

# TEMPERATURE

**THIS SIMPLE EXPERIMENT HELPS ILLUSTRATE HOW THE TEMPERATURE OF WATER AFFECTS ITS DENSITY (ITS 'HEAVINESS').**

This experiment requires some preparation – make blue ice cubes the day before by adding a few drops of blue food colouring to water and pour into ice cube trays/bags. Freeze for at least 12 hours.

1. Take a clear tank of water at room temperature and place a sheet of white paper behind it.
2. Add some blue ice cubes to the tank and watch!

## WHAT HAPPENS?

As the ice melts the blue water sinks to the bottom of the tank.

## WHY?

This is because cold water of the melting ice is more dense than the rest of the water in the tank and therefore it sinks.

## NEXT...

5. Take a paper cup and 1/3 fill with modelling clay.
6. Add a few drops of red food colouring and fill to the top with hot water.
7. Carefully cover the mouth of the cup with tin foil and secure with elastic band.
8. Place the cup in on the bottom of the water tank then pierce the tin foil once using a pencil.

## WHAT HAPPENS?

The red water should rise to the top of the tank.

## WHY?

Hot water is less dense than colder water and therefore rises above the cooler water.

