

# Experiments: Density Rainbow

## What will I Learn

This is a great way to learn about density (how some things can have more stuff packed into the same space than other things do — a cup of thick, gloppy syrup is denser than water, for example).

When something is denser, it's heavier — you will be able to see this when liquids of different densities stay separated for a while.

## What it should look like



In this experiment, you'll mix different amounts of the same sweets with the same amount of water. Then you'll carefully layer the liquids into a glass with the densest at the bottom — watch how it makes a rainbow!

## You'll need:

- Water
- Microwave-safe measuring cup
- Microwave
- Five small cups
- A clear glass to display your rainbow
- A wide spoon
- Skittles in these colours: red, orange, yellow, green, and purple ( 2 packets)

## What to do:

1. Warm a cup of water in the microwave for about 30 seconds.
2. Put 2 tablespoons of warm water into each of the five cups. Kids can help with this part. If you are looking after more than one child, each kid can take a colour.
3. Cup 1 will be red: Add 2 red Skittles.
4. Cup 2 will be orange: Add 4 orange Skittles.
5. Cup 3 will be yellow: Add 6 yellow Skittles.
6. Cup 4 will be green: Add 8 green Skittles.

7. Cup 5 will be purple: Add 10 purple Skittles.
8. Allow the Skittles to dissolve in the cups for 1 hour. (It may take longer for them to dissolve. Using warm water will help.) Remove or ignore the waxy film that will float on the surface.
9. When the sweets are entirely dissolved, begin with the purple cup. As the kids watch, pour the purple water into the clear glass.
10. Use the back of a spoon with the tip touching the side of glass to carefully add each new layer of colour, beginning with green. Slowly pour the green water over the back of the spoon so the green water rests on top of — instead of mixing with — the purple water.
11. Repeat with the rest of the colours, in this order: yellow, orange, red.
12. The rainbow won't last forever, so enjoy it while it does!