

A Reversible Change

To understand why evaporation and
condensation occur

LO: To conduct an experiment that demonstrates a reversible change.

▶ Main Question: Why has evaporation and condensation?

Key Scientific Vocabulary:

- ▶ What do you think these words mean?
- ▶ Evaporate/Evaporation
- ▶ Condense/Condensation
- ▶ Liquid
- ▶ Gas
- ▶ Molecules
- ▶ Water Vapour
- ▶ Surface Area
- ▶ Reversible Change
- ▶ Irreversible Change

Definition of our key scientific vocabulary:

- ▶ **Evaporate/Evaporation** = When a liquid turns into steam or water vapour and becomes a gas
- ▶ **Condense/Condensation** = When a gas or water vapour becomes a liquid
- ▶ **Liquid** = A material that is runny and flows downwards and the shape of a liquid can change depending on the shape of the container it's in. It's molecules are spaced out and move quite freely
- ▶ **Gas** = Gases are all around us. Most gases are invisible. It's molecules are very spaced out and move very freely

More key scientific vocabulary:

- ▶ **Molecules** = The smallest part into which a material can be divided
- ▶ **Water Vapour** = A visible gas such as mist or steam which some liquids and solids can be turned into by heat
- ▶ **Surface Area** = The amount of space an object covers
- ▶ **Reversible Change** = When a material changes back into it's original state
- ▶ **Irreversible Change** = When a material changes into a completely new and different material and cannot be changed back into it's original state

Using our key scientific vocabulary

- ▶ What material is the **liquid** in our experiment?
- ▶ What material is the **gas** in our experiment?
- ▶ What material is the **water vapour** in our experiment?
- ▶ Where has **evaporation** happened in our experiment?
Why?
- ▶ Where has **condensation** happened in our experiment?
Why?
- ▶ Why is there **more evaporation** and **condensation** happening in the bigger container?

Using our key scientific vocabulary

What material is the **liquid** in our experiment? **The hot water**

What material is the **gas** in our experiment? **The steam**

What material is the **water vapour** in our experiment? **The gas**

Where has **evaporation** happened in our experiment?

From the hot water Why? **Because when heated the water goes into the air becoming a gas but does not disappear**

Using our Key Scientific Vocabulary

- ▶ Where has **condensation** happened in our experiment?
When the gas/water vapour hits the cold surface of the covering Why? **The cooler temperature of the covering turns the gas/water vapour into water droplets**
- ▶ Why is there **more evaporation** and **condensation** happening in the bigger container? **Because there is a bigger surface area so more evaporation and condensation will take place.**

Record Sheet

LO: To conduct an experiment that demonstrates a reversible change

Main Question: Why has evaporation and condensation occurred

Remember to use the **scientific language** that we have discussed for this lesson when explaining your thinking.

Questions to investigate:

- ▶ What happened to the inside of each of the coverings?
- ▶ Why are there more water droplets on the inside of the larger covering?
- ▶ Can you explain what has happened using the key scientific vocabulary for this session?
- ▶ Why is this experiment an example of a reversible change?

1. My prediction as to what will happen to the inside of each covering

Record Sheet

2. My results and explanation

3. Can you think of examples of where evaporation and condensation occur?

4. How do you think heat and wind will affect the speed and the amount of evaporation?