The HOMESCHOOL DAILY

FREE educational resources and activities

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Hi! Thank you for your download. I'm so glad you were able to find a school tool you can use. Please feel free to use this activity for your own personal use or classroom. Hope it works out great!

♥ Marie

Candy Bar Density Lab

Find out which candy bars will "satisfy" your hunger! Snickers claims to "satisfy," but what about 3 Musketeers?

If Density is the amount of mass in volume, then wouldn't the candy bar with the greatest density satisfy your hunger the best? So, which candy bar has the highest density? Let's investigate!

We are going to make observations about each candy bar, find the mass, volume, and density of each candy bar, and then test their density against water.

- **Gather Materials**
  - 2 Paper Plates
  - Knife
  - 2 Snickers
  - 2 3 Musketeers
  - Ruler
  - Triple Beam Balance
  - Calculator
  - Beaker filled with water ½ to ¾ full
  - Paper Towel or Napkins
  - Lab Sheet
- **Make Observations**
  - Open one Snickers and one 3 Musketeers. (Do not eat!) Put each of them on their own paper plate.
  - Using the knife, cut the candy bars in half.
  - Illustrate what each looks like. Write 3 words that describe what the contents look like.

Snickers	3 Musketeers
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

- Based on what you observe about each candy bar, which one do you think is denser? Why? ____

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- **Collect and Record Data**

1) Open the remaining two candy bars: one 3 Musketeers and one Snickers. Put them on their corresponding paper plates.
2) Now, using a triple beam balance, find the mass of each candy bar and then record the data in the table below.
3) Next, using a ruler, find the length, width, and height of each candy bar in centimeters. Record your data in the table below.
4) Next, calculate each candy bar's volume. To do this, you will multiply its length x width x height. Use the calculator and then record your data.
5) Now that you have the mass and volume of each candy bar, find their densities. You will do this by dividing. Here is the formula: MASS/ VOLUME. Use your calculator to keep it simple.

	Mass in Grams (g)	Length measured in centimeters	Width measured in centimeters	Height measured in centimeters	Volume in centimeters (cm3) L x W x H = V	Density Mass/Volume g/cm3
3 Musketeers						
Snickers						

- Facts to Consider
    - Before we continue, let's discuss buoyancy and the density of water. Buoyancy is the *ability of an object to float in water or air*. The density of pure water is always 1.0g/cm3. An object with a density of more than 1.0g/cm3 will sink and an object with a density of less than 1.0g/cm3 will float.
- Analyze Data to Make Hypothesis
    - If I put a 3 Musketeer candy bar into water, then it will ___________________.
    - If I put a Snickers candy bar into water, then it will ____________________.
- Test Hypotheses
    - Drop each candy bar into the water.
- Draw Conclusions
    - Draw what happened in your experiment.
    - Was your hypotheses correct? Explain. __________________________________

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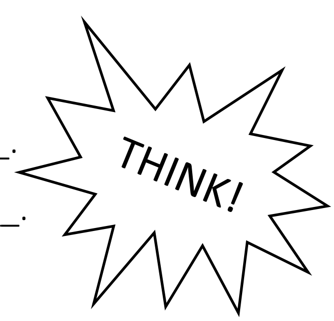
- Fill in the Blanks with either the word ***increase*** or ***decrease***.
    - When you increase mass, density will ________________.
    - When you increase volume, density will __________________.
    - When you decrease volume, density will __________________.
    - When you decrease mass, density will __________________.



* Did you know that Earth is the densest planet in the solar system? Saturn is the least dense. If Saturn was placed into a large tub of water, it would float. If Earth was put in a tub of water, it would sink.