Curiosity Labs™ by MilliporeSigma:

The Making of a Rainbow

In this experiment, you will learn...

- The color combination of a **rainbow**
- What happens when **light travels** through water

Share your results and tag us! **#SPARKCuriosity**

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The Making of a Rainbow

SUPPLIES

- Tape
- Water
- Mirror
- Scissors
- White card
- Dark room
- Large clear container
- Flashlight
- Black construction paper

Instructions

STEP 1
Using the black paper, cut out the shape of your flashlight face (area where the light comes out).

STEP 2
Cut a small slit in the middle of the black paper cover.

STEP 3
Place the black paper cover over the flashlight and secure it with tape.

STEP 4
Fill the large clear container halfway with water.

STEP 5
Stand the mirror in the water so it leans against the end of the container at an angle.

STEP 6
Point the flashlight so the light beam shines on the mirror through the water (the flashlight should be on the outside of the container and not submerged in the water).

STEP 7
Hold up the white card so the reflected light coming from the mirror can shine on it.

STEP 8
Turn out the lights so the room is dark, and turn on the flashlight.

FUN FACTS

The colors of the rainbow are always the same combination (red, orange, yellow, green, blue, indigo, violet). Each color is the combination of the two colors that surround it. For example, red and yellow create orange; yellow and blue create green and so on.

WHAT HAPPENED?

When light travels through water, the light beam slows down and bends, creating a rainbow. The seven different colors that make up the rainbow all travel at different speeds, and therefore, each color bends at a slightly different angle. The mirror reflects the different colors so that you see a rainbow or spectrum of the seven separate colors.

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