



## Activity #1 Egg Drop Demonstration

### Purpose:

This activity demonstrates the importance and effectiveness of wearing a bicycle helmet.

### Materials:

- three eggs
- egg carton
- Kleenex
- masking tape
- markers or crayons
- garbage bags

### Method:

Gather the students in a circular group and ask them questions concerning their previous experience with bicycle helmets.

- Who has had a bicycle crash?
- Who knows someone who has had a bicycle crash?
- Why do people wear helmets?  
*(to protect the brain from head injury; brain damage is permanent and irreversible)*
- What can happen if the brain is damaged?  
*(loss of fine and gross motor skills, ability to walk, talk, write)*
- How does a helmet work?  
*(it absorbs the impact of the fall and decreases movement of the brain within the skull; it also distributes the impact over the greater surface area of the helmet to decrease the risk of a skull fracture)*
- What professionals (and athletes) wear a helmet?  
*(baseball, hockey and football players, professional cyclists, astronauts, construction workers...)*
- Why do people choose not to wear a helmet?  
*(peer pressure, expense, discomfort and inconvenience)*

- Discuss the helmet law.  
*(As of October 1, 1995, all cyclists under the age of 18 are required to wear a bicycle helmet when cycling)*

After the students have talked about their own experiences with cycling collisions, introduce the similarities between the human skull and brain with the shell and yolk of an egg.

**Step One:**

Using markers or crayons, draw a face on each egg. Let the students come up with names for the eggs. Choose one egg to demonstrate what could happen to your head if you were not wearing a helmet. Drop this egg from between one foot to a meter off the ground—it will break. Then explain that the brain is fragile just like an egg and can be seriously injured from a fall of only one metre from the ground. Since the average cyclist sits approximately one and a half metres from the ground, helmets need to be worn to reduce injury from falls.

**Step Two:**

Next, take a second egg and create a modified helmet by wrapping the egg in several sheets of Kleenex and place it into a cut out section of an egg carton. Drop the egg with its “helmet” on from between a foot to a meter off the ground. Again the egg will break. This demonstrates what can happen if a helmet is not fastened to your head properly.

**Step Three:**

Now, take a third egg, wrap it in several sheets of Kleenex and place it into another cut out section of an egg carton with a second section placed on top. This time wrap the two egg carton sections with the egg inside together with masking tape. Drop the egg with its new helmet on from between a foot to a meter off the ground. The egg should not break. If it does crack, the damage will be less than the damage of the eggs in steps one and two. This demonstrates the protection a helmet can offer when worn correctly.

