



Rainbow in a Jar

Experiment with Density

INTRO

For this experiment, we are going to build our own rainbow in a jar! Our rainbow is going to be made up of 5 different colors: red, yellow, green, blue and purple.

SUPPLIES

- Tall Glass Jar
- 1/4 cup Rubbing Alcohol
- 1/4 cup Honey
- Jars for mixing and pouring
- 1/4 cup Water
- 1/4 cup Olive Oil
- 1/4 cup Blue Dish Soap
- Food Coloring: Red, Blue and Green
- 1/4 cup Olive Oil

VOCAB

- Liquid
- Density

INSTRUCTIONS

1. Add one drop of red food coloring and one drop of blue food coloring to 1/4 cup of honey and stir until combined. This will create a purple color liquid. Pour the purple liquid carefully into the tall jar.
2. Add about 1/4 cup of blue dish soap to the tall jar.
3. Add a few drops of green food coloring to 1/4 cup of water and mix until combined. Then carefully pour the green liquid into the tall jar.
Tip: When pouring in the green liquid, tilt the jar so the liquid runs down the side of the jar slowly.
4. Wait a few moments and then slowly pour 1/4 cup of olive oil into the jar. Remember to be very careful when pouring in the liquid. Tilting the jar and pouring in the olive oil very slowly will help prevent the colors from mixing.
5. Add a few drops of red food coloring to 1/4 cup of rubbing alcohol and mix until combined. Then carefully pour the red liquid into the tall jar. Again - remember to tilt the jar and pour very slowly to prevent colors from mixing. Pouring too quickly will mix the colors and prevent you from seeing a distinct rainbow.

DISCUSS

- How does this experiment work? The liquids used have different densities. The liquids with higher densities weigh more than the liquids that are less dense. Therefore, the less dense liquids will sit on top of the denser liquids.