



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

Explore solubility with Skittles candy.



Supplies Required:

Orange and green Skittles candy
Water
Plastic plate

Video

Learn more about solubility: <https://tinyurl.com/y5bztuzp>

Overview

This Skittles experiment demonstrates a process called stratification. The simple definition is that stratification is the arrangement of something into groups because of different properties. Specifically, this is water stratification. Each Skittles color has a slightly different chemical composition which when dissolved in the water creates a solution that has slightly different properties. This creates a barrier that prevents the water from mixing. A solution is a mixture of two or more substances that stays evenly mixed. Substances that are combined to form a solution do not change into new substances. Some examples of solutions include seawater, gasoline, glass, steel, and air. Each color of Skittles have the same amount of food coloring that is being dissolved off the shell and so as it spreads it doesn't mix when they meet.



Instructions

1. Set out a bowl of Skittles and sort them out.
2. Arrange the orange skittles around the plate in the shape of a pumpkin. Add green skittles on top for a stem.
3. Before pouring in the water, form a prediction. What will happen to the candy when it is wet?
4. Carefully pour water into the plate or dish until it just covers the candy. Be careful not to shake or move the plate once you add the water or it will mess up the effect.
5. Watch as the colors stretch and bleed out away from the Skittles, coloring the water. Make observations!

Additional Resources

Think About It! What happened? Did they mix? What if you used clear soda instead would that change the outcome? What would happen if you used different colored Skittle, would it be the same? What if you used candy like chocolate? How does this experiment relate to making chocolate milk?

1. How are Skittles made? <https://tinyurl.com/y6bbunk3>
2. Learn more about mixtures and solutions: <https://tinyurl.com/y59fo2hx>

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#HalloweenScience
#ProjectExploration
#StemAtHome

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