5th Grade - Lesson 1.2
Dissolving an M&M
Student Reading

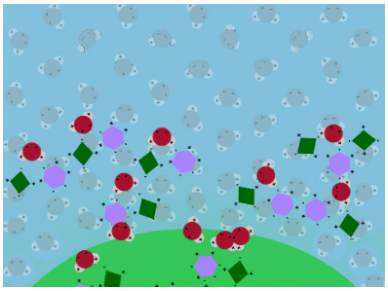
M&M in Water

Dissolving the coating of an M&M

An M&M has a candy coating made mostly of sugar and coloring. If you put an M&M in water, the candy coating forms an area of sugar and coloring in the water around the M&M. But why does this happen?

The water molecules must be interacting with the sugar and coloring molecules. Since the sugar and coloring come off the M&M, the water molecules must be attracting the sugar and the coloring molecules with more force than the sugar and coloring molecules are attracted to each other when they are on the M&M.

Water molecules are slightly positive at one end and slightly negative at the other. These molecules attract the oppositely charged areas of the sugar and coloring molecules and pull them away from the M&M and from each other. This process is called *dissolving*.



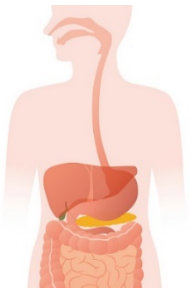
Dissolved Sugar and Coloring

Dissolving for life

Cake Batter

Dissolving is more important than you might think. Baking or cooking different types of food requires that salt, sugar, baking soda, and other ingredients be dissolved in milk, water, or other liquids.

In fact, you couldn't survive without the process of dissolving. The food you eat gets dissolved and processed in your digestive system so that nutrients can enter your blood stream and be used by your cells.



Digestive System

Gases can dissolve in liquids

Carbon dioxide in Soda Pop

Even gases such as carbon dioxide and oxygen can dissolve in water. Dissolved carbon dioxide is what makes soda pop fizzy. The dissolved oxygen in water is used by fish and other underwater creatures to breathe.

Fish Breathing Dissolved Oxygen