

SKILL-BASED ACTIVITY

Controlled Braking

Timeframe

Beginners: 10-12 minutes
Intermediate: 8-10 minutes
Advanced: 3-4 minutes

Objectives

At the conclusion of this activity the student will be able to:

1. Demonstrate exceptional or reliable performance of controlled braking as measured by the controlled braking rubric. (Psychomotor)
2. Demonstrate exceptional or reliable social behavior as measured by the social behavior rubric. (Affective)

National Standards Standard 1
Standard 2
Standard 3
Standard 4

Equipment

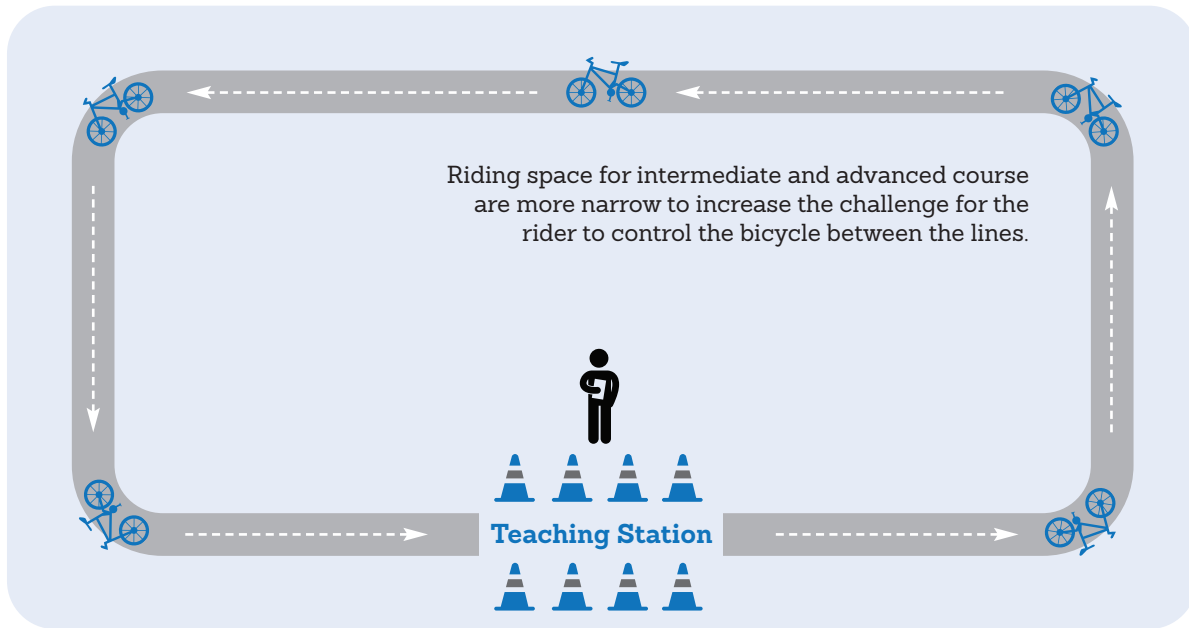
- Bicycles
- Helmets
- Head barriers
- Allen wrench
- Cones, domes, polypots or chalk to mark riding course
- Red floor tape

Teacher Overview This activity helps students understand the important difference in how the rear and front brakes each stop the bicycle. Students will first learn to use the rear brake to accomplish a controlled stop. The rear brake allows for a much more gradual braking result. Although not as efficient as using the front brake, it is a much safer manner in which to learn braking.

Preparation

1. Designate a riding course that enables the teacher to see the students at all times. This will enable students to ride throughout the class period, even when they are not performing skills.
2. Set up a "chute" using cones, to indicate where the student will perform the skill and the teacher will conduct the assessment. This area should also serve as a teaching station in which the skill will be demonstrated for the students, and where students will return when instructed.
3. If bicycles have both front and rear brakes: Wrap the left handle of the bicycle with red floor tape to discourage students from using the front brake, until proper braking skill is taught.
4. Practice the controlled braking skill before demonstrating to students.

Diagram: Controlled Braking Course



Directions

1. Introduce this activity using the following prompt:
Almost as important as being able to balance, is being able to safely stop a bicycle. In this activity, you will learn the difference in how the rear and front brakes each stop the bicycle. You will also practice stopping the bicycle in a controlled manner using the rear brake.
2. Use the following sample questions to prompt students thinking about the content in this activity.

Q: What are some reasons for braking on a bicycle?

A: Any of the following:

- You may need to slow or stop for various reasons
- Other answers may be accepted.

Q: Which brake controls which tire?

A: Left brake = front wheel; right brake = rear wheel.

Q: Why should braking happen in a controlled manner?

A: Any of the following:

- It is safer
- Uncontrolled braking can send a bicyclist over the handlebars or out of control.
- Explain and demonstrate the difference in how the front and rear brakes each stop the bicycle. Riders should:
- Jog slowly forward next to the bicycle; apply just the rear brake and observe how the bicycle stops. Remember right is rear.
- Jog slowly forward next to the bicycle; apply just the front brake and observe how the bicycle stops. Explain that this activity is focused on only using the rear brake. Using both the front and rear brakes will be taught in a future activity.

3. After this demonstration, use the following sample questions to further prompt students' thinking about the content in this activity.

Q: What is the difference between using the front and rear brakes?

A: Any of the following:

- The front brake stops the bicycle quicker
- The rear brake stops the bicycle slower
- A bicyclist has to be careful if just using the front brake
- Other responses may be accepted

Q: When would be a more appropriate time to use the rear brake?

A: On most occasions, the rear brake is used by itself. When you know you're going to stop you can slow down with the rear brake and then stop, not even needing to touch the front brake.

Q: When would you use the front brake, in combination with the rear brake, be necessary?

A: In an emergency situation when you need to stop suddenly, or coming down a steep hill.

4. Instruct students to begin riding on the designated course and remain in the **seated** position.

Upon entering the chute, remain in the **seated** position, apply the rear brake, come to a stop and place both feet on the ground.

5. Instruct students to begin riding on the designated course again and remain in the **seated** position.

Upon entering the chute, enter into the **standing** position, apply the rear brake, come to a stop and place both feet on the ground.

Assessment

1. Assess controlled braking of each student using the following rubric.

PERFORMANCE RUBRIC: CONTROLLED BRAKING

Exceptional	Reliable	Inconsistent	Struggling/ Survival
Student demonstrates the ability to control her braking, and come to a complete stop safely and effectively; Student is able to control which brake she uses; Student will use her rear brake to stop and does not use her front brake, except in emergency situations.	Student demonstrates the ability to control her braking, and come to a stop in the majority of cases; Student uses her rear brake to stop in most cases, but may want to rely on her front brake more than necessary.	Student sometimes uses her brake, but may use her feet on occasion to stop; Student is able to use her rear brake but, if available, will intermittently use her front brake; Student has some difficulty stopping safely and effectively.	Student is not able to use the hand brake correctly and/or safely, and may want to use her feet to stop, instead of her brake; Student does not understand how to use her brake to control stopping. Student is unable to stop safely and effectively.

2. Assess the performance of social behavior for each student using the following rubric.

PERFORMANCE RUBRIC: SOCIAL BEHAVIOR

Exceptional	Reliable	Inconsistent	Struggling/ Survival
<p>Student is respectful toward classmates, teacher, and equipment;</p> <p>Student receives and uses feedback from teacher and peers in a courteous manner;</p> <p>Student participates fully, without teacher prompting or supervision;</p> <p>Student is able to work cooperatively and productively with classmates, including during peer assessments;</p> <p>Student perseveres, even through difficult skills/activities, and maintains a positive attitude;</p> <p>Student is committed to learning;</p> <p>Student is committed to engaging in cycling in a safe manner, and keeping all classmates safe during the cycling unit.</p>	<p>Student is respectful toward classmates, teacher, and equipment;</p> <p>Student receives and uses feedback from teacher and peers in a courteous manner;</p> <p>Student participates fully, but needs some teacher prompting and/or supervision;</p> <p>Participates in most class activities at an appropriate and productive level;</p> <p>Student is most often able to work cooperatively and productively with classmates, including during peer assessments;</p> <p>Student is able to work hard and not get frustrated with setbacks;</p> <p>Student is committed to learning;</p> <p>Student is committed to engaging in cycling in a safe manner, and keeping all classmates safe during the cycling unit.</p>	<p>Student may not always be respectful toward classmates, teacher, and equipment;</p> <p>Student may listen to feedback from teacher or peers, but may not attempt and/or have difficulty applying it;</p> <p>Student requires some teacher supervision, but does exhibit some self-control at times;</p> <p>Student demonstrates the ability to work cooperatively and productively with classmates, but may need teacher direction or supervision;</p> <p>Student participates in most class activities;</p> <p>Student is willing to try, but may get frustrated with setbacks, and pout and/or verbalize frustration;</p> <p>Student may fluctuate between riding safely and unsafely at times.</p>	<p>Student may struggle with being respectful toward classmates, teacher, and equipment and/or show anger and/or blame others for cycling mishaps;</p> <p>Student does not listen to feedback from teacher or peers, and does not attempt to apply it;</p> <p>Student requires ongoing supervision and does not ride safely;</p> <p>Student may be unprepared and show very little interest in learning or the activity;</p> <p>Student becomes frustrated easily and may quit participating.</p>

Safety



1. Follow the 2-2-2-2 Rule (2 wheels on the ground; 2 feet on the pedals; 2 hands on the handlebars; 2 fingers on the brake levers) while riding the bicycle.
2. Use the rear brake only to stop the bicycle, until the skill level advances to be able to safely use the front brake.
3. Instruct students to ride the bicycles on the designated course and demonstrate the skill components in the “chute.”
4. Instruct students to keep at least three-bikes-lengths between each rider.

Differentiating Instruction

Adapted and Beginner

- Encourage slower riding at first.
- Make sure the course used is safe and flat.
- Check that there is considerable space for students to safely ride, without obstacles or other rider interference. It may be necessary for an aide to work with adapted students and/or students who are truly beginners, to help them remember to use the brake instead of their feet to stop.

Intermediate and Advanced

- Students can progress to the Quick Stop found in Unit 3.

Best Practices



1. Provide a discreet opportunity and safe environment for students to share information pertaining to their ability and comfort level for riding a bicycle.
2. Always complete the Helmet Fit and ABC Quick Check at the beginning of every class in which the students will be riding. The use of peers/partners to practice, inspect, and correct each other will make the most efficient use of class time and reinforce bicycle safety skills. This should not replace teacher assessment.
3. Review the three-bicycles-length rule to promote safe riding. The three-bicycles-length rule is a reminder of keeping a safe distance between cyclists while riding single-file. To help maintain proper spacing, have a marker on the course that allows students to see when it is their turn to go: when the person in front of them gets to the marker, the next student may start riding.

