

**Driver Education
Classroom and In-Car
Curriculum**

Unit 2

**Introducing Operator
and Vehicle Control
Tasks in a Controlled
Environment**

Driver Education Classroom and In-Car Instruction Unit 2-2

Unit Introduction

Unit 2 will introduce the student to the location and operation of vehicle information, control devices and routine checks and adjustments to be made prior to and after entering the vehicle.

Movement of a motor vehicle, stopping, vehicle operating space, use of signals, speed, intersection maneuvers, and right-of-way, will be reviewed and analyzed.

Goals

Time Frame: 6 hours

Students will:

- Participate in teacher-led discussion of the importance of occupant protection to include proper use of and the life saving value of occupant protection
- Discuss occupant protection systems that will address the contribution of safety belts to increased survivability in a crash
- Participate in teacher-led discussion of the symbols used to identify the location and function of the safety, communication, comfort and convenience devices found in motor vehicles. Students will complete worksheets 2.1 and 2.2 in class and 2.3 and 2.4 at home. Students will also be introduced to and discuss the need to conduct pre-driving checks and procedures
- Participate in teacher-led discussion of the operation of safety, communication, comfort and convenience devices using slides
- Participate in a teacher-led discussion of your state's vehicle law and the signs, signals and markings to be anticipated during in-car lessons one and two
- Participate in teacher-led discussion of putting vehicle in motion, braking and stopping, lane position, backing straight, turns, and moving to and from the curb
- Watch slide 2.1 through 2.31 to enhance presentation.
- Complete Unit 2 test

Driver Education Classroom and In-Car Instruction Unit 2-3

<p>Title: Introducing Operator and Vehicle Control Tasks in a Controlled Environment</p>	<p>Time Frame: 6 hours</p>
<p>Resources Needed</p>	<p>Instructor Preparation</p>
<p>Textbooks: <u>Drive Right</u>, Ch. 1,2,3,6,7 <u>How to Drive</u>, Ch. 1,2,3,5,6 <u>Handbook Plus</u>, Ch.1,2,5,6,7,11,12A,12B <u>Responsible Driving</u>, Ch.1,4,6,7,8,9</p> <p>Slides 2.1-2.36 Fact Sheets 2.1-2.7 Videos 2.1-2.10 Worksheets 2.1-2.7</p> <p>Your state's driver's handbook</p> <p>Included Videos:</p> <ul style="list-style-type: none"> • <i>Reducing Your Risks in the Crash</i> (9 minutes 40 seconds) • <i>Teaching Your Teens to Drive Lessons 1, 2 and 3</i> • <i>Signs, Signals and Markings, Understanding the Language of the Road</i> (17 minutes 30 seconds) <p>Unit 2 Test</p>	<p>Review recommended learning activities Review textbook Review on-street lesson plan used in combination with this unit and textbook</p> <p>Review fact sheets Review slides Review Worksheets Review included videos</p> <p>Check out audiovisual equipment</p> <p>Included</p>

Driver Education Classroom and In-Car Instruction Unit 2-4

Performance Objectives	Learning Activities	Resources
<p>Students will demonstrate knowledge of and proper usage of protective devices available to occupants of motor vehicles.</p>	<p>After viewing Video 2.1 use Slides 2.1 through 2.8 to lead a discussion of the proper use and precautions necessary when using occupant protection devices.</p>	<p>Video 2.1: <i>“Reducing Your Risks in the Crash”</i> (9 minutes 40 seconds)</p> <p>Slides 2.1-2.8 <i>“Safety Restraints”</i></p>

Driver Education Classroom and In-Car Instruction Unit 2-5

Content Outline

Safety Restraints

For most people the term “occupant protection” refers to safety belts, child restraints or driver and passenger side air bags. In the context of this lesson, the term “occupant protection” is much more inclusive, incorporating technological advances in vehicle integrity in the event of a crash and response capability.

Adults and Teens

Safety belt

- Snug lap belt after fastening across hips
- Adjust center post mounting for height if vehicle is so equipped
- Shoulder belt over top of shoulder and across chest to distribute force in event of crash; check frequently for snug fit
- Keep seat back in upright position to avoid sliding out of the seat in frontal crash

Head restraints

- Proper adjustment
- Seat position

Air bags/dash and steering wheel

- No passenger under 12 years of age in front seat
- Protect against head and chest injuries
- Speed of inflation
- Driver should adjust seat for minimum 10-inch clearance between chest and steering wheel
- Raise seat (no power seat - use wedge-shaped cushion), adjust steering wheel downward, if possible, to direct air bag at chest instead of face

Air bags/side impact protection

- Upper door frame
- Seat edge/door panel

Children and Youth

- Children 12 and under are safest riding in the back seat.
- Infants are safest riding in rear facing safety seats until they are at least 12 months old and 20 pounds.
- Children at least 1-year-old, weighing 20-40 pounds, and can no longer ride rearfacing can ride in forward facing child safety seats.
- Children over 40 pounds should be correctly secured in belt positioning boosters or other appropriate child restraints (until around age 8).
- Any seat must be installed and used according to the manufacturer’s Instructions and vehicle owner’s manual.

Driver Education Classroom and In-Car Instruction Unit 2-6

Performance Objectives	Learning Activities	Resources
<p>Students will be able to identify the vehicle operating space.</p>	<p>Use Slides 2.9 and 2.10 and discuss the demonstration of vehicle operation space. Emphasize to the students that objects in this area can be hidden from the view of the driver because of vehicle design.</p> <p>Show Video 2.2 and discuss with the students the demonstration of vehicle operation space.</p>	<p>Slide 2.9 “Vehicle Operating Space”</p> <p>Slide 2.10 “Locating Vehicle Operating Space”</p> <p>Video 2.2 “<i>Demonstration of the Vehicle Operating Spaces</i>” (1 minute 18 seconds)</p>

Driver Education Classroom and In-Car Instruction Unit 2-7

Content Outline

Vehicle Operating Space Demonstration

Two or three students are needed to assist in this exercise. One student is seated behind the wheel of the vehicle. The other students should position themselves close to the vehicle in positions illustrated in the video. Starting at the driver's side door position, ask the student in the car to wave his hand when he can see the shoes of the student outside the car as he walks slowly away. Repeat this process with the other positions around the vehicle. Mark the positions so that a chalk line can be drawn from one point to another. This will indicate an area that is one length of the vehicle to front, two lengths of vehicle to rear and one width of the vehicle to the left and two widths to the right. This space is not visible to the driver.

Driver Education Classroom and In-Car Instruction Unit 2-8

Performance Objectives	Learning Activities	Resources
Students will describe pre-entry checks to be made around the vehicle.	Use Slides 2.11 through 2.12 to introduce pre-entry checks around the vehicle, then show Video 2.3 included and discuss.	Slides 2.11-2.12 "Pre-Entry Checks" Video 2.3 " <i>Pre-Entry Checks</i> " (36 seconds)
Students will describe the pre-drive procedures used after entering the vehicle.	Use Slide 2.13 to introduce preparing to drive, then show Video 2.4 and follow with discussion.	Slide 2.13 "Preparing to Drive" Video 2.4 "Preparing to Drive" (40 seconds)

Driver Education Classroom and In-Car Instruction Unit 2-9

Content Outline

Pre-entry checks include:

1. Check outside of vehicle
2. Check for small children and pets
3. Approach driver's door from front
4. Unlock and enter quickly

Preparing to drive

1. Lock doors
2. Place key in ignition
3. Adjust seat for best control, (top of steering wheel should be no higher than the top of the driver's shoulders). There should be 10" between the driver's body and the bottom of the steering wheel, (use a wedge seat cushion and/or pedal extensions for maximum field of view)
4. Adjust inside and outside mirrors for maximum field of view
5. Fasten and adjust safety belt and make sure all passengers buckle up
6. Adjust head restraints

Driver Education Classroom and In-Car Instruction Unit 2-10

Performance Objectives	Learning Activities	Resources
<p>Students will identify the control and information devices found in a passenger vehicle in preparation for starting the vehicle.</p>	<p>Use Slide 2.14 to identify and lead a class discussion concerning the symbols used in motor vehicles that identify the various control, convenience, safety and communication devices with attention to their safe and proper use.</p> <p>Copy and pass out Worksheet 2.1. Have students identify the symbols during classroom discussion. After reviewing pass out Fact Sheet 2.1</p> <p>Have the students take Worksheet 2.2 and the owner's manual for their family vehicle or that of a friend to compare the control and information devices and symbols included in the dashboard of their vehicle with the one illustrated on the worksheet.</p>	<p>Slide 2.14 "Control and Information Device Symbols"</p> <p>Worksheet 2.1 "Instrument Cluster"</p> <p>Fact Sheet 2.1 "Instrument Cluster Answer Key"</p> <p>Worksheet 2.2 "Safety, Communication, Comfort and Convenience Devices"</p> <p>Several vehicle owners' manuals</p>

Driver Education Classroom and In-Car Instruction Unit 2-11

Content Outline

- Symbols are used to identify the operation and control devices found in motor vehicles
- Students must learn how to operate safely the various safety, communication and control devices found in motor vehicles

Control and Information Device Symbols (Answer Key)

A. Air-bag on/off switch *	U. Hood release
B. Air-bag readiness *	V. Horn
C. Anti-lock brake system*	W. Speed/Cruise Control
D. Antitheft system*	X. Instrument panel dimmer switch
E. Auxiliary power point* (cigarette lighter)	Y. Lighter
F. Battery charging system	Z. Master lighting switch
G. Brake system warning	AA. Overdrive off*
H. Caution possible injury	BB. Parking lights
I. Climate control system	CC. Power side view mirrors *
J. Door lock/unlock	DD. Power windows *
K. Engine oil pressure	EE. Rear window defroster *
L. Engine temperature gauge	FF. Speed/cruise control *
M. Fasten safety belts	GG. Tilt steering wheel *
N. Fog lamps *	HH. Trunk release *
O. 4-Wheel drive low/high *	II. Turn signal indicator
P. Fuel gauge	JJ. Windshield defroster
Q. Fuses	KK. Windshield washer
R. Hazard flashers	LL. Windshield wipers
S. Headlamp control switch	* Optional equipment
T. High beam headlights	

Driver Education Classroom and In-Car Instruction Unit 2-12

Performance Objectives	Learning Activities	Resources
<p>Students will identify and describe the location, function and operation of control, communication, safety and convenience devices in the vehicle.</p>	<p>Use Slides 2.15 through 2.17 and lead a discussion on the safety, communication, comfort and convenience devices.</p> <p>Use Fact Sheets 2.2 through 2.5 as study guides.</p> <p> </p> <p>Included Video: As a summary, show <i>“Teaching Your Teens to Drive”</i> Lessons 1 and 2.</p>	<p>Slides 2.15 through 2.17 “Safety, Communication, Comfort and Convenience Devices”</p> <p>Fact Sheets 2.2 and 2.3 “Operating Vehicle Control Devices”</p> <p>Fact Sheets 2.4 and 2.5 “Safety, Communication, Comfort and Convenience Devices”</p> <p> </p> <p>Included Video: <i>“Teaching Your Teens to Drive”</i> Lessons 1 and 2 (13 minutes)</p>

Driver Education Classroom and In-Car Instruction Unit 2-13

Content Outline

It is important that students know the location, purpose and operation of the various controls, safety, comfort and convenience devices when driving a motor vehicle. However, it is essential that they understand the increased risk associated with directing their attention to a task other than driving, i.e., talking on a cell phone, talking to friends in the car or tuning a radio. Any of these activities tend to lower one's level of alertness directed to driving and typically have an adverse effect on steering. (This is also discussed in Unit 10.)

Safety, communication, comfort and convenience devices

- Mirrors
- Safety belts
- Head restraint
- Horn
- Turn signals
- Door locks
- Hazard flasher
- Windshield wipers & washers
- Headlights
- Hood release
- Trunk release
- Heater, defroster, and air conditioner
- Seat adjustment controls

Operating vehicle control devices

- Steering
- Steering wheel adjustment
- Gear selector lever
- Parking brake
- Cruise/Speed control
- Ignition switch
- Accelerator pedal
- Brake pedal

Driver Education Classroom and In-Car Instruction Unit 2-14

Performance Objectives	Learning Activities	Resources
<p>Students will demonstrate knowledge of enhanced mirror settings by comparing traditional mirror settings to enhanced mirror settings.</p>	<p>Use Slides 2.18 and 2.19 and discuss the basic risk reduction principles of controlling the space to the rear by comparing traditional mirror setting to enhanced mirror settings.</p> <p>Also see Fact Sheet 2.6 for reference.</p>	<p>Slide 2.18 “Traditional Mirror Settings”</p> <p>Slide 2.19 “Enhanced Mirror Settings”</p> <p>Fact Sheet 2.6 “Mirror Usage”</p>

Driver Education Classroom and In-Car Instruction Unit 2-15

Content Outline

Traditional Mirror Settings

- Outside mirrors are set so that the back edge of the vehicle can be seen
- Limits driver's visibility to the sides of vehicle

Enhanced Mirror Settings

Advantages:

- Turning to look can be uncomfortable and unsafe in multiple lanes
- Very brief look to mirror takes less time than turning head to side
- Glancing in mirror leaves forward visual area in peripheral vision
- Mirror blind zones can be incorporated in searching process
- Night glare is eliminated until vehicle moves into mirror blind zone

Settings:

- Inside mirror becomes primary mirror for view to the rear
- Place head against window to the left, set left side mirror to see a small portion of your vehicle which is about 15 degrees to outside of vehicle
- Place head to center of vehicle and set right side mirror to see small portion of the

Driver Education Classroom and In-Car Instruction Unit 2-16

Performance Objectives	Learning Activities	Resources
Students will demonstrate knowledge of procedural steps for basic vehicle maneuvering.	Use Slide 2.20 “Starting Tasks” to lead a group discussion to explain starting procedures, then show Video 2.5 and discuss.	Slide 2.20 “Starting Tasks” Video 2.5 “ <i>Starting Tasks</i> ” (17 seconds)
	Use Worksheet 2.3 “Basic Maneuvering Tasks” as a worksheet resource during the session or as an activity sheet.	Worksheet 2.3 “Basic Maneuvering Tasks”

Driver Education Classroom and In-Car Instruction Unit 2-17

Content Outline

Starting Tasks

Procedure Activity

Preparing to Drive

1. Lock doors
2. Place key in ignition
3. Adjust seat for best control (Top of steering wheel should be no higher than the top of the driver's shoulders.) There should be at least 10" between the driver's body and the bottom of the steering wheel. (Use a wedge seat cushion, and/or pedal extensions for maximum field of view.)
4. Adjust inside and outside mirrors for maximum field of view
5. Fasten and adjust safety belt and make sure all passengers buckle up
6. Adjust head restraints

Starting the Engine

1. Check to be sure parking brake is set
2. Place foot on brake
3. Check selector lever for park position
4. Turn ignition on and check gauges; then start engine
5. Turn on low beam headlights
6. Allow engine to idle no more than 15 to 20 seconds (observe gauges while waiting)

Driver Education Classroom and In-Car Instruction Unit 2-18

Performance Objectives	Learning Activities	Resources
<p>Students will be able to identify the different styles of steering a vehicle.</p>	<p>Use Slide 2.21 to explain to the students the proper way to hold a steering wheel and steer. Emphasize that holding a steering wheel in a lower hand position will give the driver better control and reduce the risk of injury if the airbag should deploy.</p> <p>After discussing the proper hand position on a steering wheel, show Video 2.6 and discuss the push/pull method of steering vs. hand-over-hand steering. Emphasis that hand-over-hand steering is used mainly when doing parking exercises and for rear wheel traction loss control, (vehicle oversteer).</p>	<p>Slide 2.21 “Steering Wheel Control”</p> <p>Video 2.6 “<i>Push/Pull Steering and Hand to Hand Steering</i>”</p>

Driver Education Classroom and In-Car Instruction Unit 2-19

Content Outline

Steering Wheel Control

Hand position

Placing the hands at shoulder height (the left hand between 9 and 10 o'clock and the right hand between 2 and 3 o'clock) allows for balanced shoulder strength to control the wheel. Placing the left hand between 7 and 9 o'clock and the right hand between 3 and 5 o'clock with the upper arms resting against the rib cage also improves stability by lowering the body's center of gravity and reduces unintended steering wheel reversals. Because it is a more natural seating position, it also facilitates keeping both hands on the wheel and reduces upper and lower back pain often associated with trip driving. The driver's grip of the steering wheel should be firm but gentle. Grip the steering wheel by the outside rim. For greater sensitivity to information communicated by the vehicle, use fingers instead of palms of hands and keep thumbs up along the face of the steering wheel. Never turn the wheel while gripping it from the inside of the rim, hand facing outward.

Hand to hand steering

Sometimes referred to as push/pull steering this should not be confused with shuffle steering. Hand-to-hand steering permits the driver to make steering inputs ranging from very minor (one to two degrees) to gross adjustments (up to a half turn of the wheel), while keeping both hands on the wheel for precision adjustments. If turning through a slight curve, both hands will typically retain their original grip on the wheel, making only slight finger or wrist adjustments as necessary to maintain path of travel. However, when moving through a turn, the hands may move up to 165 degrees (neither hand moves beyond the 6 or 12 o'clock positions). Depending on whether the driver initiates the turn by pulling the wheel down from the 3 or 9 o'clock position toward 6 o'clock, or pushing the wheel up from the 5 or 7 o'clock position toward 12 o'clock, the opposite hand slides up or down as appropriate to provide additional input or to stabilize steering. The process is reversed to return to a straight path. The wheel is not allowed to slip through the fingers to straighten when coming out of a turn and both hands are always on the wheel to make adjustments as necessary. Hand to hand steering is particularly well suited for precision maneuvers, steering through curves, intersection entry and exit, and front wheel traction loss control (vehicle understeer).

Driver Education Classroom and In-Car Instruction Unit 2-20

Performance Objectives	Learning Activities	Resources
<p>Students will be able to identify the different styles of steering a vehicle. (continued)</p>		
<p>Students will demonstrate knowledge of procedural steps for basic vehicle maneuvering (continued).</p>	<p>Use Worksheet 2.3 as a worksheet resource during the session or as an activity sheet continues.</p>	<p>Worksheet 2.3 “Basic Maneuvering Tasks”</p>
	<p>Use Slide 2.22 to lead a group discussion explaining proper-procedures for entering a roadway from a curb. Then show Video 2.7 and discuss.</p>	<p>Slide 2.22 “Entering a Roadway From a Curb” Video 2.7 “<i>Entering a Roadway from a Curb</i>” (11 seconds)</p>

Driver Education Classroom and In-Car Instruction Unit 2-21

Content Outline

Hand over hand steering

Hand over hand steering is particularly well suited when speed of the steering movement is critical, such as skid recovery in a rear wheel traction loss (vehicle over-steer). When used to control or recover from a skid, it is important to hold the wheel in a pattern that allows the driver to use the upper left third of the wheel when steering to the left and the upper right third when steering right. This procedure allows for maximum movement of the wheel with knowledge of its neutral position. Hand-over-hand steering is also useful when maneuvering in a space with limited sightlines, such as perpendicular parking in a congested shopping center. When using hand-over-hand steering, quick movements of the hands are recommended on entry to the parking maneuver, with smooth slow movements when returning the wheel upon completion of the parking maneuver. Drivers should be aware that employing hand-over-hand steering under all conditions does expose one to some additional risk of injury to arms, hands, and/or face in the event of a crash that results in air bag inflation. Use of hand-over-hand as the primary steering technique also raises the risk of off-road crash occurrences.

Moving the vehicle forward

1. With foot on brake, shift to drive “D”
2. Release parking brake
3. Check mirrors and over shoulder for traffic
4. Signal when clear
5. When safe, release brake pedal and press gently on the accelerator
6. Look well ahead along your intended path of travel
7. Position hands on steering wheel. Left between 7-9 and right hand between 3-5 o'clock
8. Steer as needed to place vehicle in proper lane
9. Cancel signal

Driver Education Classroom and In-Car Instruction Unit 2-22

Performance Objectives	Learning Activities	Resources
Students will demonstrate knowledge of procedural steps for basic vehicle maneuvering (continued).	Use Slide 2.23 and explain the proper procedures for moving to curb/side of road, then show Video 2.8 and discuss. Use Worksheet 2.3 as a worksheet resource during the session or as an activity sheet.	Slide 2.23 "Moving to Curb/Side of Road" Video 2.8 " <i>Moving to Curb/Side of Road</i> " (18 seconds) Worksheet 2.3 "Basic Maneuvering Tasks"

Driver Education Classroom and In-Car Instruction Unit 2-23

Content Outline

Moving to Curb/Side of Road

Stopping at a curb

1. Identify place to park
2. Check mirrors
3. Signal
4. Release accelerator
5. Tap brake pedal to alert following drivers
6. Press brake pedal to point of resistance
7. Steer gently toward curb
8. Apply firm, steady pressure for smooth stops. Do not pump brakes.

Driver Education Classroom and In-Car Instruction Unit 2-25

Content Outline

Backing Procedures

Backing Straight:

1. Prior to moving vehicle, check for objects to the rear
2. Place foot on brake pedal and shift to reverse
3. Grasp steering wheel at 12 o'clock with left hand
4. Turn body to right with right arm over back of seat
5. Search through rear window and then glance forward
6. Move backward at idle speed, or use light accelerator pedal pressure if needed
7. Make minor steering corrections as needed
8. Release accelerator and apply pressure on brake pedal to stop
9. Look to rear until vehicle is stopped

Backing and Turning:

1. Prior to moving vehicle, check for objects to the rear
2. Place foot on brake pedal and shift to reverse
3. Grasp steering wheel with both hands
4. Turn body in direction of turn
5. Search through rear side window in direction of turn
6. Move backward at idle speed, or light accelerator pedal pressure if needed
7. Steer smoothly in direction vehicle is to move
8. Make quick checks to front, side opposite of turn
9. Release accelerator and apply pressure on brake pedal to stop
10. Look to rear until vehicle is stopped

Driver Education Classroom and In-Car Instruction Unit 2-27

Content Outline

Securing the Vehicle for Parking

1. Make sure the vehicle has stopped moving
2. Set parking brake
3. Shift selector lever to park
4. Turn off headlights if no daytime running lights (DRL's)
5. Turn ignition to lock and remove key
6. Check traffic to rear, exit vehicle, and lock doors

Driver Education Classroom and In-Car Instruction Unit 2-29

Content Outline

Roadway Signs

Signs are specific sizes, shapes and colors so they can be easily identified at long distances. Signs can be placed into three separate categories: regulatory, warning and guide. Regulatory signs tell the driver about specific laws that a driver must obey. These signs are usually rectangle in shape and have a color pattern of red/white, white/black or red/white/black. Warning signs tell a driver of possible danger that might be ahead. These signs are mostly diamond shape and have a yellow/black color pattern. Some warning signs such as school zones, school crossing and pedestrians crossings may be fluorescent optic yellow. Construction zone signs are orange in color and may be rectangle or diamond in shape. Construction zone signs alert drivers to construction zones ahead. Guide signs can come in a variety of shapes and colors. Green signs give information on miles, route markers and destinations. Brown signs mark cultural points of interest and recreational areas. Blue signs provide information on hospital, police, fuel, food, and lodging.

Colors of signs

- Red - prohibitive or stop
- Blue - motorist services signs
- Green - guide information, such as direction or guidance signs
- Yellow - general warning
- Orange - construction and maintenance work
- White - regulatory signs
- Brown - recreational and cultural interest
- Fluorescent Optic Yellow - school zones, school crossings and pedestrian crossings
- Black - regulatory sign

Driver Education Classroom and In-Car Instruction Unit 2-30

Performance Objectives	Learning Activities	Resources
<p>Students will be able to identify pavement marking and traffic signals.</p>	<p>Use Slides 2.32 through 2.34 and lead a discussion on the different styles of pavement markings and their meanings.</p>	<p>Slides 2.32 through 2.34 “Pavement Markings”</p>
	<p>Use Slide 2.35 and discuss the various traffic signals found on roadways.</p>	<p>Slide 2.35 “Traffic Signals”</p>
	<p>Emphasize to the students the importance of obeying a traffic control officer.</p>	
	<p>Use Worksheets 2.4 through 2.7 as a worksheet resource to review the types of roadway markings and traffic signals.</p>	<p>Worksheets 2.4-2.6 “Signs, Symbols and Pavement Markings” Worksheet 2.7 “Traffic Signals”</p>

Driver Education Classroom and In-Car Instruction Unit 2-31

Content Outline

Pavement Markings

Pavement markings are usually lines, arrows or words painted yellow or white on the roadway to give a driver directions or warnings.

Pavement markings - yellow lines

Solid yellow center lines indicate two-way traffic with no passing allowed. Always keep to the right of the yellow line. Broken yellow center line means passing is permitted in either direction. Passing should only be done when way ahead is clear and sightlines are not obstructed. Broken yellow lines alongside a solid yellow line means passing is permitted on the side with the broken line. Passing is not permitted on the side with the solid line. Double solid yellow lines means passing is not permitted in either direction but crossing the lines is permitted when making a left turn. Solid yellow lines also mark the left edge on divided highways and one-way roads.

Pavement markings - white lines and arrows

White lines separate lanes of traffic going in the same direction. Broken white lines may be crossed with caution. Solid white lines designate turn lanes and prevent lane changes near intersections. Solid white lines mark the right edge of the roadway. Stop lines, crosswalks and parking spaces are marked by white lines. White arrows on the roadway indicate which way traffic is flowing and can also indicate which turns may be made from lanes.

Traffic signals

Steady red indicates moving traffic shall stop and remain stopped as long as the signal is red, except for traffic moving in the direction indicated by a green arrow. **Green** indicates traffic shall move in the direction of the signal but should yield to other vehicles and pedestrians in the intersection. **Steady yellow** indicates a change is about to occur in the direction of the moving traffic. **Flashing red** indicates traffic shall stop before entering the intersection and yield to other vehicles and pedestrians before proceeding. **Flashing yellow** indicates a need to slow down and proceed with caution.

Driver Education Classroom and In-Car Instruction Unit 2-32

Performance Objectives	Learning Activities	Resources
<p>Students will describe the actions required of a driver in response to directions of a police officer, traffic signs, signals and markings.</p>	<p>Use Slide 2.36 to lead a discussion of the purpose of traffic laws.</p> <p>Use copies of the appropriate sections of the state's vehicle code to explain laws.</p> <p>Make reading assignments for the next unit.</p>	<p>Slide 2.36 "Your State's Vehicle Law"</p> <p>Fact Sheet 2.7 "Your State's Vehicle Law"</p> <p>Your state's driver's handbook</p> <p><u>Drive Right</u> Ch. 4 <u>How to Drive</u> Ch. 8, 9, 10 <u>Handbook Plus</u> Ch. 4 <u>Responsible Driving</u> Ch. 2,10</p>
<p>Students will complete the Unit 2 Test.</p>	<p>Distribute, collect and grade the Unit 2 Test.</p>	<p>Test Included</p>

Driver Education Classroom and In-Car Instruction Unit 2-33

Content Outline

During this session, the discussion of traffic laws, signs, signals and markings will be limited to those which, in the normal course of events, would likely be encountered during the first one or two hours of in-car instruction.

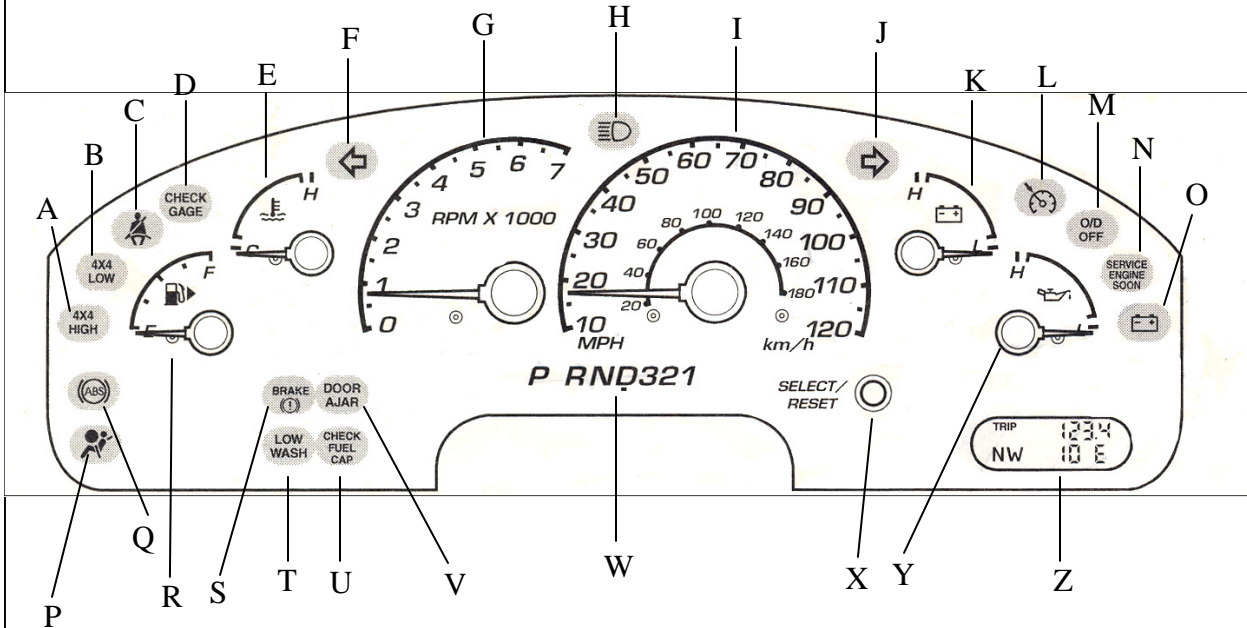
It is critical that the student better understand that the purpose of traffic laws is to enable highway users to better predict what other users are going to do. Deliberate or inadvertent failure to follow the rules lessens one's ability to predict actions and increases the chance of a collision.

Review state's vehicle law with students. Put emphasis on obeying traffic control devices and police officers.

Driver Education Classroom and In-Car Instruction Unit 2-34

Fact Sheet

2.1



- | | |
|---|--|
| <ul style="list-style-type: none"> A. 4WD High B. 4WD Low C. Safety Belt D. Check Gauge E. Temperature Gauge F. Left Turn Indicator G. Tachometer H. Headlight Beam Indicator I. Speedometer MPH/km/h J. Right Turn Indicator K. Battery Voltage Gauge L. Cruise Control M. Overdrive On/Off | <ul style="list-style-type: none"> N. Service Engine Soon O. Battery Warning Light P. Airbag Q. Anti-lock Brake System R. Fuel Gauge S. Brake T. Windshield Washer Fluid U. Check Fuel Cap V. Door Ajar W. Gear Selection Indicator X. Select/Reset Odometer Y. Oil Pressure Gauge Z. Trip Odometer |
|---|--|

Operating Vehicle Control Devices

Regardless of whether the driver's hands grip the wheel in a balanced position on the upper or lower half of the wheel, before one hand releases the wheel to adjust any information, comfort or control device, the hand not performing the action should be moved to the 7-8 or 4-5 o'clock position. It is critical to remember that when operating any vehicle control, comfort, or communication device that the driver's attention must not be diverted from the path of travel for more than an instant. Controls perform the same function in each vehicle. However, location and characteristics vary from one type of vehicle to another.

Steering — The steering wheel is always turned in the direction the driver wants the vehicle to move, whether moving forward or in reverse. However, the amount of steering input and energy needed will vary according to the type of steering, whether movement is to the front or rear, number of turns lock to lock, power assist and speed of travel.

Steering wheel adjustment — In some vehicles the angle of the steering wheel is controlled by a lever located on the left or right side of the steering column. Other vehicles permit the driver to change the angle of the steering wheel by adjusting the steering column. An adjustment lever located on the bottom side of the steering column, permits the driver to raise or lower the steering column to achieve a better steering wheel angle. When the driver is properly seated, the top of the steering wheel should be no higher than the top of the driver's shoulder.

Gear selector — In a vehicle with an automatic transmission, the gear selector is located either on the steering column or on a console located between the front seats. In a vehicle with a manual transmission, the gear selector is located on the center console, on the floor to the right of the driver, or in older vehicles on the right side of the steering column.

Parking brake — This brake is sometimes mistakenly referred to as an emergency brake. The primary purpose of the parking brake is to hold a vehicle in place when it is parked and to protect the transmission. The parking brake may be either a foot operated pedal located to the far left side of the driver's position, a hand-operated lever located to the right of the steering column or to the right of the driver on the floor or center console. To set a foot-operated parking brake, push down firmly on the pedal. Depending on the vehicle, one of two methods is used to release the brake. In some vehicles push down on the pedal until a click is heard and then release the pedal. In other vehicles a brake release lever is located above the foot pedal on the under side of the dashboard. To set a floor or console mounted parking brake simply pull back firmly on the lever. To release the brake, press down the button located on the top of the lever with your thumb and lower the lever.

Operating Vehicle Control Devices

Cruise/speed control - This device allows a driver to select and travel at a set speed without having to keep his/her foot on the accelerator. The controls are located either on the steering wheel or a stem on the left side of the steering column. The control options are: on/off, set/accelerate, coast and resume. Speed control can be cancelled at any time by pressing the brake pedal or touching the off switch.

Ignition switch - This switch locks the steering wheel gear selector and enables the driver to start and turn off the engine or use the radio. It is located on the right side of the steering column near the dashboard or in the dashboard on some vehicles.

Accelerator pedal - This foot-operated pedal is suspended from the firewall on the right side of the driver's position. Speed is controlled by adjusting pressure on the pedal.

Brake pedal - The brake pedal is located to the left of the accelerator. The driver slows the vehicle by applying downward pressure. How much and how rapidly the vehicle slows is determined by how much pressure the driver applies to the brake pedal and the friction between the tires and road surface.

Driver Education Classroom and In-Car Instruction Unit 2-37

Fact Sheet

2.4

Safety, Communication, Comfort and Convenience Devices

Mirrors - Adjustment of the mirrors can be done inside and outside in vehicles equipped with remote controlled outside mirrors. These controls may be located on the left side of the dash, the driver's side arm rest, or center console. However, no matter how the mirrors are adjusted, there are areas that cannot be seen and require that drivers turn their heads to check prior to making a move to the left or right.

Safety belts - While safety belts protect occupants in a crash, they serve an equally important role of keeping the driver firmly in place behind the steering wheel, allowing better control of the vehicle. For maximum protection, the safety belt should be positioned as low on the hips as possible. After fastening the belt, grasp the shoulder belt and pull upward to take up the slack in the belt across hips. Make sure that all passengers do the same.

Head restraint - All new vehicles are equipped with head restraints to help reduce whip-lash injuries when struck from the rear. Some vehicles are equipped with head restraints that can be adjusted up or down to position the restraint behind the middle of the occupants head. Other vehicles are equipped with head restraints that are built into the top of the seat and cannot be adjusted.

Horn - The horn is generally operated by pressing a button located on a steering wheel cross bar, or on the pad on the lower half of the steering wheel above or below the air bag cover.

Turn signal lever - Located on the left side of the steering column, the lever is moved up to signal a movement to the right and down for a movement to the left. While the signal will cancel after a turn, the driver may have to cancel the signal manually after a slight turn such as a lane change.

Door locks - In vehicles equipped with manual locks, each door has its own locking device. An additional master control is usually located on the driver side arm rest in vehicles with electric door locks. Child safe rear door locks are an option.

Hazard flasher - The purpose of the hazard flashers is to warn other drivers of a problem and to increase their awareness of the presence of the vehicle. The switch for the lights is usually located on the top or right side of the steering column or on the dash. When operated, both front and rear turn signal lights flash.

Windshield wipers and washers - This control is frequently located on the turn signal lever. Two switches are often involved. One controls the speed of the wipers and a second controls the washer fluid.

Driver Education Classroom and In-Car Instruction Unit 2-38

Fact Sheet

2.5

Safety, Communication, Comfort and Convenience Devices

Headlights - This switch may be located on the left side of the instrument panel, on the same lever as the turn signal or on a separate lever located on the right side of the steering column. The switch controls the headlights, parking lights, taillights, side marker lights and license plate lights. In many vehicles, a separate switch controls instrument panel and dome lights.

Hood release - This lever is usually located on the left side of the driver's compartment under the instrument panel. In some vehicles it is located under, or just to the right of the steering column. To open the hood, a second latch located in the front of the vehicle must be released.

Trunk release - An option on many vehicles, the release may be a lever located on the floor just to the left of the driver's seat. In other vehicles the release mechanism is a button located in the glove box.

Heater, defroster and air conditioner - These control switches are located in a cluster on the instrument panel. Some vehicles have a separate switch located on the instrument panel that operates a rear window defroster.

Seat adjustment controls - If manually controlled, the adjustment lever to move the seat forward or backward is typically located at the lower front or right side of the driver's seat. A second lever or knob is located on the left side of the seat in some vehicles, allowing the driver to change the angle of the seat back. In vehicles with electric power seats, the controls are usually located on the lower left side of the driver's seat, or in a control cluster located on the driver's side arm rest.

Mirror Usage

Mirror usage - Any time speed or position adjustments are necessary, location, size and speed of any vehicles to the sides and/or rear must be considered. It is equally important to remember that while a vehicle is in motion, mirror usage is intended to assist in detection and not in gathering detail. As indicated previously, drivers cannot afford to divert attention from the path ahead for more than a second at a time. Three quick mirror checks can answer the following questions: Are there vehicles present? If yes, where are they located? If yes, what is the size and relative speed?

When stopping - Anytime a driver prepares to stop, eyes should go to the rear view mirror. Flash the brake lights to alert any following driver. Direct attention to the rear view mirror until two cars or a truck have stopped behind the vehicle. A quick check of the mirror and allowance for extra space ahead increases the ability to steer out of the lane if it becomes apparent that a vehicle closing from the rear is traveling too fast to stop in time.

Mirror usage when turning - When a turn is anticipated, mirrors should be checked before any change of speed or position is made to enable assessment and control of rear and side space. An assessment of space to the rear should be made as soon as the turn is completed and the space to the front has been reassessed.

Checking mirror blind areas - Regular side view mirrors, even when angled out an additional 12 to 16 degrees, do not provide sufficient information to safely make a movement to the side without first making a mirror blind spot check. A mirror blind spot check involves making a quick eye movement to the left or right in the direction of intended vehicle movement. A partial solution to the problem of restricted vision to the left and right is the use of convex mirrors such as those found on the right outside of newer model cars. Due to their rounded surface, convex mirrors provide a much wider view. A problem associated with such mirrors, however, is that objects are much closer than they appear to be when viewed in the mirror.

Driver Education Classroom and In-Car Instruction Unit 2-40

Fact Sheet

2.7

Your State's Vehicle Laws

Provide information about state's vehicle laws as they apply to this unit.

Driver Education Classroom and In-Car Instruction Unit 2-41

Worksheet

2.1

Name: _____

Date: _____

Instrument Cluster

Instrument panel gauges labeling guide

Identify instruments and gauges on the instrument panel of your family car or that of a friend and list below.

The diagram shows an instrument cluster with the following labeled components:

- A:** 4x4 LOW indicator
- B:** 4x4 HIGH indicator
- C:** CHECK GAGE indicator
- D:** Fuel gauge
- E:** Temperature gauge
- F:** Tachometer (RPM X 1000)
- G:** Speedometer (MPH and km/h)
- H:** Headlight indicator
- I:** Odometer/Service Engine Soon indicator
- J:** Trip meter
- K:** ABS indicator
- L:** Brake indicator
- M:** Door Ajar indicator
- N:** Low Wash indicator
- O:** Check Fuel Cap indicator
- P:** Gear selector (P, R, N, D, 3, 2, 1)
- Q:** ABS indicator
- R:** Brake indicator
- S:** Door Ajar indicator
- T:** Low Wash indicator
- U:** Check Fuel Cap indicator
- V:** Gear selector (P, R, N, D, 3, 2, 1)
- W:** Gear selector (P, R, N, D, 3, 2, 1)
- X:** SELECT/RESET button
- Y:** Trip meter
- Z:** Trip meter

A	J	S
B	K	T
C	L	U
D	M	V
E	N	W
F	O	X
G	P	Y
H	Q	Z
I	R	

Driver Education Classroom and In-Car Instruction Unit 2-42

Worksheet

2.2

Name:

Date:

Safety, Communication, Comfort and Convenience Devices

Use this worksheet to determine whether your family's or friend's vehicle is equipped with the following Safety , Communication, Comfort and Convenience devices and if so equipped, where the control levers, switches or buttons are located.

Equipped	Yes/No	Location of control lever or switch
Tilt steering wheel		
Automatic transmission		
Manual transmission		
Parking brake		
Cruise control		
Mirror controls		
Hazard flasher		
Headlights		
Instrument panel light switch		
Hood release		
Trunk release		
Seat control manual		
Seat control electric		
Separate turn indicator lever		
Washer/wiper switch		
Air bag cut off		
Electric door locks		
Childproof rear door locks		

Driver Education Classroom and In-Car Instruction Unit 2-43

Worksheet

2.3

Name: _____

Date: _____

Pre-Drive and Basic Maneuvering Tasks

List five pre-drive tasks

1. _____
2. _____
3. _____
4. _____
5. _____

List four adjustments

1. _____
2. _____
3. _____
4. _____

List seven starting tasks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

List seven entering s roadway from a curb tasks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

List eight moving to the side/curb tasks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

List eight securing tasks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

List ten backing tasks

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Driver Education Classroom and In-Car Instruction Unit 2-44

Worksheet

2.4

Name:

Date:

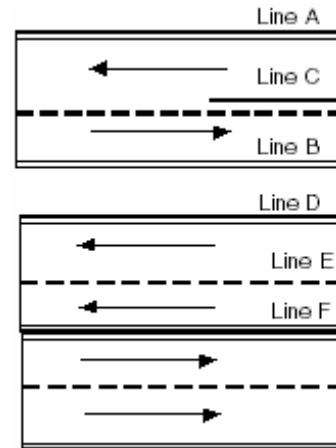
Signs, Symbols, and Pavement Markings

1. In the space to the right, draw or describe the symbol which prohibits some type of action. For example, "No U turn."
2. a) On the line below each of the diagrams, place a 1 if it is a regulatory sign, 2 if it is a warning sign, or a 3 if it is a guide or informational sign.
b) Complete the diagrams with a message of how that sign might read along a road and list the color on the line below.



3. Using the diagrams on the right, give the color and purpose of each line marked with a letter.

- A. color _____
purpose _____
- B. color _____
purpose _____
- C. color _____
purpose _____
- D. color _____
purpose _____
- E. color _____
purpose _____
- F. color _____
purpose _____



Driver Education Classroom and In-Car Instruction Unit 2-45

Worksheet

2.5

Name:

Date:

Signs, Symbols, and Pavement Markings

4. What color are stop lines? _____
5. What color are crosswalk lines? _____
6. For each color listed below, write its major classification: Warning, Regulatory/Prohibiting (Reg/Pro), Guide. Give an example of each.

	Classification	Example
White		
Yellow		
Green		
Brown		
Red		
Orange		
Blue		

Driver Education Classroom and In-Car Instruction Unit 2-46

Worksheet













2.6

Name: _____

Date: _____

Signs, Symbols, and Pavement Markings

7. Match each of the following traffic signs with its meaning.

1		Bicycle crossing			
2		No left turn	A	B	C
3		Slippery when wet			
4		Divided highway	D	E	F
5		Lane ends			
6		No parking	G	H	I
7		Railroad ahead			
8		Steep hill ahead	J	K	L
9		Construction zone			
10		Do not enter			
11		Lane added			
12		Signal ahead			

Driver Education Classroom and In-Car Instruction Unit 2-47

Worksheet

2.7

Name: _____

Date: _____

Traffic Signals

If you wish, color in each of the lights appropriately according to directions.

1. On the lines below write the 3 colors and meanings of lights on a traffic signal.



2. What is the arrangement of the lights if the light is placed like this? Write colors for each light on the lines in the same order as the lights.



--	--	--

3. Why are the lights in traffic signals always in order? _____

4. What do these traffic lights mean?

Flashing yellow: _____



Flashing red: _____



5. For the following signs and signals, mark or color the information needed to make them correspond to the given statement.



All traffic stop except those turning left



You may go straight or have a protected left turn



All traffic stop except those going right



Clear the intersection



Proceed straight ahead only



Do not travel in this lane



Travel in this lane permitted