

Freedom to Ride

Bicycle Skills Curriculum

Lesson 1

The Basics



Acknowledgements

MOVE Santa Barbara County incorporated in 1995, and has taught bicycle education to youth and adults for over two decades. This curriculum is based on national guidance, our experience, and the suggestions and recommendations of educators, parents, community members and students. Our goal is to provide simple visually-driven guidance that provides the flexibility to tailor the program to work for a variety of schools and other educational programs. Bicycling is fun, good for the planet, good for your health and cost efficient. We want students to love to ride and to learn to do so safely, ensuring a lifetime of freedom to explore their worlds.

This curriculum would not be possible without the decades of support, guidance and dedication of individuals and organizations too numerous to mention.



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LESSON 1

THE BASICS

INTRODUCTION

Lesson #1 will be many of your students' first introduction to how to ride a bicycle safely. They will learn how to properly start and stop, ride in a straight line, scan for traffic, and signal before turning. These skills will help them safely navigate much of the basic infrastructure that they will encounter while pedaling their streets.

This lesson isn't just about learning the basic techniques of safe neighborhood riding. Being able to navigate their streets gives your students the freedom to move through their communities under their own power. The ability to bike rather than walk opens up their world exponentially!

Objectives

After completing this lesson, your students will have mastered the following new skills:



Starting

Using the Power Pedal Position to ensure a smooth start and ability to confidently ride in a straight line.



Stopping

Recognizing the need to stop at a stop sign, check both ways, and restart from the Power Pedal Position.



Scanning

Being able to look over their shoulder and scan for traffic, while still riding in a straight line.



Signaling

Properly indicating turns by taking a hand off the bars to signal in advance of the actual turn.

PREPARATION

Materials

For this lesson, you will need the following materials:

- A bicycle for every student
- A helmet for every student or
 - Hair nets for every student if sharing helmets
 - Trash can for hair nets
- 4 stop signs
- 7 big cones
- 123 small cones
- Directional arrows
- Sidewalk chalk
- Bicycle floor pump
- Chain lube and rags
- Large adjustable wrench
- Allen wrench multi-tool



Logistics

To teach the lesson you will also need the following:

- A secure paved space on your school campus. This could be a blacktop playground or parking lot.
- At least 3 volunteer assistants: 2 for the Learner's Course, and 1 for the Group Ride. More assistants will allow a better student to adult ratio. See [Campus Support Guide](#) guide for tips on how to find assistants. See Page 9 for how to adjust the lesson with fewer assistants.



Classroom Prep

In the days leading up to the lesson, work with the classroom teacher on the following preparations:

1. Send home [Parent Notification Flier](#) to remind students and parents to bring their bikes on the day of the lesson, and to request parent volunteers.
2. Have all students watch:
 - For 5-9 year olds: https://www.pedbikeinfo.org/bicyclesaferjourney/el_en.html
 - For 10-14 year olds: https://www.pedbikeinfo.org/bicyclesaferjourney/mi_en.html



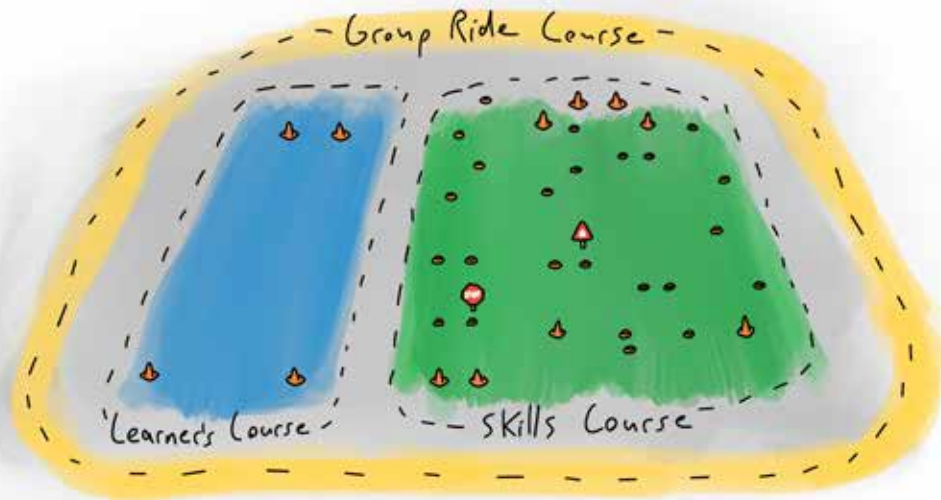
Duration

This lesson is designed around a 60-minute class period, though it can be modified based on your desired duration (see page 19).

- **Pre-Lesson Instruction** (10 min): Walk students through the bike and safety checks.
- **Course Assignment** (10 min): Divide students between courses based on skill level.
- **Lesson** (35 min): Instruct students on the core skills of the lesson, with those on the Skills and Group Ride Courses flip flopping halfway through.
- **Cleanup** (5 min): Gather bikes and helmets and discuss lessons learned.

Courses

During the Lesson period, students will ride one of these three courses:



Learner's Course

Here, the students who do not yet feel comfortable riding a bicycle can practice balance and pedaling with the help of your assistants.

Skills Course

This is the backbone of the lesson. Students will navigate obstacles, practicing skills from the Objectives as well as those from previous lessons.

Group Ride Course

As they wait for their turn on the skills course, students will go on an assistant-led loop ride, practicing skills from previous lessons.

Setup

On the day of the lesson, 30-40 minutes before the students arrive, work with your volunteer assistants to set up the three courses using cones, chalk, directional arrows, and traffic signs. You will also need to designate an area to stage bicycles and helmets. See the end of this lesson plan for a detailed diagram of the Skills Course, and page 14 for a detailed diagram of the Learner's Course.

PRE-RIDE INSTRUCTION

1. Set Expectations

Once the students arrive, they will likely head straight for the bikes and want to get riding as soon as possible. However, there are several key points to cover with them before they start pedaling so that everyone has a safe and fun day.

Each of the elements below is described in the second person so that you can use them as a script if needed. Emphasize that these are not about punishment, but making sure that everyone has a good time:



Listen to the instructor and assistants. If you don't, your ride could be over for the day.



Make sure to always wear a properly adjusted helmet when riding out on course.



Skidding, wheelies, and racing are not allowed. These can damage bikes and cause crashes.



Be kind and patient with your classmates. Help each other so that you can all ride together.

2. Distribute Bicycles and Helmets

Distribute plastic liners for the students to wear under helmets if they will be sharing.

If the students have brought their own bicycles, ask them to go stand next to theirs. If students are using provided bicycles, have your assistants assign them to bicycles that fit them best based on the illustration to the right. You will fine-tune fit and seat height later on in the lesson.

There should be at least 1-2" of clearance between the student and the bike when they are standing over it.



3. Toe to Head Check

Before students start riding, have them do a quick assessment of their clothing to make sure that they are visible to cars, and don't have loose items that might get caught in a wheel or chain.



Shoes

Tie your laces and tuck them into the side of your shoe, or under the top laces.



Pants

Roll up your right pant leg up to just below your knee and make sure to cuff it.



Loose Clothing

If you are wearing a sweatshirt around your waist, roll it into a tight noodle and tie it.



Colors

Wear bright colors so that drivers can see you and give you the space you deserve.

4. “2-2-2” Helmet Check

California law requires that youth 17 years and younger wear a properly fitted helmet while riding. Remind your students that they shouldn't just wear a helmet because it is the law: it protects your head and brain too! They can use two fingers to check all three of the adjustment points on the helmet. Have your assistants move around the group to help as you walk students through the following steps:



Forehead

You should only be able to fit *two fingers* between your eyebrows and the helmet. If the helmet tilts further back, it won't protect your brain.



Ears

Make the letter “V” with *two fingers*, and put them right under your ears. That is where the buckle or seam of your helmet straps should sit.



Chin

You should only be able to fit *two fingers* between your chin and the strap. If you can fit any more, your helmet could slip back in a crash.

Have your students shake their heads to ensure that the helmet is comfortable but doesn't move around on its own. Your assistants should double check each student's helmet to make sure they got the fit right.

5. Bicycle Check

Now that your students are ready to ride, it's time for them to give their bikes a quick once-over. We do this using a simple Safety Check, which students should do every time they go for a ride. Walk them through each of these steps, using your bike as an example. If any student's bike doesn't pass one of these steps, tell them to raise their hand and an assistant will help them fix it.

1. Air

It's pretty hard to ride on a flat tire. Check that yours are inflated by squeezing both your front and rear tires with your fingers. They should feel hard, not squishy.



2. Brakes

How would you come to a stop if your brakes were not working? There are different ways that you can check to make sure that they are functioning depending on the type of brakes you have:

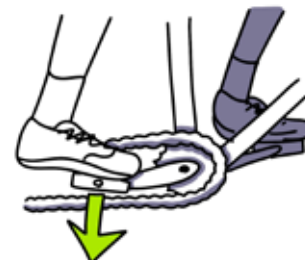
- **Hand (Rim) Brakes:** If your bike has levers on the handlebar, it has hand brakes. These stop the bike when you pull them. To test them, stand over your bike, pull the left lever to activate your front brake, and rock your bike backwards and forwards. Then do the same with your right lever to activate your rear brake. Your bike shouldn't be able to move when a lever is pulled.



It is important to use both brakes at the same time. If you just grab the rear brake this can lead to an uncontrolled skid. If you just grab the front brake the bike can flip forward and send you over the handlebars.



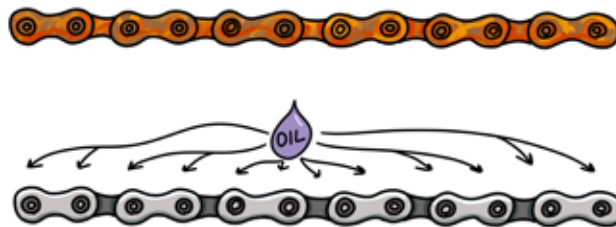
- **Coaster Brakes:** If your bike does not have brake levers on the handlebar, it has a coaster brake. This stops the bike when you pedal backwards. To test this, sit on the seat, put one foot on a pedal, and push backwards. While doing this, rock the bike backwards and forwards. It shouldn't be able to roll.



3. Chain

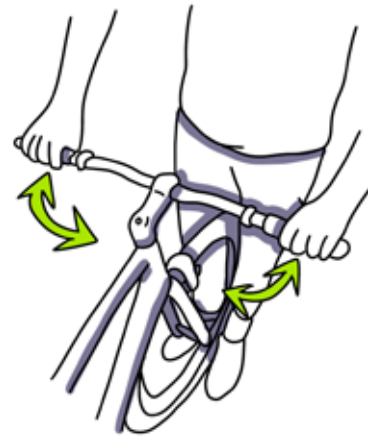
Your chain is one of the most important parts of your bicycle. It is what allows your pedaling to move the rear wheel. Without it you wouldn't be able to get anywhere fast! There are several things to check on your chain before riding:

- Is the chain dry or rusty and orange? If so, it might need some oil to function properly.
- For older students with geared bikes, have a classmate pick up your seat so the rear wheel of your bike is off the ground. Then rotate one of the pedals forward (clockwise) with your hand. This will make sure that the chain is properly seated on your gears before you start riding. If it is stuck between gears, it can break when you start pedaling.



4. Handlebars

Your handlebars not only help you steer your bike, but are home to your shifters and your brake levers. Making sure that they are properly tightened onto your bike is crucial. Imagine trying to drive a car with a loose steering wheel! To check this, stand in front of your bike, and grip your front wheel between your legs. Grab your handlebars and twist them side to side. They should not move. If they do, there are two ways to fix this depending on what type of stem your bike has.



If there are no bolts on the side of the stem, tighten the bolt on the top until the handlebars no longer twist.

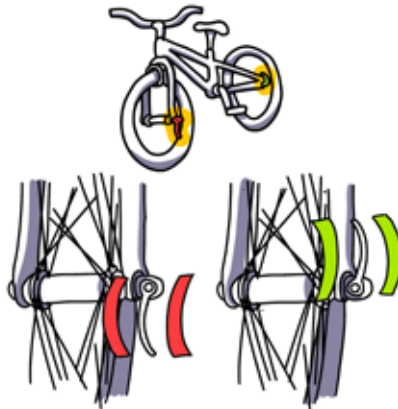


If there are bolts on the side of the stem, tighten them both equally until the handlebars no longer twist.

5. Wheels

Check to ensure that the wheels are secured tightly. Many bicycles have a quick release lever on the side of the wheel that holds it in tight. Flipping the lever into the tightened position should take a little bit of force. If it flips up too easily, or doesn't stay closed, tighten the nut on the other side of the hub.

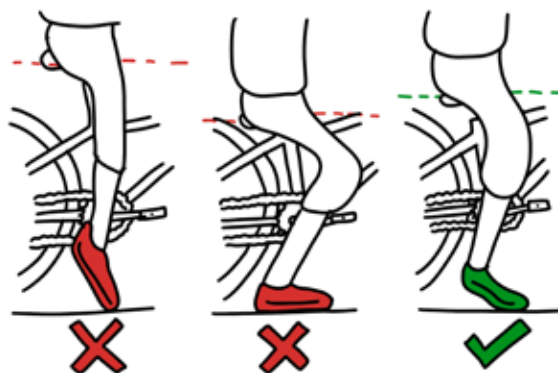
Some students may have bicycles where the wheels are held in place by bolts or a thru-axle instead of a quick release. Have an assistant with a large adjustable wrench and multi-tool with allen wrench circulate through the students as they do these checks to help tighten these as needed.



6. Seat

Proper seat height is key to enjoying your ride safely. When seated, the rider's feet should just be able to touch the ground. Note that for those just learning to ride, we will start with the seat slightly lower. This will be covered later on in the lesson.

On many bikes, proper height is controlled by a quick release lever located where the seatpost enters the frame. This lever functions the same way as the quick release on a wheel. When this lever is opened, it allows you to raise and lower the seatpost. Have your assistants work with each student to set proper seat height, and then close the lever in the same way that you did on the wheels.



LESSON

Course Assignment

After the safety checks, it is time to start the lesson. Divide your students into two groups:



Those who know how to ride



Those who are still learning to ride

Use the following steps to do this:

1. Tell the students, “If you know how to ride a bike, join us for quick lap around the lesson area.” Have any students who do not join this lap move to the Learner’s Course.
2. If any of the students who did join the lap are clearly are still struggling to ride, have them also join the Learner’s Course.
3. If you have two or more assistants, split the remaining students who did complete the lap successfully into two groups. One will proceed to the Skills Course, while the other will continue riding laps with an assistant as part of the Group Ride. Halfway through the lesson, these two groups will switch areas.
4. If you only have one assistant, drop the Group Ride and have all the students who successfully completed the quick lap proceed to the Skills Course.

Starting The Lesson

Instruction will now begin simultaneously on all of the courses. We suggest having the PE teacher manage the Skills Course, the classroom teacher or an assistant manage the Learner’s Course, and a third assistant manage the Group Ride. Additional assistants can help on the Learner’s Course, or in specific places on the Skills Course as noted below.

Here is a breakdown of how to run all three of these courses:

1. Learner’s Course: pages 12-14
2. Skills Course: pages 15-17
3. Group Ride: page 18

Learner's Course Instruction

The Learner's Course is where the classroom teacher or an assistant, plus ideally 1 additional assistant (a 4:1 student to adult ratio is best) will help those students who are not yet comfortable riding a bicycle on their own. Share this portion of the Lesson with the adult who will be leading the instruction so that they are familiar with the skills progression.

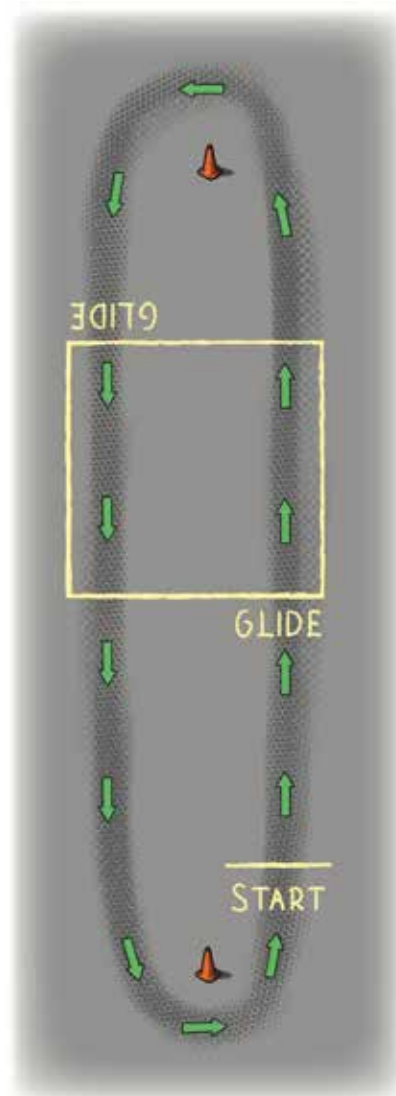
Teaching a kid how to ride a bicycle is one of the most fulfilling activities you can be involved in! Everyone learns at their own pace, so to take it slowly and let every student decide how quickly they are ready to move forward. Be supportive and maintain their trust. Make sure that all adults working on this course understand this, and have read their [Volunteer Guide](#).

Setup

The Learner's Course should be set up as a long narrow rectangle, with the students riding in a big loop. This allows them to ride in a straight line while mastering a particular skill. If there is a downward slope anywhere on the blacktop, use it! Students will master these skills faster if they have some momentum.

Directions

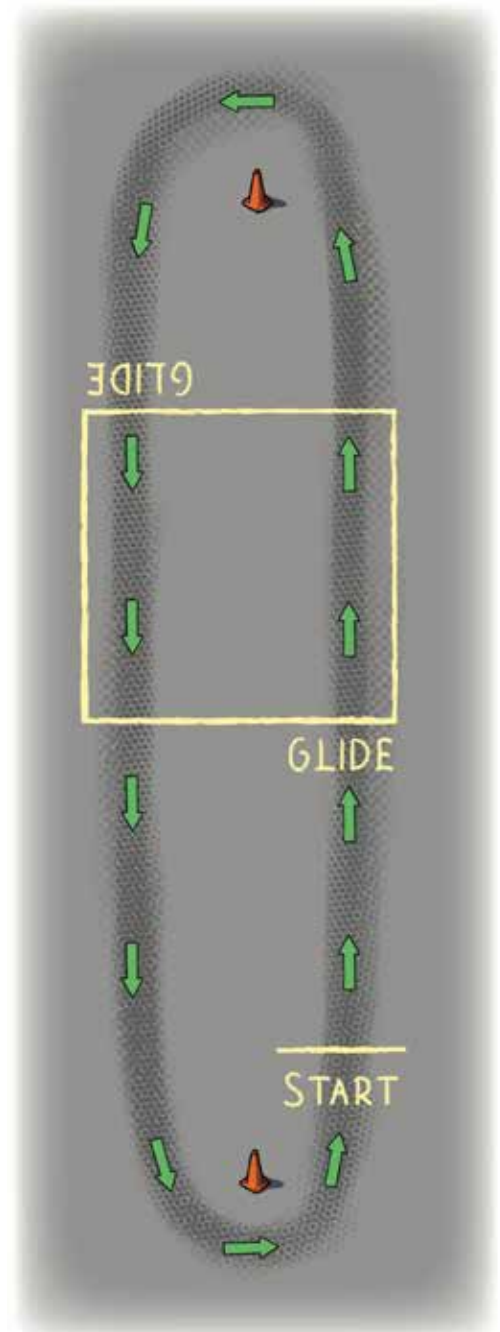
1. Have the students line up behind the designated start line.
2. Adjust each student's seat so that they can sit on the bike while also having their feet flat on the ground.
3. Adjust the seat on your own bike to the same height.
4. Demonstrate how to use your brakes:
 - Rocking forwards and backwards while standing over your bike, grabbing their brake levers (for hand brakes) or holding a pedal backwards (for coaster brakes).
 - For those with coaster brakes, explain how their bike will always stop when they pedal backwards.
5. While standing over your own bike, demonstrate how they can move forward by walking with their bike.
6. Then show them how they can push off the ground with one foot, then the other, and then lift their feet up to glide forward. We call this "Push Push Glide."



7. Have the students start walking around the course in a big loop while standing over their bikes as demonstrated, then progressing to Push Push Glide as they are comfortable. They should start with smaller steps for the Push Push portion, then proceed to larger steps as they are comfortable.
8. Mark off part of the area with chalk, and encourage them to glide when they are in this area.
9. As students master Push Push Glide, encourage them to try putting their feet onto the pedals during the Glide portion. You can say “Push Push Glide PEDALS!” to motivate them.
10. Once some of the students have gotten comfortable putting their feet on the pedals, have everyone pause wherever they are on the course and turn towards you.

11. Demonstrate with your own bike how to start from the Power Pedal Position:

- Rotate your dominant foot pedal at 2:00, or roughly parallel to the downtube of the bike frame.
- When ready, push down on hard the pedal, then hard on the ground with your other foot, and roll forward.
- Immediately bring your other foot onto the other pedal.
- Keep pedaling. The faster you go the easier it will be to balance.
- Hold your handlebars straight to avoid swerving.
- Don't look down, keep your head high and shoulders straight. Your bike will naturally want to go where you are looking.
- When ready to stop, use your brakes to slow down to a stop before taking your feet off the pedals.



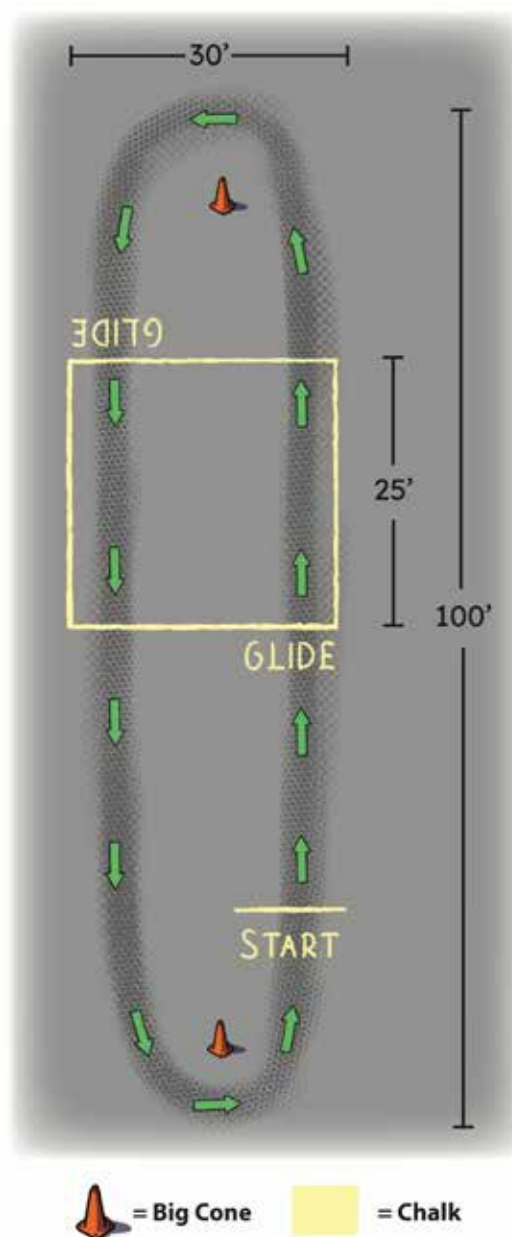
12. Have the students restart riding the course, with those who are ready to do use the Power Pedal Position doing so. The rest can continue to practice Push Push Glide.
13. If you have enough assistants, have one walk behind each student as they start from the Power Pedal Position to steady them if they lose their balance.

General Tips

- Whenever possible, avoid holding onto a student or their bike as they learn to balance. Kids learn to balance much better if they don't have an adult holding them up. If necessary, demonstrate the skills again on your own bike, then have them repeat it.
- If a student is working really hard and not getting it, take a water break and tell them they're doing a great job! You can also switch students with another assistant. Sometimes hearing the instructions in a different way will help the student progress.
- Students are dealing with learning a lot at once. Be patient and whenever you can, break down those components. This is a learning process for everyone!

Course Layout

Here is a diagram of the Learner's Course to help with setup. Feel free to modify as needed based on the space available at your school.



Skills Course Instruction

The Skills Course is where you and an assistant will teach the primary skills of this lesson. Students will ride through this course in three phases, adding an additional skill with each phase. Each phase should last 5-10 minutes, or until students have mastered the new skill introduced in that phase. Halfway through the class, have the students switch places with those in the Group Ride.

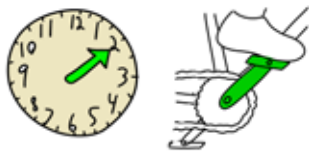
Before students begin each phase, ride the course and narrate where they should be practicing each skill. We have underlined these in the Directions. Then have the students ride through the course one at a time, counting to 10 after each student starts to space them out. Students should switch lanes every time they ride the course to practice making both left and right turns.

Phase #1: Starting and Stopping

In Phase #1, students will practice starting from the Power Pedal Position and stopping.

Objective

This phase will introduce the following new skill:



Power Pedal Position

Rotating your dominant foot pedal to the 2:00 position before starting. This will give you the most leverage when starting out, allowing you to maintain a straight line without wobbling.

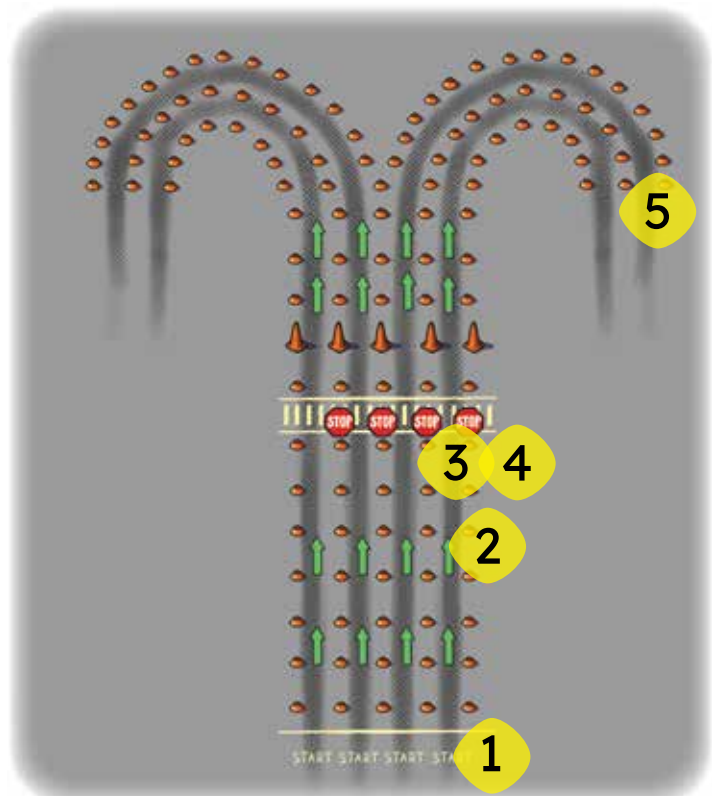
Setup

Have students line up in 4 lines, one behind the start of each course lane. Have your assistant act as a pedestrian at the crosswalk, randomly crossing in front of students.

Directions

1. Start from the Power Pedal Position.
2. As you approach the stop sign, gently squeeze your brakes. Wait to take your feet off the pedals until you have brought the bike to a complete stop.
3. Return pedals to the Power Pedal Position.
4. Look left, then right, then left for traffic and pedestrians. Then resume riding the course.
5. After exiting the cones, return to the start line and queue up to repeat the course.

Once the students master these skills, move on to Phase #2.



Phase #2: Signaling

In Phase #2, students will add proper hand signals as they make the turn at the end of the course.

Objective

This phase will introduce the following new skill:

Hand Signals

Signaling before the turn to let cars, other cyclists, and pedestrians know your intent.

Remind students to hold the signal for 2-3 seconds. This will allow them to return their hands to the handlebars to make the turn safely. To remember this, have students say the phrase “big and strong, hands back on” whenever signaling during this phase.



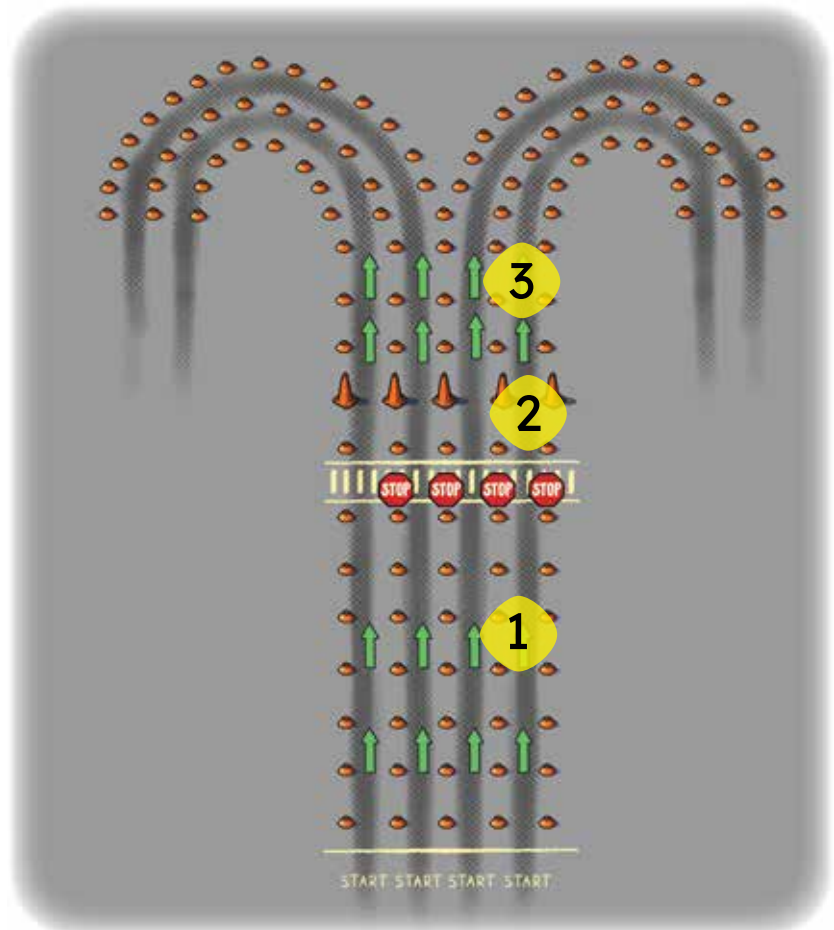
Setup

Like in Phase #1, have students line up in 4 lines, one behind the start of each course lane. Have your assistant act as a pedestrian again.

Directions

1. Ride the course up until the turn in the same way that you did in Phase #1
2. Once you reach the big cones, take the appropriate hand off the handlebars, and signal. Students who are not ready to hold a signal can practice briefly taking their hand off the handlebar, holding it out a little longer each time.
3. Return both hands to the bar before entering the turn.

Once the students master these skills, move on to Phase #3.



Phase #3: Scanning

In this phase, students will practice scanning over their shoulders for traffic approaching from behind.

Objective

This phase will introduce the following new skill:

Scanning

Looking over your shoulder to check for traffic coming from behind. Make sure to hold your handlebars straight to avoid veering in the direction you are scanning.

Setup

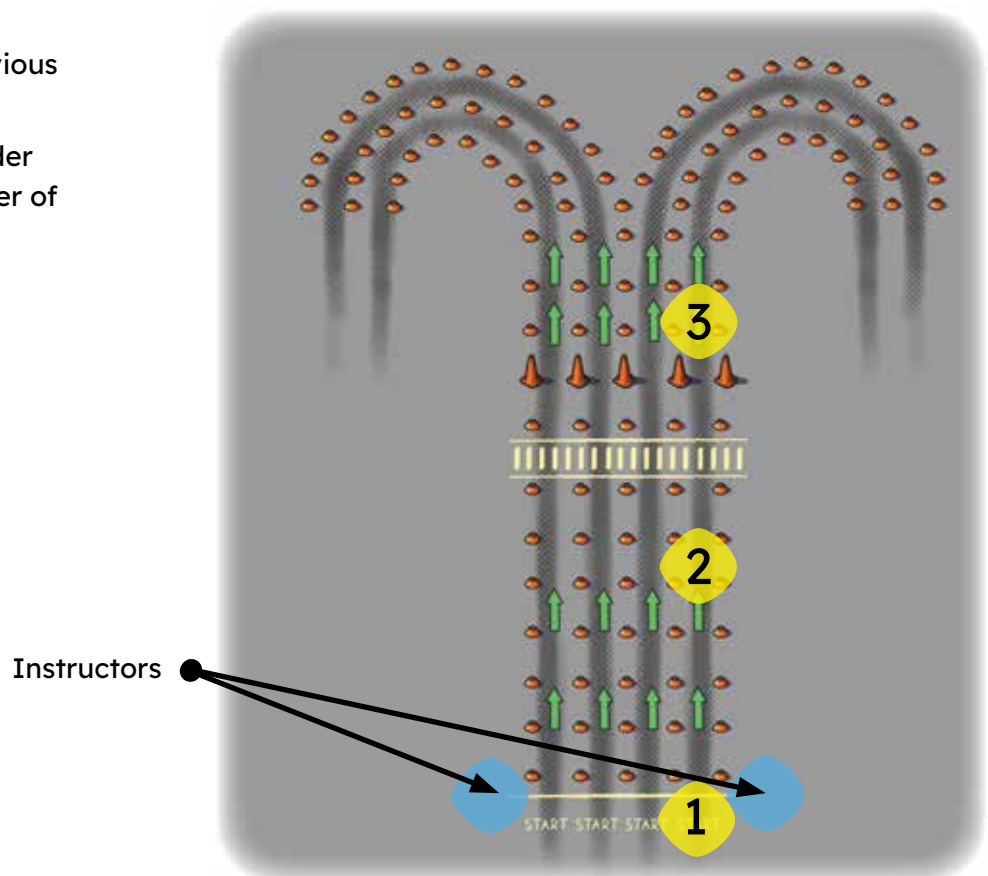
Remove the stop signs on the course before beginning this phase, as students will need momentum and distance as they practice scanning. You and your assistant should take up positions at the start of the course. Like in Phase #1, have students line up in 4 lines, one behind the start of each course lane.

Ask students why it's important to scan before they turn. What could happen if they don't? Answer: they could turn into a car coming up behind them and get hit.

Tell the students you and your assistant will stand in the noted position on the course and hold 0-5 fingers, varying these as the lesson progresses. When a student is approaching the crosswalk, they should the student look over their left shoulder (if in the left two lanes) or right shoulder (if in the right two lanes) and shout back the number of fingers that they see.

Directions

1. Ride the course as in previous phases.
2. Scan over your left shoulder and shout back the number of fingers that you see.
3. When you get to the big cones, signal and turn.



Group Ride Instruction

The Group Ride is where an assistant takes the half of the class that is not participating in the Skills Course on a follow-the-leader ride around the lesson area. Students should follow the assistant assigned to lead this ride. Maintain *1-2 bike lengths* between riders. For this lesson, have the assistant call out the following skills as they ride around the lesson area:

- **Starting from the Power Pedal Position:** When starting or restarting, call out Power Pedal Position. Students should start with their dominant foot pedal at 2:00, or roughly parallel to the downtube of their frame.
- **Stopping:** Periodically call out stopping, then slow to a stop. All riders behind you should pass the message on, and slowly come to a stop as the rider in front of them does. Students should practice coming to a stop using their brakes, and not taking their feet off the pedals until they have come to a complete stop.
- **Stopping 2x2:** Teach students to stop in pairs so that two riders are stopped next to each other, thus cutting the length of the line in half (which makes it easier to communicate teaching points).
- **Scanning:** Once the group has stopped in 2x2 formation and returned their pedals to the power-pedal-position, call out scanning. This simulates re-entering the roadway by having them scan the behind over their left shoulder for traffic before starting.

Lesson Modifications

These lessons are built around a 60-minute class period. If needed, you can modify the Skills Course portion to better fit the duration of your PE class. Here are a few suggestions:

Make it Shorter

- If needed, you can remove the scanning and signaling elements, and save those for subsequent lessons.

Make it Longer

- Add signaling “Stop” during Phase #1 or #2: right arm straight out and bent down 90 degrees. Students should also add verbally saying “stopping” while signaling and stopping.
- You can introduce slaloming from Lesson #2 by adding cones for the students to dodge after they exit the existing course and return to the start line.

Cleanup

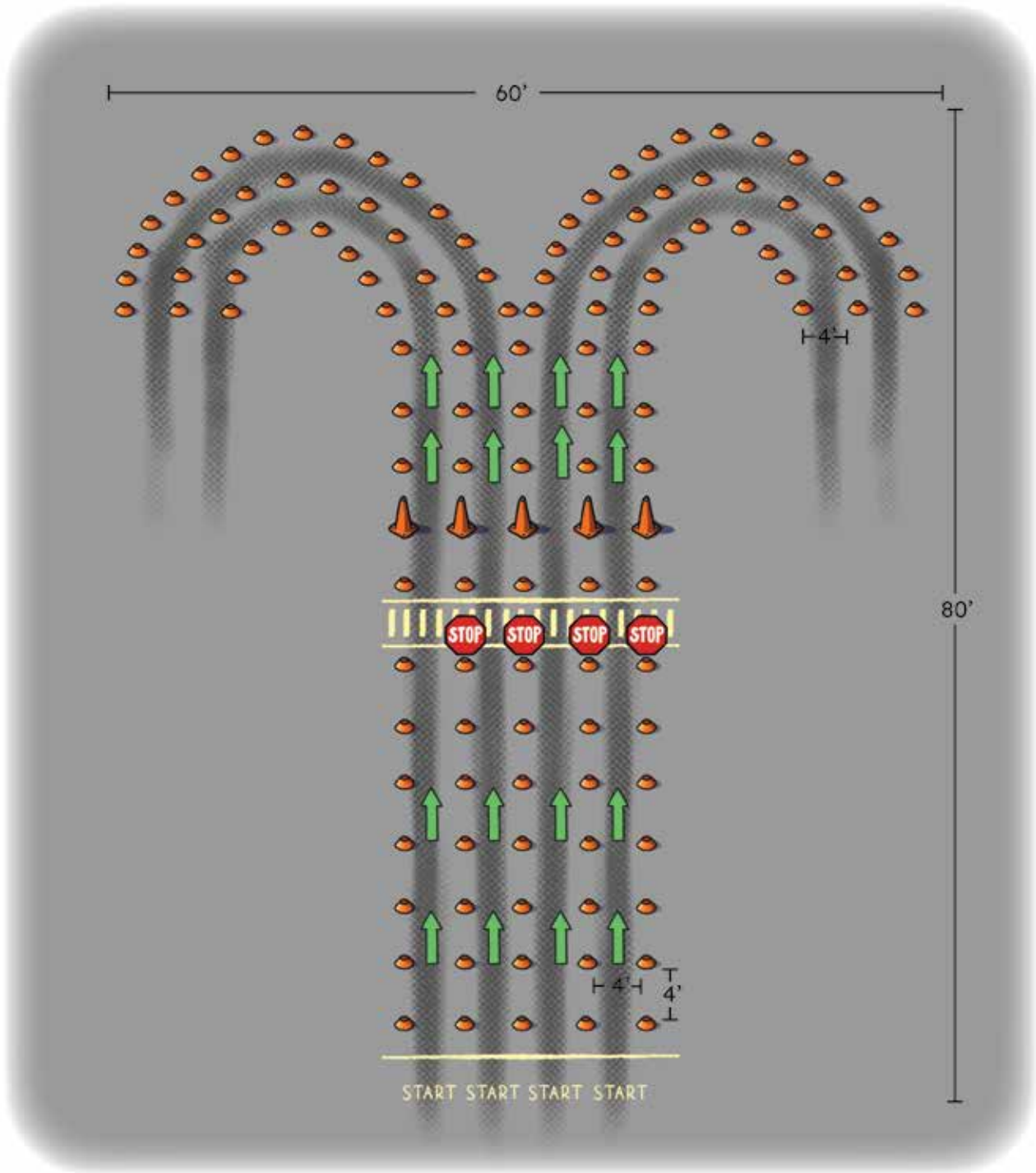
Once the lesson is finished, have the students help you pick up the cones, signs, etc. They should also return all their bicycles to the staging area, setting them up as they found them at the beginning of the lesson. If there is time, consider gathering everyone in a group and asking them the following questions:




1. What skills have you learned today? Can you describe them?
2. What was the hardest part of the lesson?
3. What was the most fun part of the lesson?

Finally, give them a brief description of the next lesson, and get them excited about the new skills that they will learn! Remind them that this whole series of lessons isn't just a fun school activity: this will help them safely navigate their neighborhoods and give them the freedom to get where they want to go.

Skills Course Layout

Here is a diagram of the Skills Course to help with setup. Feel free to modify as needed based on the space available at your school.



 = Big Cone  = Small Cone  = Chalk