

Teen Driver Lesson Plan: **Safe Driving Around Large Trucks & Buses**



U.S. Department of Transportation
Federal Motor Carrier Safety Administration

OVERVIEW

Millions of large commercial trucks and buses carry essential goods and people throughout the country. They have unique operating challenges that can pose risks for new drivers.

The U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA) provides this lesson plan and resources to teach teens how to drive safely around large trucks and buses.

LESSON OVERVIEW

Audience:

- Teens who are taking Driver's Education courses.

Duration:

- One lesson, with a 30-minute or 40-minute option, and a 5-minute Q&A session.

Lesson Purpose:

- To instruct teens on how to drive safely around large trucks and buses (also known as commercial motor vehicles or CMVs) by understanding their operational challenges.



Learning Objectives—Students Will:

- Understand why care and patience when driving near large trucks and buses is so important.
- Understand operational challenges large vehicles face.
- Be aware of how to drive safely near large trucks and buses by avoiding their blind spots, giving them space while they are turning, maintaining a safe following distance, and ensuring that they don't cut in too closely when passing.

HOW TO USE THIS LESSON PLAN

FMCSA Materials to Accompany This Lesson:

Available at www.fmcsa.dot.gov/youngdriver or by scanning the QR code.



1. **FMCSA Lesson Handout:**
For print distribution at the end of the lesson as a takeaway/reinforcement
2. **FMCSA Lesson PowerPoint:**
For use during lesson if screen is available
3. **FMCSA Lesson Social Graphic:**
For students to use on their own social accounts

FMCSA Optional Supplemental Resources:

Available at www.fmcsa.dot.gov/youngdriver and www.fmcsa.dot.gov/TeenZone

- Videos, tip sheets, the Road Safety Art Contest, and FMCSA partner resources.

GENERAL LESSON GUIDANCE

- Ask questions periodically to pique interest and engagement. Examples are provided or you can develop your own.
- Use real-life examples, exercises, and visuals, when possible, to augment information in the script.
- You can use the FMCSA Lesson PowerPoint and online resources, just a chalkboard and classroom materials, or give an oral presentation with the printed FMCSA Lesson Handout.

PRESENTERS—ARE YOU A...

FMCSA Safety Investigator visiting a classroom? We recommend:

- Connecting with a local traffic/road safety association or teen driving safety organization to invite a representative or share materials.
- Drawing on your experience and examples of vehicle interactions or situations (particularly in your state and on roads teens would be familiar with); talk about your first-hand experience in a large vehicle, if applicable.
- Sharing the perspective of CMV drivers: tell students what CMV drivers want other drivers to know and do so everyone stays safe on the road.

Driver's Education Instructor leading classes? We recommend:

- Inviting an FMCSA Safety Investigator to support or conduct a lesson; contact your local field office (www.fmcsa.dot.gov/mission/field-offices).
- Partnering with a local trucking company, traffic/road safety association, or teen driving safety organization for materials or to invite a representative.

Parent or adult instructing at home? We recommend:

- Asking friends or family with experience driving large trucks and buses to share their perspective:
 - If available, invite students into a large truck or bus for a ride-along; or while safely parked in a parking lot, demonstrate blind spots by placing a vehicle, lawn chair, or other object in different blind spots.
- Using activities to augment the lesson. To demonstrate how to drive safely:
 - Ask students to guess or judge a large truck stopping distance in a parking lot, then measure the actual distance to stop; drive to a football field to see up close what the stopping distance looks like, etc.
 - Demonstrate a blind spot viewed from a safely parked passenger car, then compare that to what a truck/bus driver experiences.
 - Model/explain safe driving around and passing CMVs, reinforcing getting well ahead of a CMV before pulling in front of it; showing a safe following distance, etc.

SECTION 1: INTRODUCTION

► Lesson slides 2–4



5 minutes

RESOURCES

Thought Starters:

- Any idea why we are focusing on safety around large trucks and buses?
- What do you think it's like to drive a big truck or bus?
- Do you think it's easier to see because they're so high up?
- What kinds of things might make it hard to drive a big truck or bus?

TALKING POINTS

Today's lesson is on sharing the road safely with large trucks and buses. That includes vehicles like semi-trucks carrying food or other products, big moving trucks, tank trucks that carry oil or gasoline, and motorcoach buses that carry people across the country.

Ask One or Two Thought Starter Questions.

Following the Thought Starter Discussion:

- A vehicle that's very long, very tall, and very heavy creates some real driving challenges. We're going to learn about three specific challenges:
 - Wide turns
 - Long stopping distance
 - Big blind spots
- Because of their size and weight, there's also greater risk to drivers of smaller vehicles and their passengers in a crash with a large truck or bus.
 - Example: Imagine two toddlers running into one another; then imagine a football player running into a toddler.
 - Example: Imagine driving into a safety cone vs. driving into a metal guardrail.
- If you don't understand how these big vehicles operate, a driving mistake could cause a crash.



SECTION 2: WIDE TURNS

► Lesson slides 5–8



5 minutes
FOR 30-MIN. SESSION
7 minutes
FOR 40-MIN. SESSION

RESOURCES

Thought Starters:

- Why do you think large trucks and buses steer and move differently than smaller cars and trucks?
- What have you noticed about how large trucks and buses turn?
- Have you seen signs warning trucks to slow down for exit ramps? Why is that warning important?

Optional Activities:

- Play video clip from the FMCSA Lesson PowerPoint.
- Draw a traffic intersection on a white board; have students predict and compare trying to turn a shorter object through the turn vs. a longer object, like a ruler—illustrating how a truck or bus swings out to make a tight turn.



TALKING POINTS

Next, we'll look at some ways that large trucks and buses handle differently—or steer and move differently—than cars, SUVs, and smaller trucks.

Ask One or Two Thought Starter Questions.

Following the Thought Starter Discussion:

- As you can see on the [video, or activity], because they're so long and wide, large trucks and buses have to swing wide when they turn, sometimes moving out of their lane to complete a turn.
- A car can get "squeezed" by moving into the lane beside a truck or bus when they're turning.
- To drive safely and give them enough room:
 - Never try to pass when they're turning; stay back a safe distance until they're done turning. This means staying about 30 feet behind the truck—or the length of three passenger vehicles—so you're not in the rear blind zone.
 - Anticipate that they must slow down to exit on an offramp to avoid rolling over; slow down and stay back.
 - In a parking lot, give them extra room to move, and be aware that they often need to back up—never try to squeeze by them, and stay well back so they can see you.

SECTION 3: LONG STOPPING DISTANCE

► Lesson slides 9–12



5 minutes
FOR 30-MIN. SESSION
7 minutes
FOR 40-MIN. SESSION

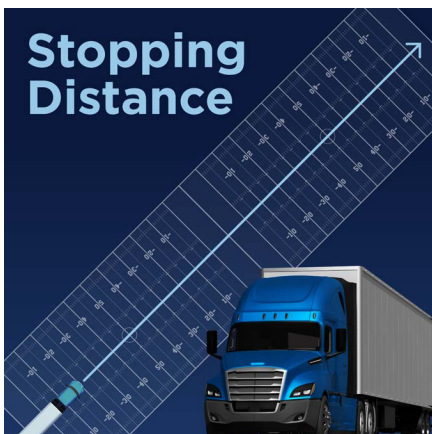
RESOURCES

Thought Starters:

- What kinds of things affect how quickly you can stop your car?
- What's different about stopping a large truck or bus instead of a car?

Optional Activities:

- Play video clip from the FMCSA Lesson PowerPoint.
- Ask students to guess how much longer it takes a loaded large truck to stop, compared to a car going the same speed; compare their answers with the actual difference of 40% longer stopping time for a large truck or bus.
- Draw a simple illustration of stopping distance: for a fully loaded large truck, it can be as long as two football fields (200 yards).



TALKING POINTS

Next, we'll look at stopping distance, which means how long a large truck or bus takes to stop, from the time the driver starts applying the brakes, until the vehicle comes to a complete stop.

Ask One or Two Thought Starter Questions.

Following the Thought Starter Discussion:

- The heavier a vehicle is, the longer it takes it to stop. You probably remember talking about inertia in a science class. Once something is moving, it tends to keep moving—and a heavy truck has more inertia than a car, so it takes longer to stop.
- When a large truck or bus goes uphill, it often moves slower than other traffic, but as it goes downhill, it speeds up more quickly than lighter cars and vehicles.
- To drive safely and adjust for longer stopping distance:
 - Never merge closely in front of a truck or bus, so the driver doesn't have to brake suddenly. Leave enough space to be able to see the vehicle in your rearview mirror before you merge in front.
 - Avoid passing a large truck or bus when you're going downhill, so you don't have to speed up too much to complete passing.
 - Avoid suddenly stopping or decreasing speed when a large truck or bus is behind you—they can't stop as quickly.

SECTION 4: BIG BLIND SPOTS

► Lesson slides 13–16



5 minutes
FOR 30-MIN. SESSION
7 minutes
FOR 40-MIN. SESSION

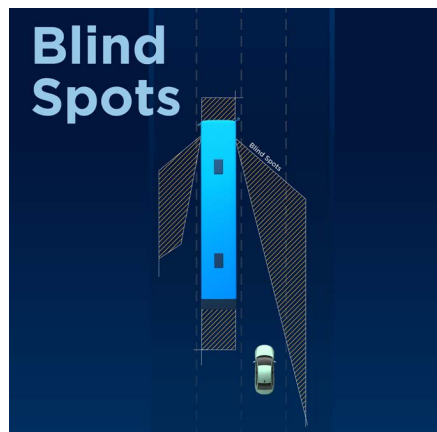
RESOURCES

Thought Starters:

- Have you ever experienced a blind spot while driving?
- How do you think blind spots might be different for a car than a large truck or bus?
- What does that mean for cars that drive near large trucks and buses?

Optional Activities:

- Play video clip from the FMCSA Lesson PowerPoint.
- If available, give students a real-life view from a parked truck cab, using objects to show how far blind spots extend.



TALKING POINTS

Now we'll talk about blind spots, which are the areas around a vehicle where the driver's vision is blocked.

You may have been in a car when the driver started to pull into another lane and got an automated blind spot warning—or a honk from another car. That's because the other vehicle was in a blind spot and not visible to the driver.

Ask One or Two Thought Starter Questions.

Following the Thought Starter Discussion:

- In a car, blind spots are usually just behind and to the side of the vehicle.
- Large truck and bus drivers have blind spots on all four sides and they are far bigger than blind spots in cars.
- The rear blind spot can pose a danger if a large truck or bus needs to back up, and the driver can't see people or cars immediately behind them.
- The front blind spot makes it especially dangerous to cut in front of a truck or bus because the driver may not be able to see a car that's immediately in front of them.
- To drive safely around large trucks and buses:
 - Know where their blind spots are.
 - Avoid driving in a blind spot for any length of time. If you're passing, accelerate (but maintain a safe speed) and get around the truck or bus promptly.
 - Never pass a truck or bus (or other vehicles) from the lane to the right of them; only pass on the left.

SECTION 5: MORE ROAD SAFETY TIPS

► Lesson slides 17–19



6 minutes
FOR 30-MIN. SESSION
8 minutes
FOR 40-MIN. SESSION

RESOURCES

Thought Starters:

- Now that you understand how large trucks and buses operate, what else is important to help keep everyone safe on the road?
- If you are riding with another driver, how do you want them to drive?

TALKING POINTS

Ask One or Two Thought Starter Questions.

Reminders:

- Buckle up, every time; it keeps you in your vehicle and able to stay in control if there's a crash.
- Stay alert when driving and avoid distractions like cell phones, eating, changing music, or being distracted by your passengers—losing focus on the road for just a few seconds can cause a crash.
- Be patient: Maintain a safe distance and safe speed—the faster the speed, the more risk of a crash—and the more serious the damage if a crash happens.
- If you're getting stressed or frustrated while driving, take a break—stress and anger can lead to risky driving behavior. Pull over to get a snack or drink, stretch your legs, check your route, or play some music.

SECTION 6: RECAP

► Lesson slides 20–23



4 minutes
FOR 30-MIN. SESSION
6 minutes
FOR 40-MIN. SESSION

RESOURCES

Thought Starters:

- What are the most important things to keep in mind when you're driving near a large truck or bus?
- What would you tell someone who didn't take this class to help them understand that driving safely around large trucks and buses can help prevent a crash—and potentially injuries or even death—for themselves, friends, and loved ones?

TALKING POINTS

- If not covered in the thought starter discussion, reiterate the importance of understanding that trucks and buses have these three limitations:

- Wide turns
- Long stopping distance
- Big blind spots

More Ways to Learn:

- Review the FMCSA Lesson Handout at home as a reminder of the information we learned.
- Access more activities/information from the FMCSA Teen Zone webpage.
- Scan the QR code on the Lesson PowerPoint or your handout to download a social graphic to post on your social media.

SECTION 7: QUESTIONS & ANSWERS

► Lesson slides 24–25



5 minutes

- Is there anything we discussed about large trucks and buses that wasn't clear or you'd like to know more about?
- What was the most surprising thing we talked about?
- What's the one thing you'll always remember or think about when you drive near a large truck or bus?

Even experienced drivers don't always understand how to drive safely around large trucks and buses. Share this information with your friends and your family. It's important for everyone on the road to understand.