

# Our wonderful water cycle

## LESSON PLAN

### Learning intention

This activity introduces students to the importance of water and basic concepts of the water cycle, through a colourful poster and floor puzzle.

### Time to complete

30 to 40 minutes

### Class size

Any

### Vocabulary

Water cycle, evaporation, water vapour, transpiration, condensation, precipitation

### Equipment required

1. Water cycle poster
2. Water cycle jigsaw page
3. Water cycle colour-in page
4. Printer to print off jigsaw and colour-in sheet
5. Laptop/PC with internet connection  
(To play YouTube: Water cycle rap video)

### Levels

Foundation (Prep) – Yr 2

### Learning areas

The Arts  
• Dance  
• Visual arts  
English  
The Humanities  
• Civic and citizenship  
Mathematics  
Science

### Capabilities

Critical and creative thinking  
Ethical  
Personal and social



## Teacher notes

Teachers should adjust the language and examples used based on:

- Students existing level of knowledge
- School setting (rural/urban)
- Water sources (town supply/rain water tanks).

The water cycle poster and activity sheets are located at the end of this lesson plan document. These can be photocopied and distributed within the classroom, and taken home complete. Broader use of activities, images or text must be approved by Barwon Water in advance.

### Introduction – 5min

Water is essential for life, and we use water in lots of ways every day. But where does our water come from in the environment? How is it naturally cleaned? And how does it move around our planet? These are the questions we will be answering during this session.

Ask students the following questions, and select a few to answer each.

*Why is water so important?*

*How do we use water in our daily lives?*

*Where does our drinking water come from?*

*(Obvious answer is 'tap', however encourage students to think about where it comes from in nature, i.e. rain)*

*What else needs rain to survive?*

*Where does our rain come from?*

### Activity – 20min

Our wonderful water cycle

Resources: Water cycle poster

Use the Water cycle poster and following prompts to lead the students through the water cycle.

Water is constantly moving. It travels as waves in the ocean, flows through rivers on land and passes in and out of our body constantly.

*Where else have you seen water? (Out of tap, in bath, swimming pool, pots/cooking, etc.)*



Water also moves around the planet, in a process called the water cycle. As water moves through the water cycle it changes form, from liquid to gas and sometimes becoming a solid.

*What do we call water in a gas form? (water vapour or steam)*

*Where have you seen steam? (kettle/ hot bath/ pots/ soup)*

*What do we call water in a solid form? (hail or snow)*

*Where have you seen solid water? (ice cubes/ snow trip)*

The water cycle is an important natural process because it constantly cleans the water on Earth and gives us rain, which all life needs to survive.

These red arrows show how our water is sent around-and-around, passing through some important changes along the way. As it travels the water changes from a liquid to a gas (that's how it is cleaned), and then sent all across the planet as clouds, before raining back down.

Let's have a closer look at the water cycle, and understand what happens at each of these important points.

### **Oceans and seas**

Let's start by looking at the ocean. Most of Earth is covered in ocean...but

*What's wrong with the water in the ocean? Why can't we drink it? (Too salty)*

Salt is not good for our bodies, and the ocean is too salty for us to be able to drink. In fact, it makes you even thirstier if you drink salt water!

The water cycle can turn this salt water into rain.

*Does rain have any salt? (No, and that's why we can drink it)*

*So how does the water cycle turn salt water into fresh water?*

### **Sun and evaporation**

The water cycle is driven by the heat of the sun. The sun makes the water in the ocean heat up, and this changes the water from a liquid to a gas (water vapour or steam). The great thing about water is that it is the only thing that can turn to steam.

*Can salt turn to water vapour? Can sand turn to water vapour? Can jelly fish turn to water vapour?*

So all the salt, sand, jelly fish and anything else in the ocean is left behind, and only the water turns to water vapour.

In this single step the water cycle purifies our water, and the hot vapour begins to float and travels up to the sky, to the next stage.



## Transpiration and trees

Trees also give off water vapour. They do this in a similar way to how animals do when we breathe. Every time you breathe, a small amount of water vapour from your lungs comes out of your mouth and joins the air around you. Trees do the same.

Trees suck up water from underground. The water travels through the trunk and into the branches, ending up at the leaves. Each leaf has tiny little holes, called 'pores or stomata', and it's through these microscopic pores that the water passes and changes from liquid to gas,

## Condensation and clouds

High in the sky it is very cold, so as the water vapour rises up into the atmosphere, it begins to cool down. When the hot vapour cools, it also changes back, from a gas to a liquid (condensation is the opposite of evaporation). As this happens, tiny rain drops are formed high in the sky. They are so small they float around close together. This forms a cloud.

Clouds are pushed all over the planet with the help of wind, and that is how the water cycle distributes water across to all parts of Earth.

*Why do some clouds look white and fluffy, while others look dark and grey?*

When the rain drops are small, the sun is able to pass through the drop easily, and it makes the cloud look very white and fluffy from below. But when the rain drops join together and start to get bigger, and the cloud gets larger, then the sun cannot easily pass through the cloud, and so it appears dark and grey from below.

## Precipitation and rain

As the wind blows the cloud along, the rain drops bump into each other and grow in size, then there comes a point where they are too big and heavy to stay afloat, and gravity pulls them back down to the ground as rain.

In the mountains, we tend to receive more rain than near the oceans, and as the rain hits the ground, it begins its journey back.

## Run-off and rivers

Some of the rain will absorb into the ground and form groundwater, whilst most of the raindrops will gather and flow downhill through streams and creeks. These will continue to flow into larger rivers, and eventually most rivers lead back to the ocean; where the fresh water from rain mixes with the salt water, and the water cycle starts all over again.

## Dams and drinking water

We can take some of this rain water and store it in dams. From dams we send the water to a cleaning factory, where dirt and leaves and germs are removed, before sending it to your homes and schools for drinking, showering, cooking and everything else we use water for.



## Summary – 5min

Conclude with questions to reinforce the learning.

*Why is the water cycle important?*

- Without the water cycle we would not have fresh water to drink
- We could not grow food.

*Why can't we drink the water in the ocean?*

- It's too salty.

*What does the sun do to the water?*

- It heats it up, which turns it into steam.

*Where does the steam go?*

- It floats up to the sky.

*What happens to the steam in the sky?*

- It gets colder, and turns into water drops, which cling together to make clouds.

*Where does the water end up when it rains?*

- It runs into the rivers and streams and eventually ends up back in the ocean, where the cycle starts again.

*If we don't drink the water in the ocean, what water do we drink?*

- Fresh water from rain.

*Do you think the water cycle ever stops?*

- No, it never stops...that is why it is called the cycle
- Even if it is not raining in Geelong today, it will be raining in many other places around the planet.



## Extension activities

### Music and movement (5min)

Perform the water cycle – Blazer Fresh song.

- Water cycle – Blazer Fresh song (<https://www.youtube.com/watch?v=KM-59ljA4Bs>)

### Visual Art (15 min each)

Cut out the water cycle jigsaw pieces, shuffle and put the jigsaw back together.

Colour in the water cycle poster and insert the process names.

Draw your own water cycle diagram, showing the ocean, sun, clouds, rain, land and rivers.

### Creative writing (15 min)

Write a short descriptive piece that follows a drop of water around the water cycle.

Describe how the drop feels (warm, cold, salty, clean), where it goes (up to the sky, into the ground, flowing along a river) and how it interacts with other drops.



# THE NATURAL WATER CYCLE





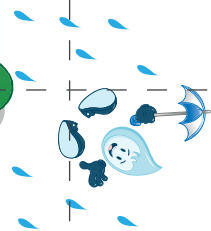
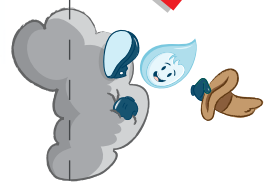




HEY DROP, WHAT IS...

# THE NATURAL WATER CYCLE?

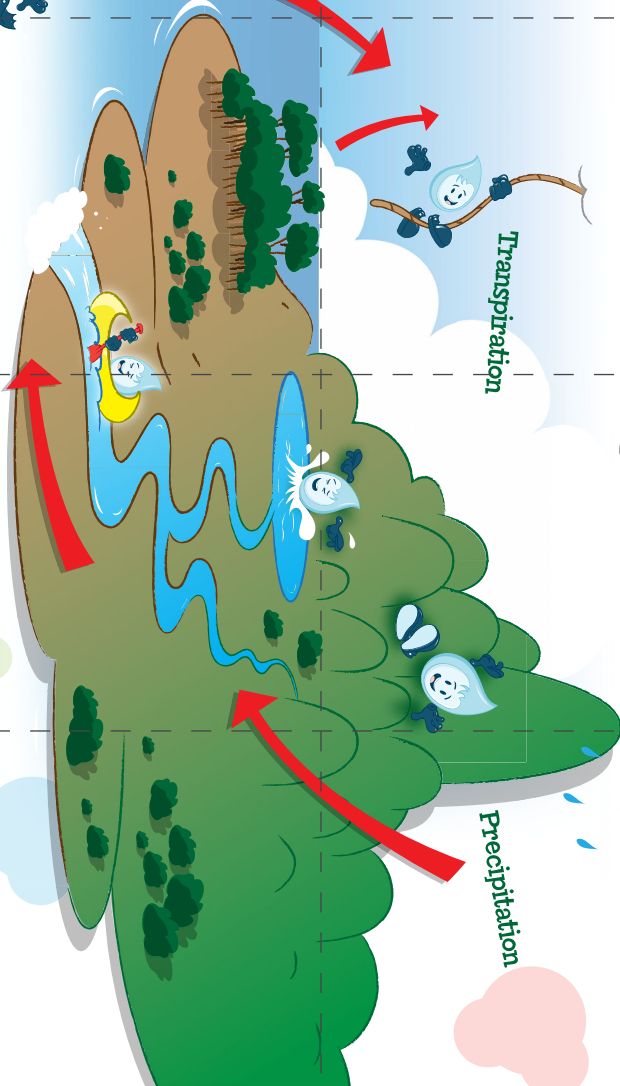
Condensation



Transpiration

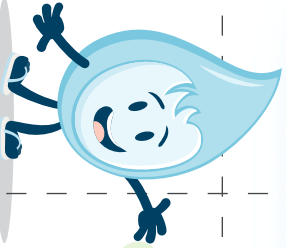
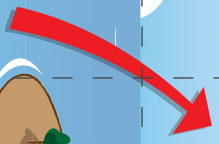


Precipitation



Rivers and Streams

Evaporation



MEET DROP,  
THE WATER DROP

Water never stops moving. It travels in oceans, rivers and under the ground as a liquid, up to the clouds as a gas and back to the Earth by rain, snow or hail. This happens over and over again and is called the Water Cycle.