Lesson 4

Focus: Bicycle Handling Skills

Materials: 10 helmets, 10 bicycles, parking lot area 90-100 feet long and 20 feet wide, tape measure, chalk, dome cones or flat markers (poly spots), large cones to mark starting lines, whistle, 100-foot measuring tape/marking wheel

Objectives: The students will be able to:

1. start and stop safely and without wobbling.
2. utilize their gears correctly in order to accelerate.
3. apply basic principles of balance and body control while riding in a straight line, around a curve, while scanning, and while avoiding hazards.
4. apply turning dynamics and scanning skills to a simulated traffic area.

Key Points:

- Always start in the "power pedal" position.
- Always use proper braking technique.
- Always step down from the saddle at a stop.
- Academic Language: turning dynamics, avoidance weave, scanning

Introduction to Lesson (Anticipatory Set/Indoors or Outdoors):

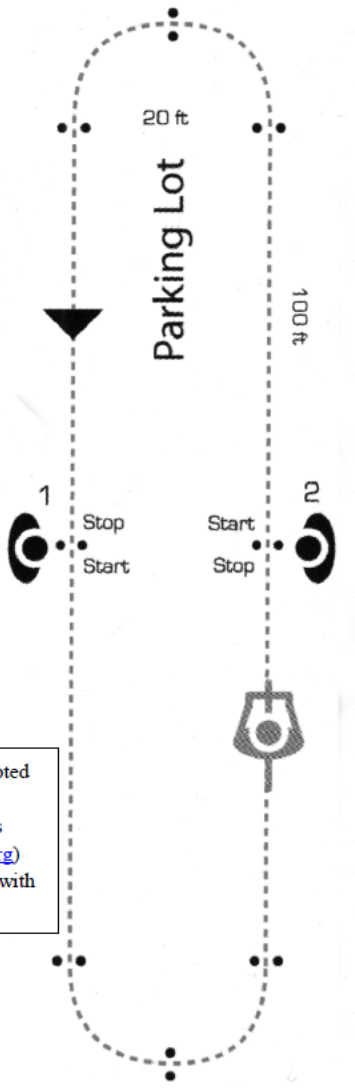
"Many on-bike drills can be practiced to promote safety and good bicycle handling skills. In today's lesson, there is one basic set up (oval) for a succession of practice drills that simulate riding your bike in traffic and around your neighborhood. Let's review the starting and stopping techniques we practiced in the last lesson. Then, we will begin a series of practice drills to help you learn more about riding bicycles safely."

- Explain Starting Technique (Power Pedal Position)
  - Make sure rider is off of the seat and straddling the top tube.
  - Have students figure out which foot they want to start on (one foot is on the ground and the other will begin on the pedal).
  - Have students raise the pedal on the side of their starting foot up to the two o'clock position.
  - Start by simultaneously stepping off the grounded foot and stepping your weight onto the starting foot while lifting up to sit onto the saddle.
- Explain Stopping Technique
  - Stop by having pedals at 12 and 6 o'clock (pedals seen as hands on a clock).
  - Remove foot that is on the 12 o'clock position while slowing to a stop.
  - Step onto the ground and straddle the top tube; Repeat.

Learning Activity 4-1 (Outdoors): Starting/Stopping Drill

Purpose: To ensure that students can start and stop safely and without wobbling; to make sure students can use their gears correctly in order to accelerate.

Procedure: One at a time, students mount their bicycles and ride around the oval, starting and stopping four times through the cycle. As soon as the first rider leaves the first turn, the second rider may begin.



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Starting position:

- Stand over the frame of the bicycle ahead of the saddle and keep both feet on the ground
- With the bike in a low, starting gear, put one foot in the power position (The 2 o'clock position)
- Push down on the power foot
- As the bike begins to roll forward, place the second foot on the second pedal and mount the saddle

Stopping:

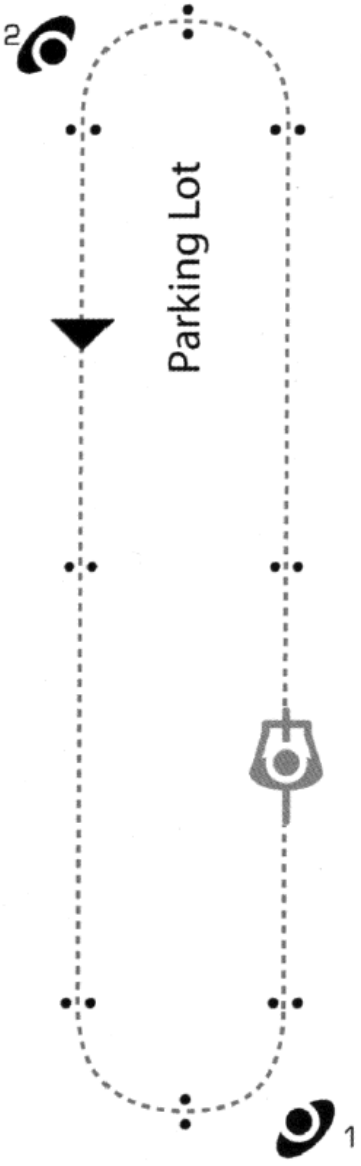
- Shift into a low (easy to pedal) gear, if applicable, before stopping
- Brake with both hands or if applicable, apply the coaster brake to bring the bicycle to a complete stop
- As the bicycle comes to a stop, turn the handlebars away from the foot that will touch the ground first. (This causes the bike to lean slightly to the side toward which the foot will touch the ground.)
- Return the pedals to the starting position

Notes: If students are riding geared bicycles, they should practice appropriate shifting along with proper starting and stopping. Gearing down before coming to a complete stop ensures that starting will be a smooth operation in a manageable gear. It is important for cyclists to be able to start smoothly and to gain speed when crossing intersections.

Students should be encouraged to turn their handlebars to the right and to place their right feet to the ground first when stopping. When stopping on roadways, it is safe to practice this 'right side' method so that the bike leans slightly away from traffic instead of into it.

Learning Activity 4-2 (Outdoors): Straight Line Drill

Purpose: To practice riding in a straight line a comfortable distance from a curb, edge, or line.



Procedure: Draw or mark a simulated curb (a straight line) three feet from each long side of the riding oval.

One at a time, students mount their bicycles and ride around the oval, demonstrating proper starting technique as they begin and proper stopping technique as they stop at the end.

Multiple students may be on the oval at once, but passing is not allowed. As soon as the first rider leaves the first turn, the second rider may begin.

Students should be encouraged to direct their line of sight well ahead of them in order to ride in a straight line.

Students should be encouraged to slow down, downshift (if applicable), and lean into corners.

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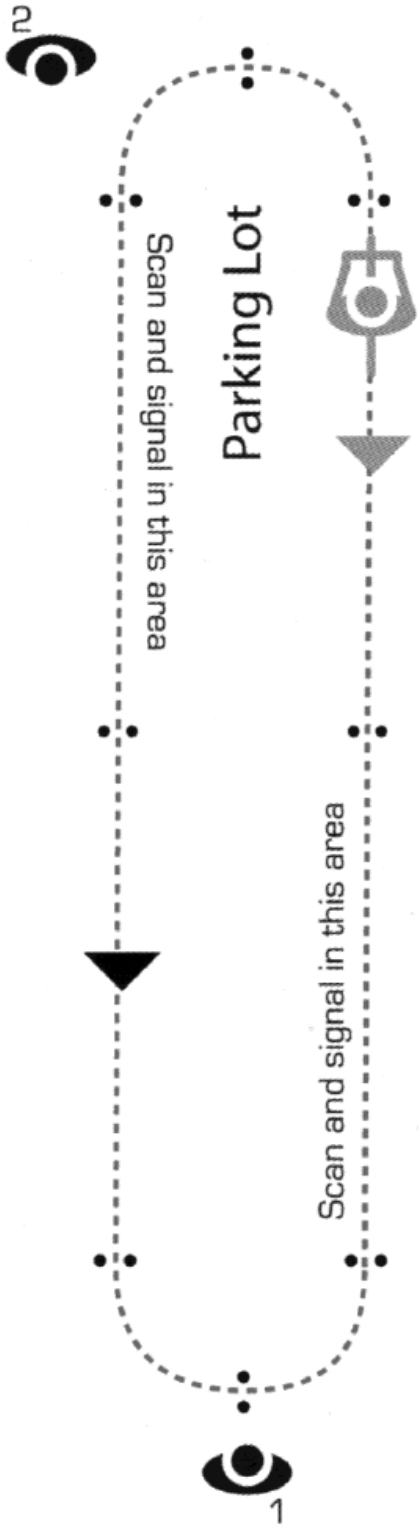
Learning Activity 4-3 (Outdoors): Scan/Signal/Turn Drill

Purpose: To practice scanning behind while maintaining a straight riding line.



Procedure: Students begin to the right of instructor 1 (see diagram).

Students ride straight ahead, scan once before the midpoint of the first long side of the oval, signal left (left arm extended) for a count of two, and return both hands to the handlebar.

Students continue to ride in a straight line, scanning once again before the left turn.

Students make the turn, leaning their bicycles as they do so.

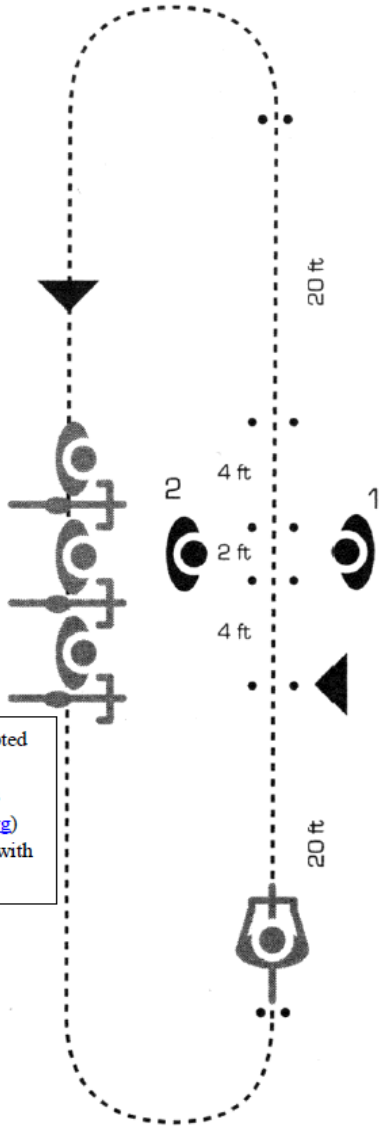
Students continue on the second side and second turn of the oval.

After each student has been allowed adequate practice (2-3 times around the oval), reverse the direction of travel and practice scanning, signaling, and turning right.

Notes: Most states require cyclists to signal 100 feet before making a turn.

Learning Activity 4-4 (Outdoors): Quick Stop Drill

Purpose: To practice starting and stopping quickly, and to master the technique of stopping quickly. Braking quickly and adequately requires practice and good technique.



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Procedure: Talk with students about the importance of brakes. Discuss the difference between coaster brakes and hand brakes.

Have students identify the front and rear brake levers on the bikes they are riding. Make sure they understand that not all bicycles are set up so that the front brake is controlled with the right hand lever, and that brakes differ in sensitivity. It is important to understand the bike you are riding so that you do not cause yourself to crash by pitching over the handlebars.

Demonstrate for students the effects of applying only one brake (front or rear) at a time and discuss.

Demonstrate for students how to apply brakes safely to stop quickly. Ideally, this involves squeezing the front brake harder than the rear and responding to the actions of the bicycle appropriately.

Demonstrate the idea of weight transfer and how moving the rider's center of gravity can change the way the bicycle can stop quickly.

Instruct students to make three passes through the layout: one using the back brake alone, one using both brakes, and one using both brakes and a weight shift.

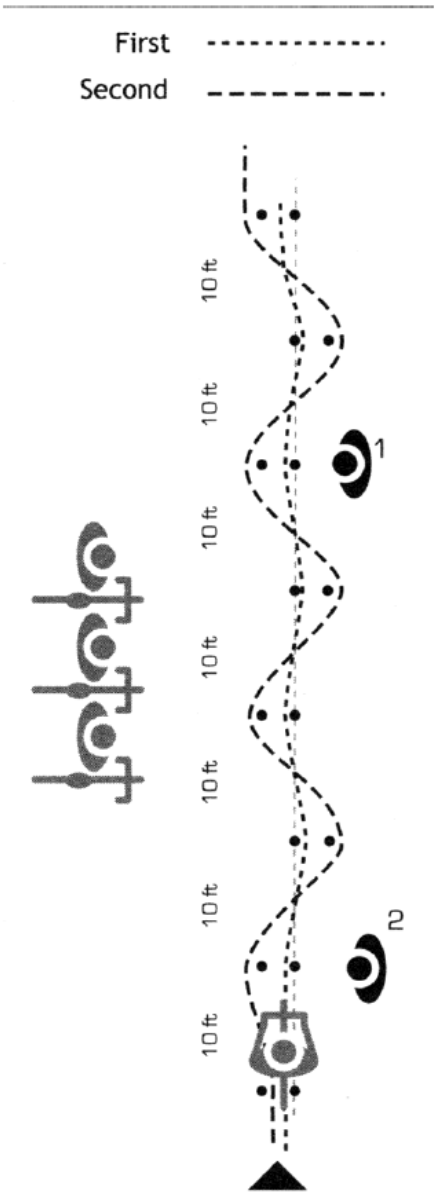
Instruct students to begin braking when the front wheels of their bicycles reach the first set of markers.

The goal is to stop the bicycle completely and to perform a correct stop, with one foot down, between the middle pairs of markers. Students then should re-mount using the proper starting technique, and ride around the oval and approach the chute again.

Evaluate students on starting technique, use of both brakes, weight transfer and control of the bicycle, and coming to a complete stop with one foot down.

Learning Activity 4-5 (Outdoors): Avoidance Weave Drill

Purpose: To practice safe bicycle handling skills and avoiding hazards as they are approached by the front wheel. Cyclists must be alert to hazards and practice to avoid them in order to maintain a smooth pedaling rhythm.



Procedure: Students will ride through the Avoidance Weave layout in two different ways. The number of times they practice each type of maneuver is up to the instructor.

The first maneuver is to ride between the markers, which means the tires move little from side to side. The second maneuver requires the tires to move quite a bit from side to side, as the bicycle is required to move outside of the paired markers. See diagram.

Students should be encouraged to look up and ahead and to lean their bicycles to achieve the desired result for each run through the layout.

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Closure: Conduct a short discussion with students about the importance of the starting, stopping, bicycle handling, and hazard avoidance skills practiced. Teacher Questions: Why do you think these skills are important? Do you think mastery of these skills will make you a better cyclist? Do you think you feel comfortable now in controlling your bicycle? Do you feel comfortable enough to ride in your neighborhood or in city traffic? Preview the next lesson on rules of the road and practicing riding with traffic.

Lesson 5

Focus: Rules of the Road/Riding with Traffic

Materials: 10 helmets, 10 bicycles, dome cones, large cones, whistle, stop signs, chalk, student journals, 2008 SC Bicycle Laws (Appendix D), Bicycle Safety Tips (Appendix E)

Objectives: The students will be able to:

1. explain the laws that pertain to the safe operation of a bicycle in any setting.
2. recall the basics of traffic laws and how to turn at a simple intersection.

Key Points:

- Cyclists do better when they act and are treated as drivers of vehicles.
- A bicycle is a vehicle just like a car.
- Always follow the basic rules of the road no matter where you are riding a bike.
- Behaving predictably and confidently is necessary when riding on the streets.
- Riders must be aware of other traffic at all times (scanning and looking right-left-right).
- Cyclists must ride to the right, but not too close to the curb.
- Academic Language: right of way, "go with the flow," intersection, vehicle, U-turns

Introduction to Lesson (Anticipatory Set/Indoors):
"Many cyclists, pedestrians, and motorists are not aware of pedestrian and bicyclist traffic laws. They do not know regulations concerning right-of-ways, correct roadway positions, turn signals, or lighting requirements. Reviewing the laws teaches you how to act in traffic and helps you anticipate the actions of pedestrians, cyclists, and motorists. By South Carolina state law, a cyclist has the right to use the roadway, but also has the responsibility to follow all the traffic laws. Riding against traffic is the most common cause of bike/car crashes for all cyclists. Traffic laws keep everyone safe – hand signals are essential to inform other road users of your intentions so they can predict your actions. Let's review the rules for safe bicycle riding by looking at the SC Biking Laws and Bicycle Safety Tips."

- **Ride in the Same Direction as Traffic (Bike Right – "Go With the Flow")**
  Ride on the right side of the road, in the same direction as the traffic next to you. Riding with the flow of traffic makes you more visible. Riding on the left side, against traffic, is illegal and dangerous.
- **Obey All Traffic Signs**
  Know and obey all traffic laws. It is illegal and dangerous to ride through stop signs, red lights, stop traffic, ride next to several bikers, or ride the wrong way down a street. (Show the students a stop sign)