



High Touch High Tech®

Science Experiences That Come To You™

Density Tower

Supplies:

- Tall clear glass
- Funnel
- 2 small plastic cups
- 2 Craft sticks
- Honey
- 100% Maple Syrup
- Milk
- Dish soap
- Water
- Vegetable oil
- Food dye

Instructions:

1. Take your 2 small cups and fill one partway (2-3 oz.) with water; fill the second one partway (2-3 oz.) with vegetable oil.
2. Use the food dye to make the vegetable oil green and the water blue. Drip the colors into each cup and stir with a craft stick.
3. Use the funnel to add about 2-3 oz. of each liquid to your glass in this exact order. RINSE the funnel between each addition.
 - a. Honey on the very bottom
 - b. Maple syrup
 - c. Milk
 - d. Dish soap
 - e. Water
 - f. Vegetable oil on top.

The Science Behind it:

Do you know what density is?

Density: Density is basically how much "stuff" or matter is smashed into a particular area or a comparison between an object's mass and volume. So, two liquids can take up the same amount of space (volume) but have completely different masses. If liquid A has a higher mass, MORE of that liquid is in that space and therefore is denser. If liquid b has a lower mass, LESS of that liquid is in that space and therefore is less dense.

All of the liquids in your glass have similar volumes but different densities. What does that mean? That means that each liquid has a different amount of mass in that volume. The liquids with the highest density are on the bottom and the ones with the lowest density are at the top. So, which of the three liquids was most dense? Least dense?