

OBJECTIVES for LESSON Two

- The teen should demonstrate precision maneuvering of the car, within 3-6 inches of accuracy, for each of the reference points described in this lesson.
- The teen should be able to position the car accurately three consecutive times for each reference point. Once reference points are understood, the teen will apply them, along with the concept of targeting, to enter traffic flows and to make precision turns.
- The teen should demonstrate the ability to make precision left and right turns from a stopped and from a moving position. Each step of a turn shall be executed with accuracy. He should be able to demonstrate each step when asked to do so.
- Emphasis is placed on the individual behaviors that go into making a turn rather than to merely be concerned with the outcome of the turn.
- Of the seventeen behaviors listed on Guide 6B for making Precision Turns, only three or four behaviors should be selected for evaluation during each turn. Help the teen perfect them. When performance is consistent for those three or four, then select another group to focus on.

THE DRIVING SETTING

Guides 5 and 6 activities should take place in a parking lot to provide ample time for the teen to consciously learn each step of making a turn without the interference from traffic. Once he understands the reference points for the turns, then have him use them while driving on street.

Key Behavioral Pattern Applications

Use of Reference Points

A reference point is to see from the driver's seat some part of the vehicle as it relates to some part of the roadway to know where the vehicle is actually positioned. Reference points serve as a guide to overcome the optical illusion a driver encounters.

Side Position RP for Turns

For Right Turns, the side position should be 3 feet away from the curb. The curb will look like it is in the middle of the right half of the vehicle. For Left Turns, the center line should appear approximately one foot in from the edge of the left fender.

Forward Position RP for Turns

For Right Turns, the forward position will be when the front bumper is even with the curb line. For Left Turns, it is when you are able to see to your target without your line-of-vision cutting across the curb line. Steering should begin at the forward reference.

Use of Signal Lights

Signal at least 5 seconds before making the turn. Be aware of others that may enter your path.

Legal and Smooth Stops

The legal stop, in obedience to a stop sign, is to come to a complete stop before going past the stop line. Release slight braking pressure during the last two seconds to bring the front pitch of the car slowly up to a level position.

Target Usage for Turns

Before turning, pick a stationary target that will be in the center of your travel path when the turn is completed.

Search Intersection, L, F, R

Search the left, the front, and the right zones to see if each will be open before entering the intersection. When it is not immediately open, identify when there will be a safe gap or hole to enter.

Look into turn before steering

Turn your head to see your target before you turn the steering wheel. When you cannot see a target with your head turned, you will be able to see a clear path to travel. And, as the turn progresses the target will come into view.

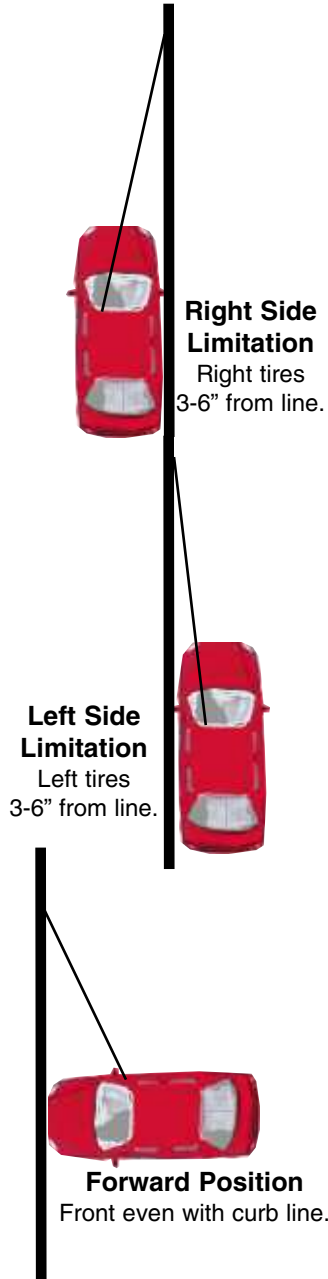
Steering and Recovery

Be able to demonstrate hand-over-hand and hand-to-hand steering for both the turn and the recovery of the steering wheel to the straight position.

Use of Transition Pegs

Use a transition peg for recovery of the steering wheel. While making a right turn, begin straightening the tires when the rearview mirror appears aligned with the target. When making a left turn, begin recovery as the driver's side windshield post becomes aligned with the target. See the mirror and the windshield post with fringe vision while looking at the target with central vision.

Rating: √ = Okay, X = More Practice Needed



5: Reference Point Discoveries

1. Line-Of-Vision Blind Spot
2. Right Side Limitation
3. Left Side Limitation
4. Front Even With Curb line
5. Rear Even With Line
6. Lane Position #2 (LP2)
7. Lane Position #3 (LP3)
8. Lane Position #1 (LP1)

Right Turn References

1. Side Position
2. Forward Position

Left Turn References

1. Side Position
2. Forward Position

6A: Entering & Crossing Traffic

Select Gap From Curbside

1. Evaluate Path to Enter
2. Mirror - Blind Spot Check
3. Locate Gap or Hole to Enter
4. Use of Signals

While Entering Traffic Flow

1. Avoid Hesitation
2. Look to Target Area
3. Side Position Reference Point
4. Steering Technique
5. Speed Control

After Entering Traffic Flow

1. Cancel Signal
2. Accurate Tracking Path
3. Re-evaluate Rear Zone
4. Look for New LOS-POTs

6B: Precision Turns

Before Turning

1. Use of Signals
2. Mirror - Blind Spot Check
3. Side Position Reference Point
4. Speed Control - Brake
5. Smooth Legal Stop
6. Forward Position Reference Pt
7. Select Target
8. Search Intersections/Gap-Hole
9. Get Commitment

During Turn

1. Avoid Hesitation
2. Look Into Turns, Target
3. Speed Control
4. Steering Technique
5. Accurate Tracking Path

After Turn

1. Precision Turn Results
2. Re-evaluate Rear Zone
3. Look For LOS-POTs

7: Reading Instruments & Gauges

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- Demonstrates understanding and correct use of gauges

8: Before Exiting the Vehicle

1. How Is The Location?
- 2-3. Parked Okay/Tires Straight?
4. Keep Foot On Brake
- 5-6. Parking Brake/Shift To Park
7. Foot Off Brake
- 8-9. Accessories Off/Belts Off
- 10-11. Windows Closed/Key Out
12. Left-Rear Zone Check
- 13-14. Alarm Set/Open Door
15. Doors Locked

NOTES

Key Behavioral Patterns

- Use of Reference Points
- Side Position RP for Turns
- Forward Position RP for Turns
- Use of Signal Lights
- Legal and Smooth Stops

- Target Usage for Turns
- Search Intersection, L, F, R
- Look into turn before steering
- Steering and Recovery
- Turns Transition Pegs

Lesson 2: Student-Centered In-Car Activities

Guide 5 Reference Point Discoveries: If you do not have access to a parking lot with painted lines, you can make a "portable line" to practice reference points. Use a 25 foot carpenter's measuring tape to represent a "curb line" or a "lane pavement line". Place the "portable line" in various positions in relation to the car. You can move the "portable line" while the car remains stationary. Set up one reference point at a time. Have the student view the reference point from inside the car, then ask him to get out of the car to see where the "portable line" is located. Then move the "portable line" to establish another reference point and repeat the process. **Common Error:** The teen will try to get a better view of the reference point by moving his head towards it. He may also want to stare at the reference point. Help him initially see the reference with central vision, then begin to use it by seeing it with fringe vision.

5: Reference Point Discoveries

Activity 1: Park the car 3-6 inches away from a curb, or a line, that is located to the right of the vehicle. The major objective is to have the teen learn how to see reference points. Have the student get in the car to see the reference of the line to the car. If the center of the hood is visible to the driver, the line will appear in the center of the hood. When the vehicle's hood is not visible to the driver, the line will appear at the lower part of the windshield a few inches to the left of center. Move the car or use the "portable line" to view Left Side limitation, Front even with curb line, and the Rear even with line reference points.

Activity 2: With the training vehicle in the parking lot, select a pavement line and ask the student to drive the car within 3-6 inches of the line. When success is achieved have him identify the reference point that is being used. Use an eye check mirror to be certain that he is able to see the reference points with his lower fringe vision. Do this for lines to the right and lines to the left of the car.

Activity 3: Ask the student to position the car with the front bumper even with a line (perpendicular to the line). Before he drives toward the line, ask him what reference point will be used (the line will appear even with the passenger's side view mirror). After the proper reference point has been established, have him drive the car to achieve the correct position. When the car is seen in the correct position, stop and secure the car. Have him get out of the car to view the position from the outside as well as from the driver's seat. This will overcome the optical illusion.

Activity 4: While in a parking lot, use perpendicular parking space lines to represent travel lanes. Use one column of parking spaces to represent a travel lane. Ask the student to move the car into Lane Position 2 (the car will be 3-6 inches away from the left lane line). When the car is positioned correctly, ask the student what was used as a reference point.

Activity 5: Conduct the same activity as above except you will ask the student to move into Lane Position 3 (the car will be 3-6 inches away from the right lane line).

Activity 6: Ask the student to place the car in Lane Position 1. Give positive feedback. (Once LP2 and LP3 are seen and learned, it becomes easier to accurately judge LP1).

Activity 7: Ask the student to tell you what reference point is used when the car's right tires are 3 feet away from the curb. Then, have him position the car in that relationship to a line.

5: Reference Point Discoveries—Turns

Activity 8: Ask the student what reference point is used for the "forward position" when making a right turn. Asking him to perform based upon information that was previously learned, rather than telling him what to do, is a very powerful learning moment. After demonstrating understanding, have him position the car with the front bumper even with a line.

Activity 9: Ask the student to tell you what reference point is used for a left turn side position. Then, have him demonstrate correct positioning. Repeat the process for the right turn side position. The side position for a left turn is the same as being in Lane Position 2. For a right turn, the side position is three feet away from the curb line.

Activity 10: Ask the student to place the car in the forward position for making a left turn. Give positive feedback. Ask student what is being used as the reference point. The forward position, when steering should begin, is when you are able to see to your target without your line-of-vision cutting across the curb line.

Guide 6A Entering & Crossing Traffic: In a parking lot use Guide 6A to have the teen practice pulling away from a curb. Then, with the car stopped heading out forward at the end of a driveway, have him pretend to enter the traffic flow and tell you when there is an acceptable hole or gap.

6A: Entering & Crossing Traffic

Activity 1: This activity should take place from a curbside location in a lightly travelled residential environment when possible. Find a location where you can have the student pull away from curbside, get up to travel speed, pull back to the curb, stop the car and repeat the entry process again. Five or six of these series should be the minimum number to begin with.

Activity 2: Have the student get in the habit of evaluating what conditions the car will be accelerating into before the entry takes place. During this early stage of performance, it will be helpful for the student to identify a target in the center of the space the car will be traveling.

Activity 3: While parked at a curb in a residential area have the teen enter the roadway. Cue him to perform mirror and blind spot checks. In a later lesson we will have more detailed instruction on how to make blind spot checks. Supplement his mirror and blind spot checks with your own to be certain there is a safe entry.

Activity 4: Help the student to look beyond the approaching vehicles by asking him to tell you when he expects a suitable gap or hole. When he gives correct information, give him positive feedback.

Activity 5: Emphasize that communication is the sending and receiving of information. The blinking signal light, when perceived by others, will generate a change in their action. A driver that is stopped may respond to the signal by moving. A driver that is moving may respond to the signal by slowing or stopping. Help the teen become aware of situations when the signal light may send the wrong message. For example, you are planning on making a right turn into a gas station that is located just beyond an intersection. At the intersection is a driver looking for a gap to enter. You put on your right signal intending to communicate that you will be turning into the gas station. The driver at the intersection sees the signal as your car making a right turn into his intersection. Therefore, he pulls out in front of you.

Student-Centered In-Car Activities: Lesson 2

Guide 6B Precision Turns: The ideal environment allows the teen to make four turns by driving around one residential block. Begin by making turns from a stopped position. A turn from a "stopped" position takes place when there is a stop sign at the intersection. Left turns are easier to make than right turns, providing there is no oncoming traffic. Have the teen make 10-12 left turns, then 10-12 right turns, from a stopped position. Then progress to left and right turns from a moving position. Ask the teen to perform one behavior at a time, from the Guide, to help him develop the correct patterns.

Common Error: The teen may merely make a turn without the use of reference points, targeting, searching the intersection, etc.. The result of the turn could be successful even with the use of wrong, and sometimes dangerous, behavior. Therefore, it is important that you avoid evaluating only the total outcome of the turn; each behavioral pattern will need to be observed, as all are likely to be performed with errors.

6B: Precision Turns

Activity 1: Select a route plan in a residential area where there is an opportunity to have the car travel around one or two blocks by making four left or four right turns. Without such an opportunity, you may need to begin the student in a parking lot, which will provide adequate time for him to learn and demonstrate each of the behaviors.

Activity 2: Ask the student to demonstrate each of the behaviors for making a right turn, one at a time. Begin with commands such as: "Show me the side position for making a right turn." Give him positive feedback when the correct behavior is performed by naming the behavior that was correctly performed. For example: "Yes, this is your side position. What reference point are you using to get this position?" It is very important that the student receives feedback about the performance of each behavior rather than merely the performance of the turns. Repeat the activity for left turns.

Activity 3: Select an intersection where it is not too likely to have traffic approaching from the rear. Have the student stop the car at the forward reference point for a right turn where the front bumper is even with the curb line. Use your reference point to confirm that the front bumper is even with the curb. Secure the car and have the student get out of the car to see the position of the car to the curb line. See how the optical illusion makes the car appear to be sticking into the intersection. It is important for the student to see this reference point in an actual situation.

Activity 4: When there are opportunities for selecting a gap in traffic, have the student tell you after which car the gap will be. This will prepare the teen with a mind-set to be ready for entering the gap.

Activity 5: Observe or coach the student to turn his head before turning the steering wheel. Give positive feedback.

Activity 6: Remind the student to use the transition pegs for making a left or right turn. The transition peg for making a right turn is the rear view mirror; for making a left turn it is the windshield corner post on the driver's side.

Activity 7: Have student hold foot on the brake, during a moving turn, until the car is at the transition peg, then recover the steering wheel and accelerate.

Guide 7 Reading Instruments and Gauges: Ask the teen to identify each gauge and instrument and describe what is a normal or abnormal indication. Whenever you see a speed limit sign, check your speedometer and use that moment as a cue to check all the operational gauges. **Common Errors:** A teen often fixates on the instrument panel, taking a long time to locate and interpret various gauges. Be selective when asking information about the gauges. Avoid asking questions when there are "driving" decisions to be made.

7: Reading Instruments and Gauges

Activity 1: Ask the driver, before engine start-up but with the ignition key on, to identify the gauges and lights that are illuminated and give the meaning of each.

Activity 2: When the car is stopped at a traffic light or stopped in traffic, you may have an opportunity to ask the driver to give you information about where a specific gauge is located and what its meaning is.

Guide 8 Before Exiting the Car: Use this Guide every time the car is parked. Follow it consistently, step by step, until all the steps become habitual. Evaluate the location selected as a parking site. Consciously evaluate where the car is parked and consider all options that are available. This will increase the teen's selectivity of parking locations. Coach the teen for correct performance by reading each step, such as by saying, "Keep your foot on the brake. Set the parking brake. Shift to park." After going over these steps 5-10 times the teen will be able to perform most without your coaching.

Common Errors: Make sure the student keeps his foot on the brake pedal until the parking brake is set. Most often, drivers will release the foot from the brake before applying the parking brake, which places all the weight of the car on the transmission as it is shifted into the "park" position. Have him remove the key.

8: Before Exiting the Car

Activity 1: Ask the student to evaluate his parking location.

Activity 2: Ask the student to define how the car is parked. Ask him to explain the various factors that would determine whether the car is parked accurately.

Activity 3: Explain to the students that keeping the foot on the brake until the parking brake is set will allow the parking brake to be the primary holding force. The shift into Park position is a secondary holding system.

Activity 4: When the car is on a slight upgrade or downgrade have the student release the parking brake while the shift is in Park position. Have the students notice the slight rolling motion of the car. The reason for the slight movement of the car is that the slot holding the park locking pin in the transmission moves up against the pin as all of the weight of the car is being held by a pin about the size of your little finger. Have the student put his foot on the foot brake and take the shift out of park. Call attention to how much resistance there was on the shift as compared to taking it out of park when the parking brake is holding the car.

Advantages of Learning Reference Points

1. **The first and foremost advantage** you'll gain from the use of reference points is the ability to be consistently successful.

2. **Once reference points are learned** for one vehicle, the techniques can be applied to any vehicle.

3. **You can get into a larger vehicle** than you are accustomed to, such as a sport utility vehicle, van, truck, or motor home, and within 5 minutes be comfortable and confident maneuvering it in tight spaces.

4. **You can feel very comfortable getting into and out of tight parking spaces** with any vehicle.



5. **While driving in the right-side lane** you'll know exactly how far your car is positioned from the parked cars, which will reduce the frequency of swerves when doors suddenly open.

6. With the use of reference points **you can make tight right turns** into driveways, alleys and narrow streets, without the need to swerve to the left before turning; nor will you hit the curb with the right rear tire.

7. **You can feel comfortable driving in confined areas** such as: parking garages with spiral ramps, tunnels with fast moving traffic, narrow bridges with a bus or truck approaching, and highway lanes narrowed by construction barriers.

8. **You can feel confident** and operate efficiently **while passing a jogger, bicyclist, or pedestrian** on narrow roads with the least amount of movement into oncoming traffic.

9. **While going into a curve you will be able to select the best travel path** to minimize the chances of a head-on crash. During slippery roadway conditions you will be able to get the best drive line to help reduce the chances of going into a skid.

10. **You can make the best decisions** for using the various lane positions to get maximum control of the zones to either side of the vehicle.

11. **You will be able to get reliable feedback** to tell exactly where your vehicle is within the lane and increase your awareness for what is an okay or not okay lane position.

12. **If you use reference points to overcome optical illusions**, rather than "guessing", then you can make accurate decisions when you are not feeling right, such as when you are tired, ill, or after taking medication.



Case Study

On a rainy afternoon, on a two-lane rural highway with guardrails, a driver began to pass a slow moving truck when she saw an oncoming car. Just as she moved back to the rear of the truck, the oncoming driver slammed on the brakes, lost control of the car, and slid into the path of the truck. He was thrown into the impact and he died instantly. If he knew reference points he could have taken a steering action toward the guard rail, without being intimidated, which would have made room if the car did pass.

Factors: no reference points, no safety belts on, raining, rural road, afternoon drowsiness, guard rail, improper braking, lack of skid control, small vs. large vehicle, improper passing, not searching to target area, no headlights on.

Any driver, of any vehicle, will benefit by learning to use reference points. For the novice teen driver, learning how to use reference points is like gaining several years of experience in how to make accurate judgments of the vehicle's road placement.

"Driving without reference points is like baking without a measuring cup—lacks consistency!"

2

Lesson

Parent-Teen Practice Guides

Student Name _____

Parent/Mentor Name _____

2

Rating: ✓ = Okay, X = More Practice Needed

			1. Demonstrate and explain the use of Reference Points
			2. Apply Side Position Reference points for left and right turns
			3. Apply Forward Position Reference points for left and right turns
			4. Use Signal Lights 5 seconds before making turns
			5. Make Legal and Smooth stops at intersections
			6. Select and use Targets before and during left and right turns
			7. Search Left, Front, and Right Zones at Intersections
			8. Turn Head to look into the turn before steering takes place
			9. Demonstrate effective Steering and Recovery of the wheel
			10. Use Transition Pegs: hold partial brake pressure until TP, return steering to straight position at TP, increase acceleration at TP

Practice Environment: All of the behaviors above should take place in a parking lot to provide ample time for the teen to consciously learn each step of making a turn without interference from traffic. When performance becomes consistently successful, go to a quiet residential area to continue making turns.

NOTES

1st Date _____ 2nd Date _____ 3rd Date _____

Signed _____ Signed _____ Signed _____