Candy Science

Understanding Density

In this experiment we will learn about the rule of density using candy! We will learn what types of candy sink and what types float and what causes this to happen.

Materials:

- 3 Musketeers bar
- Snickers bar
- Hershey kiss
- Marshmallow candy
- Large bowl filled with water
- Plastic knife
- Plastic plate

Directions:

1. Unwrap all candy bars and place on plate
2. Observe differences in candy (texture, smell, weight, etc.)
3. Write down 2 observations about each
4. What do you think makes an object like candy sink or float? Write down your hypothesis.
5. Place the unwrapped candy bars in the bowl of water
6. Observe and record which candy bars sink and which ones float
7. Take candy out of water, cut open and examine composition differences in those that float and those that do not

Results and Explanation:

The density of an object depends on two things:

1. The mass of each atom or molecule that makes up the object.
2. The volume or amount of space the material takes up. This is related to how closely the atoms or molecules are "packed" in the material

The more dense candy will sink to the bottom of the bowl. The density of the candy depends on what is inside the candy bar. The candy with marshmallow or nougat will float because it is composed of sugar and has several small holes, which fill with air and keep the candy afloat in the water. The candy that is filled with nuts or chocolate is much heavier. The fillings of these candies do not have any small air holes and thus they will sink to the bottom of the bowl.

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