

Underwater Fireworks

The Fourth of July is almost here. It is a time to celebrate with fireworks. Have your students try this safe explosively fun experiment.

What You Need



- water
- vegetable oil
- food coloring
- tall clear plastic cups
- fork

Creating Underwater Fireworks

1. Fill a tall plastic cup almost to the top with room-temperature water.
2. Pour 1-2 tablespoons of oil into the other glass.
3. Add a couple of drops of food coloring of two different colors.
4. Break up the food coloring drops into tiny droplets by briefly stirring the oil and food coloring mixture with a fork.
5. What do you think will happen when you pour the oil and coloring mixture into the tall glass?
6. Now watch as the food coloring will slowly sink in the water. Each droplet will expand outward as it falls creating - Underwater Fireworks!.

How It Works

Food coloring does not dissolve in oil but it does dissolve in water. By stirring the food coloring in the oil the food coloring is broken up into tiny droplets. Some of the tiny droplets mix to create a new third color. The oil floats on the water because it is less dense than water. The colored droplets sink to the bottom of the oil then they mix with the water. The color diffuses outward as the heavier colored drop falls to the bottom.

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