

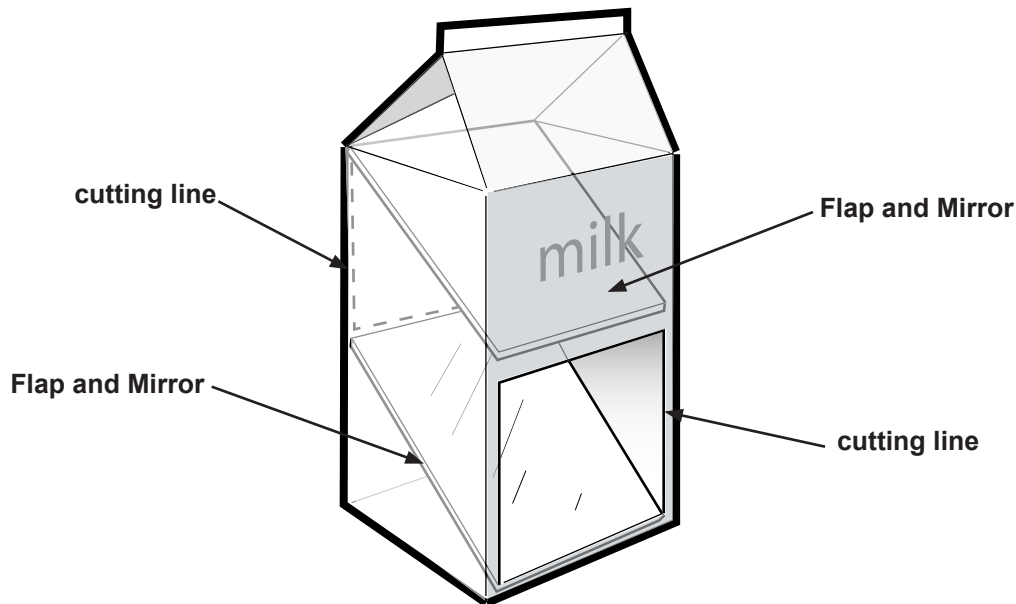
# Double Reflection

Before you left your home this morning, chances are you looked at your reflection in the mirror. Reflection is the process of light rays bouncing off an object. Mirrors are very smooth, surfaces that evenly reflect light rays. Mirrors enable us to see images as they actually appear.

In this activity you will use two mirrors to create a periscope. A periscope is a device used to see objects that are difficult to see because other obstacles are in the way. Periscopes have been used in submarines for many years. They enable people on submarines to see objects above the surface of the water.

## Materials:

cardboard 1/2 gallon milk or juice container  
two mirrors (slightly smaller than the width of the container)  
scissors  
tape



## Directions:

1. Wash the milk or juice container thoroughly with warm water.
2. **CAUTION: Be Careful!** Cut a flap on the bottom of one side of the container. Make the cut the same size as the mirror. If you do not feel comfortable cutting the container, ask your teacher to help you.
3. Next, cut out the second flap, opposite the first one at the top of the container.
4. Fold each flap back at a 45 degree angle.
5. Using tape, attach each mirror to the outside surface of the flaps.
6. Using both hands, hold the periscope straight up, and look into the bottom mirror. You may need to slightly adjust the angles of the mirrors to see the objects you want to see.
7. Answer the questions on page 25.

# Double Reflection

**Directions:** Answer the following questions.

1. Why are two mirrors necessary to make your periscope work?

2. Why may it be necessary to adjust the angle of the mirrors?

3. What are some potential uses of periscopes?