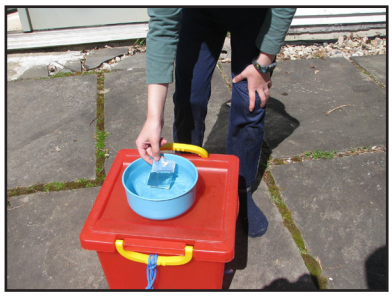
MONTSHIRE MUSEUM OF SCIENCE

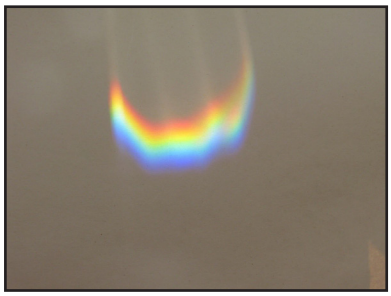
Activity: Refraction

When light hits a transparent material, like glass or plastic, it may bend a little as it enters the material and again as it exits. The angle and shape of the material determines how much the light will bend or refract. A prism and a hand lens both use refraction to create a rainbow and magnify an object.

Water Prism Materials

- Shallow contain of water
- Mirror or cd
- White paper or other surface to reflect the rainbow onto





Instructions

- On a sunny day, bring your materials outside and set your container of water on a flat spot.
- Stand facing the sun and place the mirror into the water.
- Have your partner stand in front of you holding the paper (make sure they don't block the sun!).
- Move the mirror until you can see a shimmering rainbow on the paper.
- You may need to experiment with the angle of the mirror and how deep into the water you position it.

Water Lens Materials

- Water glass, wine glass, other curved clear containers
- Water

Instructions

- Fill a variety of clear cups with water.
- Place your finger into the water and observe it through the side of the glass. The curve of the glass (and therefore the water) will act like a lens to make your finger appear larger.
- Look at objects (both inside and outside) through the glass. Objects may appear larger or upside down!