

Fireworks in a Jar

This easy science project mimics colorful fireworks explosions and is a perfect craft for your Independence Day celebrations. You can work together to re-create the bursts of cascading color we see with fireworks displays by using a few basic ingredients you likely already have in your cabinets.



Materials

- ❖ Glass jar or any clear vessel (jar, glass, cup, vase), plastic or glass – glass recommend
- ❖ Food coloring in assorted colors
- ❖ Vegetable oil
- ❖ Fork
- ❖ Small bowl
- ❖ A dash of patience



Instructions

1. Fill the jar three-quarters full with warm water.
2. In a separate bowl, add three to four tablespoons of oil.
3. Add several drops of food coloring in various colors to the bowl of oil.
4. Use a fork to mix the oil and food coloring together until small beads of color form.
5. Slowly pour the oil mixture into the jar of water.

Watch for what happens next...as the liquids combine, the food coloring will slowly sink out of the oil and into the water. When this happens, it will expand and begin to mix with the other colors, creating a cascading “fireworks” effect.

The Science Behind the Experiment

Use this project as an opportunity to talk science with your kids! Why does the color seem to “fall” from the oil into the water? Food coloring dissolves in water but not in oil. Because the oil is less dense than the water, it will float at the top. The colored droplets will begin to sink because they are heavier than the oil. Once they sink into the water, they will begin dissolving slowly-creating the tiny “explosions.”

