Magic Milk Science Experiment

To set up the magic milk science experiment, you only need to grab a few supplies.

- Milk
- Liquid food coloring – gel doesn't work well
- Dish soap
- Qtip
- Baking dish

Directions

2. Pour a thin layer of milk in a shallow pan.

3. Add drops of food coloring all around in the milk.

4. Pick up a cotton swab and dip it in the dish soap.

5. Then put the cotton swab in the milk – pressing it down in one spot and holding it there for about 15 seconds.

Watch what happens!.

How Does the Magic Milk Experiment Work?

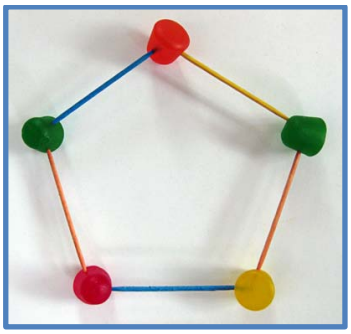
Milk is made up of minerals, proteins and fats. When the dish soap enters the milk the fat begins to break up. The soap molecules run around and try to attach to the fat molecules in the milk. Normally this process would be invisible to you, but the food coloring helps you to see all of the movement taking place. Press another dish soap covered cotton swab into the milk and see if there are any more fat molecules that haven't been found. If you still see movement, there were still some fat molecules on the loose!

How to build a Geodesic dome

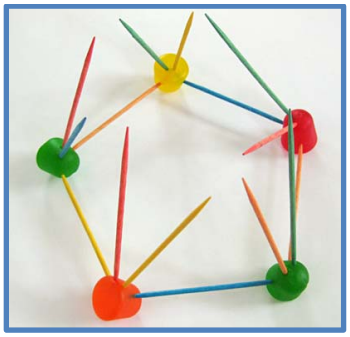
Supplies:

- toothpicks
- gumdrops (Dots) or mini marshmallows

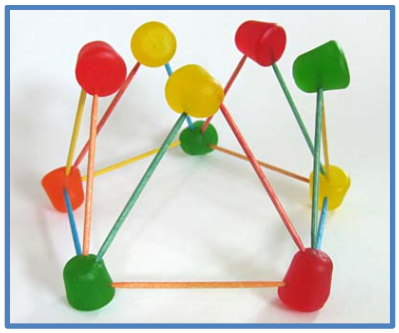
1. Attach five toothpicks together using the gumdrops to form a flat pentagon (five-pointed) shape. You should have a gumdrop at each point and a toothpick along each edge.



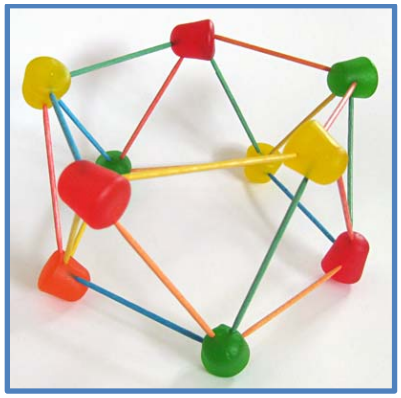
2. Poke two more toothpicks into each gumdrop, arranging the new toothpicks so that they are pointing up.



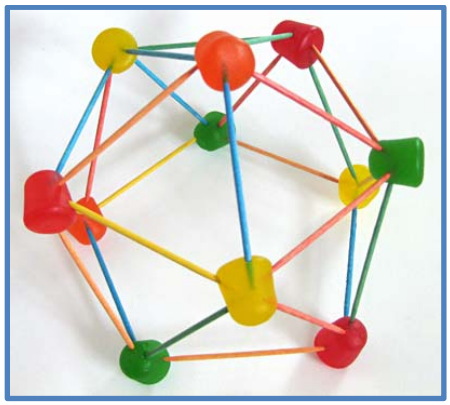
3. Take five new gumdrops and attach them to the top of the new toothpicks, putting two toothpicks into each gumdrop, to form triangles. (The pentagon should form the base of the triangle, and the new gumdrops should form the top point.) You should end up with five triangles this way.



4. Attach a toothpick between the top points of the triangles you just made, connecting the triangles together. This uses five toothpicks, and will create another pentagon shape, this time at the top of the dome.



5. Take five more toothpicks and poke one into each of the five gumdrops that make up the top pentagon. Arrange the new toothpicks so that they are pointing up. Then poke all five toothpicks into a gumdrop in the middle, and at the top, of the dome. Your geodesic dome is complete!



To make rainbow paper we gathered a few quick supplies:

- A bowl filled with water
- Clear nail polish
- Rectangles of black construction paper or black card stock (about 3-5 inches long on the sides)

- drip one little drop of nail polish into the bowl of water.

-wait a couple of seconds and then dip a piece of black paper into the water and pull it out again.

- you can also place the paper under the water first and then dripping one drop of clear nail polish on top of it. The nail polish disperses across the surface of the water within a couple of seconds. Once the nail polish spreads out, it's safe to pull the paper out of the water, coating it with a thin film of clear nail polish. Put on paper towel to dry

The colors of the rainbow vary with the thickness of the nail polish on the paper. This is why each piece of rainbow paper is varied and unique!

This is the same effect you will see when oil mixes with water on the road on rainy days. Thin film interference is also visible on the surface of soap bubbles at just the right angle to the light.