

Amaze Your Brain *at Home!*

EXPERIMENTS

BEST FOR
Grades
2-8

CANDY CHROMATOGRAPHY

MATERIALS

- Skittles (or another candy with colored coating)
- Foil
- Water
- Coffee filter
- Ruler
- Scissors
- Pencil
- Toothpicks
- Small bowl
- Salt
- Clear cup

INSTRUCTIONS

1. Take one of each color of Skittles and place them in a line on the foil. Make sure there is a little bit of space between each candy.
2. Dip your finger in some water and place a small drop in front of each Skittle. Place one Skittle in each drop, and wait for about a minute so that the color comes off.



3. Cut the coffee filter into a 3 inch x 3 inch square.
4. Using a pencil, draw a horizontal line half an inch from the bottom of the coffee filter. Draw a small dot to represent each of the colors you are testing. Make sure the dots are equally spaced along the line. Underneath the line, label which color will go on each dot.

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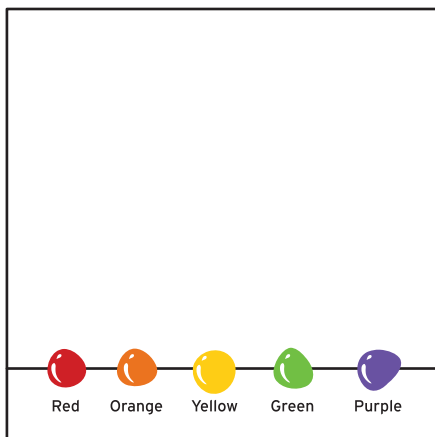
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CANDY CHROMATOGRAPHY (CONT.)

5. Dip a toothpick into the first colored drop of water that you made in step 2. Make a small dot of color on the coffee filter where you made your first mark. Repeat for each color of Skittle you are testing.



6. Pour one cup of water into a bowl and add 1/8 of salt. Mix well.
7. Add a tiny amount of salt water to the clear cup- just enough to make a thin layer along the bottom.
8. Carefully place the coffee filter in the cup. Make sure that the water only touches the bottom of the paper and does not reach the colored dots. Watch what happens.
9. Experiment! Try the procedure with other colored substances, such as M&Ms or other candies, markers, or food coloring. You could also compare the same color of different candies. For example, are the pigments in green Skittles the same as in green M&Ms?

WHAT'S HAPPENING

Paper chromatography is a technique that chemists use to separate the components of a mixture, such as the pigments that give an object its color. As the salt water travels up the coffee filter by a process called capillary action, it carries the pigments from the coating of the Skittles along with it. Different pigments have different affinities or "attraction" to the salt water, causing them to travel different distances up the coffee filter. Some colors may even be made up of several pigments.



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