

# Make A Rainbow

**Grade Level:** 6th - 8th; **Type:** Physics

## Objective:

This science project demonstrates how a rainbow forms, using water to split white light into its many colors.

## Research Questions:

How can I make a rainbow without a prism?

Have you ever made a rainbow by shining light through a prism? Maybe you've noticed the colors of the rainbow in the reflection of a diamond ring. A real rainbow forms when the raindrops in the sky actually act as prisms, splitting the light that hits them into its many hues. In this project, the water acts as a prism as well, making a rainbow appear.



## Materials:

- Shallow baking pan
- Masking tape
- Water
- Flat mirror
- Blank white index card

## Experimental Procedure:

1. Place a strip of masking tape, sticky-side down on the bottom of the baking pan, near one of the edges.
2. Fill the pan with about an inch of water.
3. Set the pan near a window that has direct sunlight streaming through it. The masking tape should be on the side opposite the window.
4. Lean the mirror against that side of the baking pan so that its bottom rests on the masking tape. It should now be angled towards the top of the open window.
5. Hold the index card so that any light reflected from the mirror will shine on it. A rainbow will appear on the card. This is because the water in the pan split the white light into its different colors, just like a prism does. These colors were then reflected in the mirror and onto the card.

**Terms/Concepts:** Prism; How does a rainbow form?

## References:

- Experiments With Light, by Salvatore Tocci. Pp 32-33.

Author: Keren Perles

Copyright © 2025 Education.com LLC All Rights Reserved