

Steering Control and the Turning Radius

# Investigate turning radius of different vehicles

Supplies: Owner’s manuals, web pages, older vehicle, newer vehicle.

Instructions:

Take the students to the parking lot to evaluate two vehicles with different turning ratios, or report on their findings from web pages, etc.

**Part 1** Start the students with an older vehicle

* With the wheels straight, count the number of turns until wheels lock to right.
* Repeat going to the left
* Total the number of turns from lock to lock
* Repeat above steps on newer vehicle
* What are the differences?

**Part 2** Use the owner’s manual and/or web pages of auto makers to compare the turning radii of various sized of vehicles.

* Compare sub-compact mid-size, and SUV or truck
* How large is the turning radius?
* What causes the differences?
* Why is this important to know?

# Practice Steering Control While Turning

Supplies: Simulated steering wheel for each student; yardstick.

Instructions:

Give each student a simulated steering wheel.

Have the students place hands at 3-9.

On command, have the students demonstrate proper hand positioning for.

**HAND-OVER-HAND**

Pull the steering wheel down with one hand while your other hand crosses over to pull the wheel farther down

Left turn example:

* Begin the turn with a balanced hand position
* Start pulling down to the left with your left hand
* Your right hand pushes the wheel toward the left about ¼ turn
* Release your left hand from the wheel and cross it over your right hand to grasp the wheel near the top. Continue pulling down.

**PUSH-PULL**

This method allows you to keep both hands on the wheel at all times.

* One hand grasps the steering wheel near the 4 or 8 o’clock position.
* That hand pushes the wheel up to near the 12 o’clock position.
* At the same time, the other hand slides up to the 11 or 1 o’clock position and pulls down.
* As the pulling hand comes down, the pushing hand returns to the original position to continue the procedure.

Describe a speed and maneuver for the students to practice.