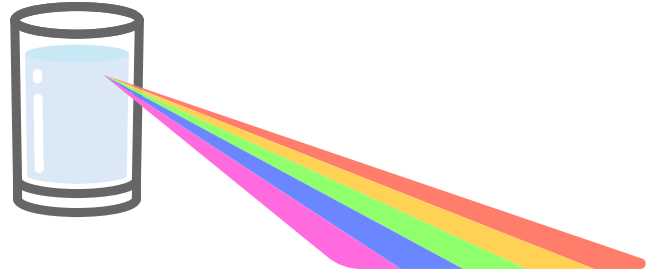


Make a Rainbow



Activity Description

Have you ever looked up at the sky and seen a rainbow? These rainbows form from sunlight passing through tiny water droplets in our atmosphere!

Sunlight is white light, which is actually a mixture of all the colors. When the light passes through the droplets at an angle, it bends the white light and separates it into the main colors that we see—red,

orange, yellow, green, blue, indigo, and violet. This bending of the light as it passes through a medium (in this case, water) is called refraction.

Procedure

1. Fill the clear glass up with water.
2. Place the white sheet of paper on the ground in a sunny spot.
3. Place the glass of water on the edge of the paper facing the sun.
4. What do you see on the paper? You should see a rainbow!
5. If you don't see a rainbow, try moving the glass of water to another position and make sure there is nothing blocking the light shining into your glass.
6. Why do we see a rainbow if we are shining white light through the water?

Materials

- Clear glass of water
- Sheet of white paper
- Flashlight or Laser Pointer (optional)
- Clear soda, hydrogen peroxide, or rubbing alcohol (optional)

Preparation and Safety

Do not look directly at the sun or shine any type of light directly into the eyes of people or pets.

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Extensions or Adaptations

- Trace the rainbow on the sheet of paper and color it in using markers, crayons, or color pencils!
- Try using different light sources and see how it affects the way the rainbow looks. You could try a flashlight, laser pointer, or black light. Do you still see a rainbow?
- Try using different types of clear liquid and a flashlight. You could try clear soda, hydrogen peroxide, or rubbing alcohol. Be sure to ask an adult's permission before using these alternative liquids.