

# Lesson 7

## OBJECTIVES for LESSON Seven

- This lesson presents life-saving behavioral patterns to help a teen avoid the major cause of single vehicle fatalities: when a teen drives with excessive speed into a curve and loses control of the vehicle. No other vehicle is involved. The teen makes a wrong decision that cannot be undone.
- This lesson helps the teen respond effectively to laws, signs, signals and marking, and to learn what makes speed excessive on an approach to a curve. The teen learns how to reduce speed while there is still adequate time before entering the curve to maintain car control. Use of vision, lane positioning and speed control are practiced.
- This lesson provides practice in how to keep 4 seconds of following time. With four seconds of following time the teen will have control over the actions the vehicle ahead takes and eliminate being surprised and victimized by it.
- Teen drivers have a tendency to get distracted easily. When a teen is distracted, and the car ahead makes a sudden braking action, it is a combination for disaster. Keeping four seconds of space is essential for any driver, especially a teen. And, it provides time to make very valuable adjustments.
- The use of Practice Commentary demonstrates the ability to use the ABC steps of Zone Control to identify and solve LOS-POT problems. The teen should acquire familiarization with the practice commentary in order to be proficient in practicing the ABC steps without the use of the guide from this lesson.

## THE DRIVING SETTING

Use residential roadways, rural two and four lanes, urban areas, and State highways with two to six lanes of traffic.

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## Key Behavioral Pattern Applications

### Respond to stop/yield signs

There are two behaviors at a stop sign: to come to a complete stop and to effectively search to be certain the intersection will be clear before entering.

### Respond to traffic signals

- **Point-Of-No-Return** While approaching a green light, be prepared for the light to change to yellow. The point of no return is that point at which you are not able to stop without entering the intersection (two seconds away).
- **Yellow Changing Lights** The purpose of a yellow light is to clear the intersection. By knowing where your point of no return is, you'll be able to make your best decision as you see the light changing.
- **Green Lt, Search Intersection** Do not expect that a green light will prevent other drivers from coming into your path. Always search the left, front and right zones before entering an intersection.

### Demonstrate right of way laws

- Must yield to pedestrians at all times, especially when a pedestrian is at or in the crosswalk with no traffic light.
- When turning left, you must yield to oncoming traffic.
- Drivers on a minor road yield to vehicles on a main road.
- On two equal roads, drivers coming from the left must yield to vehicles coming at the same time from the right.
- At at 4-way stop sign, the driver reaching the intersection first gets to go first. When arrival is equal, the driver on the left yields to car on right.

### Respond to pavement markings

**Yellow lines** separate opposite traffic flows.  
**White lines** separate traffic moving in the same direction.  
**Solid lines** generally mean you should not cross.  
**Broken lines** mean it is permissible to cross.

### See and respond to curves in target areas

The initial detection of a curve is seen in your target area.

### Test Tire-Road Grip

Before entering the curve when roads are wet from rain, dew, snow, ice, apply the brakes to test the tire-road grip. If the tires slide, reduce speed before entering the curve.

### Look for Oncoming Traffic-Get Best Lane Position

Become aware of the positioning of oncoming traffic. If there are no oncoming vehicles, the **approach into a right curve** could be lane position two. If there is oncoming traffic, take lane position one. **For a left curve**, if the right-front zone is open the approach begins in lane position three. If closed, take lane position one.

### Look Into Curve - See 4 Seconds of Road

Look into the curve by turning your head before you turn the steering wheel. If you cannot see at least four seconds of road while entering the curve, your speed is too fast. Reduce speed immediately. If speed reduction is needed do it before getting to the apex. Attempt to see if your exiting path is open. For right or left curves, exit in lane position one.

### Evaluate POT at hillcrest--Be Curious!

Approach a hillcrest in lane position one. Search over the crest to see if you have an open POT. Look for the option of moving into lane position three if there is a problem caused by oncoming traffic in the left-front zone.

### Adjust Closure Rate to front vehicle

Closure rate is how fast you gain on the car in front. When you find yourself gaining on the car ahead, evaluate why.

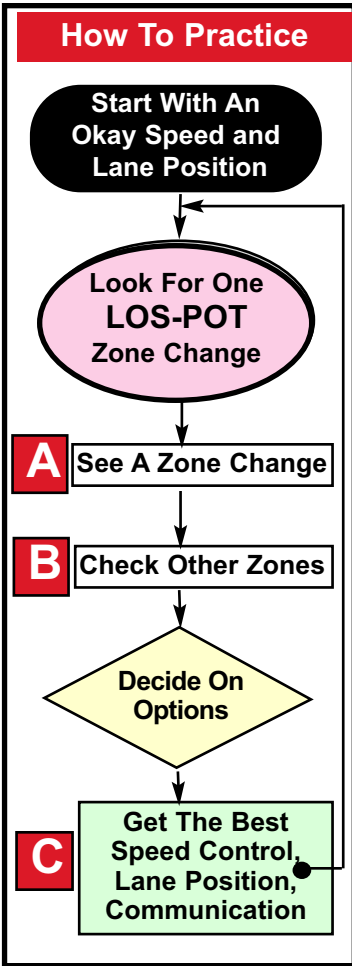
### Keep four seconds of time

When traveling behind another vehicle, try to keep at least four seconds of separation space. This will give you independence from the actions of the vehicles ahead.

### Use practice commentary effectively

- A. Verbalize when you Find one LOS-POT blockage.
- B. State the condition of the Other Zones you check.
- C. Then, take actions. Practice for ten minutes at a time.

Rating: √ = Okay, X = More Practice Needed



**NOTES**

**24: Laws, Signs, Signals & Marks**

- 1. Respond To Stop/Yield Signs
- 2. Respond To Signal Lights
  - Point Of No Return
  - Red Light & Right Turn On Red
  - Yellow Changing Lights
  - Green Light, Search Inter
- 3. Signal Arrows: Gr, Yel, Red
- 4. Flashing Signal Lights
- 5. Respond to Traffic Signs
  - Regulatory Signs
  - Warning Signs
  - See Sign As Traffic Cue
- 6. Respond To Pave Markings
  - Check Rear Zone
  - Check LOS-POT
  - Check Escape Path
- 7. Demo Right-of-Way Laws

**25: Approaching Curves and Hills**

- 1. See Curve In Target Area
- 2. Check Rear Zone
- 3. Test Tire-Road Grip
- 4. See A Left or Right Curve
- 5. See 4 Seconds of Road
- 6. Get Best Speed Control
- 7. Look For Cars/Get LP
- 8. See LOS-POT at Apex
- 9. Look Into Curve For POT
- 10. Evaluate New Target Area
- 11. Evaluate Targeting Path
- 12. Hill Approach LP 1
- 13. At Hillcrest, Evaluate POT
- 14. Hillcrest LP 1

**26: Separation from Others**

- 1. Adjust Front Closure Rate
- 2. Become Alert Slower Vehicle
- 3. Keep 4 Seconds Of Time
- 4. Try To Improve LOS
- 5. Read Traffic 12 Seconds Ahead
- 6. Control The Rear Zone
- 7. Respond To Communications
- 8. When Front Car Slows
- 9. Explain Benefits

**27: Practice Commentary**

- 1. Start With An Okay:
  - Speed For Conditions
  - Lane Position
- 2. Look For One LOS-POT
- 3. Use The ABC's For One LOS-POT
  - A. See an LOS-POT Zone Ch
  - B. Check The Other Zones
  - C. Get The Best:
    - Speed Control
    - Lane Position
    - Communication
- 4. Repeat The ABC's
  - Commentary Practice effective
- 5. Practice For 10-20 Minutes
  - Successful results achieved



**Key Behavioral Patterns**

- Responds to Signs, Markings
- CONTROLS 4 sec Danger Zone
- Applies Right Of Way laws
- Looks into Curves/Hill crests
- FINDS Curves in Target Area
- 4 Seconds Separation Space
- Evaluates Traction Envelope
- Adjusts Closure Rate
- Gets Best LP, Speed Control
- CONTROLS Rear Zone

# Lesson 7: Student-Centered In-Car Activities

**Guide 24 Laws, Signs, Signals & Markings:** Observe the teen's performance in response to signs, signals and pavement markings. Ask her to explain "what if" situations when conditions permit. For example, while stopped at a four way stop sign, ask "what if a car to your right stopped at the same time as we did, who should be granted the right-of-way?" "Show me how you would grant the right-of-way!" "What if you saw a pedestrian ready to cross the street in the intersection ahead, what would you do?" **Common Error:** The teen will be hesitant, because of uncertainty. You can help her make effective decisions by giving her many problems to solve, such as the activities described above. Coach her to follow all the laws and correct application of signs.

## 24: Laws, Signs, Signals & Markings

**Activity 1:** As you approach a regulatory sign discuss what the sign is cuing a driver to do. For example, a stop sign affects the driver's POT and cues the driver to check the rear zone.

**Activity 2:** As you see a speed limit sign discuss what it is cuing the driver to do (check the speedometer, and zone conditions, to see if the vehicle's speed is okay).

**Activity 3:** As you approach a warning sign, ask the driver what does the sign cue you to do (evaluate speed, lane positioning, other zones—especially the rear zone, to be prepared to make a sudden stop).

**Activity 4:** Work with the student to recognize the PONR. As you approach an intersection, have the student state when you have reached the PONR.

**Activity 5:** As a review, ask the student to explain situations regarding right-of-way laws. For example, when approaching a four-way stop sign ask, "Which driver must yield the right of way?" or "When you are turning left, who is to yield the right of way?" Pay attention to the driver's unconscious driving behaviors while you have her distracted by this activity. This will give you an opportunity to assess areas where she requires additional practice in order to develop model expert driving habits.

**Guide 25 Approaching Curves and Hill Crests:** Have your teen consciously practice two or three behavioral patterns on each curve approach. She cannot consciously perform all of the behaviors on any one curve approach. However, if you decide upon which steps you will assess before approaching the curve, then, after approaching 15-20 curves while practicing 2-3 steps each time, the teen's behavior should become consistently successful. **Common Error:** The teen will go into the curve without awareness of what behavioral patterns are being used. Help the teen learn how to determine an unsafe speed when the tire-road grip is reduced and when there is not 4 seconds of road visible.

## 25: Approaching Curves and Hill Crests

**Activity 1:** Have the student use the "hand-to-hand" steering for curves. When the student sees the curve in the target area she should slide her right hand up the steering wheel to the two position in preparation for entering a right curve. As steering takes place she pulls the steering wheel down in a smooth motion. This technique will allow the student to make fine adjustments in control by pulling the steering down as compared to other steering methods.

## 25: Approaching Curves and Hill Crests

**Activity 2:** Help the student become aware of how speed and road conditions affect traction control. Tell her to pretend it is raining, ask her how to test the tire-road grip as she approaches the curve. (Apply brake to feel the braking action while the vehicle is on a straight stretch.) If road conditions are slippery for the speed traveling, and if tire grip is exceeded, the car will tend to slide straight ahead. There will be time to reduce speed before entering the curve where additional tire grip will be needed to not only brake the car, but also to steer the car.

**Activity 3:** When there are no vehicles to the rear, ask the student to demonstrate how to approach the curve as if there is snow on the road. Look for her to test the tire-road grip in a timely and effective manner.

**Activity 4:** Ask the student, after seeing a curve in the target area, to state whether it is a left or right curve. Then ask her, "what is the best lane positioning for your approach?"

**Activity 5:** When the car gets abeam (opposite) to the curve's warning sign, have the student use this point as a cue to evaluate and establish a correct speed for entering the curve.

**Activity 6:** Ask the student, "Are there oncoming cars?" If so, "What lane position do you want to approach in?"

**Activity 7:** Ask the student, when there are oncoming vehicle at the apex of a curve, "How can you tell if you are at risk of having an oncoming vehicle crash head-on into you?" If so, "What speed selection and lane position do you want to approach in?" "How could you communicate to the oncoming driver?"

**Activity 8:** Ask the student, "What would you do if at this moment if there was an oncoming car heading directly for you?"

**Activity 9:** While approaching left and right curves, ask the student to evaluate the positioning of oncoming vehicles and have her state which vehicle puts her most at risk. She should be evaluating the speed and lane position of the oncoming traffic. While she is evaluating oncoming traffic, evaluate how accurately her fringe vision is monitoring the tracking path.

**Activity 10:** As the student approaches a curve, have her evaluate the left and right side zones as being open or closed. Have her state where the best escape path would be in the event of a vehicle presenting a head-on crash potential.

**Activity 11:** While 15 seconds away from a hill crest or a curve have the student state the condition of the rear zone. Ask her what actions she would take if she had a "closed rear zone". And, how would she respond if she had an "unstable rear zone".

**Activity 12:** When approaching a hill crest ask the student to demonstrate the best lane positioning and state the reasons why it is best.

**Activity 13:** Have the student tell you as soon as she crests a hill whether her traveling path is open or closed. Cue her to be curious about the condition she will be traveling into.

**Activity 14:** As the student is at the crest of the hill have her give you an update on the status of the left-front zone, front zone, and the right-front. There is a high risk of having a head-on crash near the crest of the hill. And, there is a high risk that the right-front zone may be closed by an LOS-POT blockage, causing her to ping-pong into oncoming traffic.

# Student-Centered In-Car Activities: Lesson 7

**Guide 26 Following Others:** Have the teen evaluate the space other drivers are keeping. Comment on what the driver gains when keeping four seconds of space. And, what does one lose by keeping less than four seconds? Do this at least a few times during this session, and during following sessions. Because there may not be many opportunities to follow vehicles, you can play the "pretend" game. Ask your teen to pretend there is a "red truck" which you are following. Ask her to tell you how she would measure the distance. Ask her to tell you what it would mean if the "red truck" began to slow down. Ask her to explain how she could control the rear zone if there were one of the three tailgater types in back.

**Common Error:** The teen will have a difficult time responding to the front vehicle's speed reductions and she is likely to have too fast of a closure rate. Another problem that the teen will have is failure to improve her LOS when following large profile vehicles. Visibility can be improved by increasing following time, and by changing side position to lane position two. Still another common error that the teen will have a tendency to make is failure to use the rear view mirror to gain best rear zone control — see Guide 18.

## 26: Separation Space

**Activity 1:** Ask the student to guess the number of seconds of following time she has from the vehicle ahead. After taking a guess have her pick out a marker that the car ahead will pass. Once the car passes the marker, count along with her by 1001, 1002, 1003, 1004 until the front of your car reaches the marker. Having the student take a guess before counting develops her ability to judge space in seconds more effectively than by not guessing first.

**Activity 2:** In the absence of vehicles ahead, you can have the student pick out a marker that she believes to be four seconds away. Then she counts off in the same manner as if there was a vehicle ahead. Do this often and at various speeds. This activity becomes more than measuring space. It gets the student distracted by performing a task that takes concentration away from her immediate path of travel. You can evaluate how capable she is of multi-tasking. And, she can learn that there are situations that require her full attention.

**Activity 3:** Ask the student to tell you when she will be approaching a vehicle that is traveling slower than she is. Give her feedback on how effective her closure rate is. When it is too fast, cue her to brake more and tell her why. It is very important for new drivers to learn to be perceptive about closure rate. Closure rate is very often experienced when approaching a traffic light with cars stopped at the light.

**Activity 4:** Point out other drivers that are not keeping four seconds of space and make mention of how those drivers give themselves more stress having to react to the vehicle ahead.

**Activity 5:** When there is a truck or bus that you are following, have the student move into lane position 2 to see how that improves her vision beyond the LOS created by the bus.

**Activity 6:** Ask the student to explain the benefits a driver receives when she keeps four or more seconds of following time. (• Gives time to become conscious of closure rate. • Can see beyond the vehicle ahead. • Removes the control the front vehicle has over your actions. • Eliminates surprised braking action. • Removes stress caused by others' wrongful actions).

## 26: Separation Space

**Activity 7:** Use the "red truck" (see the boxed text to the left) to give the teen various problems and testing situations. Have her pretend there is a red truck ahead, ask her to demonstrate: how to measure the space, how to improve the LOS, what should she do when the truck signals for a right turn and slows. She should take appropriate actions with the car.

**Activity 8:** Have the student tell you the moment she notices she is closing in on another vehicle. When a closure is detected, ask her to decrease the closure rate and to state what caused the closure. Use this activity randomly and repeatedly to raise students' alertness and sensitivity to closure rate.

**Activity 9:** When there is a tailgater, ask the student to describe the actions that determine and identify the tailgater type. Discuss how this information may help to control the front zone.

**Guide 27 Practice Commentary:** The practice commentary for the Zone Control System involves a conscious verbalization. The talking part is very limited and directly applicable to the actions that are necessary to take. This type of commentary can actually help the driver to concentrate on a traffic scene and gain maximum performance. Give her positive feedback for each successful step completed. For best results, always stay focused on upcoming problems, not on those that have already occurred. For students that prefer not to talk, have them use Activity 3, "May I use the brake" game.

**Common Error:** Some students will not feel comfortable talking. Their performance may become erratic while thinking of what to say. Minimize these problems by having the student talk only about one LOS-POT blockage at a time, and use short statements such as: "Front zone closed, rear open". The braking action is performed without verbalizing it.

## 27: Practice Commentary

**Activity 1:** Have the student select one LOS-POT to use the ABCs of Zone Control by verbalizing and acting out each step. The student should:

- A. State an LOS POT Zone Change
- B. State the Other Zones to be checked
- C. State and Perform the best Speed, Lane Positioning and Communication.

Have the student use this process for ten minutes at a time. Use the flowchart "How To Practice" as a cue on the sequence the student should perform.

**Activity 2:** After the student has demonstrated an understanding and application of the 17 Expert Actions, you can have her eliminate the verbalizing of the C step of Zone Control. As she takes correct actions it is necessary for you to give her specific feedback by stating which of the 17 Actions she took. For example: after she takes the actions you would say, "Good lane position 2 and covering the brake."

**Activity 3:** "May I Use the Brake" game is an excellent way to have teens become aware of their targeting path. The teen is to ask permission to use the brake and state for what reason it is to be used. For example, "May I use the brake in case the traffic light turns red?" After the request is made you will count from 1001 to 1005 and then state, "Yes, you may use the brake." If the brake must be used before permission is granted it will be considered a "crash." To have success, the teen must think at least 10-15 seconds ahead. Make it fun, but always be certain that the brake is actually used in a timely manner.

# Four-Seconds Separation Space Puts You In Control

## Learning How to Keep Space

To effectively keep four seconds of space, one needs to learn how to develop it into habit. Knowing what to do is not the same as doing it automatically without thought. To acquire space management into habit, the following levels of learning must take place.

1. Learn how to estimate space.
2. Learn how to manage the front zone closure rate.
3. Learn how to read the actions of the vehicle you are following.
4. Learn how to read the actions of the drivers to your rear.
5. Learn traffic's speed for the different travel lanes you operate in.
6. The more often you keep four seconds of space, the more advantages will be gained.

## Adjust Front Closure Rate

Closure occurs when your vehicle is traveling faster than the vehicle ahead of you. Closure rate is how fast you gain on the vehicle in front. It is best to acquire a habit that will make you sensitive to any closure of space. The habit of keeping space between you and the vehicle ahead will allow you to become sensitive to a closure of space. If you keep the amount of following space that the average driver keeps, which is 1.5 seconds, you may not be alerted to a fast closure rate until you are 2 seconds away from the vehicle in front. If, on the other hand, you have 4 seconds of separation space as your habit, then, when you get within 5 seconds of the vehicle you are gaining on, an alert will sound within you to say you are approaching your

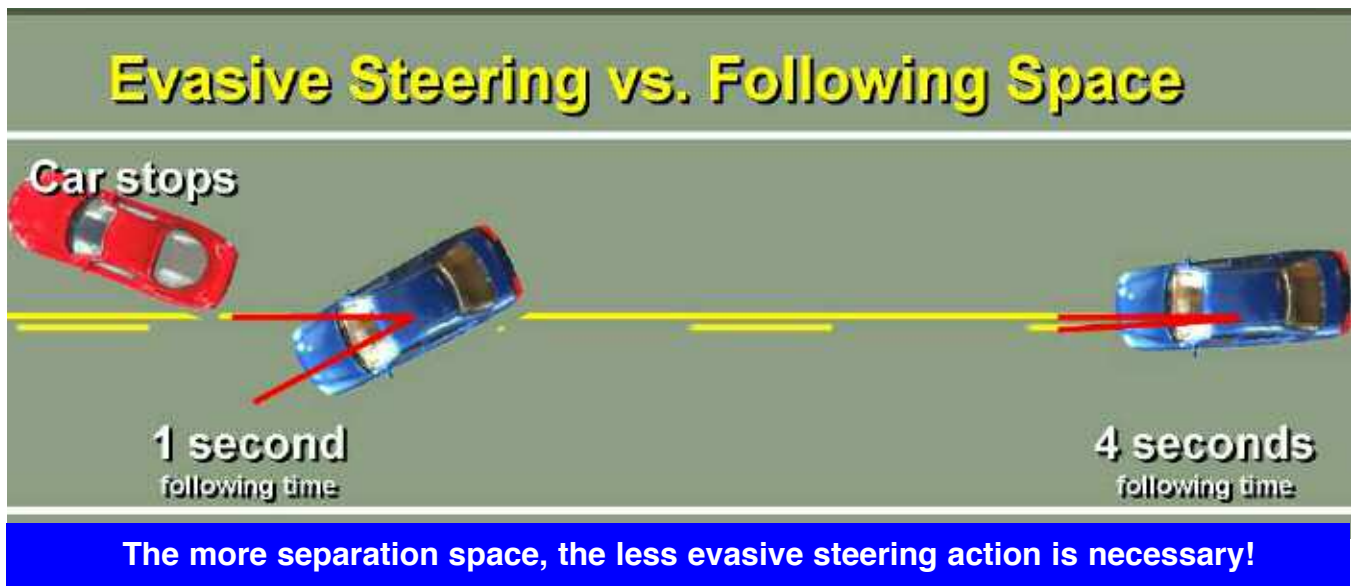
danger zone. Therefore, you can have a very precious 3 seconds of additional time to cope with whatever problem is causing your closure. It could be a stalled vehicle, a sudden stop of traffic on the highway, a construction site, or any number of things that cause the vehicles ahead to be traveling slower than your speed.

## Read the Actions of the Front Vehicles

The slower the front car is going in relation to your speed, the greater your rate of closure is going to be. Many times the reason the car is going abnormally slow — which results in your fast closure rate — is that the driver may be looking for an address or a street. The driver is very likely to brake and make a quick turn without adequate use of signal lights. Without training, the average driver will keep less space as the vehicle in front slows, which creates a stressful reactive situation based on the front cars actions. As the front car slows, be proactive and adjust your speed in a like manner until you can make a decision on how to handle the changing situation.

If you see the driver in front reducing speed, receive that as a communication that your following time may be affected. Adjust your speed to keep the front zone open. Be alert to a hard, sudden braking action from that vehicle. Avoid being victimized by a surprise action.

The larger the front vehicle, the more your Line-Of-Sight will be blocked. Try to gain the best view of situations ahead by keeping more space between you and that vehicle.



## Advantages Gained by Keeping Four Seconds

- Gives you time to become conscious of a need to correct a fast closure rate.
- Your eyes can search beyond the vehicle in front.
- Removes the control the front vehicle has over your actions.
- Will eliminate, or minimize, surprises from the actions of the first vehicle.
- Removes the stress of being surprised by sudden braking actions of vehicles ahead.
- Makes you more conscious of the disadvantages of keeping a lesser amount of space.

# 7

## Lesson

# Parent-Teen Practice Guides

Student Name \_\_\_\_\_

Parent/Mentor Name \_\_\_\_\_

Rating: ✓ = Okay, X = More Practice Needed

			<b>1. Respond to stop signs, yield signs, traffic signals, traffic signs, and pavement markings</b>
			<b>2. Demonstrate right-of-way laws</b>
			<b>3. See and responds to Curves in Target Areas</b>
			<b>4. Test Tire-Road Grip on Approach to Curve</b>
			<b>5. Look for Oncoming Traffic-Get Best Lane Position at Curve</b>
			<b>6. Look into Curve — See 4 Seconds of Road</b>
			<b>7. Evaluate POT at Hillcrest — Be Curious</b>
			<b>8. Adjust Closure Rate when approaching a vehicle ahead</b>
			<b>9. Keep four seconds of space from vehicle ahead</b>
			<b>10. Use Practice Commentary effectively</b>

**Driving Environment:** Use residential roadways, rural two and four lanes, urban areas, and State highways with two to six lanes of traffic.

### NOTES

1st Date \_\_\_\_\_ 2nd Date \_\_\_\_\_ 3rd Date \_\_\_\_\_

Signed \_\_\_\_\_ Signed \_\_\_\_\_ Signed \_\_\_\_\_