**5th Grade - Lesson 2.5** **Name: _____**
**Activity Sheet**
**The Density of Liquids** **Date: _____**

**Safety:** Wear safety goggles and be sure to follow all safety instructions given by your teacher. Wash your hands after completing the activity.

## *DEMONSTRATION*

In a demonstration, your teacher poured corn syrup into water.

1. Your teacher put two cups containing equal amounts of corn syrup and water on opposite ends of a balance.
   Which was heavier, the corn syrup or the water?

   The corn syrup was heavier.

2. Your teacher poured the corn syrup into the water. Did the corn syrup sink or float in the water? The corn syrup sunk in the water.

3. Is corn syrup more dense, less dense, or the same density as water?
   Corn syrup is more dense than water.

## *ACTIVITY*

**Question to investigate:**

Is vegetable oil more or less dense than water?

**Materials**

- 50 mL water in cup
- 50 mL vegetable oil in cup
- 50 mL corn syrup (colored) in cup
- Balance


**Procedure**

1. Place the cup containing water and the cup containing vegetable oil on opposite ends of a balance.

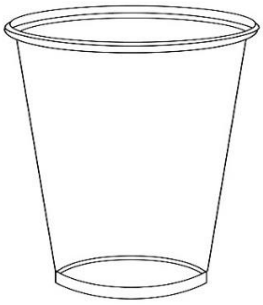
4. Which weighs more, the cup containing water or the cup containing vegetable oil? The water weighs more than the vegetable oil.

5. Is vegetable oil more dense or less dense than water? Explain.
   Since the vegetable oil weighs less than an equal amount of water, the oil is less dense than water.

6. When you poured the oil into the water, did the oil sink or float on the water? The oil floated on the oil.


7. When you poured colored corn syrup into the oil and water, what did you observe?
The colored corn syrup went through the oil and through the water and ended up on the bottom.

8. In the picture of the cup below, draw the different layers that you observed in the cup containing water, oil, and corn syrup. Label the drawing to identify the layers.

**Vegetable Oil**

**Water**

**Corn Syrup**

On the lines below, write down the three liquids in order from *least* dense to *most* dense.

Oil Water Corn syrup

**Least Dense** **Most Dense**

## *TAKE IT FURTHER*

9. Your teacher added one ice cube to a cup of water and another to a cup of isopropyl alcohol.


a. Did the ice cube sink or float in water?
The ice cube floats in water.

b. Did the ice cube sink or float in isopropyl rubbing alcohol?
The ice cube sinks in alcohol.

c. Which is more dense, water or rubbing alcohol? Explain.
Since the ice cube floats in water, water must be more dense than the ice cube. And since the ice cube sinks in alcohol, the ice cube must be more dense than alcohol. Since the water is more dense than the ice cube, and the ice cube is more dense than the alcohol, the water must be more dense than the alcohol.