



Helmet Safety

Bicycle Safety lesson 1 of 3

Grade level: 4

Subject Area: Physical Education, Health

Skill Set: Bicycle Safety

Introduction

This is the first of two in-classroom bike and pedestrian safety lessons. The third lesson is an on-bike “Rodeo” skills session to be completed outdoors. In this first lesson we demonstrate the importance of wearing a helmet.

Objective

This series of activities will allow students to make the connection between wearing a helmet and avoiding death or permanent brain damage. We will discuss how a helmet works and show the proper way to fit a helmet; hear the story of a boy who was seriously injured in a bike crash; execute the “egg drop” demonstration; and conduct a sharing activity on the topic of students’ own experiences.

California Health Education Standards

7.4.N Practice how to take personal responsibility for engaging in physical activity

1.9.S Explain the importance of wearing helmets, pads, mouth guards, water safety vests, and other safety equipment during athletic and outdoor activities.

1.18.S Identify personal protection equipment needed for sports and recreational activities (e.g., mouthpieces, pads, helmets).

6.1.S Make a personal commitment to use appropriate protective gear while engaging in activities -
Helmet Pledge?

California Physical Education Standards

These standards are not applicable to this lesson.

Set Up

This is a regular classroom activity with an outdoor area used for helmet drop demonstrations.

Materials

- ✓ Compost Container to dispose of broken eggs
 - ✓ Waxed paper to wrap eggs in (contain any mess)
 - ✓ Pictures of professional athletes and workers wearing helmets
 - ✓ Newspaper to cover drop zone area
 - ✓ 15 helmets
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- ✓ Cardboard box approximately 9 inches square, containing Styrofoam pellets 6 inches deep
 - ✓ a bicycle helmet (preferably the one you wore to get to class)
 - ✓ a bicycle helmet with plastic shell separated and slick plastic shell
 - ✓ 1/2 dozen raw eggs
 - ✓ Video: “Travis’s Story” excerpted from Jello in a Jar (distributed by the National Safe Kids Coalition)
 - ✓ VCR & monitor, with hookups and power source
 - ✓ Multiple colored sharpie pens

Preparation

- ✓ Spread newspaper on the floor.
- ✓ Cue video.

Discussion/Review: Introduce Safe Routes to Schools (SRTS)

SRTS is a program that teaches kids the importance of walking and bicycling as a way to get around. SRTS programs work to increase safety by teaching kids walking and bicycling skills and etiquette.

Discussion/Review: The Four Fantastic Reasons to bike and walk

Ask students to provide reasons if they have previously discussed them or have ideas.

When walking and biking, we’re:

- ✓ cutting down on pollution
- ✓ getting good exercise
- ✓ cutting down on traffic
- ✓ having fun!

Discussion:

Who wears a helmet? The consequences of not wearing one.

Ask students to name professionals that use helmets. Ask why they think these people use helmets. Discuss the idea of choices and consequences.

Consequences are the result of our actions. These can be positive or negative. Give examples of getting good grades as a consequence of doing your work and asking for help where you need it. You could also have consequences from your actions that are negative, like not being able to go to the movies or being grounded. Who here has ever done something that your parents have told you not to do? That’s probably because you didn’t have your own reason to follow their instructions. Today I want to give you a reason to wear a helmet. I have a video to show you of a young person who was injured when he was about your age. His name is Travis.

Activity

Show “Travis’s Story” excerpted from Jello in a Jar

After showing this 3-minute video, it can be good to have students take turns sharing their thoughts about it with each other. “What do you think about Travis’s Story?” and “How would your life be changed if you had a head injury?”, are good leading questions. Have students pair up and take turns listening to each other. That means that when your partner is talking, you are just listening. When it is





your turn, you talk and your partner listens. Give them up to 1 minute each turn. Have several students share their thoughts with the group.

Discussion: Helmet function

A properly fit CPSC (Consumer Product Safety Commission) - approved bicycle helmet will reduce the risk of brain injury and death by 85%.

Demonstration: Different parts of a helmet

Bicycle helmets are composed of compressed Styrofoam covered in a plastic shell. (Show the sample helmet that is missing its outer shell.) In minor impacts the helmet will cushion the head. In serious crashes the Styrofoam will crack or even shatter, absorbing the force of the impact. The hard plastic shell serves as a slick surface that will allow the helmet to skid in a crash, protecting the wearer from neck injury. (Show the hard outer shell on your complete helmet if a separate plastic shell is not available.) In Australia a helmet is called a “skid lid.”

Discussion: Helmet fit

Demonstrate proper helmet fit with your own helmet in good condition. Fit your helmet incorrectly (backwards, tilted too far back, chin strap not buckled and then not buckled tight enough. Have the students tell you what is wrong. The chinstrap must be attached. The helmet must fit snugly and stay level on the head. You should be able to look up and see the front of the helmet. Helmet straps tend to loosen over time, so helmet fit must be re-checked frequently. The helmet must be the right size for the rider (some students may have outgrown their helmets). The sliding adjusters that form the “Y” on the side straps must be between the ears and jawbone. If the “slider” is too low from being hung by the “Y” on the bike handlebars then the chinstrap will not be able to be tightened, running into the slider buckle instead of tightening.

Activity: Student Egg drop

Supply student pairs with one retired helmet, one egg in a sealed plastic bag (to keep the mess contained if it breaks), one bicycle inner tube, and one shop rag each. Each group will work together to protect and cradle their egg in the helmet to keep it from breaking when dropped from a height of 6’ or above.

Note: This is not a scientific comparison to the kind of impact a human head would sustain.

When dropping the finished helmets, take note of which ones broke and which ones did not. Have students suggest different reasons why the helmets did or did not protect the eggs. Students should have many things to say after just learning how a helmet works and functions. Possible answers: helmet too loose, too tight, helmet already cracked, etc...

Alternate Demonstration: Egg drop - instructor only

Ask students to predict the outcome if we drop an egg onto the ground. Pick students to draw a friend’s face on an egg. Allow a boy to drop an egg onto the newspaper on the floor. Drop an egg (draw a smiling face with a helmet) into the cardboard box containing Styrofoam pellets. This egg will survive, showing that Styrofoam is effective.





Discussion: Share personal experiences

Ask students if they have ever had a bike crash in which wearing their helmet helped. Discuss the cause of the crash and ask students if they had not been wearing their helmet, could they have been hurt a lot worse.

Activity: Helmet Pledge

Ask students if they are ready to keep themselves and those around them safe by practicing what they now know about using and adjusting helmets. Have them raise their hands if they are ready to pledge to do so.

Assessment

Were students able to answer questions, participate in discussion and share personal experiences?

Closing

Explain that next time we will be playing a Traffic Safety Game show which will test their knowledge and skill.

Additional Safe Routes to School information can be found at:

www.saferoutesinfo.org

www.sfbike.org/saferoutes

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