

We will stick with some more **water investigations for Week 2.**

- ***Hope you had fun last week finding out that Water actually has a skin! Can you explain surface tension and water resistance???***
- ***This week we will be investigating how the Water Cycle works, that is, how real clouds and rain are formed! We will also look at why some things float and some sink.***
- ***Have a look at <https://www.natgeokids.com/uk/discover/science/nature/water-cycle/> before you have a go at our activities.***

Investigation 1: Monday

### **Rain in a jar!**

Try this simple experiment.

You will need:

- A glass jar
- **Hot water (get an adult to help!)**
- Tin foil
- Ice cubes

Instructions:

1. Pour some recently boiled water into a glass jar and cover it with a piece of foil.

2. After a minute place some ice cubes on top of the foil. **What happens?**

**The hot water turns into vapour (a gas) and rises inside the jar. This is known as *evaporation*. The cold foil makes the vapour cool and turn back into water droplets, which fall like rain. This is known as *condensation*.**

**Did you know that rain is also called *Precipitation*?**

## Investigation 2: Tuesday

### **Condensation!**

This investigation shows us how **water vapour (gas)**, turns into **water droplets (liquid)**.

**You will need:**

- A glass
- A plastic cup
- **Hot water (get an adult to help!)**

**Instructions:**

1. Pour some recently boiled water into a glass.
2. Place a plastic cup on top and wait for a few minutes.
3. Take the plastic cup off and look inside.

**What do you see?**

- **Hot water turns into vapour at the surface and rises. As it rises, it cools and forms water droplets inside the top cup. This is know as condensation.**

Some more simple experiments to show how condensation works!

**Try making Dew!**

Half fill a glass with ice. Add enough cold water to cover the ice.

Watch the outside of the glass.

**What do you see?**

**Steaming up!**

Put a small mirror in the fridge for 15 minutes. Take it out and blow on it.

## What happens?

Investigation 3: Wednesday

### **Make a Rain Gauge**

A rain gauge allows you to collect and measure rainfall!

You will need:

- An empty plastic water bottle
- scissors
- some stones
- Paper and pencil

Instructions:

1. Take the cap of a plastic bottle, then carefully cut the top part off the bottle.
2. Turn the top upside down to make a funnel and tape onto the bottom part.
3. Place your rain gauge outside in an open area so it can catch any rain.
4. Place stones around your rain gauge to stop it blowing over.
5. The next day, measure the depth of any water in the bottle using your ruler.
6. **Measure the rainfall at the same time every day for a week.** Don't forget to record your measurements!!

- When you have your results try recording them on a **Bar graph**, showing

**Rainfall in cm on your Y (vertical) axis and Days of the week on your X (horizontal) axis.**

- **Showing your results on a Bar graph helps you to see the way rainfall changes each day. You could continue to record rainfall for several weeks or months if you want to, to see the way it varies over a longer period of time.**

## Investigation 4: Thursday

### **Floating and sinking**

Try these simple experiments to learn more about why different things float and sink.

### **Floating oranges!**

You will need:

- A small orange (a clementine works well!)
- A glass jug
- Water

Instructions:

1. Place an orange in a jug of water.
2. Notice what happens.
3. Remove the orange from the jug of water. Now peel the orange and put it back in the jug.

**What happens?**

**Can you think why this happens?**

- **Orange skin has lots of tiny air pockets in it, making the orange float. Without the skin the orange sinks!**

## Investigation 5: Friday

### **Bobbing raisins!**

You will need:

- Sparkling water
- A drinking glass
- Raisins

Instructions:

1. Pour some sparkling water into the glass.
2. Sprinkle in some raisins.
3. Watch what happens.

- **At first the raisins sink. However, sparkling water contains bubbles of gas, which stick to the raisins and make them float up to the surface. There the gas escapes, leaving them to sink again!!**

### **Something else to try!**

Carefully lower a fresh egg into a bowl of water.

#### **Does it float or sink?**

Remove the egg and stir in several heaped spoonfuls of salt. Put the egg back in the bowl of water.

#### **What happens now?**

- **Eggs are more denser than water ( which means that an egg-sized amount of water weighs less than an egg), so they sink. However, adding salt makes the water denser than the egg, so the egg now floats in the salty water!**

