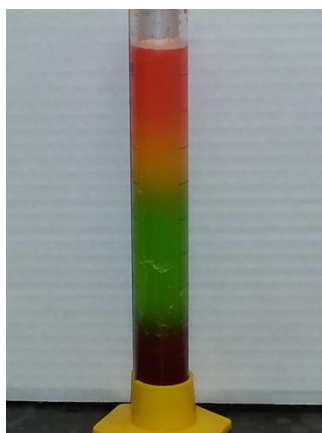




California State University of Bakersfield, Department of Chemistry

Rainbow Tower



Standards:

2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

MS-PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

Introduction:

Sugar water was prepared by dissolving skittles in various amounts. Sugar water is denser than water, the more sugar, the denser the water. Since the water with less sugar is less dense, it floats on top of the denser layer like oil on water.

Materials:

- Bag of Skittles
- Boiling Water
- Tall skinny glass/Test Tube
- Five bowls or glasses- microwave safe
- Tablespoon
- Pipettes/ Syringe

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Safety:

- Always have an adult with you to help you during your experiment.
- Always wear eye protection and gloves when doing chemistry experiments
- Be careful around hot water.

Procedure:

1. Sort Skittles by color and separate them into 5 different bowls/cups.
3 Red, 6 Orange, 9 Yellow, 12 Green, 15 Purple
2. Put two tablespoons of HOT water in each bowl/cup.
3. Leave Skittles in water to dissolve for 15 minutes or until the water is room temperature (The Skittles will not fully dissolve, but be stripped of their original color).
4. Pour the purple Skittle water into the tall empty glass or test tube (no Skittles should be in the glass).
5. Use pipette to suck up the green.
6. Hold the pipette tip against the glass near the top. Squeeze it SLOWLY, whilst running the pipette around the inside of the glass. This helps to layer the colors, if you go too quickly or pour the water straight in, they will mix. (Remember to rinse pipette after all the liquid of each color has been used, because colors mix easily and ruin the rainbow)
7. Use the pipette to suck up the yellow.
8. Repeat step six until all the yellow liquid has been used.
9. Use the pipette to suck up the orange.
10. Repeat step six until all the orange liquid has been used.
11. Use pipette to suck up the red.
12. Repeat step six until all the red liquid has been used.

Data and Observations:

1. Record your observations here.

Questions:

2. Why do the colors separate in the glass?

References:

1. "Raising Wild Ones - UK Family | Lifestyle | Parenting Blog." Raising Wild Ones. N.p., n.d. Web. 23 July 2014.

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