



Create Your Own Rainbow In A Cup

Materials

- 1 jar (e.g., A mason jar works best)
- ½ cup blue dishwashing liquid
- ½ cup olive oil
- ½ cup rubbing alcohol
- ½ cup light corn syrup
- Food coloring
- 5 plastic spoons
- 5 small bowls for mixing

Procedure

Make your purple layer by mixing 1/2 cup of the light corn syrup with 1 drop of blue and 1 drop of red food coloring.

Carefully pour it into the bottom of your jar.

Carefully pour the blue dish soap down the side of the jar.

Mix 1/2 cup of water with 2 drops of green food coloring.

Carefully pour in your green water down the side of the jar.

Gently pour 1/2 cup olive oil down the side of your jar.

Mix 1/2 cup of rubbing alcohol with 2 drops of red food coloring.

Carefully pour the red rubbing alcohol down the inside of your jar.

Being careful not to disturb your liquids, set your jar down on the table and enjoy your rainbow!

You should have produced a beautifully layered rainbow in a jar with distinct lines that separate each layer of liquid without them mixing.

Explanation

So what keeps all these layers all separated from each other? It's how dense, or heavy, each liquid is inside the jar. The corn syrup is heaviest, and sits nicely on the bottom. The dishwashing soap is not quite as heavy as the corn syrup, but it's heavier than the olive oil, and so on. Layering them from heaviest to lightest from the bottom up ensures that the rainbow maintains its distinct lines.

The Rainbow in a Cup contains materials considered toxic, so please use caution when doing any science activity. Be careful not to get it in your eyes, and wash your hands after handling the solution.

