COURSE OF STUDY IN DRIVER EDUCATION

A Field Report
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The Graduate Division
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In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by
Kenneth H. Hook
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CHAPTER I
INTRODUCTION

America has become a nation on wheels. Today there is in the
United States approximately one car for every fourth person. One out
of every seventh gainfully employed person owes his livelihood directly
or indirectly to the automobile. ¹ The luxury of owning a car is fast
becoming a necessity for most American families.

The high speed mobilization of today brings with it many problems.
A major problem is accidents. The National Safety Council stated that in
1956 the automobile killed forty thousand people and injured nearly a
million and a half.

Ninety per cent of all accidents are the result of human error. ²

This being the case, an obvious approach to the problem is education.
If the purpose of the schools is to educate students so that they can
drive a better life, certainly the automobile cannot be overlooked.

As a guide toward the analysis of the material to be used in a course of
Schools should provide a place in their curriculum for driver education.

I. THE PROBLEM

As the problem developed. In 1961 the Knoxville Board of Educa-
tion asked the state department of education to make a survey of curricul-
courses in driver education. These courses vary in length from thirty-
six hours of classroom instruction to ninety hours of classroom

¹ E. B. White, The Road to Better Driving (New York: Cambridge

instruction. There are two possible reasons for the variation of the number of classroom hours. First, because the cost per pupil is slightly higher in this area of instruction, many schools reduce the number of classroom hours and use the teacher for other subjects. Secondly, insurance companies will give a reduction in insurance rates for students with a minimum of thirty-six hours of classroom instruction.

Statement of the problem. The purpose of this project was to write a course of study in driver education that can be used in any school in Iowa regardless of the number of classroom hours of instruction. Because driver education is relatively new in education and because of the variations in the number of classroom hours of instruction, there is no course of study, as such, available for use in every situation.

Limitations. Many textbooks have been written in the area of driver education, but there is a limited supply of literature in relation to methods and procedures. The content of textbooks will have to serve as a guide toward the analysis of the material to be used in a course of study.

How the problem developed. In 1957, the Knoxville Board of Education asked each teacher to write a master teaching plan for his particular subject area. At that time, the writer of this report had five years of teaching in driver education at Knoxville High School.

To enable the writer to write a Master Plan, available information pertinent to the problem was secured. It was discovered through written communication with Iowa State Teachers College and Iowa State College,
the only two schools in Iowa that train teachers in this area, that
there was no course of study, as such, for teaching driver education.
The writer then proceeded to write a Master Plan with the materials at
hand and from personal experience in the field.

With the thought in mind that there was no course of study available
and with the current pressure throughout the state for making the course
about safe driving can be learned as well in the classroom as school left-
a high school requirement, it was the opinion of the writer that a course
of study should be written suitable for use in any school in Iowa.

listed ten areas of study. They are as follows:

II. CONTENT OF DRIVER EDUCATION COURSES

1. Driving
2. Today's Car
3. Safe Car
4. After World War I, safety education became a recognized national
movement. 1 Industry was among the first to realize that the safety of its
personnel needed attention. The safety movement in schools began in the
1930's. The driver education program did not gain momentum until after
World War II. 2, White divides his book, The Road to Better Driving, into
units. Even though the driver education program is still in its infancy,
facts are available to prove the worth of the program. Many surveys
throughout the United States verify the fact that students who have taken
courses in driver education have fewer violations and accidents than do
students who have not taken the course. Other proof of its worth rests
with insurance companies. Almost every major insurance company in the
United States will allow a discount to young drivers who have successfully
Traffic Safety (May, 1939), p. 3.
completed a course in driver education.

1. Ernest B. White, The Road to Better Driving (New York: Cambridge
American Automobile Safety Association, Commission on Safety
Education, Safety Education (Washington: National Education Association
Department, 1940), Ch. 5.

2. A. E. Lee, Tomorrow's Drivers (Chicago: Lyons and Carnahan,
1958), The Federal Government is becoming vitally interested in the traffic
problem. 3 In a recent report of the United States Bureau of Public Roads,
this organization foresees fifty-one thousand highway deaths and an economic cost of nine and one-half billion dollars by 1975.\(^1\) One of the areas for suggested Federal action was the support of driver education in schools.

**Textbooks.** A. R. Lauer states that "Much of what needs to be known about safe driving can be learned as well in the classroom or school laboratory as on the road."\(^2\) As a guide to the classroom instruction, he listed ten areas of study. They are as follows:

1. Driving
2. Today's Car
3. Your Car
4. Controls
5. Maintenance
6. Attitudes
7. Accidents
8. Responsibilities
9. New Drivers
10. Traffic

Ernest B. White divides his book, *The Road to Better Driving*, into units of instruction. The areas of instruction which he believed should be taught are as follows:

1. The Automobile and You
2. The Essentials of Driving
3. Basis for Sound Driving Practices
4. Living in the Motor Age
5. Automatic Transmissions
6. Instruction in the Car

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\(^3\) Ibid., p. ix.

The textbook, **Sportsmanlike Driving**, published by the American Automobile Association, is divided into five units of instruction. They are as follows:

1. The Driver
2. Learning How to Drive
3. Traffic Laws
4. Sound Traffic Practices
5. You and the Motor Age.\(^1\)

Maxwell Halsey divided his textbook, *Let's Drive Right*, into four parts. They are as follows:

1. You and Other Drivers
2. You and Your Driving
3. Your Traffic Behavior
4. You and Your Car.\(^2\)

The textbook, *Man and the Motor Car*, provided eight divisions of instruction. They are as follows:

1. The Traffic Problem—A Challenge to Young Drivers
2. Learning Fundamental Driving Skills
3. The Driver
4. Understanding your Car—Its Construction, Operation, and Maintenance
5. Traffic Laws—Natural and Man-Made
6. The Art of Driving
7. Co-operation Among Highway Users
8. Meeting the Challenge—It Can Be Done.\(^3\)

**Master Teaching Plan.** The Master Plan in use at Knoxville High School, Knoxville, Iowa, was divided into five units. The units are as follows:

1. Driving the Car
2. The Driver
3. The Car

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4. The Future
5. First Aid. 

These units are similar in nature to those presented in textbooks with the exception of "first aid." Textbooks were primarily concerned with the prevention of accidents. The unit on first aid in the teaching plan was for the individual who is confronted with an accident.

III. PROCEDURE

An analysis and comparison of the literature presented in textbooks and other sources was made to determine the material authors considered necessary for the teaching of driver education.

The Master Plan in use at Knoxville High School, Knoxville, Iowa, was compared with materials presented in textbooks and other literature in the field.

From the comparison made above, the Master Plan was revised into a course of study that could be used in any school in Iowa.

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1Kenneth H. Hook, "Master Plan" (Knoxville, Iowa: Knoxville High School, 1957).
CHAPTER II

DRIVER EDUCATION AS OUTLINED IN MASTER PLAN
AND IN TEXTBOOKS

In this chapter, an analysis will be made between the literature in the field and the master teaching plan for driver education in use at Knoxville High School.

I. MASTER PLAN

The Master Plan is divided into five units, as follows:

1. "Driving the Car"
2. "The Driver"
3. "The Car"
4. "The Future"
5. "First Aid"

In the unit, "Driving the Car," the Master Plan has the following instructional sequence:

1. Laws of Iowa. Students who wish to take the driving portion of the course must pass a written examination of the Laws of Iowa.

2. Getting acquainted with the car. This includes learning the use of the instruments and controls of the car.

3. Accident reports

4. Types of insurance

5. City driving. The major areas covered in city driving are:
   a. stopping distance
   b. intersections
c. traffic signals
d. hazards
e. parking
f. pedestrians

6. Highway driving. The major areas covered in highway driving are:

   a. speed
   b. passing
   c. weather conditions
d. natural laws
e. problems and hazards

Unit two, "The Driver," has the following instructional sequence:

1. Physical fitness
   a. temporary disabilities, such as carbon monoxide, fatigue, and alcohol
   b. correctable disabilities
c. permanent disabilities

2. Mental fitness. Mental fitness includes the following types of drivers:
   a. emotional
   b. egotistical
c. show-off
d. thwarted
e. rationalisers

3. Alcohol and its effects

4. Mature drivers. Mature drivers include the following:
   a. judgment
   b. self-control
c. courtesy
d. attention

5. Pedestrians

6. Bicycle riders

Unit three, "The Car," has the following instructional sequence:

1. Gauges

2. Safety aids
3. Control devices

4. The engine and its related parts, such as: block, ignition system, cooling system, fuel and air system, and oil system.

5. Transmission of power from the engine to the rear wheels.

6. Brakes

7. Steering

8. Automatic transmission

9. Economical operation

10. Economy in buying a new or used car

Unit four, "The Future," has the following instructional sequence:

1. Future trends in street and highway engineering

2. Trends in parking

3. Trends in auto engineering

4. Trends in traffic regulations

5. Trends in teen-age activities

6. Vocational opportunities

Unit five, "First Aid," has the following instructional sequence:

1. General directions

2. Dressings and bandages

3. Treatment of shock

4. Circulatory system

5. Wounds and their care

6. Bandaging

7. Poisons

8. Transportation

9. Fractures
10. Injuries due to heat and cold
11. Common medical emergencies
12. First aid kits
13. Artificial respiration

II. LITERATURE

The textbook, Let's Drive Right, was used with the master teaching plan at Knoxville High School; the text has essentially the same organization as the master plan, so is not analyzed here.

Man and the Motor Car. This book, used in many high schools, is divided into eight units of instruction.

Unit one is concerned primarily with the traffic problem as it is today, the history of the automobile, and the accident statistics.

Unit two entitled, "Learning Fundamental Driving Skills," includes the following:

1. Introduction to the car, including maneuvering in traffic
2. Safety aids
3. Car controls

Unit three entitled, "The Driver," includes the following:

1. Physical condition in relation to driving
2. Personality traits in relation to driving

Unit four, "Understanding Your Car--Its Construction, Operation, and Maintenance," includes the following:

This right, "Meeting the Challenge--It Can Be Done," is a brief discussion of the construction of the automobile and traffic problems.

1. The engine and its relative parts
2. Ignition, cooling, oil, fuel and air systems
3. Transmission of power to the rear wheels
4. Economy in driving
5. Purchasing new and used cars

Unit five, "Traffic Laws--Natural and Man-Made," includes the following:
1. Natural laws of motion
2. Basic man-made rules
3. Traffic engineering
4. Traffic control measures
5. Responsibility in case of accident
6. Insurance and control devices
7. Enforcement agencies

Unit six, "The Art of Driving," includes the following:
1. City driving and its hazards
2. Highway driving and its hazards
3. Superhighways and their problems
4. Common driving emergencies

Unit seven, "Co-operation Among Highway Users," includes the following:
1. Relationship between drivers and pedestrians
2. The Bicyclists in accidents

Unit eight, "Meeting the Challenge--It Can Be Done," is a brief discussion of the co-operation of the citizenry and traffic problems.
Sportsmanlike Driving. This book, published by the American Automobile Association, is probably used in more high schools than any other textbook in its field. This textbook is divided into five parts.

Part one, "The Driver," includes the following:
1. The history of the automobile
2. Traffic accidents
3. The value of eyesight in driving
4. Physical fitness in driving
5. Stopping distance and reaction time
6. Psychological make-up of good drivers

Part two, "Learning How To Drive," includes the following:
1. Introduction to the car
2. Safety aids and control devices
3. The engine and its relative parts
4. Transmission of power to the rear wheels
5. Brake and steering systems
6. Introductory action in gearshift cars
7. Introductory action in cars with automatic transmissions
8. Introductory driving practice

Part three, "Traffic Laws," includes the following:
1. Natural laws in driving
2. Man-made laws in driving
3. Responsibilities in accidents
4. Traffic and pedestrians
5. Bicycles

1 American Automobile Association, Sportsmanlike Driving, op. cit.
6. Enforcement agencies

Part four, "Sound Traffic Practices," includes the following:

1. Highway driving and its hazards
2. City driving and its hazards
3. Driving under special conditions
4. Pedestrians

Part five, "You and the Motor Age," includes the following:

1. Automobile economy
2. Insurance
3. Vocational opportunities
4. Future automobile engineering
5. Future highway engineering

The Road to Better Driving.¹ This book is used in many Iowa high schools. It is divided into six units of instruction.

Unit one, "The Automobile and You," includes the following:

1. Accident statistics
2. Brake distance and stopping time
3. Physical make-up of drivers
4. Psychological make-up of drivers
5. Pedestrians

Unit two, "The Essentials of Driving," includes the following:

1. Introduction to the car
2. Introductory driving skills
3. City driving
4. Highway driving

¹ White, The Road to Better Driving, op. cit.
5. Automotive economy
6. Engine and relative parts
7. Transmission of power to the rear wheels
8. Electrical, cooling, oil, fuel and air systems

Unit three, "Basis for Sound Driving Practices," includes the following:

1. Natural laws and driving
2. Rules of the road
3. Traffic regulations
4. Law enforcement agencies

Unit four, "Living in the Motor Age," includes the following:

1. Development of modern automobiles and highways
2. Driving economy

Unit five, "Automatic Transmissions," includes the following:

1. How the automatic transmission works
2. Driving the automatic transmission car
3. Driving as a career

Unit six, "Instruction in the Car," includes the following:

1. Behind-the-wheel instruction
2. Work sheets

Tomorrow's Drivers. This book, written by Dr. A. R. Lauer, at
Iowa State College, is relatively new as a classroom text. It is divided
into ten units of instruction.

Unit one, "Driving," includes the following:

1. Auto statistics

1 Lauer, Tomorrow's Drivers, op. cit.
Unit eight, "Responsibilities," includes the following:

2. Rules of the road

Unit two, "Today's Cars," includes the following:

1. Automobile history
2. Horse power and speed

Unit six, "New Driver," includes the following:

3. Accidents

Unit three, "Your Car," includes the following:

1. The engine and its parts
2. Control devices and safety aids
3. Transmission of power to the rear wheels
4. Electrical, cooling, oil, and fuel and air systems
5. Tires and safety equipment

Unit four, "Controls," includes the following:

3. Driving automatic transmission

Unit five, "Maintenance," includes the following:

1. Importance of attitudes
2. Laws and regulations
3. Stopping distance
4. Passing
5. Speed and driving

Unit seven, "Accidents," includes the following:

1. Types of accidents
2. Temporary illness
3. Traffic signs
Unit eight, "Responsibilities," includes the following:

1. Insurance
2. Pedestrians
3. Bicycles

Unit nine, "New Drivers," includes the following:

1. Proper care of tires
2. Proper habits
3. Learner's permit
4. Natural laws
5. Psychological principles
6. Driving etiquette
7. City driving
8. Highway driving
9. Highway engineering

Unit ten, "Traffic," includes the following:

1. Defensive driving
2. Driving senses
3. Driving economy
4. Stopping distance and reaction time

Other literature. The National Safety Council publishes a monthly magazine entitled, **Traffic Safety.** In this magazine they discuss the current trends, news, and any other literature pertaining to traffic safety. Below is listed the literature discussed in the last twelve issues:

1. Alcohol and traffic
2. Federal and State legislature
3. Driving Tips
4. State Roles and Highway Safety
5. State Bills
6. Enforcement Problems
7. Fatality Toll
8. Holiday Drivers
9. Insurance Companies and Highway Safety
10. Traffic Courts
11. Should Police Teach Driver Education
12. Driving on Superhighways
13. Urban Pedestrians
14. Tire Killing
15. Stopping Distance
16. Moral Emphasis on Driving
17. Is Driver Education A Frill
18. Headlight Glare
19. Parking Ills
20. How to Sit Out An Accident
21. Your Responsibility
22. Keep Pedestrians Alive
23. Driver's License
24. Driver's Education Bill
25. Motor Scooters
26. Turn Signals
27. Safety for Tomorrow's Cars, Tires and Turnpikes
28. Electronics in Future Traffic Control
29. Uniformity in Traffic Laws

30. What They Teach Truck Drivers in College

31. Drugs and Driving

32. Enforcement Is Greatest Need

It is apparent that one or the other will have to be used as a substitute to the Master Plan is a single line manner, the Plan of structure, it will be used as the basis. The research and analysis can be based on the following items of consideration:

1. Driving the car
2. The driver
3. The car
4. The future
5. First aid

Much of the information found in current literature has been written in a different order than it is in the present form. The present form is
more in organization and better for the purpose of arranging
much of the material for which we have taken material and
the ease with which it can be used to determine the

Unit one: Driving the car

written to be easy to use.
CHAPTER III

COMPARISON OF LITERATURE AND THE MASTER PLAN

The reader will find this chapter exciting. It is the first of its kind and
probably the last of its kind. It is the first chapter to be included in the
incentives for driving skills. The Master Plan entitled them, because
As the writer views comparisons of the literature and the Master
Plan, it is apparent that one or the other will have to be used as a
primary area of difference in the area in automobile history and
base. Because the Master Plan is a single unit against the field of
literature, it will be used as the base. The comparison and analysis
will then be based on the following units of instruction:

1. Driving the car

2. The driver

3. The car

4. The future

5. First aid

I. TEXTBOOKS

Most of the literature found in textbooks was presented in
different order than it is in the Master Plan. Every textbook differs
somewhat in organization and instructional sequence. Regardless of the
units, the basic difference in this unit is

UNIT ONE, DRIVING THE CAR

unit three, the car. There was no difference in the instructional
order of instruction, the Master Plan and the textbooks covered very
nearly the same material. The basic differences will be discussed by
the inclusion of the Laws of Iowa in the Master Plan. Textbooks are
written to be sold in every state, so they cover the general traffic laws.
trends in traffic regulations, and occupational opportunities.
The students taking driver education in Iowa must know the Laws of Iowa in addition to general traffic laws.

The second area of difference is that some textbooks included introductory driving skills. The Master Plan omitted them, leaving such driving skills for instruction in the vehicle.

A third area of difference is the area in automobile history and statistics. Some textbooks include the evolution of the automobile to its present status while other textbooks include a section on the statistics relating to automobile accidents. Some unit, which first aid should definitely be taught to students. It one knows when the unfortunate accident might happen to students. It one knows when the unfortunate accident might

Unit two, the driver. There was very little difference in the material covered in the Master Plan and the textbooks. A few textbooks, however, included consideration of habits and attitudes. Some of the authors of these texts state that proper driving habits are a must; as previously stated, the magazine Traffic Safety, published by other authors devote sections on proper driving attitudes. The Master National Safety Council, discussed some of the current problems in Plan was written with the assumption that skills practiced over and over again will become habits and that one of the objectives of the entire program is to build proper attitudes.

Unit three, the car. There was no difference in the instructional material covered between the Master Plan and the textbooks. Both covered auto mechanics, economical operation, and economy in purchasing.

If the above issues are not discussed in textbooks, then perhaps

Unit four, the future. Although the material was in different sequences and was included in a course of study, literature such as location in the various textbooks, it did not differ from the material in the could make very good outside reports. The writer believes that good the Master Plan. Both included future trends in highway engineering, trends in traffic regulations, and vocational opportunities.
Unit five, first aid. First aid, as it is known today, was not included in any of the textbooks. Possibly the best reason for this is the fact that it is a textbook in itself published by the American Red Cross. A second possible reason is the fact that it requires special training to teach first aid, and some states may not require this training for the teachers of driver education. In Iowa, the situation is different. Most of the teachers trained to teach this subject are required to have first aid training.

The writer feels that if time permits, first aid should definitely be taught to students. No one knows when the unfortunate accident might happen.

II. LITERATURE

As previously stated, the magazine Traffic Safety, published by the National Safety Council, discusses most of the current problems in the area of traffic safety. Literature not included in the Master Plan or the textbooks is listed below:

1. Moral emphasis on driving
2. How to sit out an accident
3. Motor scooters
4. Drugs and driving

If the above items are not discussed in textbooks, then perhaps they should not be included in a course of study. Literature such as this would make very good outside reports. The writer believes that good teachers look for supplementary material such as this.
CHAPTER IV

SUMMARY AND RESULT

The purpose of this project was to write a course of study in
driver education that could be used in any high school in Iowa. At the
time of writing, there was no course of study, as such, for this area.
One probable reason for this situation is the great variation in the
number of classroom hours of instruction among the schools of Iowa.

The procedure used in this study was as follows:

1. Analyze the master teaching plan now in use at Knoxville
   High School.

2. Analyze problems in this area by reviewing literature.

3. Revise the Master Plan so it could be used in any school in
   Iowa on the basis of a comparison of points one and two.

4. Write a course of study that could be used in any Iowa high
   school.

The course of study written was designed to be used in any Iowa
high school.\(^1\)

\(^1\)See Appendix, p. 25.
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UNIT

I. DRIVING THE CAR: It could be used in any school regardless of size.

II. THE DRIVER: The number of classroom instruction. The teacher who is not.

III. THE CAR: The number of cross-section will have to be based on.

IV. THE FUTURE: Material to be placed will be...

V. FIRST AID: Suggest that...his class...First aid at home.

RESOURCES: There are...teaching thirty-six semester hour.

In this opinion, the other units could easily be cut in half.

Now are being added rapidly to the field of driver education.

The writer has listed only a few which he believes to be among the best.

The present...
INTRODUCTION

Schools in Iowa vary in the number of classroom hours of instruction in driver education. This course of study was written with the intention that it could be used in any school regardless of limitations that will insure safety in the fewest number of hours of classroom instruction. The teacher who is not allowed ninety semester hours of instruction will have to use his own discretion as to what material he should use.

The writer suggests that unit five, "First Aid," be omitted completely for those teachers who are teaching thirty-six semester hours. With this omission, the other units could very nearly be cut in half to come out right.

5. Establish correct driving habits and skills necessary for operation of the automobile.
6. Show the importance of proper care and conservation of the motor vehicle.
7. Show the social and economic importance of the motor vehicle in modern living.
8. Receive an understanding of first aid in the event the individual may become involved in an accident.
GENERAL OBJECTIVES

Any high school course in driver education designed to teach youth the necessity for conservation of life and property should--

1. Show that there is a definite relation between the mental, physical, and emotional make-up of drivers and pedestrians and their probability of being involved in traffic accidents.

2. Show that compensation for mental, physical, and emotional limitations can be made that will insure safety in the use of streets and highways.

3. Develop an understanding of traffic laws, traffic control devices and signs, and show the necessity for voluntary obedience to them.

4. Bring about an understanding of the responsibility which must be accepted when one becomes a driver of a motor vehicle.

5. Show the importance of courtesy in the use of streets and highways.

6. Establish correct driving habits and skills necessary for the achievement of an accident free record.

7. Develop an understanding of the basic construction and operation of the automobile.

8. Show the importance of proper care and conservation of the motor vehicle.

9. Show the social and economic importance of the motor vehicle in modern living.

10. Develop an understanding of first aid in the event the individual may become involved in an accident.
UNIT I

DRIVING THE CAR
(classroom hours twenty-two)

I. OVERVIEW

It is impossible to teach all that should be taught in driver education and have practice driving correspond to the classroom teaching. Therefore, a unit on "Driving the Car" should come first. This unit is designed with that purpose in mind. The student will become acquainted with possible driving situations, their hazards and solutions.

II. OBJECTIVES

A. To learn the Laws of Iowa and the possible variations of laws among the states.

B. To gain an understanding of the history of the automobile and its importance today.

C. To gain an understanding of the accident situations.
   1. Accident reporting
   2. Financial responsibility
   3. Accident facts

D. To understand the effect of speed on driving situations.

E. To understand the different problems involved in highway driving and city driving.

F. To develop proper attitudes toward "right of way" situations.

G. To establish a closer association between the pedestrian and driver.

H. To understand the importance of traffic signs and peace officers.

I. To develop driving skills.

J. To assume that other drivers may make mistakes and that your good judgment, skill and courteous attitude may avoid an accident.

K. To develop the ability to make the right decision when faced with a dangerous situation.
III. TERMINOLOGY

A. Insurance
   1. Liability
   2. Medical payments
   3. Comprehensive
   4. Collision

B. Financial responsibility

C. Contributory negligence

D. "After the Facts" suspension of license

E. Force of impact

F. Reaction time

G. Braking efficiency

H. Velocitated

I. Friction

J. Gravity

K. Centripetal force

L. Expressway

IV. UNIT OUTLINE

A. Laws of Iowa
   Under the age of eighteen years, each student
   must secure written consent from parents to drive.

B. Evolution of the automobile
   Each student must fill out an application for a driver's

C. Accident facts

D. Getting acquainted with the car
   1. Instruments
   2. Controls
   3. Starting and stopping

E. Accident reporting

F. Types of insurance

G. City driving
   1. Force of impact
   2. Stopping distance
      a. Reaction time
      b. Judging distance
3. Intersections  
4. Traffic signals  
5. Traffic hazards  
6. Angle parking  
7. Parallel parking  
8. Traffic light signals  
9. Pedestrians in traffic

H. Highway driving  
1. Speed  
   a. time saved  
   b. night driving  
2. Passing situations  
3. Weather conditions  
4. Natural laws  
5. Expressways  
6. Traffic problems and hazards

V. APPROACH

At the beginning of this unit the instructor should discuss the value of driver education. Students should be given the statistics in relation to deaths and injuries caused by the automobile. They should also know how they will compare with other drivers upon completion of this course. Before any student can drive in this course, he must complete the following:

1. Each student, under the age of eighteen years, must secure written consent from parents to drive.

2. Each student must fill out an application for a driver’s permit.

3. Each student must pass a written and visual test given by the Iowa Highway Patrol to receive his permit to drive.

VI. ASSIMILATIVE MATERIALS

A. Activities  
1. Written assignments  
2. Class discussion  
3. Eye tests  
4. Reaction time test  
5. Field trips  
   a. Measuring reaction time and braking distance with a vehicle  
   b. Judging distance
B. Materials

1. Practical Driving
   a. Reaction timer
   b. Visual chart
2. Magnetic traffic board
3. Film
   a. "Driving in the City"
   b. "Driving on the Highway"
   c. "Driving under Adverse Conditions"
4. Textbooks or reference books
   a. Code of Iowa Law Book
   b. Let's Drive Right
   c. Road to Better Driving
   d. Sportsmanlike Driving
   e. Man and the Motor Car
   f. Accident Facts

VII. EVALUATION

A. Tests placed on the driver.
   1. Scores received on the test given by the Iowa Highway
      Patrol
      The highway patrol is neither a motorist nor a pedestrian, but his
      score on the road given us a cause to study him both as a motorist
      and a pedestrian.
   2. Scores received on tests given throughout the unit

B. Class discussion

OBJECTIVES

A. To develop proper attitudes toward other drivers and pedestrians.

B. To understand your physical limitations and how to correct or
   compensate for them.

C. To understand the importance of controlling emotions while
   driving.

D. To understand the effects of alcohol and driving.

E. To understand the habits of pedestrians and their relationship
   to drivers.

F. To develop qualities found in a "top-notch" mature driver.

G. To understand that bicycle riders, pedestrians, and motorists
   must co-operate in the use of our streets and highways.
UNIT II

THE DRIVER
(classroom hours fifteen)

I. OVERVIEW

Having a proper attitude toward safety is probably the greatest single asset a person can have in driving. In building proper attitudes, the driver must know his physical limitations, how to control his emotions and to develop good habits. Because all of us are pedestrians at one time or another, the pedestrian must be studied with the same interest in mind that is placed on the driver.

The bicyclist is neither a motorist nor a pedestrian, but his presence on the roadway gives us cause to study him both as a motorist and a pedestrian.

II. OBJECTIVES

A. To develop proper attitudes toward other drivers and pedestrians.
B. To understand your physical limitations and how to correct or compensate for them.
C. To understand the importance of controlling emotions while driving.
D. To understand the effects of alcohol and driving.
E. To understand the habits of pedestrians and their relationship to drivers.
F. To develop qualities found in a "top-notch" mature driver.
G. To understand that bicycle riders, pedestrians and motorists must co-operate in the use of our streets and highways.
III. TERMINOLOGY

A. Visual acuity
   1. Judgement
   2. Courtesy
B. Field of vision
C. Depth perception
   1. Statistic in relation to deaths and injuries
D. Peripheral
   a. Location
E. Glare sensitivity
   a. 'Driver's responsibility
F. Chronic illness
   a. 'Bicycle rider
G. Accident repeater
   a. Location of accident
H. Accident prone operation of driver, bicyclist.
I. Egotist
J. Emotional
   a. Account for 80 per cent of our impressions. It is,
K. Rationalizer
   a. Spend additional time on improving the visual
L. Thwarted
   a. Student. The first day should be spent testing eyes
M. Drunkometer
   a. The second day working with the tachistoscope

IV. UNIT OUTLINE

A. Physical fitness
   1. Temporary disability
      a. Carbon monoxide
      b. Fatigue indicators
      c. Alcoholism
   2. Correctible disability
      a. Eyes—visual perception with the tachistoscope—use
      b. Ears—third day throughout the unit
   3. Permanent disabilities
      a. 'And Then There Were Four'
B. Mental fitness
   1. Emotions in 'Court'
   2. Egotists
   3. Show-off
   4. Thwarted
   5. Rationalizer
C. Alcohol
   1. Effect on brain
   2. Tests
   3. Statistics
D. Mature drivers
   1. Judgment
   2. Self-control
   3. Courtesy
   4. Attention

E. The pedestrian
   1. Statistics in relation to deaths and injuries
      a. age groups
      b. location
      c. time
   2. Driver's responsibility

F. The bicycle rider
   1. Cause of accidents
   2. Location of accident
   3. Need for co-operation of driver, bicyclist.

V. APPROACH

Eyes alone account for 80 per cent of our impressions. It is, therefore, important to spend additional time on improving the visual perception of each student. The first day should be spent testing eyes on the Porto-Clinic and the second day working with the tachistoscope to improve speed in visual acuity.

VI. ASSIMILATIVE MATERIALS

A. Activities
   1. Written assignments
   2. Class discussions
   3. Testing eyes with the Porto-Clinic
   4. Improving visual perception with the tachistoscope--use every third day throughout the unit
   5. Films
      a. "And Then There Were Four"
      b. "The Case of Officer Hallibrand"
      c. "Day in Court"

B. Materials
   1. Porto-Clinic

---

1 See Resources, pp. 51-52.
2. Tachistoscope
3. Textbooks and reference books
   a. Let's Drive Right
   b. Road to Better Driving
   c. Sportsmanlike Driving
   d. Man and the Motor Car
   e. Accident Facts

VII. EVALUATION

A. Tests over subject matter in textbook

B. General test over attitudes

C. Repeat performance with tachistoscope to determine improvement

D. Class discussions

... 

... 

1. To be able to read and understand the value of the gauges on the instrument panel
2. To understand the use and value of safety side
3. To understand the use and care of the control devices

... 

1. See Resources, p. 50.
I. OVERVIEW:

Even though our nation is a specialized one and perhaps only a very small percentage of the students may become mechanics, it is to the advantage of every driver to have a basic concept of the working parts of the auto engine. With this understanding the student should be able to spot trouble and/or realize the consequence of the misuse of the working parts in the automobile. The more one knows about something, the more apt one will be able to take care of it in the light of its normal operation.

II. OBJECTIVES:

A. To be able to read and understand the value of the gauges on the instrument panel

B. To understand the use and value of safety aids

C. To understand the use and care of the control devices

D. To understand the operation of the engine and its related parts
   1. Cooling system
   2. Ignition system
   3. Fuel and air
   4. Lubrication

E. To understand how power is transmitted to the rear wheels
   1. Flywheel and clutch
   2. Transmission
   3. Universal joint
   4. Drive shaft
   5. Differential
   6. Rear axle

F. To understand the braking system
G. To understand the steering system
H. To understand the basic principles of the automatic transmission
I. To understand how to change a tire
J. To understand how to keep your car in good safe working order
K. To understand the cost of driving
L. To develop the ability to choose a new or used car wisely

III. TERMINOLOGY

A. Ammeter
B. Odometer
C. Choke
D. Chassis
E. Block
F. Cylinder
G. Piston
H. Connecting rod
I. Crankshaft
J. Valves
K. Carburetor
L. Coil
M. Distributor
N. Flywheel
O. Universal joint
P. Differential
Q. Fluid coupling
R. Torque converter
S. Planetary gears
IV. UNIT OUTLINE

A. Gauges
   1. Gas
   2. Speedometer
   3. Odometer
   4. Temperature
   5. Ammeter
   6. Oil pressure

B. Safety aids
   1. Lights
   2. Mirrors
   3. Wiper
   4. Defroster
   5. Sun visor
   6. Horn

C. Control devices
   1. Steering wheel
   2. Brakes
   3. Power assistants

D. Engine
   1. Block
      a. Cylinder
      b. Piston
      c. Connecting rods
      d. Crank shaft
      e. Cam shaft
   2. Ignition system
      a. Generator
      b. Coil
      c. Distributor
      d. Spark plugs
      e. Battery
   3. Cooling system
      a. Radiator
      b. Thermostat
      c. Water jacket
      d. Fan
      e. Water pump
   4. Gas and air
      a. Fuel pump
      b. Air cleaner
      c. Carburetor
      d. Manifolds
      e. Valves
   5. Oil system
   6. Four stroke cycle
E. Transmission of power
1. Flywheel
2. Clutch
3. Slip joint
4. Universal joint
5. Drive shaft
6. Differential
7. Rear axle

F. Brakes

G. Steering

H. Automatic transmission
1. Torque converter
2. Fluid coupling
3. Planetary gears

I. Economical operation
1. Lubrication
2. Brakes
3. Tires
4. Battery

J. Buying the new or used car
1. Need
2. Price
3. Car test
4. Guarantee
5. Trade in

V. APPROACH

The auto is taking more and more of the family budget every year. It is, beyond a doubt, our most expensive luxury. It is, therefore, necessary to know how to buy wisely and how to operate the vehicle as economically as possible.

VI. ASSIMILATED MATERIALS

A. Activities
1. Written assignments
2. Class discussion
3. Each student could collect material and make a chart on the cost per mile in driving.
4. Students could make drawings and label parts of each system contributing to the operation of the engine.
5. Students could list and describe all of the moving parts in the engine.
6. Films
   a. "A.B.C. of the Internal Combustion Engine"
   b. "Where Mileage Begins"
   c. "Why of Auto Lubrication"

7. Field trips
   a. Changing a tire
   b. Trip to a garage where students can actually see working parts of an engine and chassis

VII. MATERIALS

A. Car—To change tire and observe electrical and mechanical parts
   This will have to be built and new specific jobs changed. Recently, thousands of students have been taught to drive, change engine, and replace parts arising from this recession.

B. Textbook and reference books
   1. Let's Drive Right
   2. Road to Better Driving
   3. Sportsmanlike Driving
   4. Man and the Motor Car

VIII. EVALUATION

1. OBJECTIVES
   A. Written tests over subject matter
   B. To understand the need for improving roads
   C. Drawings
   D. To realize the cost of superhighway construction
   E. Class discussions
   F. To understand the parking problem and a possible solution
   G. To understand that to expect to retain auto drivers
   H. To understand the function, operation, and duties of our traffic police departments
   I. To understand what men—cars can do to help improve our traffic problem today
   J. To understand the vocational opportunities offered today to good drivers

TERMINOLOGY

A. Freeways
B. Closer-leads
C. Turnpike

See Resources, pp. 51-52.

See Resources, p. 50.
UNIT IV

I. OVERVIEW

Every year more and more cars are put on our streets and highways. This presents two problems. First, newer highways and parking lots will have to be built and our traffic laws changed. Secondly, thousands of young people will have to be trained to drive, educate, engineer, and in general fill the needs arising from this tremendous increase in traffic.

II. OBJECTIVES

A. To understand the need for improving roads
B. To realize the cost of superhighway construction
C. To understand the parking problem and a possible solution
D. To understand what to expect in future auto design
E. To understand the function, operation, and duties of our traffic police departments
F. To understand what teen-agers can do to help improve our traffic problem today
G. To understand the vocational opportunities offered today to good drivers

III. TERMINOLOGY

A. Freeways
B. Cloverleaf
C. Turnpike
D. Toll roads

VI. ASSESSMENT MATERIALS

A. Traffic circle
B. Activities
IV. UNIT OUTLINE

A. Streets and highways
   1. Condition of early roads
   2. Present roads
   3. Federal aid
   4. Taxes
   5. Improving city bottlenecks
   6. Modern highway design

B. Parking
   1. Commercial parking
   2. Off street parking
   3. Trends in legislation
   4. Trends of business

C. The modern automobile
   1. Auto today
   2. Auto of the future
      a. size
      b. material
      c. horsepower
      d. safety features

D. Traffic regulation
   1. Uniform traffic code
   2. Traffic police
   3. Courts
   4. Licensing
   5. Public opinion

E. Teen-agers
   1. School
   2. Organizations
   3. Drag strips

F. Vocational opportunities
   1. Teaching
   2. Truck driving
   3. Bus driving
   4. Management
   5. Engineering

V. APPROACH

As future adults all teen-agers should be presented with the
problem of the immediate future.

VI. ASSIMILATED MATERIALS

A. Activities
1. Each student is given one of several traffic congestion areas in the city to study and make suggested improvement.
2. One field trip is taken to busy intersection for a traffic survey.
3. Written assignments
4. Class discussion

B. Materials
1. Magno safety board
2. Textbooks and reference books¹
   a. Let's Drive Right
   b. Road to Better Driving
   c. Sportsmanlike Driving
   d. Man and the Motor Car

VII. EVALUATION
A. Written tests over subject matter
B. Oral discussion
C. Written papers on traffic suggestions

Although first aid covers many areas, each one will be studied.

The main objectives to mind. They are as follows:

A. To prevent accidents
B. To train people to do the right thing in all traffic situations
C. To prevent avoidable injury or damage
D. To provide proper transportation, if necessary

¹See Resources, p.50.
I. OVERVIEW

A complete safety program should prepare students for the unexpected accident. Accidents have come to be a leading cause of death in the United States. First aid training gives the student the ability to save lives by doing the right thing at the right time. This training does not only apply to auto accidents, but can be used in everyday living.

II. OBJECTIVES

Although first aid covers many areas, each one will be treated with the same objectives in mind. They are as follows:

A. To prevent accidents

B. To train people to do the right thing at the right time

C. To prevent added injury or danger.

D. To provide proper transportation, if necessary

III. TERMINOLOGY

A. Shock

B. Hemorrhage

C. Abrasion

D. Incised

E. Lacerated

F. Abdomen

G. Cravat

H. Tourniquet
IV. UNIT OUTLINE

A. General directions
   1. Keep the injured person lying down.
   2. Look for, in this order, hemorrhage, stoppage of breathing, poisoning, wounds, burns, fractures and dislocations.
   3. Keep the injured person warm.
   4. Send someone to call a physician.
   5. Keep calm and do not be hurried into moving the injured person unless it is absolutely necessary.
   6. Never give liquid to an unconscious person.
   7. Keep onlookers away.
   8. Make the patient comfortable and cheerful.
   9. Don’t let the patient see his injuries.

B. Dressings and bandages
   1. Dressing and compresses
      a. function
      b. type
      c. uses
   2. Bandages
      a. function
      b. uses

C. Shock
   1. Symptoms
   2. Prevention
   3. First aid

D. The circulatory system
   1. Blood
   2. Heart
   3. Lungs
   4. Arteries—pressure points
      a. throat
      b. ear
      c. jaw
      d. collarbone
      e. upper arm
      f. groin

E. Wounds and their care
   1. Abrasions
   2. Incised
   3. Lacerated
   4. Percutured
   5. Infected
   6. Controlling bleeding
   7. Special kinds of wounds
      a. powder burns
      b. abdomen
      c. eyes
d. nose  
e. internal bleeding

F. Bandaging
1. Open head
2. Open hand or foot
3. Open chest or back
4. Shoulder
5. Sling
6. Open face
7. Head or ear
8. Arm, forearm, thigh or leg
9. Cheek or ear
10. Elbow or knee
11. Palm of hand
12. Ankle support

G. Poison (carbon monoxide)
1. Causes
2. Symptoms
3. First aid

H. Bones
1. Head
2. Trunk
3. Upper limbs
4. Lower limbs
5. Joints

I. Transportation
1. When to transport
2. Type to use
   a. stretchers
   b. three and eight man carry
   c. chair
   d. pack-strap
   e. automobiles

J. Fractures
1. Cause
2. Prevention
3. First aid
4. Simple
5. Compound
6. Splints
   a. fixation
   b. traction

K. Burns and scalds
1. degree
2. prevention
3. symptoms
4. first aid
L. First aid for common medical emergencies
   1. Unconsciousness
      a. red
      b. white
      c. blue
   2. Apoplexy
   3. Intoxication
   4. Heart failure
   5. Epileptic convulsions or fits

M. First aid kits

N. Respiratory system

O. Artificial respiration

V. APPROACH

Many people die each year as a result of someone rushing an injured person to the hospital at breakneck speed. A knowledge of first aid could prevent such a disaster. Not only will it aid you in any of your emergencies, but it will give you a sense of security in any group you are in.

At the completion of this unit, each student will receive a Standard First Aid card issued by the American Red Cross.

VI. ASSIMILATIVE MATERIALS

A. Activities
   1. Written assignments
   2. Class discussions
   3. Students should participate in artificial respiration demonstrations.
   4. Students should participate in splinting exercises.

B. Materials
   1. First aid textbook
   2. Cravat

VII. EVALUATION

A. Practical skills test
   1. Bandaging
   2. Splinting
   3. Artificial respiration
B. Written tests over subject matter

C. Oral class discussion

RESOURCES

The teacher of driver education should be aware of the fact that new materials appear every year. In light of this fact, only the most commonly used materials, to date, are listed below. Complete addresses can be found under other resource materials, or in the bibliography.

Textbooks


Resource Books


**Pamphlets**

1. American Automobile Association. "How to Drive." The Department of Public Relations, 1957. This pamphlet gives useful tips to the beginning driver. Can be used as a supplement to the textbook.


4. National Association of Automobile Mutual Insurance Companies. "How to Drive." This pamphlet has 100 ideas for club activities.

5. "How to Drive," The Department, 1959. This is a good guide for outside projects. It contains safety lessons for the elementary schools.


**Journals**

1. "Ideas, Iowa Driver Education Association." This journal contains safety lessons for the elementary schools.


3. Films Recommended in Course of Study. The following are films which are recommended by the writer. These films are free loan.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>&quot;How to Drive&quot;</td>
<td>General Motors Corporation</td>
</tr>
<tr>
<td>2</td>
<td>&quot;How to Drive&quot;</td>
<td>Ford Motor Company</td>
</tr>
<tr>
<td>3</td>
<td>&quot;How to Drive&quot;</td>
<td>National Association of Automobile Mutual Insurance Companies</td>
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<tr>
<td>4</td>
<td>&quot;How to Drive&quot;</td>
<td>The Department</td>
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<td>5</td>
<td>&quot;How to Drive&quot;</td>
<td>National Safety Council</td>
</tr>
<tr>
<td>6</td>
<td>&quot;How to Drive&quot;</td>
<td>M.S.A.</td>
</tr>
<tr>
<td>7</td>
<td>&quot;Tests and Evaluation Methods Used in Driver and Safety Education&quot;</td>
<td>National Safety Council</td>
</tr>
</tbody>
</table>

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1. Iowa State Department of Public Safety, Amos Hiatt Building, Des Moines, Iowa.
   a. "Driving in the City"
   b. "Driving on the Highway"
   c. "Driving under Adverse Conditions"
   d. "Last Date"

2. General Motors Corporation, Department of Public Relations, Detroit, Michigan.
   a. "A.S.C. of the Automobile Engine"
   b. "Where Mileage Begins"

3. Pratt Sound Films, Cedar Rapids, Iowa
   a. "And Then There Were Four"
   b. "Day in Court"
   c. "Open Road"
   d. "Whye of Auto Lubrication"

Film Guides in Driver Education

4. "Iowa State College Film Catalogue." Film Library, Ames, Iowa.
7. State University of Iowa, Film Catalogue. Film Library, Iowa City, Iowa.

Equipment

The following are publications from manufacturing companies.

They give illustrations, information, and prices of equipment used in driver education.

2. Driver Education Equipment, G. S. Kabat Company, Los Angeles, California.


4. Motor Club of Iowa, Davenport, Iowa.


Other Resource Material

The new instructor in the field of driver education should write to the following places and have his name placed on the mailing list for free materials:

1. Aetna Casualty & Surety Company, Hartford, Connecticut

2. American Automobile Association, Davenport, Iowa; or Washington, D. C.

3. Ford Motor Company, Department of Public Relations, Dearborn, Michigan

4. General Motors Corporation, Department of Public Relations, Detroit, Michigan

5. Iowa State Department of Public Safety, Amos Hiatt Building, Des Moines, Iowa

6. Motor Club of Iowa, Davenport, Iowa


8. Travelers Insurance Company, Hartford, Connecticut