Spring Break Activity Sheet

Spring Science!

For these activities you will need:

Rainbow in a Jar:

- **4 glasses**
- **Tall glass or mason jar**
- **Sugar**
- **Food colouring**
- **Straw**

Colourful Dancing Milk:

- **Milk (homogenized or 2%)**
- **Shallow container**
- **Food colouring**
- **Cotton swab (Q-tip)**
- **Dish soap**

Rainbow in a Jar

1. Add 1/2 cup of warm water to each of the four glasses.
2. Add 2 drops of food colouring into each glass. Use red, yellow, green and blue - a different colour for each glass.
3. Add the following amount of sugar to each glass:
    - Red – 2 tbs of sugar
    - Yellow – 4 tbs of sugar
    - Green – 6 tbs of sugar
    - Blue – 8 tbs of sugar
4. Stir each glass until the sugar dissolves completely.

Tip: If the water is not warm enough, ask a grownup to put the glass in the microwave for 15 -30 seconds at a time, stirring in between until the sugar is dissolved.

4. Pour about an inch of blue water into a new tall glass.
5. Use a straw to gently drip the green water on top of the blue layer.

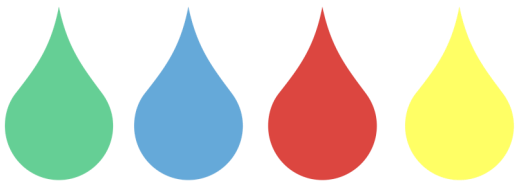
Tip: It works best to place the straw to the side of the glass, just above the blue layer.

4. Add the yellow layer using the same method, then the red layer.

Colourful Dancing Milk

1. Pour enough milk to cover the bottom of a shallow container.
2. Add several drops of food colouring into the centre of the container.
3. Repeat with different colours.
4. Dip a cotton swab in dish soap and swirl it around where the food colouring is.
5. Observe the amazing results!

Density - Food colouring is less dense than the milk causing it to remain suspended in the fat molecules of the milk. Adding dish soap breaks up the fat molecules making the food colouring spread across the surface of the milk. Adding sugar to water affects the density and allows it to have a layering effect!



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Spring Science!

For these activities you will need:

Underwater Fireworks:

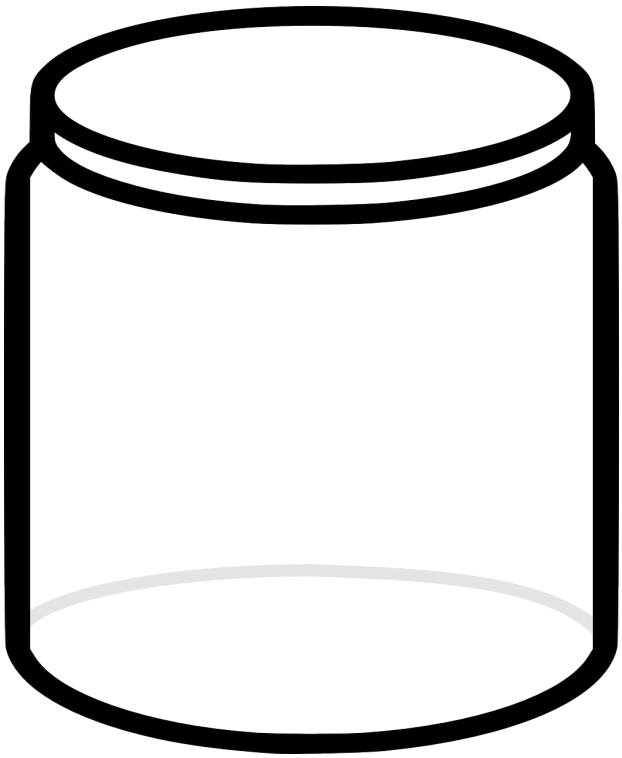
- **1 1/2 cups warm water**
- **1/4 cup vegetable oil**
- **Food colouring**
- **2 large clear containers**

Bouncing Egg:

- **Clear drinking glass**
- **White vinegar**
- **Egg**

Underwater Fireworks

1. Por 1 1/2 cups of warm water into a large clear container.
2. In a separate container, pour 1/4 cup of vegetable oil. Add a few drops of food colouring and gently stir together.
3. Add the oil mixture to the water.
4. Stand back and watch what happens. Draw your findings below.



Bouncing Egg

1. Gently place an egg into a glass.
2. Fill the glass with vinegar leaving 1/2 inch space at the top
3. Sit the glass on a flat surface for 2 days.
4. Observe the changes to the egg through-out the days.
5. Remove the egg from the glass and rinse it off with water.
6. How did the egg change? Compare it to another egg. What do you notice?
7. See if your egg will bounce when you drop it from a low height. Start with 2 inches and see how high you can get. If you go too high, the egg will break!

The shell dissolves because eggshells contain calcium carbonate. This dissolves in the acidic vinegar to produce calcium ions (which stay dissolved in vinegar) and carbon dioxide gas. The carbon dioxide produces the bubbles that you will see while the egg is dissolving.

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