

Simple STEM Activity

Colorful Creations with Candy

Purpose:	The purpose of this activity is for students to investigate and explain how candy dissolves and diffuses when placed in a sample of water.
Standard:	<p>S2P1. Obtain, evaluate, and communicate information about the properties of matter and changes that occur in objects.</p> <p>a. Ask questions to describe and classify different objects according to their physical properties.</p> <p>S5P1. Obtain, evaluate, and communicate information to explain the differences between a physical change and a chemical change.</p> <p>a. Plan and carry out investigations of physical changes by manipulating, separating and mixing dry and liquid materials.</p> <p>S8P1. Obtain, evaluate, and communicate information about the structure and properties of matter.</p> <p>a. Develop and use a model to compare and contrast pure substances (elements and compounds) and mixtures.</p>
Materials:	Disposable plate, cup of water, at least one kind colorful candy (Skittles, M&M's, gumballs, Spree, Nerds all work well).
Procedures:	<ol style="list-style-type: none"> 1. Observe the properties (features) of your candy. Write a list of words that describe it. 2. Place a handful of pieces around the inside of the plate. See picture. 3. Add water so that it covers the bottom of the candy. 4. Observe how the colors dissolve and move. 5. Explain why you think the colors move toward the middle. 6. If possible, change at least one factor (ex. kind of candy, kind of liquid, shape of candy outline) and try it again. 7. Carefully dump out your candy water and clean up as needed.
Science Behind It:	Candy is a mixture of substances including sugar, flavoring, and food coloring. Candy is designed to dissolve quickly when it enters your mouth so you can fully enjoy the wonderful taste. As the substances dissolve, they naturally move from a place where they are crowded, or concentrated, to a place where they are less crowded. This process is called diffusion . When candy is placed in water instead of your mouth, the coloring is one of the first things that dissolves and then spreads out. This provides a great change to observe the process of diffusion.
Questions to Ask:	<ol style="list-style-type: none"> 1. What words can be used to describe the properties of your plastic bag? 2. Explain why you think the dissolved colors moved toward the middle? 3. Describe how the process of diffusion works in this activity?