

Watch for Slow Pokes

Many slow moving vehicles use rural roadways including tractors, combines, harvesting equipment, and other farm implements being transported. These big machines travel at a much slower speed than cars and pickups. Slow moving vehicle emblems, made of reflective material, are attached to the back of farm machinery to alert faster traffic to slow down in order to avoid a collision.

ACTIVITY

Reflectivity Comparison

Targeted Age: Middle school and above

Learning Objective: The students will visualize the importance of reflective material on visibility from a distance.

Concept: Due to the difference in speed, a slower vehicle needs to be visible from a distance in order for the faster vehicle to slow down and avoid a collision. To facilitate this, machines that travel less than 25 miles per hour are required to have slow moving vehicle emblems on the back of the vehicle for visibility. Laws vary by state about what constitutes a slow moving vehicle and when SMV emblems are used. Check your state laws by calling your Department of Transportation or going online.

It is important that the emblems, which are made of highly reflective material, be clean and in good shape. As SMV emblems age, they lose their reflective ability.

You will need:

- ▶ Yellow reflective tape
- ▶ Red reflective tape
- ▶ Orange reflective tape
- ▶ Colored construction paper
- ▶ Flashlights
- ▶ Dirt or mud
- ▶ Optional: actual SMV emblems (one new and one faded)

Cut out 8 inch triangular shapes from the reflective tape and several colored paper sheets. Tape the triangles on a wall of a large inside room where lights can be turned off. Explain to the students that the lights will be turned off so they will be prepared to stand still. From a short distance (within 10 feet) use the flashlight to highlight the triangles. Turn the lights back on and have the students rearrange objects in order of how easy it is to see each object. Have the students move backwards to be as far away from the objects as possible. Repeat the lighting demonstration and rearrange the triangles according to their reflectivity.

Mix dirt and a little water to make a mud paste. Apply mud to a portion of the reflective tape shapes. Repeat the light demonstration and observe the effect on visibility.

If you have actual SMV emblems repeat the light demonstration comparing the faded and new emblems.

Questions to Ponder:

- ▶ What variables had an influence on the visibility of the shapes?
- ▶ How did the distance influence the visibility of the objects?
- ▶ Why is it important to keep SMV emblems clean?

Reflective tape, markers, and SMV emblems are available through Gempler's. 1-800-382-8473 or www.gemplers.com.