

Helmet Safety—Ride Smart



Subject: Health



OBJECTIVE:

- Students will learn about the importance of wearing a bicycle helmet



MATERIALS:

- Egg-helmet (block of styrofoam shaped into the form of a helmet that an egg can fit into). *Contact Safe Routes to Schools for information on creating or borrowing a helmet (707)545-0153*
- Newspaper or two bowls
- A bicycle helmet
- 2 raw eggs
- Video: Ride Smart, It's Time to Start (available for free from NHTSA)
- DVD player
- Sharpie to draw "egg-face"



SETTING: classroom



ESTIMATED TIME:
45 minutes



VOCABULARY:

Consumer Product Safety Commission (CPSC)



ACTIVITY SOURCE:

Transportation Authority of Marin's Safe Routes to Schools Program

OVERVIEW: Students will learn about the importance of wearing a bicycle helmet. They will observe how a helmet works and learn the proper way to fit a helmet; hear the story of a boy who was seriously injured in a bike crash; watch the "egg drop" demonstration; and share their own experiences.

BACKGROUND: This lesson discusses some important facts about helmet safety in a fun and interactive way. From 45-85% of all head injuries from crashes could be avoided if all bicyclists wore helmets—particularly properly fitted helmets. It is important to emphasize that helmets are not a guarantee of safety. Wearing proper gear should go hand-in-hand with following the rules of the road, which is covered in the Safety Jeopardy lesson.

LESSON SET-UP:

- Familiarize yourself with the the egg-drop demonstration.
- Gather all materials necessary for the lesson.

BUILDING BACKGROUND/DISCUSSION:

Discussion: Who wears a helmet? Consequences of not wearing one

Aka: In 4th grade it may be cool to not listen to parents and teachers but being unsafe has serious consequences

In California, if you are under 18 years of age you must wear a helmet when riding a bike, scooter, skateboard or roller blades. The fine for failure to wear a helmet is a minimum of \$25.00 for first time offenders, then another \$65.00 to register for a required bicycle safety course.

It can take AT LEAST 3 years for your brain to recover from an injury.

Video: "Ride Smart, It's Time to Start" (8 minutes, 55 seconds) – (note - the video demonstrates how to fit a helmet, but should be followed by a "live" demonstration. You may choose not to show the part of the video where they crack the egg, since you'll be doing the egg drop experiment)

STATE STANDARDS

Health:

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

Explain the importance of safety at play, including wearing helmets, pads, mouth guards, water safety vests, and other safety equipment.

Make a personal commitment to use appropriate protective gear while engaging in activities.

Follow safety rules and laws at home, school, and in the community.



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ACTIVITIES

Lecture: Helmet function

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

Demonstration: Helmet Fit

Demonstrate proper helmet fit with your stylish helmet. It works well to fit it incorrectly and have the students tell you what is wrong. The chinstrap must be attached. The helmet must fit snugly and stay level on the head. 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) and should not move when shaking your head. The sliding adjusters that form the “V” on the side straps must be between the ears and jawbone.

Demonstration: Egg Drop Simulation

- Explain that you are going to demonstrate how effective helmets are at protecting our heads, by doing a simulation using an Egg and a special Egg Helmet.
- Draw a face on an egg, and give it a name (i.e. Eggbert). Explain that Eggbert likes to ride his bike, and he usually wears a helmet.
- Show students the “egg helmet” and explain that it is made of similar material that a bike helmet is made from (styrofoam). They can compare the egg helmet to your real helmet. Explain that this material absorbs shock and therefore protects the brain from injury when crashes occur where the head hits the ground.
- Put the egg-helmet on Eggbert. Make sure it is

secure. Explain that good fit and taking care to buckle the helmet are very important.

- Tell a story about how Eggbert is riding his bike and accidentally falls while wearing his helmet. Select a student to drop the helmeted Eggbert into the bowl (or onto newspaper), from about knee-high, or do it yourself. Eggbert should survive. Ask them how Eggbert made it through the fall. Note: In the unlikely event that Eggbert does not survive, analyze why—did the helmet fall off or was his egg-head sticking out of the helmet too far (i.e. improper fit)? If no reason can be found, explain that there are some crashes where helmets don’t protect—but they are rare. 85% of the time, helmets protect your brain from injury.
- Take the helmet off Eggbert and tell a story about how he decided that he didn’t really need his helmet and decided to go out without it. Have students predict what will happen. Have a student drop Eggbert into the bowl without his helmet from the same distance. Discuss what happened and why.
- Explain that the most important thing is to ride safely, but that crashes can happen, and if they do happen, you must protect your brain! Even though our skull most likely won’t crack open like an egg will upon impact, the damage to our brain can be as devastating as a cracked egg. The main point is to demonstrate how the egg-helmet that is made of the same material as a REAL bike helmet protected the egg, in the same way that your head will be protected by a helmet! And that’s no yolk.

Note: You may prefer to do the egg drop simulation with two eggs instead of one, in order to end on a positive note; first egg “Shellina” doesn’t wear a helmet and cracks. 2nd egg, “Eggbert” wears a helmet and does not crack.

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; reminding students that helmets protect them from potentially grave injury.

EXTENSION IDEAS

1. Have students survey peers on helmet usage.
2. Have students write a persuasive essay to their peers or parents explaining why they should wear a helmet when wearing a bike.