

Lesson Two: Seeing is Believing

Objectives:

Demonstrate to students how and why eyes need to be protected from injury.
Give students an opportunity to express ways to protect their own vision.

Time Required:

One to two class periods

Materials:

- Assorted art supplies including scissors, construction and white paper, markers, glue, popsicle sticks, pipe cleaners
- Assorted houseware items including aluminium foil, plastic wrap, wax paper

Instructions:

- Explain to students that vision is often considered the most critical of the five senses and that all precautions should be taken to protect and maintain healthy vision.
 - Share examples from nature to demonstrate how animals protect their vision:
 - . A camel has eyelashes that are up to 4 inches long to protect from sand in the desert
 - . A cat's eyes appear to glow in the dark because they have "mirrors" that reflect light, allowing them to see in the dark
- Explain that Statistics New Zealand reports that an average of 14,576 occupation-related eye injuries occur every year. Describe possible eye injuries that could be protected against, including:
 - Foreign matter/particles in an eye
 - Burns
 - Chemical splashes
 - Airborne objects entering eye, i.e. being hit by a baseball
- Lead a discussion on the different types of jobs and activities that require wearing protective eyewear. If possible, bring examples of protective eyewear and have students guess what type of job a particular piece of eyewear would be for.
 - Safety shields - worn by construction workers, etc. to protect their eyes from material particles
 - Anti-reflective glasses - worn by military to protect from glare
 - Swim goggles - worn in water to protect eyes from bacteria, chemicals and/or chlorine
 - Helmets - worn by welders to protect the eyes and head from sparks
- Ask the students what other types of jobs or activities might wear protective eyewear? How come? Thought starters include:
 - Dental and medical office employees
 - Chemists and other scientists
 - Airline pilots
 - Machine operators
 - Lifeguards (protect from glare and UV)
 - Varied sports, especially those with objects that may become airborne
- Explain that many types of protective eyewear are available with prescription lenses.
- Explain that UV radiation can cause sunburn of the eye and that protective eyewear can often be enhanced with photo chromic technology to automatically protect from UV radiation.

Activity:

- Distribute art supplies and ask students to conceptualise a pair of safety goggles for their lives. Possibilities include:
 - Draw and decorate a pair of goggles
 - Build a 3-D model of goggles
 - Fabricate a pair of “mock” goggles out of materials provided
- Have students take turns describing their goggles to the class and explaining how they pertain to their lives.

Conclusion:

- Ask the students if they feel differently about protecting their eyes at this time. How so?
- Suggest that students talk to their parents about their personal eye health needs.