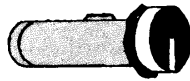


Discovering the Laws of Reflection

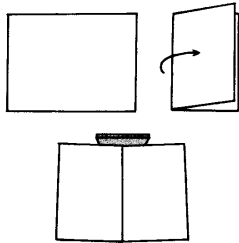
This is a nice little activity to do with the class as it has the children discover that light always reflects in the same way. The light coming in and striking the mirror is reflected at the same angle. It is easy to set up and requires very little materials. If you have ray boxes, use them in the place of the flashlights.

Compare the path of light before it hits a mirror with the path after it hits. How is it the same? How is it different?

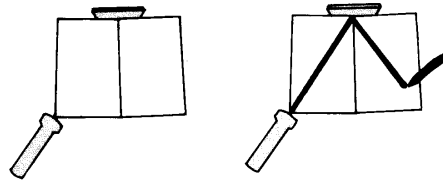
To find out you will need a mirror, paper, crayons, scissors, and a flashlight. Tape black paper over the end of the flashlight. Cut a slit from the center to the edge of this paper. When the light shines through the slit onto the paper, it will make a narrow path.



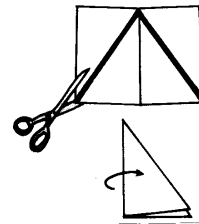
Next, fold a sheet of paper in half. Open it out flat. Lay it in front of an upright mirror. The edge should be even with the mirror. And the fold should be in line with the center of the mirror. A small mirror will stand upright if you tape it to a book or block of wood.



Shine a beam of light across the surface of the paper. Aim it where the fold and mirror meet. Can you see a second path of light leaving the mirror? Using a crayon or pencil, trace both paths. Then cut the paper along the paths you have drawn. What is the shape of the cut-out piece of paper? Fold the cut-out piece along the same fold line. Do the pieces on both sides of the fold match?



Do this again several times. Put a new piece of folded paper in position next to the mirror each time. And hold the flashlight in a different position. But be sure the light is always hitting the mirror at the fold line. Are the angles on each side of the fold always the same?



Addison-Wesley 1984

When you have completed the activity, tape 3 mirrors together and direct the light beam to the center mirror. Before you shine the light, predict the path the reflected light will take. Try shining the beam at one of the side mirrors, and predict its reflected light.

