

# JR-SCIENTISTS

# DENSITY TOWER

See how we set up super easy liquid density tower physics activity for kids!

## INSTRUCTIONS:

**STEP 1:** First, add your ingredients from heaviest to lightest.

**STEP 2:** First add syrup, then dish soap, then water (color the water if desired), then oil, and lastly alcohol.

**STEP 3:** After the layers separate, add a drop of food coloring to the alcohol layer.

## SUPPLIES

Syrup

Water

Cooking Oil

Rubbing Alcohol

Dish Soap

Large, Tall Jar

Food Coloring

## THE SCIENCE

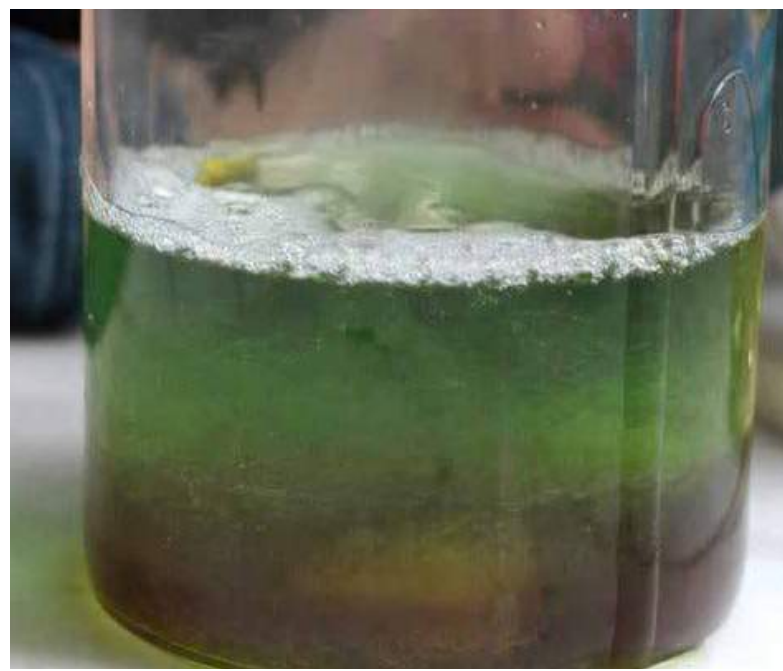
Matter has different densities meaning some will be heavier and some will be lighter. It's hard to imagine that different liquids have different weights, but they do!

Why do some liquids weigh more than others? Like solids, liquids are made up of different numbers of atoms and molecules. In some liquids, these atoms and molecules are packed together more tightly resulting in a denser or heavier liquid like the syrup!

These different liquids will always separate because they are not the same density! That's pretty cool, isn't it? I hope you explore science at home and test out some awesome physics concepts too.

$$E=mc^2$$

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# Density Tower Observations

Use this worksheet to process and evaluate your work.



What do you think will happen when you put all of these liquids together?

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What happens to the water on top of the corn syrup?

Does it mix or stay separate?

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What happens to the oil? Does it float on top or sink to the bottom?

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Why do you think the layers turned out this way?

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What happens if you turn the jar upside down?

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