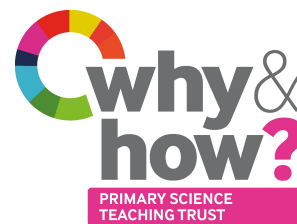


SCIENCE FUN AT HOME



Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**



BEFORE YOU START! Please read through this with an adult:

- * Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- * If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- * Talk to your adult about sharing the science you have done and if they want to share on social media, please tag **@ScienceSparks** and **@pstt_whyhow** and use **#ScienceFromHome**

WATERY SCIENCE

1 TRY THIS INDOORS DENSITY JAR

Pour water into the glass or jar until it's about half full. Fill to almost the top with vegetable oil. If you're using a jar with a lid you could try giving it a shake and leave to settle. The oil and water will separate again after a few minutes. Test small items (toys, lego piece, coin etc.) to see if they float on the top or sink, or sink only half way down the jar.

You will need

- * Glass or Jar
- * Vegetable Oil
- * Small items, toy, lego, coin
- * Coffee filter paper or kitchen roll
- * Sand or dried herbs
- * Funnel or sieve
- * Bowl
- * Spoon

WHAT DO YOU NOTICE?

Things to talk about ...

What happens when you pour the oil on top of the water? Do they mix? What happens to different objects when you put them into the jar? Do they sink to the bottom or float on top of the oil? Can you find anything that will sink in the oil but float on the water? Try making a new jar, starting with a layer of salty water (you could add food colouring) then carefully pour fresh water on top and then the oil.



2

TRY THIS OUTDOORS

Add a couple of spoons of sand or dried herbs to a glass of water and stir. The challenge is to separate them using a filter. Place a sheet of kitchen roll or coffee filter inside a funnel or colander/sieve placed over a small bowl and pour the water through. You should find water passes through the filter while the sand or herbs are left behind.

WHAT DO YOU NOTICE?

Things to talk about ...

How clean does the water look? What is left in the paper? What happens if you filter the water again? How could you dry out the sand or herbs?



3

WHAT IS THE SCIENCE?

Whether something floats or sinks depends on the density of the object and the density of the liquid it is in. One small lego brick usually sinks through oil but floats on water. This is because the lego brick is more dense than oil but less dense than water. A coin will sink to the bottom of the water as it is more dense than both oil and water. Something that is less dense than oil will float on the oil, which itself is floating on the water.

A filter is porous which means it has tiny holes (you cannot see them) that let water through, but not the sand or herbs. When you pour the sandy water through the filter the sand stays in the paper and the water goes through. If the water doesn't look clear, this means that something in the sand must have dissolved in the water and so has been able to pass through the paper.

4

MORE ACTIVITIES YOU COULD TRY

MAKE COLOURFUL WATER <https://www.science-sparks.com/skittles-experiment/>

MAKE WATER BEND! <https://wowscience.co.uk/resource/bend-water-with-static-electricity/>

MAKE A WATER WALL <https://www.science-sparks.com/summer-science-with-a-diy-water-wall/>

Join in with **THE GREAT SCIENCE SHARE** - [register](#) for this year's event and take a look at these [question maker](#) tools to **SHARE YOUR SCIENTIFIC QUESTIONS!**

IMPORTANT NOTICE: Science Sparks and The Primary Science Teaching Trust are not liable for the actions of activity of any person who uses the information in this resource or in any of the suggested further resources. Science Sparks and The Primary Science Teaching Trust assume no liability with regard to injuries or damage to property that may occur as a result of using the information and carrying out the practical activities contained in this resource or in any of the suggested further resources.

These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.