



Water Rainbow

Ages 5-10

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Background

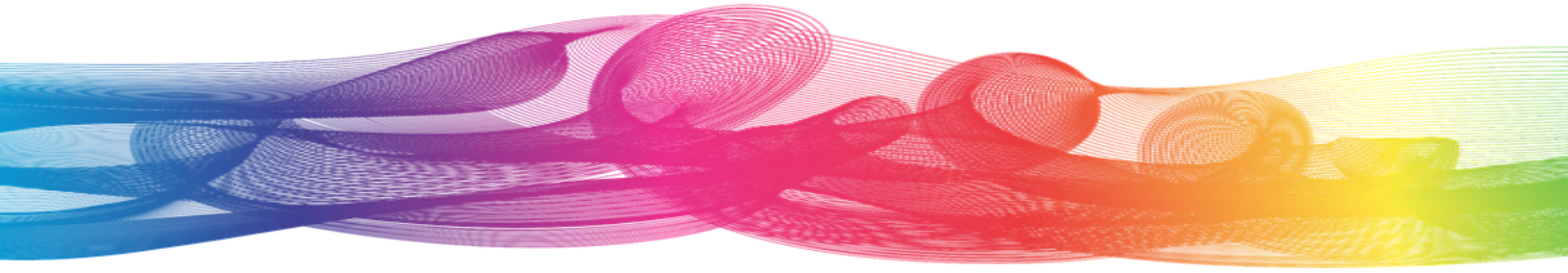
Do you like to float in a swimming pool on a hot summer day? Have you ever wondered how big boats float on top of water? Today we will explore why things float by creating a water rainbow!

Materials

1. 6 plastic cups
2. 1 bag of Skittles
3. 1 plastic spoon
4. 1 black marker
5. 1 plastic dropper

Experiment

1. Place five plastic cups on the table
2. Using the black marker, label the plastic cups with the numbers 1-5
3. Open your bag of Skittles
4. Place the following amount of Skittles in each cup



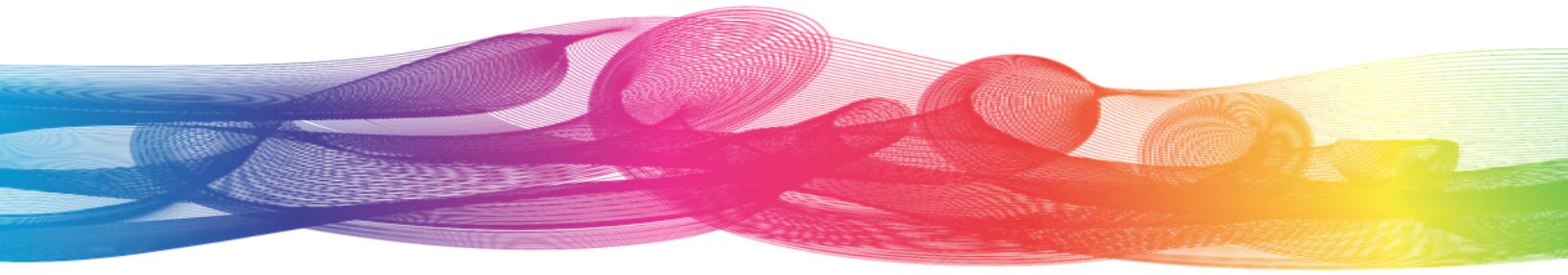
Cup #1	2 red skittles
Cup #2	4 orange skittles
Cup #3	6 yellow skittles
Cup #4	8 green skittles
Cup #5	10 purple skittles

5. Fill a mug with water and heat the water for about one minute in the microwave. Ask a parent or guardian for help!

***Parents/Guardian:** Water should be hot but not boiling!*

6. Using the plastic spoon, place two spoonfuls of hot water into each of your numbered cups. Make sure you pour the water on top of your Skittles!
7. Gentle swirl the water in each cup.
8. Wait five minutes. What do you notice about the color of the water in e
9. Add one spoonful of cool water to each cup.
10. Gently swirl the water in each cup.
11. SLOWLY use the dropper to add the colored water from cups #1-5 to cup #6 in this order:
 - a. Purple
 - b. Green
 - c. Yellow
 - d. Orange
 - e. Red

Be careful! You do not want to mix the water during this step!



How does this experiment work?

As you can see, the water formed layers! But how did this happen? We added the same amount of water to each of the five cups however we added different amounts of Skittles to each cup. This changed how much sugar was in each cup. The red cup had the smallest amount of sugar while the purple cup had the largest amount of sugar. Scientists call this **density**. When something has a small density, it floats on top of things with larger density. Just like how the green water floats on top of the purple water!



Should this be live or recorded?

Probably pre-recorded due to the logistics of doing a livestream where you have to do the experiment but also use the microwave in your kitchen. But if someone has a kitchen that could accommodate this then maybe we can do it live!

Amazon links to materials

1. [Plastic Spoons](#)
2. [Skittles](#)
3. [Plastic cups](#)
4. [Dropper](#)
5. Black marker