

Lesson Plan: Color Splash!

Subject: Physical Science

Age Group: 2nd-3rd Grade

Supplies Needed:

- 3 clear plastic cups
- Water
- Cooking oil
- Liquid food coloring
- Pencil

Introduction:

- Ask the students what they normally color with.
- Tell them you've found a new fun way to color!

Instructions:

- 1) Fill one cup about 2/3 full of water and another about 2/3 full of oil.
- 2) Add a few drops of food coloring to each cup.
- 3) Leave space between the drops so they don't touch.
- 4) Ask the students what happens.
- 5) Now fill the third cup about 2/3 full of water.
- 6) Pour in enough cooking oil so it forms a thin layer on top of the water.
- 7) What do you think will happen if you add food coloring to this last cup?
- 8) Ask them to guess what will happen.
- 9) Touch one of the drops of food coloring in the last cup with the tip of a pencil. What happens?
- 10) Touch the different drops of food coloring with the pencil and draw on paper.

Follow-up:

- When you add food coloring to water, it mixes in, but food coloring to oil doesn't mix.
- Why? Food coloring is mostly made of water, and water and oil don't mix.
- Even if you stir them, the oil separates and forms a layer on top of the water.

- This is due to density. Oil is less dense than water, therefore floats.
- When you add food coloring to the cup that has water and oil, each drop is coated with oil. That is why the drops sit in the oil layer.
- The oil is like a raft that helps the food coloring float.
- If you poke a drop with a pencil, the oil layer is broken.
- Then the food coloring mixes with the water and makes a cool design.

Source: <http://pbskids.org/zoom/activities/sci/colorsplash.html>