

CHALLENGE LEVEL



## MIXING LIGHTS TO MAKE A RAINBOW

### MATERIALS AND EQUIPMENT

What happens when you mix light? White light can be broken into a spectrum of seven colors, but to mix it you need only three colors—red, green, and blue. These three



### Method of Investigation

**NOTE:** Since you will be opening lightsticks, you must have an adult helper.

**1** Break open two lightsticks.



**2** Add green or the red.

Put on a pair of work gloves. Make a hole in the end of each lightstick with a nail and hammer. Keep the lightsticks, hole end up, in a glass or jar. **Note:** The material in lightsticks is nontoxic; however, it may irritate your skin or eyes, and it may stain your clothing. Please handle it carefully and dispose of it safely in a refuse container.

**3** Add blue.



about ten drops of glowing fluid.

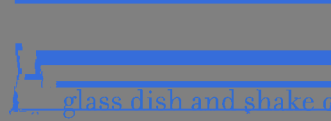
**4** Add a few drops of



**5** Add red one drop at a time, mixing by swirling between drops.

### Observations & Suggestions

Try mixing just green and red and see what



# Vanishing Rainbow

It's exciting to see a rainbow, but here we're going to show you how to make one disappear!

## YOU WILL NEED



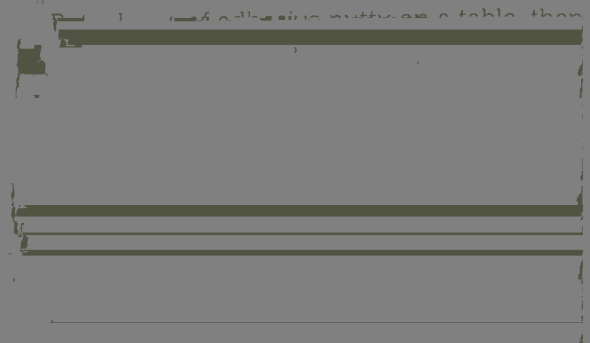
1

Draw a circle on a sheet of white cardstock and cut it out. With the help of a ruler, draw eight sections on it, like the slices of a pie.

2

Color the sections in this order: red, orange, yellow, green, blue, **indigo**, and violet. Leave the last section white.

3



## SCIENCE: LIGHT AND COLOR

White light is a combination of all the other colors that we can see (the **visible spectrum**). When you spin the wheel fast, your eyes can't distinguish the separate colors. What they see is all the colors blended to a grayish-white.