



Fireworks

People all over the world shoot off fireworks to celebrate special events

and holidays. When you light a firework, the starting powder catches fire. As the powder burns, it releases gases that expand. Some of the gases release through a small hole, launching the firework into the air. A bursting powder deep inside the firework ignites to create the final explosion.

Red, blue, green, purple—the color is all about chemistry. Different metals inside fireworks create bursts of colors. Sodium makes yellow, strontium produces red, calcium creates orange, barium makes green, and copper creates blue.

Chemistry is fun! Aren't you glad that our creative God made so many beautiful colors and gave us the creativity to use chemistry to make fireworks?



Make fireworks in a jar.

You'll need:

- An empty jar
- 4 tbsp of cooking oil
- Food coloring
- Water
- A bowl
- Paper towels
- A spoon

1. Fill the jar $\frac{3}{4}$ of the way with water.
2. In the bowl, mix 3 tablespoons of cooking oil with several drops of food coloring.
3. Use your spoon to stir the food coloring into the oil to break the food coloring into smaller droplets.
4. Pour the oil into the jar of water. The oil will settle at the top of the jar.
5. Watch as the food coloring shoots down and mixes into the water—like fireworks!



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In the US, more than 14,000 fireworks displays light up the sky every year on the 4th of July.

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Most historians believe that fireworks were accidentally invented in China around 200 BC, when someone tossed bamboo into fire—the world's first firecrackers!