

# Water Cycle Lesson Plan



## Aim

To learn about the life cycle of water, in particular, the important processes of evaporation, transpiration, condensation, precipitation and collection.

## Time requirements

Approximately 60 minutes with an overnight element

## Resources

- Interactive water resource
- Whiteboard or projector

## Activity 1

- Two pieces of cloth (exactly the same)
- Water
- Air tight plastic bag
- Plate

## Activity 2

- Glass jar
- Plate
- Ice cubes
- Very hot water

## Learning objectives

To learn about the water cycle through discussion and drawing and to investigate elements of the water cycle through relevant experiments.

## Curriculum Strands

**SESE, Science** – Energy and forces, materials

**SESE, Science and Geography** – Natural environments and environmental awareness and care

**English** – Oral language and reading

**Maths** – Numbers, measures and early mathematics

## Skills

Questioning, observing, predicting, discussing, investigating, counting and analysing

## Links to Green-Schools

**Step 2 Environmental Review** – Investigating the life cycle of water

**Step 3 Action Plan** – Experiments to help understand the life cycle of water

**Step 6 Informing and Involving** – Posters on the water cycle, put on display on the Green-Schools notice board, inform the school and parents what the students are learning about water

## Vocabulary

Water cycle, evaporation, excess, airtight, molecules, condensation, water droplets, solid, liquid and gas

### Running the activity

- Ask the students to name places they can find water and how they think it gets around the earth.
- Go through Section 1 to explain the water cycle. Afterwards ask the children to draw diagrams of the water cycle.
- Experiments to help explain the water cycle:

#### 1) Evaporation

- Wet the two pieces of cloth and wring out the excess water.
- Put one piece of cloth in an airtight plastic bag and the other on a plate and place them somewhere they will get plenty of sunlight or near a heat source.
- Ask the students which one they think will dry the quickest and why.
- Leave the cloths overnight and the next day check which piece of cloth is drier. Discuss what you find.

#### Explanation:

The exposed cloth will be drier as the water molecules were able to escape into the air when they were heated unlike the cloth in the bag where the molecules could not escape.

#### 2) Condensation

- Pour a few inches of very hot water into the jar.
- Cover the jar with a plate and wait a few minutes. Then put the ice cubes on the plate. What happens to the water?

#### Explanation:

The cold plate causes the water vapour in the warm air, which is inside the jar to condense and form water droplets.

See Section 1 of the [Water Resource](#) and click on the link below to see our animated videos on the [Green-Schools 7 Steps in Action](#) and [Our Water from Cloud to Glass](#)

[www.greenschoolsireland.org/resources/water.215.html](http://www.greenschoolsireland.org/resources/water.215.html)

#### Questions

Can the students name any rivers, lakes or seas?

Can the students give examples of water in solid, liquid and gas form?

Where did the water go in experiment 1? Which cloth was the driest and what caused the water to disappear?

Why did water droplets form in experiment 2? Is this similar to what happens in the water cycle?

How is it similar?

#### Go further

Investigate the transpiration process and how this fits into the water cycle. Do some experiments and drawings.