

Water Density

<u>The Action</u>	Observe how the density of water changes with a change in temperature
<u>Grade Level</u>	Grade 3 – Properties of Matter Grade 3 – Heating and Cooling Grade 5 – Heat Grade 5 – Matter and its Changes
<u>Materials</u>	2 Clear Bottles with the same size mouth Kettle Water Food Colouring Protective Mitts Catch Tray
<u>Instructions</u>	Heat up water in kettle. Put bottles in catch tray and fill one just about to the top with cold water. With mitts on fill the other bottle almost full with hot water. Add a couple drops of food colouring to the hot water and allow time for it to mix with the water. Quickly turn the cold water bottle over top of the hot water bottle so that it rests on top of the bottle. Observe what happens.
<u>Safety</u>	Use protective mitts when dealing with hot water. Use old rags to wipe up any water containing food colouring as it will stain clothing
<u>Hints</u>	Keep the cold bottle of water in the fridge for a day before the experiment, or add some ice cubes to the water to cool it quickly.
<u>Science Principle</u>	Cold water is denser than hot water therefore the cold water will sink to the bottom forcing the heated water to rise into the top bottle.