Lesson 2

Focus: Bicycle Fitting and ABC Quick Check

Materials: 10 helmets, 10 bicycles (have bikes out and organized by size), 10 ABC Quick Check Guides (Appendix C), 10 ABC Quick Check Quizzes, 10 pencils

Objectives: The students will be able to:

1. identify the importance of properly fitting a bicycle to one's body size.
2. recall the importance of properly fitting a bicycle when asked by the teacher.
3. demonstrate how to properly fit a bicycle before riding during the closure.
4. describe the process in doing a safety check on their bicycle every time they ride.
5. discuss the necessity of performing pre-ride checks to their bicycles.

Key Points:

- Bikes are like shoes and need to fit to be comfortable.
- The seat should be at the proper height for safe riding.
- Small adjustments to a bicycle can dramatically change riding comfort.
- Academic Language: seat binders, top tube, chain, cranks, cassette, chainrings, derailleurs

Introduction to Lesson (Anticipatory Set/Indoors):

"The first step to having a safe bike is to have one that fits. A bike that fits properly helps bicyclists stop better and balance better. After finding a bicycle that fits, it is just as important to know that all of the parts work. It is very important to do a bicycle safety inspection every time you ride your bicycle. The goals of today's lesson are to find a bike that will fit you and to learn how to do an equipment check before you begin riding a bicycle. When you find a bike that fits well, you need to use the same bike that has been adjusted to your size for every future class."

- Why should your bicycle be fitted properly to you? (to avoid long-term injury and discomfort)
- How does seat height affect riding a bicycle? (good seat height maximizes comfort, power, and speed)
- What are two important aspects of fitting your bicycle? (a frame that you can stand over; seat height that allows almost full extension of the leg while pedaling)
- What are some parts of the bicycle that would be good to check before you begin riding? (air, brakes, chain, handlebars, seat)

Learning Activity 2-1 (Indoors): Bike Fitting

1. Have students work in groups of 2-3.
2. Each student should have a bike they can stand over with 1" – 2" of clearance over the top tube.
3. Demonstrate how to use quick release seat binders.
4. Have student mount bike with one hand on a wall or table for stability.
5. Put ball of foot squarely on pedal.
6. Pedal backwards until one foot is in lowest position, pedal down.
7. Have partners check to see if there is a slight bend in the knee
8. Make adjustments and check again; repeat for each student.
9. Briefly discuss gears and demonstrate how to shift gears. The proper gear combination is important for efficient pedaling:
   - Chain is farther away from the bike the harder the gear (downhill).
   - The closer the chain is to the bike the easier the gear (uphill).
   - Flat riding is in the middle.
   - Right hand controls the back gears.

Learning Activity 2-2 (Indoors): ABC Quick Check Guide (Appendix C)

It is very important to do a safety check of your bike each time you ride so you don't get stranded or injured while out riding. Any bike part that is broken may compromise your safety. A properly functioning bike is safer and more fun to ride. Knowing how some of the essential bike parts work will make diagnosing problems easier. You don't need to do exhaustive maintenance, but a 30-second check of a few essentials could save you from a serious crash or from having your bike break down at an inconvenient time or place.

1. Divide students into pairs; all students should be wearing a properly fitted helmet and have a bike that properly fits them.
2. Explain each part of the ABC Quick Check and what each bike part does:

   - **A – Air:** Have student squeeze tires to make sure they are firm; pump tires if air pressure is low.
   - **B – Brakes:** if handbrake, squeeze the brakes and make sure that the bike won't roll and the lever doesn't come all the way back to the bars. If coaster brake, push backwards on the pedal and make sure the bike won't roll.
   - **C – Chain:** Lift the back end of the bike and pedal forwards for a few pedal rotations. Check that the chain runs smoothly through both derailleurs; if chain is rusty, dry off the chain rings, lube, or re-position it.
   - **Quick:** Manually inspect the quick release levers to be sure they are tight; straddle the front wheel of the bicycle and attempt to turn the handlebars – they should not move without the wheel also moving, and they should face

straight ahead. Make sure the ends of the handlebars are plugged (open-ended handlebars can be the cause of serious injury or death).

- **Check:** Give the whole bike a "look over" to check for anything that is falling off, rubbing, or is not where you think it should be. Once riding, make sure nothing is noisy or loose.

Closure: Revisit the discussion about why a bicycle's parts must all be in good working condition in order to keep the rider safe. Teacher Questions:

- What if you get on your bike and you start riding, and your brakes don't work? What could happen?
- Do you know of other items on bikes that need to be in good working order?

Written Assessment: ABC Quick Check

Image courtesy of Pennsylvania Department of Transportation. Used with permission.

Identify what A, B, C and Hand stand for in the ABC Hand Check.

A stands for _____ . Check for wear and tear, also.

B stands for _____ . Remember to check the levers and the pads.

C stands for _____ . Make sure it's tight and runs smoothly.

Hand stands for _____. Make sure they're tight and aligned correctly.

Remember that as you begin to ride, you should **check** your bike to make sure it's running smoothly. Ask an adult for help if you find problems with your bicycle!