

# Fireworks in a Glass

Learners will use the power of chemistry to create a shower of colors inside a glass.

**Recommended Age:** 6+

**Time needed:** <5 minutes to set up, 5+ minutes to explore

**Video:** <https://youtu.be/WftrCnQ1eDE>



## What You Need

- Water
- Food coloring
- Oil (corn, vegetable, whatever you have)
- A tall glass (if you don't have one, a regular drinking glass or jar is OK too)
- A small glass jar with a lid

## What You Do

- Pour water into the tall glass, leaving a few inches at the top



- Fill your small jar with enough oil to take up the last few inches in the tall jar
- Add a few drops of food color to the oil, whatever colors you like
- Put the lid on the jar, and shake the oil really hard



- Pour the oil into the tall glass
- Wait and watch

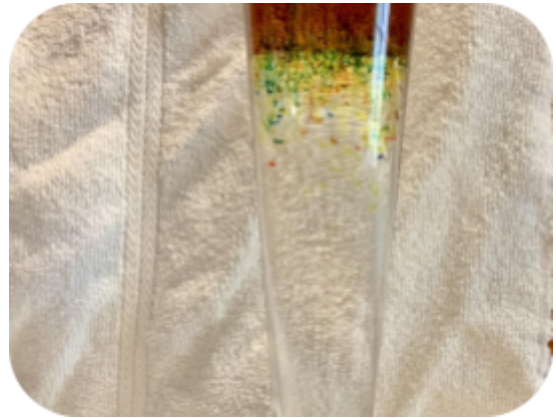


## Tips for Adults

- It can take a moment for the reaction to get going. Don't panic!
- When you're done, stuff the glass full of rags or paper towels to absorb the oil, and then toss it. Don't pour the oil down your sink.
- Ask your child to make predictions at each step: "What do you think will happen when we...." It's OK if predictions don't turn out; it happens to scientists all the time!

## What's Going On?

Water and oil don't mix; you probably noticed that when you poured the oil into the glass, it just floated on top of the water. But the food coloring is water-based. So the drops of food coloring sink through the oil. When they hit the water, the drops start to spread through the water, leaving colorful streaks.



## Learning and Skills Connection

- **Experimenting:** Making and testing predictions, trying multiple solutions
- **Being open to possibilities:** Expressing interest, wanting to explore, taking things apart, trying things out, asking questions
- **Curiosity:** Wondering about the world, wanting to explore, willingness to try new things and take risks

## Doing STEAM with Kids

STEAM stands for Science, Technology, Engineering, Art, and Math. There are lots of ways you can explore these letters, apart or together. Ask your child to make predictions, describe what they see, and to imagine possibilities and solutions. Don't worry so much about the "right" answer. Developing curiosity, and problem-solving skills are important first steps to doing STEAM!

