



HOW TO MAKE YOUR OWN RAINBOW

When your kids just want a rainy-day rainbow and it isn't raining

Kids love seeing a beautiful rainbow stretching across the sky after it rains. But what if the weatherman predicts nothing but sunshine for the days ahead? Here's a way for your little ones to make their own cheery rainbow inside.

Using water, a mirror and sunlight, your kids can create a water prism to break light into a spectrum of rainbow colors. Sorry, you'll have to supply your own pot of gold at the end!

GATHER THIS:

- Big bowl full of water in a clear container
- Small mirror
- Sheet of white paper
- Sunlit window

THEN DO THIS:

1. Place the bowl in front of the window.
2. Place the mirror part way into the water facing the light.
3. Hold the piece of paper up to intercept the reflection.
4. A rainbow should appear on the paper in bands of color.

ASK THIS:

- What do you predict will happen?
- What if you change the angle of the mirror or the piece of paper. Do you see more or fewer colors?
- What colors do you see? Have you seen these colors in nature?
- What colors are missing?

WHAT IS HAPPENING?

This experiment demonstrates what happens when light is "refracted". When light enters another substance of a different density, it either slows down or speeds up, causing the light to bend. White light is made up of many different wavelengths and each wavelength bends differently. The difference in angle means the light leaves the water in different positions, showing up on the paper as bands of color. Normally, you can't see this effect of refraction because the split light is too small.



WHAT THIS TEACHES:

Skills: Scientific method, observation
Themes: Light refraction, color

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