



Name: _____

Subject: Science/Chemistry

Key Concepts: density, liquids

Try this at Home: Make a Liquid Rainbow!

Watch the Wonderama Video on YouTube: [Cool Science With Rachel: Liquid Density](#)

(If needed, use the video title to search for this video)

Words to Learn

Density: the degree of compactness or thickness of a substance

Hydrophilic liquids: liquids that attract water and mix with it

Hydrophobic liquids: liquids, like oil, that repel water and do not mix with it

What You Need:

- Honey
- Dishwashing soap
- Water with food coloring (optional)
- Vegetable oil
- Rubbing alcohol with food coloring (optional)
- Clear cup or container
- 2-3 Spoons

If you don't have all of these liquids, you can do this experiment with any of the 3 liquids listed.

What to Do:

1. Pour the liquids into the clear container, in order from **most dense, (or thickest) to least dense**. You may need to use the spoon to slowly and gently pour the liquids.

The order of the liquids is:

- Honey
 - Dish soap
 - Water with food coloring (if available)
 - Vegetable Oil
 - Rubbing alcohol with food coloring (if available)
2. Notice the way the layers stay separate, with the most dense liquid at the bottom and the least dense liquid at the top, creating a beautiful liquid rainbow!

Bonus! Leave the cup filled with the liquid for 1-2 hours to see if you notice any differences in the layers. Take pictures of the cup right after you fill it and then later to compare the differences.

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What You Learned:

Draw a picture of your liquid rainbow.



What surprised you most about this experiment?

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