Skittles Rainbow Experiment

Make your own rainbow with this super simple science experiment! When you've tried it once, try some of the extension activities listed below the basic instructions.

Materials Needed: Skittles, white plate, warm water

Instructions

1. Place your Skittles in a circle on the plate.
2. Have an adult help you carefully pour warm water in the middle of the plate until it reaches and just covers the Skittles.
3. Watch what happens! Be a scientist – make observations and ask questions.

Extension Activities

- Why do you think the colors spread but don't mix? Discuss this together and then read the science explanation below!
- What are some other ways you can arrange your Skittles? You can make a different shape or use different color patterns. What about trying to make a more complicated design with your Skittles, like a face, flower, or house?
- Would other candies work the same way for this project? Try using other colored candies. Does it work the same or differently than the Skittles?
- Can you make the color reaction move slower or faster? Time how long it takes for the colors to reach the center with warm water, and then try other liquids such as cold water, hot water, or white vinegar. (Remember to always have an adult help you!) Before you start, make a prediction of which liquids will allow the fastest and slowest reactions.

Science Explanation

Why do the colors spread? Skittles are coated in food coloring and sugar. The warm water causes the coloring and sugar to dissolve (to melt or become liquid) and then diffuse (to flow out or spread freely.)

Why don't the colors mix? Water stratification! This is where distinct layers or barriers form between water with different properties (like density or temperature.) For example, fresh water and salt water do not mix. In the case of our experiment, each color Skittle creates a water solution with slightly different properties that do not mix.