manual cover responsibilities of the school bus driver; the school bus driver's relationship to parents, pupils, and school officials; administrative procedures of the school transportation program; driver qualifications; driving skill; accidents, first aid, and school bus health and sanitation, care and maintenance of the school bus; traffic laws, signs, and signals; driving skills in closed areas. Also included is a review test and a bibliography of recommended films for individual units of the course. The appendix has copies of the necessary school bus driver forms (application, medical examination, psychophysical test record, and accident) as well as information pertaining to safety citations and where psychophysical tests may be secured. (EA)

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# MANUAL FOR THE INSTRUCTION OF SCHOOL BUS DRIVERS

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THE UNIVERSITY OF THE STATE OF NEW YORK  
THE STATE EDUCATION DEPARTMENT 1973



**MANUAL FOR THE INSTRUCTION OF  
SCHOOL BUS DRIVERS  
of  
The State of New York**

**(1963 Revision)**

**(Reprinted 1966)**

**(1973 Revision)**

**The University of the State of New York  
The State Education Department  
Albany**

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## FOREWORD

The purpose of this manual is to stress the fact that safety is good business. School officials as well as the general public must realize that safety and efficiency go hand in hand.

Correct safety procedures must be so well defined for those who are engaged in school transportation that at no time will they fail in their duties and obligations. School bus drivers have a tremendous responsibility. Each day they carry precious cargo, the value of which cannot be measured in dollars and cents. To them, too, is intrusted the careful and economical operation of expensive and valuable vehicles. These school buses should always be maintained at peak efficiency so that "not one child shall be injured, maimed or killed."

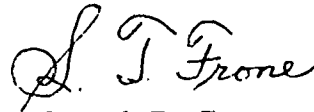
Through the years school transportation in New York State has been admirably administered by boards of education, superintendents and principals. They are to be commended for the efficient, comfortable and safe travel that has been provided. It is important that school administrators continue to emphasize the problems relating to school bus safety. This emphasis should come to the children through the parents, the classroom teacher and the school bus driver, as well as through the administrator himself.

This manual for the instruction of school bus drivers was prepared in answer to requests from numerous school and safety officials throughout the State. The manual was originally compiled by Otto J. Stewart, school transportation supervisor, State Education Department, and the manuscript revised for publication by Anthony E. Terino, supervisor of secondary education, State Education Department.

The State Education Department expresses appreciation to the following representatives of the New York State Central School Principals Association and the New York State Association of District Superintendents of Schools, who made valuable contributions to the first edition of this publication: Elton F. S. Shaver, Willard W. Steeves, William J. Hendron, Kenneth A. Streeter, Fred P. Foster, John Moehle, Lester J. Roosa and Robert MacNaught.

Appreciation is likewise expressed to the following principals and district superintendents for their help and suggestions in revising this manual: Lawrence H. Gallagher, William D. Firman, Elton F. S. Shaver, Harold G. Bowerman, Franklin B. Clark and Raymond C. Vrooman.

Inquiries relative to this manual should be addressed to Joseph J. Caruso, Supervisor of School Business Management, State Education Department.

A handwritten signature in cursive script that reads "S. T. Frone".

Samuel T. Frone

Chief, Bureau of Special Educational  
Management Services

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## INTRODUCTION

In the State of New York approximately 2,000,000 pupils were transported daily in 20,000 vehicles during the school year 1972-73. The task of transporting children to and from our schools safely is a tremendous one. Boards of education are responsible for the conduct and safety of the children in all school activities. The safety of pupils on school buses constitutes an important part of their responsibility.

Six major groups share the duty of transporting children safely from home to school and back again:

1. The board of education: It has the responsibility of selecting drivers, the key persons in the whole problem of safe school transportation.
2. The administrator: He supervises the transportation program and has direct responsibility for it.
3. The driver: He has the children under his supervision for a longer period of time during the day than do some classroom teachers. He must be one who is interested in his job, in children, in his school and in his community.
4. The teacher: It is his or her responsibility to develop in children the right attitude toward the protection of their lives and the lives of others.
5. The parents: It is their job to continue the work of the school through example and teaching so that the child shall always be in environment conducive to the development of proper attitudes toward other persons.
6. The child: He is his own best protector by creating an orderly environment in school and on the school bus.

The key persons in the school transportation program are the school bus drivers. Drivers must cope with heavy traffic, railroad crossings, poor roads, narrow bridges and all types of weather. Upon their judgment and skill depend the lives of many children. Their behavior and performance will serve as examples to their youthful passengers. Because of the time a school bus driver spends with children on the way to and from school, he can exert great influence in shaping their lives.

School bus drivers, therefore, should be selected with the greatest care and should be adequately instructed in their duties and responsibilities.



They must be reliable, honest and dependable. They must have ability to get along with others. They must be patient, kind, considerate and cooperative and must be calm under stress. Indeed the school bus driver is in effect "the silent teacher."

It is essential, too, that every school bus driver keep in top physical condition. By maintaining the best of mental and physical health he is better able to guard the safety of the children who are intrusted to him, for good driving requires alertness of mind and body.

In selecting teachers consideration is always given to the applicant's ability to maintain discipline among the pupils. This factor should be considered in the employment of school bus drivers as well. School bus drivers are responsible for pupil discipline on school buses in the same manner that teachers are responsible for discipline in the classroom. The driver is expected to uphold on the school bus the same standard of conduct that has been established for the school system as a whole. In many cases drivers of school buses have more children in their care at one time than classroom teachers have. Therefore, the driver should be an individual of high moral character whom the children will respect. At the same time, the school itself must instill in the pupils respect for all adults, and for the property and lives of others.

Every school bus driver should be carefully trained for his job. This manual was prepared for school authorities who wish to provide a training course for school bus drivers. The course contained in these pages is intended to encourage the operator of a school bus in New York State to appreciate more fully the responsibilities and personal relationships involved in his work and to promote safer and more economical operation of school buses.

Section 156.13 of the Regulations of the Commissioner of Education requires that during the first year of employment, each school bus driver employed after July 1, 1973, shall complete a course of instruction in school bus safety practices approved by the Education Department.

SUGGESTIONS FOR ORGANIZING A COURSE  
FOR SCHOOL BUS DRIVERS

The following suggestions should prove helpful in establishing and conducting a course for school bus drivers:

1. The meeting place selected for the course should be accessible and convenient for the participants.
2. The course should meet for at least ten 2-hour sessions or a minimum total of 20 hours.
3. The superintendent or district superintendent of schools should serve as general chairman in setting up the program.
4. The principals of the area should serve as instructors and preside at each meeting. Because of their experience in teaching they can provide effective methods of instruction.
5. Teachers of high school driver education courses should assist the principals in this instruction, especially in units V (III), VI and X.
6. The school physician, school nurse, state police, sheriff's office, local police, head school bus driver, and the school bus mechanic should be consulted for suggestions and advice in planning the instructional activities of the course.
7. The instructors should refer to and make use of School Business Management News. Many articles on transportation appear in each issue of this newsletter.
8. A representation of parents should be present when unit II is taught, and the principal who teaches this unit should explain to these parents in advance why they have been asked to attend and what contributions they may offer. Not more than five or six parents should be selected for this representative group.
9. All new drivers should be required to take the course as soon as possible. Several schools in an area can contribute their instructors and their resources each time a new group of drivers must be taught.
10. A refresher course should be given to all drivers at least every other school year, with special emphasis on units I, V, VI, VII and IX.

11. Those men and women who plan to become substitute drivers or regular drivers should be encouraged to attend. Teachers in the school system should be encouraged to take this course, both for substitute work or for possible emergencies.

12. The trainees who have attended every session and who have passed an examination at the close of the course should receive appropriate certificates issued by the State Education Department. The superintendent or district superintendent should submit the names of the drivers, by schools, and should certify that each driver has successfully completed the 20 hours of instruction and is entitled to a certificate. The requested certificates will be mailed to the superintendent.

13. School bus drivers who have successfully completed for a second time the 20-hour course for instruction of school bus drivers can be presented with a certificate indicating this second milestone, which gives testimony to the interest and sincerity of the particular driver or drivers. Appropriate certificates may also be issued for drivers who complete the course more than two times.

District superintendents and/or superintendents, when submitting the names of drivers, by schools, who are entitled to a certificate, should indicate the number of times each driver has completed the course.

## U N I T I

### RESPONSIBILITIES OF THE SCHOOL BUS DRIVER

#### General Purpose

The school bus driver is one of the key persons in the cooperative enterprise of educating the youth of our Nation. His work is as vital as that of any other member of the school staff. School personnel, working together, must safeguard the physical safety and mental health of the boys and girls who are intrusted to them. If these duties are to be performed with maximum efficiency, each member of the staff must be adequately trained. School bus drivers can best contribute to the children's safety and to the school's safety aims only when they have a thorough knowledge and understanding of their specific duties and responsibilities. It may be stated here with due emphasis that the school bus driver is a "silent teacher" at all times.

#### Pretraining Test

1. Why should the school bus driver always remain in the school bus as long as the motor is running or any pupils are on the bus?
2. The law requires school buses to stop at all railroad crossings before proceeding. Explain why this law is justified.
3. Why should a loaded school bus not exceed 35 miles an hour?
4. Why is it essential that a school bus driver have working knowledge of first aid?
5. Why should the door of the school bus never be left open while the bus is in motion?

#### General Information

##### I. Responsibilities of the school bus driver

##### A. Specific duties of the school bus driver

1. To provide for the safety of the pupils at all times
2. To keep physically fit and mentally alert
3. Through his own conduct to set a desirable standard of courtesy and orderliness for the pupils to follow
4. To adhere to schedule as much as possible
5. To maintain a spirit of pupil cooperation and discipline on the bus

6. To consult with the principals, teachers, parents and transportation officials in maintaining and operating a safe school bus
7. To cooperate with parents and school authorities in arranging bus stops for economy and safety
8. To know the first aid course given by the Red Cross
9. To make simple emergency repairs when necessary
10. To keep his uniform or clothes neat and make a good appearance generally
11. To operate the bus skillfully and safely
12. To assist a new driver to make a correct start
13. To prepare and keep records required by local and state authorities
14. To be familiar with the regulations of the State Education Department concerning school transportation
15. To keep the bus in good operating condition (tires, brakes, horn, mirrors, windows, safety doors etc.)
16. To heed carefully all warning signs and intersections of the road
17. To assign seats to pupils when necessary
18. To think of his job as that of guardian of human life
19. To direct pupils across the highway in front of the bus
20. To observe carefully all laws, traffic regulations and the rules of the road:
  - a. Flashing light
  - b. Proper use of the directional signals, courteous attitude toward the general public, such as pulling over on the shoulder as far as possible and signaling motorists to pass before opening the door to discharge pupils

**B. School bus driver's responsibility for the safe condition and safety equipment of the vehicle**

1. Tires
2. Brakes
3. Steering mechanism
4. Clutch
5. Battery
6. Lights
7. Windshield wipers
8. Defrosters
9. Windows
10. Rear vision mirror
11. Driver's seat
12. Emergency door
13. Fire extinguisher
14. First-aid kit
15. Hand ax
16. Heater
17. Chains
18. Flares
19. Necessary tools

## II. Safe driving practices

### A. Ten commandments for driving safely

1. Keep to the right of center line of highway.
2. Pass overtaken vehicles on left, but only after sounding horn and only when road ahead is clear enough to permit getting back to the right with a wide margin for safety.
3. Never attempt to pass an overtaken vehicle at an intersection, on a curve or approaching the crest of a hill.
4. At intersections, be prepared to stop if a vehicle on an intersecting road is moving into intersection and do not try to take the right of way.
5. Keep far enough back of the vehicle ahead to allow a safe braking distance in the event that the other vehicle makes a sudden stop. Except in emergency, do not stop so suddenly as to cause collision by a following vehicle.
6. Signal before making a turn and further insure safety by looking to see whether a vehicle is approaching from the rear. Wait before pulling out from the curb until making such observation.
7. Always keep both hands on steering wheel and keep eyes on the road ahead while driving. Look behind before backing.
8. Always stop before crossing railroad tracks. After carefully looking in both directions and listening, proceed only if it is safe beyond any possible doubt and then proceed in low gear, gears not being shifted until all tracks have been cleared.
9. When stopping on a highway, pull as far off hard surface as road conditions permit and, where the stop is prolonged, see that the rear of vehicle is adequately protected.
10. Do not operate at excessive speed at any time. At curves, blind crossings, crests of hills, in fog or wherever the view is curtailed, reduce speed so as to be able to stop within the distance of clear vision.

### B. Special driving regulations for the school bus driver

1. No gasoline tank shall be filled when there are pupils in the bus.
2. No pupil shall be allowed to occupy any position that will interfere with the vision of the driver or his driving.
3. Every school bus **MUST** make a complete stop at highway intersections protected by "STOP" signs, and the driver must exercise the utmost care before proceeding.

4. All school buses must come to a complete stop immediately before crossing a railroad grade crossing.
5. The school bus driver must not leave the school bus when children are inside except in case of emergency, and in such case before leaving the bus the driver shall stop the motor, remove the ignition key, set the auxiliary brake and leave the transmission in gear.
6. The Vehicle and Traffic Law specifies a maximum speed limit of 55 miles an hour for all vehicles. It is suggested, however, that school buses should not exceed 35 miles an hour while carrying pupils to and from school.
7. No bus shall be operated with the clutch disengaged, except when coming to a stop.
8. The doors shall be closed at all times when the bus is in motion.
9. The driver shall not back the bus on school grounds or at loading or unloading stops without proper signals from another responsible adult.
10. No bundles, large parcels or groceries shall be carried in the school bus.
11. A school bus driver shall never drive a school bus when he has had any alcoholic beverage.
12. The school bus driver shall not permit any person other than pupils, teachers and other persons designated to supervise such pupils to ride the school bus.

#### Questions for Discussion

1. Explain why a school bus driver should never drive a school bus when he has had any alcoholic beverage.
2. What signals should be used when passing another vehicle?
3. What precautions should be used when passing another vehicle?
4. What signal and what precautions should be taken when backing a school bus?
5. Why should drivers never criticize another school bus driver in public?
6. Explain fully why it is essential that a school bus driver maintain a punctual time schedule on his bus route.
7. Why is it necessary to cooperate with the motoring public in order to make the School Bus Passing Law effective and workable?

8. Why should a school bus driver NEVER leave his school bus as long as any pupils are in it, except in case of emergency?

9. Why is it important that every pupil be assigned a seat on the bus?

10. How does a sanitary and clean bus build proper attitudes in the pupils who ride school buses?



## U N I T II

### THE SCHOOL BUS DRIVER'S RELATIONSHIP TO PARENTS AND PUPILS

#### General Purpose

The purpose of this unit is to make clear the proper relationship between the driver and the pupils and to show how this relationship results in attitudes of courtesy, cooperation, respect for property and, most important of all, in the safe transportation of pupils to school and to their homes in a happy receptive frame of mind.

#### Pretraining Test

1. In what ways is the parents' cooperation essential to the success of the school's safety program and to the safe transportation of pupils?
2. Why should the school bus driver be personally acquainted with all the parents on his school bus route?
3. How can the preschool child be taught that the school bus driver is a friendly school employee, kind and helpful to all?
4. How can the school bus driver further the public relations program of the school?

#### General Information

##### I. Parents

##### A. Parents' duties

1. To cooperate with the school by
  - a. Making sure pupils are ready on time
  - b. Insisting on pupil cooperation with school officials
  - c. Complying with school requests
  - d. Observing best safety practices in their own driving
2. To instill even in the preschool child habits of punctuality and correct behavior and to make clear that the bus driver is a friendly school employee
3. To study with the child the list of transportation regulations

4. To accompany very small children to the bus in the morning and meet them in the afternoon for the purpose of supervising their conduct and assisting in the establishment of desirable safety practices
5. To support the bus driver and school officials in all rules and regulations
6. To acknowledge and discharge their disciplinary prerogatives in support of the school's safety program. Correct parental attitudes are especially essential.

B. School bus driver's responsibility to parents

1. To be on time at stops
2. To exercise maximum safety practices
3. To maintain the best type of personal habits
4. To insist on best pupil conduct
5. To be courteous to parents
6. To be cooperative at all times to all
7. To know every parent personally
8. To commend pupils to their parents for good conduct

II. Pupils

A. Pupils' responsibility to the school bus driver

1. To be on time at the scheduled stop or when going home at the close of school
2. To wait until the bus comes to a full stop before attempting to enter or get off
3. To go immediately to the assigned seat and stay there until the bus comes to a complete halt at the assigned stop or at the school
4. To leave no books, lunches, or other articles in the bus
5. To refrain from talking with the driver while the bus is in motion
6. To be a courteous and responsible passenger at all times

B. School bus driver's responsibility to pupils

1. General
  - a. To maintain the highest degree of safety at all times
  - b. To conduct himself properly and to practice good personal habits
  - c. To require good conduct and desirable attitudes on the part of the pupils

## 2. Specific

- a. To convey to the homes information regarding irregular schedules or regarding the closing of schools in case of emergencies like snowstorms, floods, etc.
- b. To cultivate proper attitudes of respect and regard for discipline
- c. To keep the bus clean and orderly at all times and to keep it properly heated and well ventilated
- d. To remain always on the school bus until all pupils have been discharged
- e. To load and transport pupils properly on the school bus according to the following rules:
  - (1) No bus shall be loaded beyond the capacity indicated on the approved inspection sticker.
  - (2) Pupils shall not be loaded on a steep grade, a blind curve or on the crest of a hill.
  - (3) No pupil shall get on or off the school bus while it is in motion, nor shall the door be "cracked" while the school bus is in motion.
  - (4) Each pupil shall be assigned a regular seat on the bus.
  - (5) No person other than a pupil, teacher or other individual designated to supervise the pupils shall be permitted to ride on the school bus.
- f. To unload pupils properly according to the following rules:
  - (1) The driver shall always give the proper signals relative to the flashing light before stopping to receive or discharge pupils.
  - (2) No pupil shall be permitted to leave the bus except at his regular stop, unless written permission has been given by the parents.
  - (3) The driver shall see that each pupil who must cross the highway does not do so until he has given the signal.
  - (4) Pupils crossing the highway shall pass in front of the school bus at least ten feet ahead of it. Care must be taken to make sure that these pupils do not step out on the road beyond a point protected by the bus until the school bus driver gives the signal for them to cross the highway.

- (5) The bus driver shall carefully observe the number of pupils getting off the bus and account for all these pupils before proceeding with the bus.
- (6) The driver shall not open the door of the school bus until he observes that the road is clear and that no danger exists.

#### Questions for Discussion

1. What are the school bus driver's responsibilities to the pupils of the school?
2. List at least ten commandments for safe driving.
3. State why discipline and control on the school bus are essential to the welfare of all those who play a part in the transportation of school children.
4. Why must the school bus door be left closed until it is safe for the pupils to get off the bus?
5. Why is it essential that the pupils cross the highway at least ten feet ahead of the bus?
6. In addition to moving to a position ten feet ahead of the school bus, why are pupils required to stay off the center of the highway until they receive the signal from the school bus driver to cross?
7. List reasons why a school bus driver should be thoroughly acquainted with his route before school begins in the fall.
8. Why is punctuality important for the school bus driver, the parents and the pupils?
9. Personal pride should play a great part in using school bus equipment. How can the bus driver and the pupils develop this attribute?
10. How can the parents, pupils and bus driver help make the school bus passing law an effective and essential part of our transportation program?

## U N I T III

### THE SCHOOL BUS DRIVER'S RELATIONSHIP TO SCHOOL OFFICIALS

#### General Purpose

The purpose of this unit is to emphasize that the bus driver does not work independently. Like every other school system employee, he must work within the policies of the schools as established by the board. The driver should understand his obligations to the district superintendent and the supervising principal. The school bus driver also has definite responsibilities to the parents of the pupils who ride his bus and to the motoring public who share the road with him. The school bus driver's success in his work will result, to a large extent, from his recognition of his responsibilities as apart from the mere act of bus operation. The quality of his work will help change the attitude of the public toward the school as a whole and toward bus operation in general.

#### Pretraining Test

1. What obligations does the bus driver have to the school officials?
2. To whom is the bus driver responsible for the efficiency of his work?
3. How does the bus driver have connection with the work of the school?
4. What obligations does the bus driver owe to the school?
5. Why is the school bus driver a "silent teacher"?

#### General Information

- I. Board of education
  - A. Board of education's powers and duties
    1. Empowered by law to provide transportation
    2. Empowered by State Education Department to operate approved routes
    3. Empowered to employ bus drivers and to fix conditions of work
    4. Empowered to purchase necessary approved buses
    5. Obligated to provide maximum safety precautions
    6. Obligated to protect the school district through adequate insurance coverage

7. Responsible for selecting site, constructing garage, installing heating equipment, etc.

B. School bus driver's responsibility to the board of education

1. To understand and honor conditions of employment
2. To take maximum precautions for safety of pupils placed in his care
3. To take best care of equipment
4. To understand and support school policy
5. To assist effectively in the establishment of desirable attitudes
6. To observe all regulations relating to routing, schedules, loading and unloading
7. To observe faithfully school requirements relating to transportation reports
8. To observe every practical economy so that maximum service may result.

II. (District) superintendent

A. Superintendent's powers and duties

1. To approve bus routes
2. To approve bus purchases
3. To consult on school policy
4. To consult on transportation problems

B. School bus driver's responsibility to the superintendent

1. To maintain desirable standards of personal and moral habits
2. To recognize and respect the superintendent's authority as enumerated above

III. Chief School Officer

A. Powers and duties

1. To advise the board and to make recommendations in regard to policies
2. To enforce board policies
3. To recommend personnel and approve drivers employed
4. To provide a school bus safety program
5. To supervise maintenance of equipment
6. To work with board on transportation problems
7. To maintain proper standards of pupil conduct on bus
8. To see that school children recognize the important duties of the bus driver and that the driver is a part of the school system and one of its employees

B. School bus driver's responsibility to the principal

1. To honor the principal's authority as the board's executive officer

2. To comply with the principal's requests and policies
3. To recognize that he is a school employee under the principal's supervision
4. To cooperate with the bus safety program
5. To report all matters of discipline and to cooperate in the correction of them
6. To observe all regulations relating to routing and schedules as laid down by the principal
7. To create and instill in the pupils a high respect for the policies as laid down by the principal
8. To conduct himself prudently
9. While on special trips to provide pupils with an opportunity to cooperate cheerfully and to show respect for the school
10. To report disciplinary cases only after failing to obtain cooperation through his own efforts
11. To make detailed daily bus reports
12. To attend meetings, conferences and training courses upon request

#### Questions for Discussion

1. By what authority does the school district provide transportation for pupils?
2. What are some of the provisions that the board of education must make to assure most effective transportation?
3. What responsibility does the bus driver owe to:
  - a. The board of education
  - b. The (district) superintendent of schools
  - c. The school principal
  - d. Other school bus drivers on the highway
  - e. The motoring public on the highway
  - f. The teachers of the school system
  - g. Other employees of the school
4. How does a person obtain final appointment as a school bus driver?
5. How is the work of the school bus driver related to the work of the teacher?

6. Why must the bus driver's personal habits and character be beyond reproach?
7. Why are proper mental and emotional qualifications as important as physical qualifications for school bus drivers?
8. How may unusual cares and worries affect the attitude of a school bus driver?
9. List several instances in which the driver can be helpful in promoting good relationships among all those connected with school transportation safety.
10. Why is good personal appearance important for a school bus driver?



## U N I T IV

### ADMINISTRATIVE PROCEDURES OF THE SCHOOL TRANSPORTATION PROGRAM

#### General Purpose

The administration of a transportation system depends to a great degree on the cooperation and understanding between the administrator and the drivers. Drivers should be thoroughly informed not only about all the general transportation problems of the school but about their own individual driving duties as well. Such understanding enables them to do a more intelligent job and establishes a relationship of mutual respect. Cooperation among fellow bus drivers and mechanics is likewise essential to the success and safety of school transportation.

#### Pretraining Test

1. Why should the bus driver have a general knowledge of all the problems confronting the school transportation system which employs him?
2. Why is a conference of all drivers and administrators worth while previous to the opening of school in the fall?
3. List reasons why a seating chart is essential to a successful transportation system.
4. Why is it important to be on a scheduled time each day?
5. What is the school bus driver's responsibility toward the motorist in regard to the stopping law?

#### General Information

##### I Route layouts

- A. Advantages of having well-planned schedules and routes
  1. The safest route possible is the best planned route.
  2. A well-planned route facilitates the location of the bus in case of breakdowns.
  3. A well-planned route provides information which everyone should have: the school, the driver, the parents, the pupils, the motoring public and regular trucks (for example milk trucks) which frequent this route daily.
  4. Unnecessary and costly overlapping of routes can be avoided.

B. Factors which should be considered in laying out routes and planning schedules

1. Age, health and physical condition of the pupils
2. Climate
3. Condition of the roads to be traveled
4. School schedule
5. Distances between homes and school, and homes and bus routes
6. Safety of walking routes between homes and school, and homes and bus routes
7. Number and size of buses available
8. Number of pupils to be served
9. Area to be served

C. Suggestions for planning school bus routes

1. All school bus routes must be planned, evaluated and approved by all the school officials concerned.
2. The school bus drivers should be a part of the planning board and their suggestions and ideas should be considered and weighed.
3. Safety of all pupils must be the main objective in laying out school bus routes and schedules.
4. Single or double tripping on a route must be evaluated in terms of safety, time, number of pupils and distances.
5. A copy of the final plan of each route should become a part of the area transportation map which should show route, homes, pupils and distances.
6. Hazards such as bad curves, steep hills, narrow bridges, main routes, railroad crossings etc. must be carefully studied in relation to each route.
7. Bus stops should be arranged in places that are free from the physical hazards mentioned above.
8. Buses should be routed as near to the homes as school policy permits, but bus stops need not be at every home. After careful study, a definite policy should be set and adhered to in regard to this matter.
9. Pupils should not be required to spend more than one hour a trip on a school bus.
10. In assigning a school bus to a route and setting up a schedule consideration should be given to the condition of the roads, number of pupils, year of bus and the driver involved.
11. Distances to be traveled by empty school buses should be kept at a minimum.

12. Each year, before school opens and at other times if necessary, the bus route should be reviewed by all school officials together with the school bus drivers.

#### D. School bus route maps

1. Each school bus route should be mapped on a large area map which serves the school transportation system.
2. Location of schools and homes of pupils should be listed.
3. Number of pupils at each home should be designated by a number or by colored pins (different colors for kindergarten, elementary and high school pupils).
4. Location of bus stops should be shown and number of pupils to be picked up at each stop.
5. Proper symbols should indicate the beginning of route, direction, storage of bus, single or dual tripping and bus number.
6. Type of road and all hazards should be shown by proper symbols.

#### II. Importance of schedules

- A. A time schedule should be prepared for each route, giving the time and place of all bus stops for both morning and night.
- B. Factors to be considered in making the time schedule
  1. The number of routes for each bus
  2. Types of highways, conditions of roads and traffic count
  3. Road and other hazards
  4. School schedule
  5. Size and condition of the school bus
  6. Number of pupils involved
  7. Walking distance of each of the pupils

#### III. School bus stops

- A. Important consideration in determining bus stops
  1. Care should be taken that bus stops are not too numerous, as each bus stop takes considerable time on the trip. Safety must be ultimate goal, however, in selecting the number and type of stops.
  2. Physically handicapped children must be considered when stops are being planned.
  3. All route hazards must be thoroughly studied. Stops should never be made on steep grades, blind curves, near large signs or buildings obstructing the view or near the crest of a hill. Traffic in either direction should be visible for a distance of at least 500 feet. Safety is more important than convenience.

4. A workable and practical stop chart should be prepared and this chart should be revised whenever any change is made.

B. School bus law

1. The Vehicle and Traffic Law provides in article 29, section 1174, that

"a. The driver of a vehicle upon a highway outside of the city of New York upon meeting or overtaking from either direction any school bus marked and equipped as provided in subdivision twenty of section 375 of this chapter which has stopped on the highway for the purpose of receiving or discharging any school children shall stop the vehicle before reaching such school bus when there is in operation on said school bus a visual signal as specified in subdivision twenty of section 375 of this chapter and said driver shall not proceed until such school bus resumes motion, or until signaled by the driver or a police officer to proceed."

"b. The driver of such school bus, when discharging pupils who must cross the highway, shall instruct such pupils to cross in front of the bus and the driver thereof shall keep such school bus halted with red signal lights flashing until such pupils have reached the opposite side of the highway."

2. State, county and local police have been especially vigilant in enforcing this law.
3. School authorities should explain this law to people in their community and should emphasize need for its observance.
4. School bus driver should be courteous and considerate to motorists and should signal them to pass when he stops to discharge pupils, but he should not discharge pupils until after motorists have passed. He should also signal them to pass after pupils get on the bus, but he should not start the bus until after motorists have passed.
5. Under no circumstances should buses be left standing on highways or streets. When buses are parked in this manner, the motorist is never certain what to do.
6. If buses are traveling the highways for purposes other than transporting school pupils, the words "School Bus" should be covered so that motorists will not be confused or will not stop unnecessarily. The sign bearing the words, "School Bus" should be such that it can be removed or turned over with sufficient ease.

## Questions for Discussion

1. Discuss why safety is the most important responsibility in driving a school bus.
2. Explain fully where bus stops should be placed.
3. What is meant by a "steady" schedule?
4. Discuss in detail "Better late than never" as it applies to school transportation.
5. When is the proper time to "crack" the door? Describe instances where this might not be true.
6. Write a list of important information that should be reported daily.
7. What is the bus driver's responsibility toward a motorist in regard to the stopping law?
8. What is a "reasonable" waiting time in picking up children who are not ready when the bus arrives?
9. What climatic factors are to be weighed in laying out routes and planning schedules?

## U N I T V

### DRIVER QUALIFICATIONS PHYSICAL AND PSYCHOPHYSICAL TESTING

#### General Purpose

The purpose of this unit is to make clear the physical qualifications desirable for the school bus driver. In his hands are the lives of many children. It is important, therefore, that the bus driver be physically and mentally alert. He should meet the standards set forth in this unit. If he has minor shortcomings, he must observe the necessary precautions to compensate for these.

#### Pretraining Test

1. How can color blindness be compensated?
2. What is meant by night vision?
3. What are temporary disabilities?
4. What are permanent disabilities?
5. How can the driver's mental attitude affect his performance as operator of a school bus?

#### General Information

##### I. Physical qualifications

###### A. Physical examination

Each applicant for the position of school bus driver should be required to pass a thorough physical examination by the school physician before being employed by the district. A sample form is provided in the appendix, pages 70-71.

###### B. Vision

1. Eyes should be checked frequently because they tend to weaken with age or excessive strain.
2. Tests should be made for nearsightedness and farsightedness.

###### C. Hearing

A school bus driver must have at least normal hearing to enable him to hear signals, engine trouble, approaching vehicles and other sounds related to traffic safety.

#### D. Disabilities

1. Temporary. A school bus driver must never drive a school bus when he is ill, emotionally upset or fatigued.
2. Permanent. A school bus driver should have the normal use of both hands, arms, legs, and eyes. He should be free from such disabilities as epilepsy, paralysis, insanity, abnormally high or low blood pressure, certain types of heart disease and tendency to faint.

#### E. Urinalysis and blood tests

1. Sugar content
2. Social diseases

### II. Mental condition and personal habits

#### A. Questionnaire and character references

Each applicant should be carefully investigated as to mental condition, personal habits and character. The application form which requires some of this information is given in the appendix, pages 68-69.

- B. History
- C. Tests for present mental and emotional stability
- D. Use of alcohol, narcotics, tobacco
- E. Cleanliness of mind and body
- F. Good judgment in use of language

### III. Psychophysical tests

These tests are given by means of specially constructed devices. They measure elements that may affect driving performance.

#### A. Visual acuity

Visual acuity is accurately and easily tested by a visual acuity machine. Standard charts are used and readings can be made with right eye, left eye or both eyes. The device is amply illuminated from within to describe clear, legible letters.

#### B. Field of vision

1. The distance to left and right that a person can see when looking straight ahead is known as the field of vision.
2. A normal field of vision is between 170 and 190 degrees.
3. "Tunnel vision" is a field of vision of less than 140 degrees. A person with tunnel vision should not be permitted to drive a school bus since he can not see cars or persons approaching from the side until they are directly in front of him.

4. The device which tests field of vision has accurately gauged, etched scales which provide a true measurement of the bus driver's degree of side vision. Levers operate silently and without betraying the instrument's movement.

C. Color blindness

1. Color blindness is the inability to distinguish different colors accurately.
2. A driver must be able to distinguish colors in order to:
  - a. Distinguish between red and green traffic signals
  - b. Recognize rear stop lights on cars
  - c. Recognize characteristic red, yellow and green lights on trucks and buses
  - d. Interpret traffic signs on red, yellow or white backgrounds
3. A device which flashes red, yellow and green lights tests color blindness and gives an accurate interpretation of the bus driver's ability to distinguish traffic signals.

D. Night vision

1. The effects of darkness and glare on an individual's eyes determine his ability to drive safely at night. Three qualities are necessary for good night vision:
  - a. Glare resistance
  - b. Glare recovery
  - c. Darkness adaption
2. Night vision and glare acuity are measured by an instrument which simulates actual conditions of night driving and driving in the face of glaring headlights.

E. Depth perception and distance judgment

1. This is the ability to judge the size, shape, distance and rate of motion of an object.
2. Judgment of depth and distance are required of a driver in certain important situations, for example,
  - a. In overtaking and passing another car
  - b. In turning in traffic
  - c. In turning within a limited space
  - d. In judging the relative sizes and distances of objects and spaces ahead
3. The school bus driver should have at least normal ability to judge depth, distance and speed.



4. Depth perception and distance judgment are measured by a device which, through the use of a mirror and lights, requires the subject to line up small model cars.

F. Foot reaction time

1. The driver's quick mental and physical response to a traffic situation is essential for the safe operation of a vehicle.
2. A device which requires the subject to apply a foot pedal as soon as he sees a light flash accurately measures the speed of mental and muscular reaction.

G. Steadiness of hand and eye

1. A device which requires the subject to move a stylus between a narrow vertical opening tests steadiness of hand and eye.
2. If the subject achieves average or above average scores on other psychophysical tests, it would be unwise to attach too great significance to a low score on this device. It has not been conclusively demonstrated that this test measures to a reliable degree a factor essential in safe driving.

Questions for Discussion

1. Why should eyes be checked from time to time even though a previous examination showed them to be normal?
2. Why is it important that the school bus driver have normal blood pressure?
3. Why is abstinence from alcohol and drugs essential for the school bus driver?
4. Explain why a school bus driver must be free from venereal disease.
5. How often should a school bus driver undergo a thorough physical examination? Why?
6. Explain what is meant by emotional stability.
7. State the two types of disabilities and discuss their importance.
8. What is meant by "field of vision"?
9. What is meant by "depth of perception"?
10. What is meant by "reaction time"?

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Note: A form for recording the driver's achievement in the various psychophysical tests is included in the appendix , page 72.

## U N I T VI

### DRIVING SKILL

#### General Purpose

Driving skill should be the first consideration in selecting school bus drivers. This unit reviews the various safe practices which constitute driving skill and it applies them especially to the operation of the school bus. Drivers and prospective drivers will find the unit valuable as a means of analyzing and improving their own procedures.

#### Pretraining Test

1. Why are good health and good habits essential to the success of a school bus driver?
2. How is the school bus driver's knowledge checked?
3. What are the characteristics of a skilled driver?
4. How is driving skill developed?
5. Why is there special concern over perfecting the driving skill of the school bus driver?

#### General Information

##### I. Safe driving practices

- A. Checking safety devices such as lights, brakes and fire extinguishers at frequent intervals
- B. Adjusting speeds to road conditions, weather and types of roads
- C. Judging distances
  1. Refraining from following too closely
  2. Passing other vehicles only when there is adequate clearance
- D. Using brakes
  1. Braking gradually
  2. Eliminating sudden stops
- E. Steering
  1. Considering length and weight of bus for clearance
  2. Holding steering wheel properly, that is, left hand at 10 o'clock, right hand at 2 o'clock

## F. Turning

1. Making sure there is sufficient amount of space
2. Making sure no traffic is approaching
3. Keeping bus in proper speed and position before turning
4. Making U turn (not advisable)
5. Using proper mechanical signs

## G. Backing

1. Making sure there is ample vision
2. Avoiding backing out onto main highway
3. Signaling one's intentions

## H. Starting

1. Engaging the clutch slowly
2. Shifting to various speeds

## I. Stopping

1. Decelerating the bus by the brake and compression of the engine
2. Engaging clutch when speed has been reduced to approximately 10 MPH
3. Refraining from use of clutch for braking

## J. Parking

1. Parking properly and out of danger
2. Avoiding prohibited parking areas
3. Parking between vehicles, parallel with curb and at an angle
4. Fastening hand brake securely and leaving vehicle in gear

## K. Rounding curves

1. Decreasing speed as curve is approached
2. Accelerating speed slightly on the curve
3. Refraining from passing vehicles on curve

## L. Passing

1. Venturing to pass another vehicle only when there is at least 500 feet of clear highway ahead
2. Observing highway to rear before pulling out to pass
3. Sounding horn always when passing
4. Refraining from passing on the crest of a hill, when approaching a curve, on a narrow bridge, at an intersection or on a portion of a highway where men are working

## M. Following other vehicles

1. Staying a safe distance behind other vehicles (at least two bus lengths for each 10 miles of speed)

2. Knowing the stopping distances
3. Being on the alert for unexpected actions of the driver ahead

N. Entering the main highway

1. Observing all signals, signs and right of way
2. Making sure the way is clear before entering main highway
3. Never backing onto main highway

O. Driving on main highway

1. Keeping in proper lane; keeping to right
2. Always using proper signals to indicate change in direction
3. On down grades braking smoothly and steadily when necessary, without disengaging the clutch
4. On the upgrade selecting the proper gear, shifting before climbing and keeping to right

II. Safe driving practices for special weather and road conditions

A. Wet pavement

1. Slowing down
2. Being alert and cautious
3. Having in operation all mechanical devices that will relieve dangerous conditions
4. Remembering that stopping distances are longer

B. Fog

1. Reducing speed
2. Turning on dim lights
3. Sounding horn on hills, at curves and other dangerous places

C. Rough and muddy roads

1. Driving as smoothly and safely as possible to avoid damage to springs and motor
2. Avoiding spinning wheels in the mud
3. Avoiding riding the clutch
4. Shifting to a lower gear if necessary
5. Using chains when they will add to the safety of the trip

D. Winter driving

1. Starting in cold weather
  - a. Pushing in the clutch when starting, to save the transmission
  - b. Allowing the starter motor to turn the engine a few times before turning the ignition
  - c. After the engine is running, allowing the bus to warm up before driving it

2. Removing ice from the windshield before moving the bus; using the defroster
3. Keeping the interior of the windows clear of steam
4. Driving slowly on icy and snowy roads
5. Using chains
6. Avoiding use of the brake as much as possible
7. Reducing speed for each turn
8. Preventing skids and refraining from spinning wheels in trying to start

#### Questions for Discussion

1. Why is clearness of vision necessary in school bus driving?
2. Why is it important that a school bus driver be free from color blindness?
3. Discuss the importance of this statement, "A school bus driver should be entirely free of communicable diseases."
4. Discuss in detail, "A school bus driver should have no physical, mental or moral characteristics which would interfere with proper and safe driving."
5. Why are the driver's personal habits and character important?
6. If traffic and driving knowledge is important, what methods may be used in learning?
7. How can a bus driver's health affect his work as a school bus driver?
8. State the position of the clutch when starting the bus and give several reasons for your statement.
9. List all the precautions you observe when approaching a railroad crossing.

## U N I T VII

### ACCIDENTS, FIRST AID AND SCHOOL BUS HEALTH AND SANITATION

#### General Purpose

This unit attempts to give the school bus driver a minimum of training in Standard First Aid and School Bus Health and Sanitation so that he may adequately meet any emergency that may arise, and also so that he may enforce the standards for health and sanitation as they apply to the school bus.

The objectives of this unit may be set forth as follows:

1. To familiarize the driver with the rules and regulations concerning the content of the first-aid kits carried on school buses.
2. To make the driver aware of the many chances that children have of sustaining injuries on the bus; to eliminate as many of these accidents as possible through proper precautionary measures; and to give the driver confidence in handling emergencies when they do arise.
3. To impress upon the driver the need for regular and systematic inspection and cleaning of the interior of the school bus in order to maintain safe, healthy and sanitary conditions.
4. To familiarize the school bus driver with the Red Cross Handbook, and see that every school bus first-aid kit is equipped with this manual.
5. To teach the school bus driver what not to do in cases of first aid, as well as what to do.

#### Pretraining Test

1. How often should the school bus first-aid kit be inspected? Why?
2. What should the properly equipped first-aid kit contain?
3. What is the proper treatment for frostbite?
4. How may "shock" be recognized and how should a person suffering from "shock" be treated?
5. How may satisfactory conditions of sanitation prevent accidents?

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Note. It is recommended that every school bus driver hold a Red Cross Certificate.

## General Information

### I. School bus drivers must be trained to cope with accidents

#### A. Possibility of accidents

In spite of all precautions accidents will happen. The driver should be trained so that when an accident occurs he knows what to do. He should have confidence in his own ability to meet the emergency and be able, by his action, to create a feeling of confidence in the pupils.

#### B. Where accidents may occur:

1. Before getting on the bus or immediately after leaving the bus

2. On the bus

- a. Caused by pupils
- b. Caused by unclean condition of the bus
- c. Caused by contact with another vehicle

#### C. Types of accidents

1. Controllable by driver

- a. Accidents due to pupil carelessness
- b. Accidents caused by faulty equipment and unclean condition of bus
- c. Accidents resulting from improper operation of the vehicle

2. Noncontrollable by driver

- a. Accidents before getting on or immediately upon leaving bus
- b. Accidents with other vehicles which are not due to the bus driver

### II. Responsibilities of school bus drivers in case of accidents

#### A. Mechanical breakdown

1. Put out flares.
2. Determine the nature and extent of the breakdown and proceed to make repair if possible.
3. Send a responsible male pupil for the type of help needed. Supply him with a written message giving location and details of breakdown.
4. Make children as safe and comfortable as possible or move them to a safe and comfortable location if necessary.
5. Under no condition allow children to proceed home by begging rides or walking long distances.

## B. What to do in case of an accident

1. Keep calm.
2. Put out flares at once.
3. Make pupils as safe and comfortable as possible.
4. Call State Police.
5. Notify school officials.
6. If possible, remove wreckage from highway.
7. Get license number and other information about all vehicles involved.
8. Get names and addresses of all persons involved.
9. Get names and addresses of all witnesses.
10. Make sure that all pupils arrive home safely or are taken care of.

## C. Additional directions when accident results in injury

1. Do not move injured persons unless absolutely necessary and then only when the extent of injury has been determined and such movement is deemed safe.
2. Keep onlookers away from the injured.
3. Keep injured persons lying down to prevent fainting and shock.
4. Persons who have stopped breathing or who are bleeding excessively should be cared for first.
5. Keep the patient warm, make him comfortable and cheer him in any way possible.
6. Send a responsible person to call a physician or ambulance, giving information concerning the location of accident or the injured person, the nature and possible extent of injuries, the supplies available at the scene of the accident, and what first aid is being given.
7. Avoid allowing the patient to see his own injury.

## III. Rendering first aid\*

### A. Maintaining the standard first-aid equipment of the school bus

1. Equipment should be inspected regularly (at least once a month) by the school nurse or other qualified person.
2. Materials should be replaced periodically.

Note. A copy of the Accident Report Form required by the Division of Educational Management Services is found on pages 74-75. This should be studied in detail in order that a complete report may be given to the Department when an accident occurs.

\* If you are not sure of what to do, don't try to give first aid. It is better to leave an accident victim without treatment, when you may hurt, rather than help him by doing the wrong thing.



3. Every school bus should also carry "scented absorbent" to be used in case of sickness, for example vomiting etc.
  4. Every school bus first-aid kit should include the Red Cross Handbook.
  5. Older pupils should be instructed as to the location of the first-aid kit and its use.
- B. The school bus driver's training for first aid
1. He should thoroughly learn the contents of the Red Cross Handbook.
  2. He should know how to use the equipment of the first-aid kit.
  3. He should take a Red Cross course in first aid.
- C. Simple bandaging
1. Cover the wound with clean dressing.
  2. Hold dressing on wound with a bandage firmly but not tightly secured by a slip knot.
  3. Never apply a wet bandage, unless internal organs are exposed.
- D. Bleeding of the nose
1. Have the patient sit up and tip his head back slightly.
  2. Loosen the collar and anything tight around the neck.
  3. Apply a cold compress over the nose.
  4. Press the nostrils together for four or five minutes.
  5. Avoid blowing the nose for a few hours.
- E. Control of bleeding
1. Arteries carry blood away from the heart. If blood pours from a wound in spurts, it usually flows from an artery. In controlling bleeding from an artery apply pressure between the cut and the heart.
  2. The six chief points where main arteries lie close to the bone are:
    - a. In the neck just to the side of windpipe, against the backbone
    - b. In front of the ear against the skull
    - c. About an inch forward from the angle of the jaw
    - d. Behind the inner end of the collar bone against the first rib
    - e. On the inside of the upper arm halfway between shoulder and elbow
    - f. In the groin as it passes over the pelvic bone
  3. The driver should consult the Red Cross First Aid Handbook for diagrams showing the location of these important "pressure points," and for further steps in the treatment of arterial bleeding.

4. Severe bleeding is sometimes controlled by a flat band, which is usually made of cloth and is called a tourniquet. Never use a rope, wire or sash cord. The tourniquet is usually applied on the arm directly below the armpit or around the thigh of the leg. Steps in the application of the tourniquet are:
  - a. Wrap the material twice around the limb, then tie a half knot.
  - b. Place a short stick over the half knot and tie a square knot.
  - c. Twist the stick to tighten the tourniquet sufficiently to control bleeding.
  - d. Loosen tourniquet every 15 or 20 minutes.

F. Treatment of wounds

1. Do not touch a wound or wash it with soap and water.
2. Bandage the wound snugly.

G. Treatment for shock

1. Keep the patient warm by wrapping him in blankets or warm clothing.
2. Lay the patient on his back with his head low. Do not have him sit up.
3. Never give the patient an alcoholic beverage. Do not attempt to make an unconscious person drink anything.

H. Treatment for foreign bodies in the eye

1. Do not rub the eye.
2. Lift upper lid away from the eye and allow tears to wash the foreign body to the inside corner of the eye.
3. Do not attempt to remove an imbedded body; hold a compress over the eye and consult a doctor.

I. General first-aid treatment of fractures

1. Do not move the injured person until medical aid has been secured.
2. Prevent further pain and damage.
3. Make the patient comfortable and treat him for shock.

J. Treatment for fainting

1. Have patient lie down with head low. Keep him lying down until he has completely recovered.
2. Loosen any tight clothing.
3. To ward off a fainting spell have the patient sit with his head hanging low between his knees, and exert a slight pressure on his back.

K. Treatment for fits

1. Prevent the patient from injuring himself or other pupils.
2. Wrap a pencil with a clean cloth and place it crosswise in the victim's mouth to prevent his biting his tongue.
3. Place something soft under his head.
4. Make no effort to restrain the movement of the patient.
5. Give no stimulant.
6. Leave the patient undisturbed until he has fully recovered.
7. Loosen tight clothing, collar, belt etc.

IV. Health and sanitation as related to the school bus

A. In addition to seeing that the pupils are carried safely to and from school, it is the duty of the school bus driver to see that no factors exist which will endanger the health of the pupils while in his care.

B. Care of pupils

1. Before meeting the bus

- a. Since many children must walk over a mile to meet the bus, the driver should observe whether the pupils are properly clothed to suit the weather conditions. If a pupil is not suitably clothed, the driver should report such negligence to the proper school authorities.
- b. Established schedules should be maintained to avoid unnecessary waiting.

2. On the school bus

- a. Pupils with a communicable disease shall not be carried. If a pupil with a communicable disease is boarding the bus, the parents should be contacted and the situation should be explained to them. Arrangements should be made to transport the pupil again after he has fully recovered from the disease and has presented the required certificate from a physician or health officer.
- b. The bus should be ventilated properly with assured safety from carbon monoxide fumes. It should be remembered that this gas is colorless, odorless and tasteless and therefore very difficult to detect. Caution should be taken that no pupil sits in a draft.

- c. Pupils should not be required to spend more than one hour in getting to or from school, including the time spent on the bus.
3. On reaching the school
- a. Provisions should be made for drying wet clothing.
  - b. Pupils arriving early should be under supervision.

#### Questions for Discussion

1. What is first aid?
2. Demonstrate and explain first-aid procedures for the following:
  - a. Simple bandaging
  - b. Frostbite
  - c. Shock
  - d. Broken bones
  - e. Burns
  - f. Bleeding
  - g. Fainting
  - h. Asphyxiation
  - i. Transportation of injured
3. Why should a school bus be kept in a clean and sanitary condition?
4. Why must everyone cooperate in maintaining standards of cleanliness?
5. How does the bus driver exert influence over the health and behavior of the school children?
6. Who should be responsible for cleaning the bus?
7. What parts of the bus should have weekly attention?
8. How will the driver inform pupils about rules of sanitation and conduct?
9. Why are carbon monoxide fumes dangerous?
10. Explain how a school bus that is clean both inside and out can affect the lives and habits of the pupils.

## U N I T VIII

### THE CARE OF THE SCHOOL BUS AND A SIMPLE MAINTENANCE PROGRAM

#### General Purpose

The purpose of this unit is two-fold: to teach the driver how to conserve equipment and to offer practice in locating and repairing defects. The school bus driver is often required to make emergency roadside repairs and adjustments while on his route. Indeed it is his responsibility to keep his school bus rolling safely, efficiently and durably.

#### Pretraining Test

1. How can a school bus driver aid in conserving tires?
2. What are the causes of most school bus accidents?
3. What are unusual road conditions?
4. What are the proper procedures for repairing tires and tubes?
5. What should school bus drivers do in case the engine refuses to start or stop on the highway?

#### General Information

##### I. How to conserve tires

###### A. Reduce mileage

1. Avoid unnecessary driving
2. Use bus only on scheduled trips

###### B. Drive at low speeds

1. Tires will go twice as far at 30 miles an hour as at 50 miles an hour.
2. High speed is much more harmful to tires in hot weather than in cold. They wear six times as fast at 100 degrees as at 40 degrees.
3. Drive slowly especially on roads with sharp projecting stones.
4. Drive slowly on curves and turn slowly. Speeding around curves multiplies tire wear as much as ten times in some cases.

###### C. Never let tire pressure get below that recommended by the tire manufacturer.

1. Slight under-inflation increases the tire wear considerably.

- a. Six pounds under-inflation for a tire which should carry thirty pounds of pressure will cut life of tire at least 20%
  - b. Learn what the pressure should be and check all tires, including spare, once a week. See that each tire has its valve cap screwed on tightly.
2. Never drive on a flat tire.
- D. Avoid accidents. Even if no one is injured and the bus is not badly damaged, an accident often ruins one or more tires.
- E. Avoid striking rocks, holes, curbs, glass, etc.
1. Anything which produces a sudden sharp bend in the casing, especially if the tire fabric is crushed between the rim and a hard object, is likely to break cords within the tire and then other cords break around the unseen weak spot and the tire later fails.
  2. Cuts or bruises in the side wall will greatly shorten the life of the tire.
- F. Inspect tires weekly for cuts, snags, bruises, imbedded nails, glass, gravel, etc. Have a vulcanized repair made at once if a flaw is found. Minor cuts tend to grow deeper. Water and grit get in at flaws and will later destroy the cord structure inside the tire.
- G. Avoid jumping starts and screeching stops. They scuff off much more tire tread than many realize. One ten-foot skid takes many miles off tire life.
- H. Keep brakes adjusted so no one tire does more than its share of braking.
- I. Switch wheels every 5000 miles.
1. This will assure approximately even wear on all tires and so increase tire life.
  2. The most important point is to get each tire used in each position. Know which switching plan you are using and stick to it.
- J. Have wheel alignment, play and balance checked twice a year. Driving a bus with a wheel one-half inch out of line on a dry pavement is approximately equivalent in tire wear every mile to an 87-foot direct side skid. Wheels out of line can shorten tire life one quarter or more. Too much play in steering system also causes spotty wear of tires.
- K. Use tires of proper size and do not overload the bus.
- L. Keep oil and grease off tires. Oil and grease cause rubber to deteriorate or rot.

II. Diagnosing mechanical troubles and making emergency repairs when noise develops

A. Engine noise

1. Check external conditions of engine for gaskets, cracks, leakage of water or oil, intense temperature etc.
2. Stop motor and check oil gauge.
3. Check cooling system.

B. Rear end noise

1. Check dual wheels for stones between tires.
2. Check grease level by removing differential filler plug.
3. Check position of wheels for broken axle.
4. Check tires for breaks or fissures.
5. If trouble can not be located, do not move bus.

III. What the school bus driver should do in case the engine refuses to start or stop on the highway

A. Battery

1. Check water in battery.
2. Check spark plugs with screwdriver to see if current is going through
3. Check fuel pump.
4. Check all wiring.
5. Check fuel supply.
6. Check spark plug and wiring for excessive moisture.
7. Check battery and connections.

B. Coils and distributor points

1. Look for grease or moisture inside distributor.
2. Check for broken distributor cap.
3. Check distance of breaker points.
4. Check coil connections.

IV. What the school bus driver should do when engine is missing fire

A. Spark plugs

1. Check for broken porcelain.
2. Check for distance of points.
3. Check if spark is going through or making connections.

B. Distributor

1. Check distributor for current from coils to distributor.
2. File distributor points.
3. Tighten condenser connections.

C. Carburetor

1. Check for water in gas.
2. Check to see if fuel line is open from tank to fuel pump; from fuel pump to carburetor; and from carburetor to engine.

V. What the school bus driver should do in case of flat tire

- A. Stop at first safe place.
- B. Put spare tire on as soon as possible
- C. Tighten tire lugs as much as possible at the time and tighten every ten miles until tight.

VI. What the school bus driver should do in case of vapor lock in fuel pump

- A. Pour water on fuel pump.
- B. Blow out gas line.
- C. If possible, put on a new fuel pump.

VII. What the school bus driver should do in case of a bad break in tail pipe or muffler

- A. Make temporary repairs.
- B. If unable to make repairs, lower windows in front part of bus and proceed to repair shop.

VIII. Keeping the school bus clean

- A. A clean school bus provides a healthy atmosphere for the pupils, aids them in developing clean living habits and creates a favorable psychological effect. Cleanliness prevents the spread of germs and therefore cuts down the possibilities of spreading disease.
- B. The school bus driver should enlist the cooperation of all the pupils in keeping the bus clean and neat. The school bus monitors might assist the driver in a brief inspection before the pupils leave the bus. The children should never be allowed to eat on the bus. This not only violates proper health habits but tends to make the school bus untidy and unclean.
- C. Daily routine includes

1. Sweeping the floor
2. Dusting seats and inspecting for damage or breakage
3. Cleaning the windshield, side windows and mirrors
4. Removing mud from exterior of bus at first opportunity
5. Checking exhaust and heating apparatus to make sure no carbon monoxide gas is reaching the interior of the bus.  
CAUTION: Do not run the engine of the bus in a closed garage.  
Carbon monoxide gas is fatal in very small concentrations.

Note. Forms which can be used for the bus driver's weekly, monthly, quarterly and annual inspection reports may be found in chapter VIII of School Business Management Handbook No. 6--Transportation.



6. Removing all books, book bags, lunch baskets, pails and other school utensils which have been left by the pupils. These should be turned in to the office or to whomever the principal has delegated.

D. Weekly routine includes

1. Sweeping and washing the floor with a good disinfectant
2. During epidemics washing the entire interior of the bus with a good disinfectant
3. Washing exterior of bus
4. Cleaning and checking doors and windows for damage
5. Dusting interior of bus
6. Cleaning dashboard

Questions for Discussion

1. What responsibility does the school bus driver have for maintaining the school bus in clean and sanitary condition?
2. Explain the school bus driver's responsibility for the physical condition of the bus.
3. How can the school bus driver set a personal example in cleanliness?
4. Name the equipment and materials needed for the maintenance of a clean and sanitary bus.
5. Suggest several schedules for cleaning the school bus.
6. What would a dull, regular knock in the engine in time with crankshaft speed indicate?
7. What would excessive vibration in the engine indicate?
8. What would sudden drop in oil pressure indicate? What measures would you take?
9. Explain what you as a school bus driver would do if you saw smoke coming from under the hood.
10. What may an odor of gasoline indicate? What steps would you immediately take if you detected such an odor?

## U N I T IX

### TRAFFIC LAWS, SIGNS AND SIGNALS

#### General Purpose

The object of this unit is to acquaint the school bus driver with the various traffic laws, signs, signals and school regulations which govern the safe operation of school buses.

#### Pretraining Test

1. What type of license should a driver have to operate a school bus?
2. Under what circumstances must a bus driver be equipped with a chauffer's license?
3. Under what circumstances other than loading or unloading is it necessary to bring a school bus to a complete stop?
4. What does each of the six differently shaped traffic signs mean?
5. What do solid traffic lines mean? What do dotted lines mean?

#### General Information

##### I. Traffic Laws

###### A. Speed (Vehicle and Traffic Law)

1. Maximum speed
2. School zones
3. Other zones

###### B. Reckless driving (Vehicle and Traffic Law)

1. Keeping in line
2. Passing on hills, curves and at intersections

###### C. Approaching railroad crossings (Vehicle and Traffic Law)

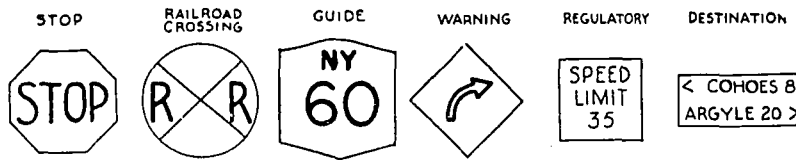
###### D. Overtaking or meeting a school bus (Vehicle and Traffic Law)

###### E. Operation of vehicles (Vehicle and Traffic Law)

###### F. Right of way (Vehicle and Traffic Law)

##### II. Traffic signs and road markings

- A. There are six different shapes of standard traffic signs and road markings. These are:



- B. In addition there are many other types of signs, markers and signals which must be thoroughly studied. These are found in the Manual of Uniform Traffic Control Devices, published by the State Traffic Commission, Albany, New York.

### III. Making turns (Driver's Manual)

#### IV. Backing (Vehicle and Traffic Law and Manual of Uniform Traffic Control Devices)

#### V. Parking (Driver's Manual and Manual of Uniform Traffic Control Devices)

### VI. Signals

#### A. Highway traffic (Vehicle and Traffic Law)

1. Red
2. Green
3. Amber
4. Green arrow shown with red light
5. Amber flashing
6. Red flashing

#### B. Hand (Vehicle and Traffic Law, Driver's Manual, and Manual of Uniform Traffic Control Devices)

#### C. Vehicle mechanical signal (Vehicle and Traffic Law)

#### Questions for Discussion

1. List several illustrations of either violation or observance of certain laws and rules.
2. Suggest types of laws which affect the work of school bus drivers, and give specific illustrations.
3. What are the causes of most school bus accidents?
4. What is the correct procedure for a school bus driver to follow if he has a mechanical breakdown?
5. What should the bus driver do in case of collision which results in personal injury?
6. Who may legally ride on a school bus?

7. List the six different shapes of standard traffic signs and discuss them in full.

8. What signal and what precautions should one give before backing up his school bus?

## U N I T X

### DRIVING SKILLS IN CLOSED AREA

#### General Purpose

The purpose of this unit is to acquaint each school bus operator with his own limitations as a driver and to show what exercises may be used to correct and improve his driving habits.

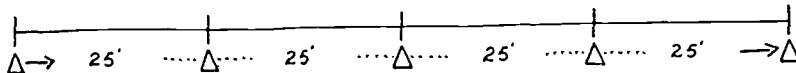
There are five exercises in this unit. Each exercise is arranged so that the instructor can conduct it with little difficulty. Under the heading, "Check List and Score Sheet," at the end of each exercise, there are a number of statements to be checked by the instructor. It has been found good practice to check each exercise carefully for each driver and to discuss it with him. When he notes his mistakes, he is aware of the items on which he must practice before another trial.

#### Exercise I Driving forward and backward in a straight line

This exercise seeks to determine a driver's ability to drive both forward and backward on a straight line 100 feet long.

##### A. Preparing a course for exercise 1

1. Mark out a straight line 100 feet long and four inches wide.
2. Place a stanchion at points indicated by  $\Delta$  in diagram.



##### B. Procedure

1. The driver places the bus with the front left wheel just touching the painted line; then he drives forward, keeping the left wheels on the line, stopping when the left rear wheel reaches the end of the line.
2. The driver tries to keep the left wheels on the line for 100 feet while driving the bus backward. (Make deductions on the basis of rough operation, distance remaining off straight line, clashing gears, racing engine, and stalling engine.)

##### C. Check list and score sheet (total number of deductions is the final score).

Forward	Weight	Check Items Performed Satisfactorily	Deduct Weight of Items Not Performed Satisfactorily
1. Operates the bus smoothly (1 point for each 25 ft).....	4.....	( )	.....
2. Keeps left wheels touching line for....feet (2 points for each 25 ft).....	8.....	( )	.....
3. Keeps an even speed.....	1.....	( )	.....
4. Moves bus continuously, no stops.....	5.....	( )	.....
5. Does not open door during entire distance.....	3.....	( )	.....
6. Stops smoothly at the end of 100 feet.....	5.....	( )	.....
7. Moves gear-shift lever to another position without clashing gears.....	2.....	( )	.....
8. Does not race engine.....	5.....	( )	.....
9. Does not stall engine.....	5.....	( )	.....
	Total Deductions		.....

Backward	Weight	Check Items Performed Satisfactorily	Deduct Weight of Items Not Performed Satisfactorily
1. Backs the bus smoothly (1 point for each 25 ft).....	4.....	( )	.....
2. Keeps left wheels touching line for....feet (2 points for each 25 ft).....	8.....	( )	.....
3. Keeps an even speed.....	1.....	( )	.....
4. Moves bus continuously, no stops.....	5.....	( )	.....
5. Does not open door during entire distance.....	3.....	( )	.....
6. Stops smoothly at end of 100 feet.....	5.....	( )	.....
7. Does not race engine.....	5.....	( )	.....
8. Does not stall engine.....	5.....	( )	.....
	Total Deductions		.....
	Grand Total		.....



#### D. Scale for scoring

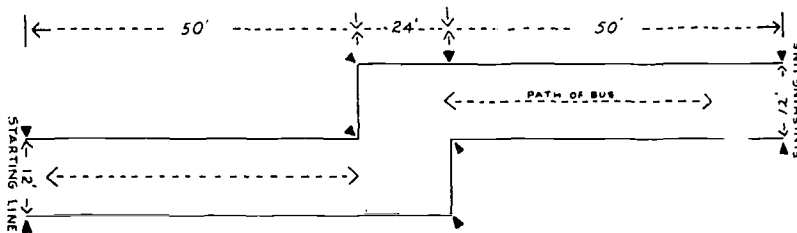
Grade	Score
A .....	0 - 4
B .....	5 - 6
C .....	9 -17
D .....	18 -21
E .....	22 or above

#### Exercise 2 Steering in close limits

This exercise tests the ability of a driver to steer and maneuver a school bus quickly and accurately in a limited area.

##### A. Preparing the course for exercise 2

1. Mark out an area 124 feet long according to the following diagram.
2. Make all lines four inches wide.
3. Measure dimensions to center of lines.
4. Place a stanchion at points indicated by  $\Delta$  in diagram.



##### B. Procedure

1. The driver lines up the bus with the front bumper at left limit line. He drives in the right lane and turns into the left lane through the space marked out by the painted lines and the stanchions. He is not to touch any of the stanchions or the painted lines.

Record in seconds the total time required to go forward, the number of stanchions hit or touched, and the number of times painted lines are touched. Warn the driver that if a stanchion is touched, he is to pull up and drive around the stanchion. If the driver touches a stanchion but does not stop, add 5 seconds for each stanchion touched. If painted lines are touched, add 5 seconds each time a line is touched. Start the stop watch when the front bumper of the bus moves from the starting line at left and stop the stop watch when the rear bumper moves over the finishing line at right. Record the reading.

2. After going through forward, the driver backs through the same path, shifting from the left lane to the right lane. Time the movements with the stop watch. Start the stop watch when the rear bumper moves from the original finishing line at the right. Stop the watch when the front bumper moves over the original starting line at the left. Record stanchions hit etc., same as in the forward exercise.

For the final score, add the time used to go forward and the time used to go backward.

C. Check list and score sheet

	Forward	Backward	Total
Time.....	.....Sec.	.....Sec.	.....Sec.
Stanchions touched.....	.....Sec.	.....Sec.	.....Sec.
Number times painted lines touched.....	.....Sec.	.....Sec.	.....Sec.
Grand total	.....Sec.	.....Sec.	.....Sec.

D. Scale for scoring

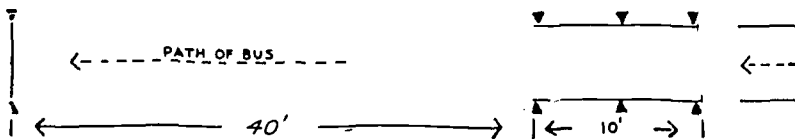
Grade	
A .....	0--39 seconds
B .....	40--59 seconds
C .....	1 min.--1½ min.
D .....	1½ min.--2½ min.
E .....	2½ min.--5 min.

Exercise 3 Stopping smoothly

This exercise determines the ability of the driver, traveling at a speed of 20 miles an hour to make a smooth stop within a distance of 40 feet.

A. Preparing the course for exercise 3

1. Mark out straight line, as indicated in the diagram, making each line four inches wide.
2. Place a stanchion at points indicated by  $\Delta$ .





B. Procedure

The driver drives the bus in high gear at 20 miles an hour between the stanchions at the right and tries to stop smoothly with the front bumper directly above the limit line. The driver is to apply the foot brake as the front bumper passes between the last pair of stanchions before the 40-foot space.

C. Check list and score sheet (total number of deductions is the final score).

Driving forward between stanchions	Weight	Check Items Performed Satisfactorily	Deduct Weight of Items Not Performed Satisfactorily
1. Moves gear-shift lever to another position without clashing gears.....	2.....	( )	.....
2. Keeps an even speed--20 miles per hour.....	1.....	( )	.....
3. Moves vehicle continuously--no stops.....	5.....	( )	.....
4. Steers with certainty--no sudden jerks.....	2.....	( )	.....
5. Does not stop between stanchions.....	4.....	( )	.....
6. Does not hit right or left stanchions.....	4.....	( )	.....
7. Does not race engine.....	5.....	( )	.....
8. Does not stall engine.....	5.....	( )	.....
9. Stops vehicle smoothly.....	10.....	( )	.....
10. Stops with front bumper short of line (deduct).....	5.....	( )	.....
11. Stops with front bumper beyond line.....	10.....	( )	.....
	Total Deductions		.....

D. Scale for scoring

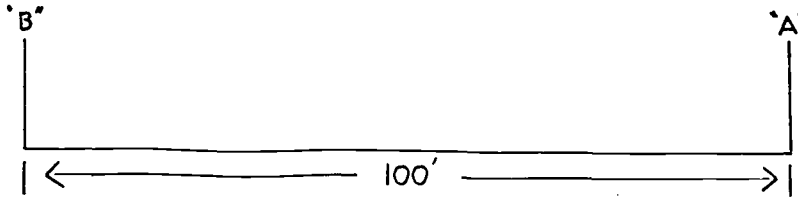
Grade	Score
A .....	0-- 5
B .....	6-- 9
C .....	10--14
D .....	15--18
E .....	19 or above

Exercise 4 Judging location of wheels and bumpers

This exercise determines whether or not a driver knows the location of the rear wheels and the front and rear extremities of the bus.

A. Preparing the course for exercise 4

1. Mark out the lines indicated below.
2. Make each line four inches wide.



B. Procedure

1. The driver begins this exercise by placing the outer left rear tire on longitudinal line at crossline A. The driver moves forward 100 feet keeping outside left rear tire on longitudinal line and stopping bus with the front bumper directly over crossline B.
2. The driver drives bus ahead and back into position with inside left rear tire on longitudinal line at crossline B.
3. The driver backs the bus, keeping inner left rear tire on longitudinal line and stopping bus with the rear bumper directly over crossline A.

C. Check list and score sheet (total number of deductions is the final score).

Forward	Backward
Front bumper from cross mark.....in.	Rear bumper from cross mark.....in.
Number of tires off longitudinal line times maximum number of inches off longitudinal line.... in.	Number of tires off longitudinal line times maximum number of inches off longitudinal line.... in.
Total .....inches	Total.....inches
Grand total	.....inches

D. Scale for scoring:

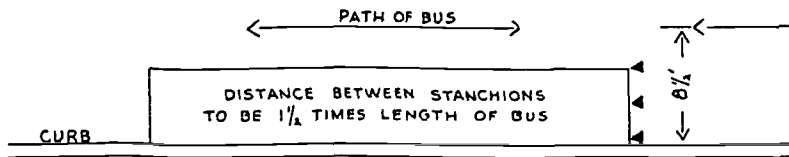
Grade	Score (total inches of error in 4 measurements)
A .....	0-- 40
B .....	41-- 60
C .....	61-- 90
D .....	91-- 110
E .....	110 or above

Exercise 5 Parallel parking

This exercise tests the ability of a driver to park parallel to a curb.

A. Preparing the course for exercise 5

1. Mark out alongside a curb a distance equal to  $1\frac{1}{2}$  times the length of the bus
2. Place stanchions at both ends of the space, as shown in the diagram below



B. Procedure

1. The driver parks the bus in the marked stall with as few maneuvers as possible, centering it there without striking the curb or the stanchions. The approach to the space should be under as nearly normal conditions as possible.
  2. The driver drives the bus out of the parking space into the proper traffic lane.
- C. Check list and score sheet (total number of deductions is the final score).

Backing in	Weight	Check Items Performed Satisfactorily	Deduct Weight of Items Not Performed Satisfactorily
1. Observes conditions behind and ahead and gives right signal to stop.....	2.....	( )	.....
2. Stops vehicle in proper position for problem.....	2.....	( )	.....
3. Backs slowly slipping clutch..	2.....	( )	.....
4. Does not back vehicle more than twice.....	5.....	( )	.....
5. Turns steering wheel properly while maneuvering into parking space.....	3.....	( )	.....
6. Does not turn steering wheel while vehicle is standing....	3.....	( )	.....
7. Does not race engine.....	5.....	( )	.....
8. Does not stall engine.....	5.....	( )	.....
9. Does not hit stanchion front or rear.....	4.....	( )	.....
10. Does not strike curb.....	4.....	( )	.....
11. Spots vehicle with equal distance from front and rear stanchions.....	5.....	( )	.....
12. Parks vehicle within six inches of curb front and back.....	6.....	( )	.....
	Total deductions		.....

Pulling out	Weight	Check Items Performed Satisfactorily	Deduct Weight of Items Not Performed Satisfactorily
1. Observes conditions front and back.....	2.....	( )	.....
2. Backs vehicle slowly	2.....	( )	.....
3. Stops smoothly without hitting stanchions.....	5.....	( )	.....
4. Observes traffic - gives left turn signal.....	2.....	( )	.....
5. Moves forward smoothly turning steering wheel properly...	3.....	( )	.....
6. Does not turn steering wheel while vehicle is standing....	3.....	( )	.....
7. Does not race engine.....	5.....	( )	.....
8. Does not stall engine.....	5.....	( )	.....
9. Does not strike curb.....	4.....	( )	.....
10. Straightens vehicle and moves slowly away.....	1.....	( )	.....
	Total deductions		.....
	Grand total		.....

D. Scale for scoring:

Grade	
A .....	0-- 5
B .....	6-- 9
C .....	10--29
D .....	30--44
E .....	45 or above

Computing over-all score

It is expected that some drivers will do better in one exercise than in another. In order to classify the drivers from very good, through average, to very poor, it is necessary to compute a total score for each from the ratings he made on each exercise and then classify each driver from his over-all score.

One method of computing an over-all score is to use weights for each letter grade, such as:

A .....	5 points
B .....	4 points
C .....	3 points
D .....	2 points
E .....	1 point

Obtain the over-all score by substituting the point value for each grade made by a driver on each individual exercise.

Example: Driver X

Skill Exercises	Letter Grade	Point Value
Exercise #1	B becomes	4
Exercise #2	D "	2
Exercise #3	A "	5
Exercise #4	C "	3
Exercise #5	D "	<u>2</u>
		16 points

In the table below, find the classification in which the driver's total over-all numerical score places him.

Over-all Score	Letter Grade
21-25	A
17-20	B
14-16	C
10-13	D
5-9	E

The over-all score of 16 points made by Driver X places him in the "C" group, or "average driver."

\* \* \* \* \*

The preceding unit has been adapted, with permission, from materials prepared by Amos E. Neyhart, Institute of Public Safety, Pennsylvania State College, State College, Pennsylvania

Tests of driving skill contained in the Teacher's Manual for Sportsmanlike Driving and in the manual of practice driving instruction designed for Man and the Motorcar may be adapted for school bus drivers.

## REVIEW TEST

These 50 questions are intended to review important basic elements presented in the course. After the test has been given, it should be corrected immediately. Members of the group should have an opportunity to discuss each question. Instructors should devise their own tests as well. When properly used, tests and marks are important teaching devices.

### Answer All Questions

Place a "T" before the number of each statement you believe to be correct or true, and an "F" before the number of each statement you believe to be incorrect or false.

- ..... 1. A school bus driver's personal habits and character must be beyond reproach.
- ..... 2. Proper mental and emotional qualifications are as important as physical qualifications.
- ..... 3. Cares and worries do not affect the attitude of a school bus driver.
- ..... 4. Good personal appearance has little importance in the position of a school bus driver.
- ..... 5. A school bus driver is often referred to as a "silent teacher" because pupils learn from the school bus driver personal habits, character, language, conversation and attitudes toward appearance and health.
- ..... 6. It is not important that a school bus driver be personally acquainted with the parents on his school bus route.
- ..... 7. Family cooperation with the school bus driver is very essential to safe transportation of pupils.
- ..... 8. A school bus driver is undoubtedly an important public relations agent for the school system.
- ..... 9. The school bus driver must not "crack" the school bus door as he approaches a stop.
- ..... 10. School pupils should cross the highway at least 10 feet in front of the bus.
- ..... 11. A school bus driver should always remain in the school bus as long as the motor is running or any pupils remain aboard.
- ..... 12. A school bus having any pupils aboard should never exceed 35 miles per hour.
- ..... 13. A knowledge of first aid is not essential as a requirement for school bus drivers.
- ..... 14. The gasoline tank should never be filled while there are pupils on the school bus.
- ..... 15. Every school bus must make a complete stop at highway intersections.
- ..... 16. It is perfectly safe to operate a school bus at any time with the clutch disengaged.
- ..... 17. The driver should never back the school bus on the school grounds or at loading or unloading stops unless he has proper signals from another responsible adult.

- .....18. No person, other than a teacher, pupil, school official or other school employee, should be permitted to ride the school bus, unless he has been granted special permission.
- .....19. The bus driver may carry bundles, large parcels and groceries on the school bus.
- .....20. A school bus driver shall never drive a school bus when he has had any alcoholic beverages.
- .....21. It is a school bus driver's duty to criticize another school bus driver in public.
- .....22. A sanitary and clean school bus helps to build proper attitudes in the pupils who ride it.
- .....23. The school bus driver is one of the key persons in the cooperative enterprise of educating the youth of our nation.
- .....24. A school bus driver may change his bus route any time he feels like doing so.
- .....25. The school bus driver should create and instill in the pupils a high respect for the policies as laid down by the principal.
- .....26. It is perfectly safe to load pupils on a steep grade, on a curve or on the crest of a hill, for motorists will be looking out for school buses at all times and will stop for them.
- .....27. The school bus driver should carefully observe the number of pupils getting off the bus and account for all these pupils before proceeding with the bus.
- .....28. The bus driver should never allow children to walk home or to beg rides.
- .....29. Climatic factors are not important enough to be taken into consideration in laying out routes and planning schedules.
- .....30. Absence of venereal disease is an important requirement for a school bus driver.
- .....31. Clearness of vision is not very important in school bus driving.
- .....32. The first-aid kit should be inspected only at the regular inspection period and only by the Public Service Inspector.
- .....33. Carbon monoxide, the deadliest of all fumes, must be watched for at all times.
- .....34. A sudden drop in oil pressure is not too serious. When it occurs it is safe to continue on to the school garage.
- .....35. The shape of a standard traffic sign has no special meaning.
- .....36. The school bus driver has no connection with the work of the school.
- .....37. Brake adjustment has little or no effect on tire wear.
- .....38. It is unimportant that a driver maintain a steady time schedule.
- .....39. It is the duty of the principal, as the board of education's executive officer, to enforce board policies pertaining to bus drivers and their duties and responsibilities.
- .....40. The state law requires that all school buses must stop before crossing a railroad crossing.
- .....41. A clean school bus, both inside and out, will remove the cause of many school bus accidents.
- .....42. The district superintendent or superintendent of schools is empowered by the State Education Department to approve school bus routes and school bus drivers.
- .....43. The school bus driver must not leave the school bus without first stopping the motor, setting the brakes and taking out the ignition key.
- .....44. Good discipline on a school bus will remove the cause of many school bus accidents.
- .....45. Slight acceleration of speed on a curve is advisable.



- .....46. The mechanical safety devices and signals on the bus should be checked daily by the driver and any breakdown should be reported immediately to the head mechanic or to the principal.
- .....47. While driving his school bus, a school bus driver is legally responsible for any actions of his own that constitute a violation of the vehicle and traffic law.
- .....48. It is good policy for a school bus driver to note instances of commendable pupil conduct and behavior and report them to the parents.
- .....49. Teamwork and cooperation by everyone concerned with school transportation will result in safe and happy transportation for the pupils riding our buses.
- .....50. The three objectives in school transportation are safety, adequacy and economy.

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3. Automobile User's Guide. General Motors Corp., Detroit, Mich.
4. Behind the Wheel. New York University Center for Safety, 8 Fifth av., New York.
5. Better Driving. E. W. Pipyne, W. A. Mann, and H. C. Hartull, Prentice-Hall, Inc., Englewood Cliffs, N. J.
6. Building Driver Testing Devices and Using Driver Tests. Association of Casualty and Surety Companies, 60 John st., New York.
7. Digest of Motor Laws. American Automobile Association, Washington, D. C.
8. Driver Education Teacher's Manual for Practice Driving Instruction. Association of Casualty and Surety Companies, 60 John st., New York.
9. The Driver's Handbook for South Carolina. South Carolina State Highway Department, Columbia, S. C.
10. Driver's Manual. State of New York, Department of Motor Vehicles, 504 Central av., Albany, N. Y.
11. Faulty Attitudes as Factors in Traffic Accidents. L. S. Selling. University of Michigan, Ann Arbor, Mich.
12. Guide for the Selection and Training of School Bus Drivers. Maryland State Department of Education, Baltimore 1, Maryland.
13. Handbook for School Bus Drivers. North Carolina Department of Motor Vehicles, Raleigh, N. C.
14. Handbook for School Bus Drivers. State Department of Education, West Virginia.
15. Handbook for School Bus Drivers. Department of Education, Montgomery, Ala.
16. Handbook for School Bus Drivers. State Department of Trade and Industrial Education, Columbia, S. C.
17. Highway Accidents: Their Causes and Prevention. Department of Agriculture. U. S. Gov't Ptg Off., Washington, D. C.
18. How To Be an Expert Driver. Ford Motor Co., Dearborn, Mich.
19. Instructional Units for Training Alabama School Bus Drivers. Department of Education, Montgomery, Ala.
20. Instructor's Manual for Training School Bus Drivers. State Superintendent of Schools, Atlanta, Ga.
21. Knowledge Test for Adult Automobile Drivers. S. A. Abercrombie. New York University Center for Safety Education, 8 Fifth av., New York.
- \*22. Man and the Motor Car; rev. ed. A. W. Whitney. Association of Casualty and Surety Companies, 60 John st., New York.
23. Manual for New Mexico School Bus Drivers. State Division of Transportation, Department of Education, Santa Fe, N. M.
24. Manual of Uniform Traffic Control Devices. State Traffic Commission, Albany, N. Y.
25. New York State Chauffeur's Manual. Department of Motor Vehicles, South Mall, Albany, N. Y.
26. New York State Driver's Manual, Department of Motor Vehicles; South Mall, Albany, N.Y.
27. New York State Vehicle and Traffic Law. State Department of Taxation and Finance, Albany, N. Y.
28. Omnibus and Motor Vehicle Rules and Regulations. Public Service Commission, Albany, N. Y.
29. Oregon School Bus Drivers' Manual. Oregon State Department of Education, Salem 10, Oregon.
30. Safety Education. The University of the State of New York, Albany, N. Y.

31. Safety Supervision in Motor Vehicle Fleets. M. D. Kramer, ed. Association of Casualty and Surety Companies, 60 John st., New York.
32. School Bus Drivers - Current Practices in Selection and Training. U. S. Office of Education. Gov't Ptg Off., Washington, D. C.
33. School Bus Driving. Commonwealth of Pennsylvania, Harrisburg, Pa.
34. School Bus Safety. South Carolina State Highway Department, Columbia, S. C.
35. School Transportation Responsibilities. The University of the State of New York, Albany, N. Y.
36. Signs, Signals and Markings on New York State System of Highways. State Traffic Commission, Albany, N. Y.
- \*37. Sportsmanlike Driving. American Automobile Association, Washington, D. C.
38. Standards and Training Programs for School Bus Drivers. National Education Association, 1201 16th st. N. W., Washington, D. C.
39. State Programs for Training School Bus Drivers. National Education Association, 1201 16th st. N. W., Washington, D. C.
40. Suggested Unit Course in Bus and Truck Driver Training. The University of the State of New York, Albany, N. Y.
41. Teacher's Manual for Sportsmanlike Driving. American Automobile Association, Washington, D. C.
42. The School Bus Drivers in Education Today. Cottrell Safety Services, Inc. 2036 Waldron av., Buffalo 25, N. Y.
43. Training School Bus Drivers. U. S. Office of Education. Gov't Ptg Off., Washington, D. C.
44. Truck and Bus Driver's Rule Book. Association of Casualty and Surety Companies, 60 John st., New York.
45. We Drivers. General Motors Corp., Detroit, Mich.

\* Textbooks in driver education.

A P P E N D I X

Sample form which may  
be reproduced locally

District No. \_\_\_\_\_ Town of \_\_\_\_\_

Name of District \_\_\_\_\_

APPLICATION FOR POSITION  
OF  
REGULAR OR SUBSTITUTE SCHOOL BUS DRIVER

(Form prescribed pursuant to Section 156.13 of the Regulations of the Commissioner of Education)

Date - - - - - 19 - - - - -

Name of applicant - - - - - Married  Single  Age - - - - -

Address - - - - -

1. Class of driver's license - - - Expiration date of such license - - - - -

2. How many years have you driven? - - - Have you ever had an accident while driving during  
the past 10 years which resulted in injuries to yourself or others? - - - - -  
(Yes) (No)

If yes, describe extent of accident or accidents - - - - -

.....  
.....

3. Are any vehicle and traffic law convictions recorded on your driver's license? - - - - -

Date	Offense	Disposition and Fine	Court and Location
.....	.....	.....	.....
.....	.....	.....	.....

.....  
.....

4. Years of active driving experience - - - - - Years - - - - - Years  
(School Bus) (Passenger bus or heavy truck)

..... Years.  
(Light truck or station wagon)

5. Do you use intoxicating liquors? Frequently - - - - - Seldom - - - - - Never - - - - -

6. Do you use habit forming drugs? Frequently - - - - - Seldom - - - - - Never - - - - -

7. Have you ever had any convulsions or periods of unconsciousness? - - - - -

8. Are you presently employed? - - - - - If yes, where? - - - - -

If not, when and where were you last employed? - - - - -

9. Have you ever attended an approved School Bus Driver Training Course? - - - - -  
(Yes) (No)

Other such courses - - - - - If yes, give date, place and duration of each kind of course  
(Yes) (No)

.....

Did you receive a certificate as a result of this course? - - - - -

10. Are you a disabled veteran? - - - - If so, state in detail your disability and the percentage of such disability you have been allowed.

- - - - -  
- - - - -

11. Attach to this application form at least three (3) statements from three different persons who are not related to you either by blood or marriage pertaining to your moral character and reliability.

To the best of my knowledge and belief the answers to the above questions are true.

Signature of Applicant - - - - -

I have reviewed the above application, the three character statements and the report of the physician pertaining to the above-named applicant for the position of school bus driver for the school year 19\_\_ - 19\_\_ for School District No. \_\_\_\_\_  
Town of \_\_\_\_\_ County of \_\_\_\_\_  
Name of District \_\_\_\_\_

I hereby approve his (her) employment.

\_\_\_\_\_  
Superintendent of Schools  
or  
Supervising Principal

This \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_



This form may be reproduced locally

District No. \_\_\_\_\_ Town of \_\_\_\_\_

Name of District \_\_\_\_\_

ANNUAL MEDICAL EXAMINATION REPORT  
FOR  
SCHOOL BUS DRIVERS AND SUBSTITUTE SCHOOL BUS DRIVERS

(Form prescribed pursuant to Section 156.13 of the Regulations of the Commissioner of Education)

Attention: Medical Examiner:

MINIMUM PHYSICAL REQUIREMENTS

1. Minimum vision (with or without glasses) shall be 20/40 in each eye.
2. Shall have all limbs, hands and feet. In the case of fingers, there shall be at least two fingers and a thumb on one hand and four fingers and a thumb on the other hand.
3. There shall be a good utilization of both arms and legs.
4. Hearing in each ear shall be adequate (without hearing aid).
5. Shall not have any other physical or mental condition which might impede the ability to operate a bus safely.

RETURN COMPLETED FORM TO: School District \_\_\_\_\_  
 \_\_\_\_\_ Address \_\_\_\_\_  
 Chief School Officer

Name of applicant \_\_\_\_\_ Address \_\_\_\_\_

Date of medical examination \_\_\_\_\_ Date of birth \_\_\_\_\_

Have you ever had: 1. Tuberculosis \_\_\_\_\_ 2. Heart Disease \_\_\_\_\_ 3. Diabetes \_\_\_\_\_  
 4. Epilepsy \_\_\_\_\_ 5. Fainting Spells \_\_\_\_\_. If "yes" to any of the

above, explain \_\_\_\_\_

6. Height \_\_\_\_\_ ft. \_\_\_\_\_ in. Weight \_\_\_\_\_ lbs.

7. Vision without glasses: Right \_\_\_\_\_ Left \_\_\_\_\_

Vision with glasses (if applicable): Right \_\_\_\_\_ Left \_\_\_\_\_

Peripheral vision (degrees): Right \_\_\_\_\_ Left \_\_\_\_\_ Both \_\_\_\_\_

8. Is applicant color blind? \_\_\_\_\_ Type of test used \_\_\_\_\_

9. Extremities: Deformities \_\_\_\_\_



10. Hearing: Right \_\_\_\_\_ Left \_\_\_\_\_ Type test used \_\_\_\_\_  
 (Audiometer Testing Recommended)
11. Heart and cardio-vascular system \_\_\_\_\_ 12. Pulse rate \_\_\_\_\_
13. Blood pressure: Systolic \_\_\_\_\_ Diastolic \_\_\_\_\_
14. Lungs: Check for asthma \_\_\_\_\_ Tuberculosis \_\_\_\_\_ Type test used \_\_\_\_\_
15. Reflexes \_\_\_\_\_ Nervous system \_\_\_\_\_ Tremors, etc. \_\_\_\_\_
16. Genito-urinary \_\_\_\_\_ Hernia (actual or potential) \_\_\_\_\_ Type \_\_\_\_\_  
 (Inguinal or other)
17. Is there any evidence of mental deficiency, alcoholism or drug addiction? \_\_\_\_\_  
 If "yes", state extent of each \_\_\_\_\_
18. Speech: \_\_\_\_\_
19. Periphero-vascular disturbance, e.g. varicose veins (degree) \_\_\_\_\_
20. Urinalysis: \_\_\_\_\_ 21. Any evidence of growths, tumors, etc. \_\_\_\_\_  
 (Yes) (No)
22. Will they hinder applicant in performing duties as school bus driver? \_\_\_\_\_  
 (Yes) (No)

---

I hereby certify that \_\_\_\_\_ has been examined by me in accordance with the Medical Examination Report form prescribed by the New York State Education Department. In my opinion the above-named applicant is free from contagious diseases and (is) (is not) physically fit to perform the duties of a school bus driver.

(If applicant is not physically fit but condition can be corrected, enter below corrective action indicated).

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_ (Medical Examiner's Signature)



SCHOOL BUS DRIVER PSYCHOPHYSICAL TEST RECORD

Over-all Rating.....

Name..... Date..... Sex.....

Address..... Age.....

Driver's License No..... State..... Height.....

Number of days absent from work or school during past 12 months because of  
illness..... Nature of illness.....

Years of experience as licensed driver..... Occupation.....

Estimated number of miles you have driven during the past 12 months.....

How many traffic accidents have you had where damage exceeded \$5.00 or where  
first aid was required? (Describe on other side.)

Psychophysical Tests

		Raw Score	Rating
Visual acuity:			
Do you wear glasses while driving?.....	Right	.....	.....
	Left	.....	.....
Did you wear glasses during this test?.....	Both	.....	.....
Reaction time: a... b... c... d... e... f... g... h... i... j...	Aver.	.....	.....
Distance judgment: a... b... c... d... e... f... g... h... i... j...	Total	.....	.....
Field of vision: R.... L.... R.... L....	Total	.....	.....
Night vision: a... b... c...	Total	.....	.....
Glare resistance: a... b... c...	Total	.....	.....
Steadiness: a... b... c... d... e...	Total	.....	.....
Color vision: Normal.... Questionable.... Blind....	Errors	.....	.....
Eye dominance: a... b... c... d... e... f...	Total right	.....	.....
	Total	.....	.....

## WHERE PSYCHOPHYSICAL TESTS MAY BE SECURED

### Loan

1. Local automobile club
2. American Automobile Association, Traffic Engineering and Safety Department, Pennsylvania Avenue and 17th Street, Washington, D.C.
3. School offering high school courses in driver education.

### Purchase

American Automobile Association, Pennsylvania Avenue and 17th Street,  
Washington, D.C.  
Porto-Clinic Instruments Inc., 298 Broadway, New York 7, N.Y.

### Construction

Driver Testing Devices: Construction and Use. Association of Casualty  
and Surety Companies, 60 John Street, New York City  
Plans for Building Driver Tests. American Automobile Association,  
Pennsylvania Avenue and 17th Street, Washington, D.C.

THE UNIVERSITY OF THE STATE OF NEW YORK  
THE STATE EDUCATION DEPARTMENT  
Division of Educational Management Services  
99 Washington Avenue  
Albany, New York 12210

SEM-20

Drivers of school buses involved in accidents (regardless of the seriousness of the accident or whether any children or other persons are injured) shall make out and file TWO copies of the accident report with the superintendent of schools. The superintendent shall, in turn, file one copy with the Division of Educational Management Services of the State Education Department.

Date of Accident.....Time of Accident.....  
Place of accident.....  
(Between what streets, or nearest intersection road, or nearest house)  
Type of trip.....  
(to and from school, field, athletic, etc.)  
School bus owner.....  
Name of driver.....Age.....Sex.....  
Address of driver.....  
Bus number.....Make of Body.....Chassis.....Pupil Capacity.....Year.....  
Damage to bus.....  
Other vehicles or property involved.....  
.....

Death and/or Injuries

Number of passengers seated in bus.....Number of these injured.....Killed.....  
Nature of injuries.....  
Number of passengers standing in bus.....Number of these injured.....Killed.....  
Nature of injuries.....  
Was medical aid rendered.....By whom.....  
Amount of insurance carried on bus.....  
Driver .....Injured .....Killed .....  
Other persons .....Number injured ..... Number killed .....

DESCRIPTION OF ACCIDENT

Weather conditions ..... Road condition .....

Driver's statement of how accident occurred .....

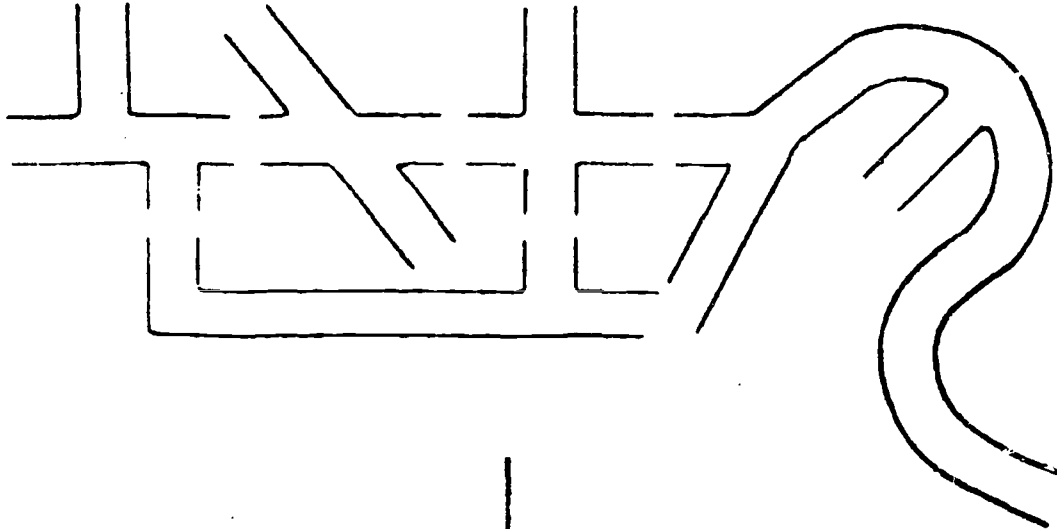
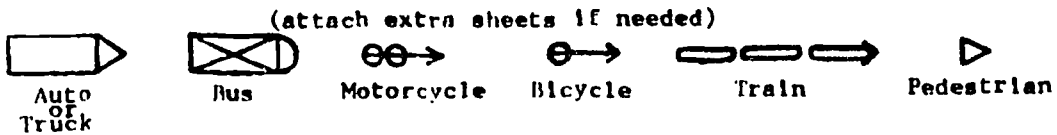
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Indicate - N.E.S.W.

Signature of driver.....

Name of district filing report.....

Name and title of school district officer filing report.....

.....

Has driver completed Education Department School Bus Driver Training Course.....

Basic.....Date..... Advanced.....Date.....

(Year) (Year)

Signature of (District) Superintendent of Schools.....

## SAFETY CITATIONS

### Rules and Regulations Covering Safety Citations by the New York State Association of District Superintendents

#### Definitions

1. Accident may be defined as a mishap which results in bodily injury to a child while being transported in a vehicle owned by the school or operated under a contract with the school district or under the direction of the school district. It includes bus breakdowns and accidents which occur at the loading or unloading points.
2. Injury may be defined as bodily harm or hurt which has required professional attention beyond that normally requiring first aid and demanding care beyond the services of the school staff--that is, doctor's services.

#### Methods of Reporting

1. The District Superintendent of Schools will accept all responsibility to see that trustees of common school districts report any accident to him.
2. In all other schools the Clerk of the Board of Education will certify to the (District) Superintendent of Schools all transportation accidents in connection with the particular school.
3. The (District) Superintendent of Schools will report at the time each accident happens in his supervisory district to the Division of School Business Management on the regular Accident Report Form printed by the Division.
4. The District Superintendent of Schools will certify to the Division of School Business Management not later than August 1st whether or not his supervisory district is eligible for citation.
5. If the District Superintendent does not report by August 1st, no citation will be given to that supervisory district.
6. Directly after August 1st, the Division of School Business Management will prepare an article for the September issue of the Bulletin to the Schools which will list the supervisory districts which have earned the right to be cited on the basis of the rules and regulations adopted by the Association of District Superintendents.

#### Rules and Regulations

1. School transportation includes all types of transportation: district-owned equipment, private contract and public service. Public service transportation must be public service transportation arranged for by the Board of Education; it does not include that arranged independently by parents.
2. This citation list will be published each year in the September issue of the Bulletin to the Schools, to cover the preceding year--July 1st--June 30th.

3. Only those supervisory districts which have had no pupils injured or killed in school transportation will be eligible for this Safety Citation.

4. Eligibility for the citation must be based on the fact that the school's responsibility begins at the home of the child or at the loading point on the route as determined by the school authorities, and ends only with the safe delivery of the child at that same point. Eligibility for this citation is also based on transportation connected with school-sponsored activities.

5. Eligibility for this citation is based on the fact that all the district-owned buses, private contract conveyances and public service conveyances in a supervisory district have been accident-free as to injury or death of any pupil attending school during the year for which the citation is given.

6. This plan is not to include the safety of the pupils once they are within the school building, but pertains only to the actual transportation of pupils, the loading schedule and the safety program involved in their transportation.

#### SUPPLEMENT

The safety citation program for pupil transportation, as adopted by the New York State Association of School District Administrators, became effective during the school year 1960-61.

It now consists of the following three types of citations:

1. Publishing in the September issue of Bulletin to the Schools, a list of supervisory districts which have been free from accidents in school transportation resulting in injuries to pupils.
2. Awarding of Safety Citation Certificates to the District Superintendents of these districts.
3. Awarding of the Safety Citation Certificate to school districts, within supervisory districts, which have been free from personal injury to pupils in accidents associated with school transportation.