

Sugar Rainbow

Experiment Materials

- 6 Tall, clear glasses (See NOTE in Step1.)
- Granulated sugar
- [Coloring tablets or food coloring](#)
- Water (See NOTE in Step 3.)
- Clear drinking straw
- Measuring spoons
- Small dish or sink
- Adult supervision
- Fill each of the six glasses with water. NOTE: The glasses need to be stable and about as deep as the straw is long. As you fill the straw with solutions, it has to be plunged deeper and deeper into the liquids.
- Use coloring tablets or food coloring to dye the water a different, bright color in each glass. Stir it completely.
- The first of the six glasses will be just colored water with no sugar. The second color receives one rounded teaspoon of sugar. The third color receives two rounded teaspoons of sugar. The fourth gets three teaspoons and so on to five teaspoons of sugar in the last glass. Stir the solution in each glass until the sugar is completely dissolved. NOTE: Using warm or room temperature water will speed up this process.
- Grab the straw and, if you haven't already, remove the wrapper. Hold the straw near one end, wrapping four fingers around the straw and placing your thumb over the straw's top opening. To make your Sugar Rainbow, lift your thumb off the opening, dunk the lower

end of the straw about 1" (3 cm) into the plain water. Cap the straw firmly with your thumb, lift it out of the water, and dip it quickly into the 1 tsp solution. This time, go a little deeper than you did into the first glass. You want the layers to be about the same thickness. With the straw in the liquid, lift your thumb but quickly replace it. Lift the straw and you'll have the first and second colored solutions in a stack inside the straw. Continue the dipping process until you have all six colored solutions inside the straw. It's a density column of sugar water, a Sugar Rainbow!

- When you're ready, hold the straw over the dish and lift your thumb to empty the straw. Rinse it and make another one.