

## Small Science Learning Tasks

<p><b>Bend a straw with your eyes!</b></p> <p>Using the power of your eyes, bend a straw sitting in half a glass of water without even touching it! It sounds like magic but it's really another amazing scientific principle at work.</p> <p>What you'll need: A straw or pen/pencil, a glass half filled with water, 2 eyes (preferably yours!)</p> <p>Instructions: 1. Look at the straw from the top and bottom of the glass. 2. Look at the straw from the side of the glass, focus on the point where the straw enters the water, what is strange about what you see?</p> <p>What's happening? Our eyes are using light to see various objects all the time, but when this light travels through different mediums (such as water &amp; air) it changes direction slightly. Light refracts (or bends) when it passes from water to air. The straw looks bent because you are seeing the bottom part through the water and air but the top part through the air only.</p>	<p><a href="#">Tornado in a bottle:</a></p> <p>You will need: an empty bottle – try to find one that is tall and thin with a lid! Some washing up liquid, glitter food colouring (optional) Fill the bottle up 3/4 with water Put in 2 squirts of washing up liquid Put in glitter food colouring. Put the top on VERY tightly! Hold it at the bottom or top and swirl the water around using your wrist in a circular motion – can you see your tornado? Try using smaller or bigger bottles and varying the amount of washing up liquid!</p>	<p>All about our memory:</p> <p>Did you know your brain has different parts? Some of them are important for memory. The hippocampus (say: hih-puhKAM-pus) is one of the important parts of the brain that processes memories.</p> <p>Kim's game How many can you remember? Choose 10 different objects and place them on a flat surface e.g. a pencil, a pair of scissors, a toy, an apple etc. Ask an adult to carefully look at them for 30 seconds. Then take the tray away or cover it with a towel and ask the adult to say or write down as many of the 10 objects as they can remember. You could also try the game again with covering the objects and then taking one away! Or putting in an extra object!</p> <p><a href="#">More information here.</a></p> <p><a href="#">And here!</a></p>	<p>Stay afloat!</p> <p>Christopher Columbus's ship the Santa Maria was a heavy ship which had to carry huge cargo and 86 sailors. Your task is to design a boat that can hold treasure! (15 coins).</p> <p>You can use whatever you have at home such as food packets, plastic bottles, paper cups, tin foil etc.</p> <p>With an adult, fill a shallow bath or sink with water and test out your boat – add each coin one by one.</p> <p>Try making boats from different materials – which one is the most buoyant? Was it the one you thought it would be? Make sure it is a fair test by keeping everything the same such as the size and depth of water – the only thing that changes (the variable) is the material used.</p> <p><a href="#">More information here.</a></p>
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