

## The Water Cycle — Year 4 Science

A guide for parents · Australian Curriculum

- ✓ **You can help!** The water cycle happens all around us every day — in rain, puddles, morning dew, clouds and even your kettle! You don't need any equipment to explore this with your child.

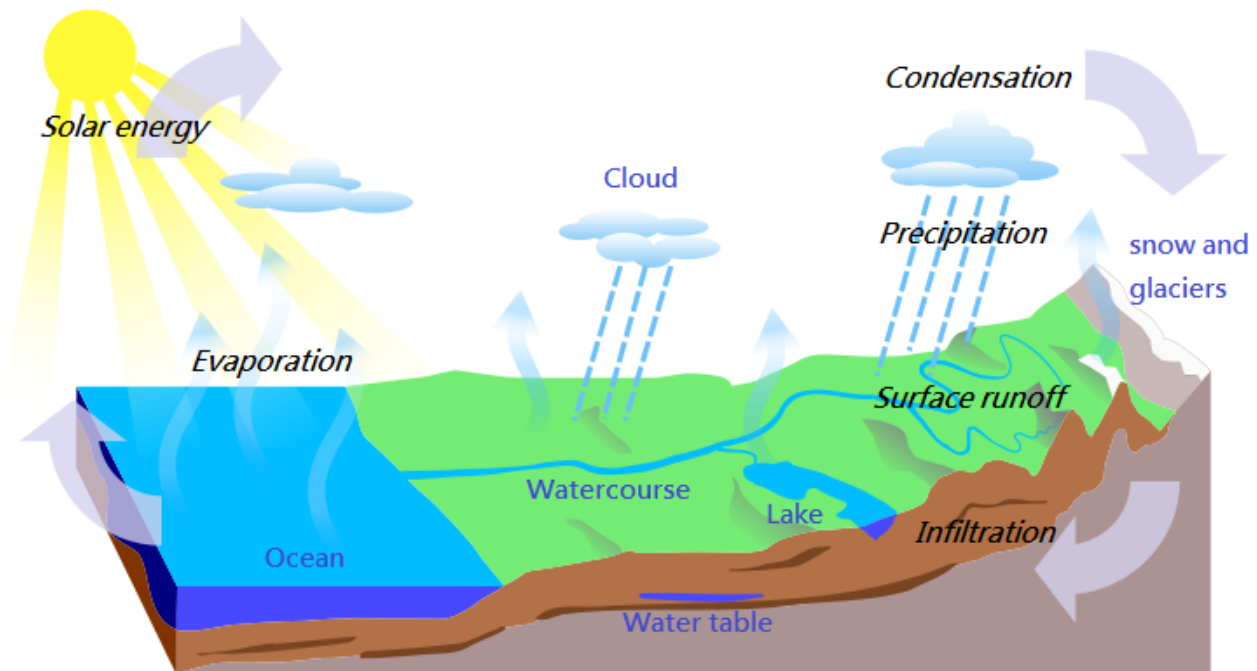
### Why are we learning this? Living with the Wet and Dry

The wet and dry seasons up here are the water cycle in action — you live it every year! In the wet, the rain pours down and rivers flood. In the dry, the heat evaporates it all back up to the sky. Bore water, rainwater tanks and creeks are all part of the same water cycle your child is learning about at school. Understanding where water comes from and where it goes helps kids appreciate this precious resource and why caring for our waterways and Country matters.

#### WHAT YOUR CHILD IS LEARNING — BY THE END OF YEAR 4 THEY CAN:

- |                                                           |                                                                      |
|-----------------------------------------------------------|----------------------------------------------------------------------|
| ✓ Name the key parts of the water cycle                   | ✓ Describe where water comes from (sources of water)                 |
| ✓ Explain how water moves through the sky, land and ocean | ✓ Use science words like evaporation, condensation and precipitation |

#### THE WATER CYCLE — FOLLOW THE JOURNEY OF WATER



#### WHERE DOES OUR WATER COME FROM?

##### Where does our water come from? (Sources of water)

- Oceans & seas** — biggest source, but salty (not for drinking)
- Rivers & lakes** — freshwater flowing over land
- Groundwater** — stored underground, pumped up as drinking water
- Rain** — falls from clouds and fills dams, rivers and tanks

## KEY PROCESSES — WHAT IS HAPPENING AT EACH STEP?



### Evaporation

Heat from the sun turns liquid water into water vapour (gas) that rises into the sky.

**e.g.** Puddles disappearing. Wet clothes drying on the line.



### Condensation

Water vapour cools and turns back into tiny droplets — forming clouds.

**e.g.** Fog on a cold morning. Drops on a cold glass.



### Precipitation

Water in clouds gets heavy and falls back to Earth as rain, hail or snow.

**e.g.** Rain on your roof. Snow on a mountain.



### Surface Runoff

Water that falls on land flows downhill into rivers, lakes and eventually the ocean.

**e.g.** Water rushing down a hill after rain.



### Transpiration

Plants absorb water from the ground and release water vapour through their leaves.

**e.g.** A forest releasing water vapour, adding to cloud formation above.



## Think Like a Scientist! — Zip-lock bag water cycle

### 1. SET UP

Put water in a zip-lock bag. Seal it. Tape to a sunny window.

### 2. PREDICT

"What do you think will happen to the water?"

### 3. OBSERVE

Check over a few hours. Watch for drops forming inside the bag.

### 4. EXPLAIN

"Which parts of the water cycle did you just see?"

**What you see:** Evaporation (water rises) → Condensation (drops on bag) → Precipitation (drops fall back) — a whole water cycle in a bag!



## Questions to ask *Tip: let your child be the expert — ask them to explain it to you!*

- Where does rain come from? Can you explain all the steps?
- Why do puddles disappear on a sunny day?
- What do you think clouds are made of?
- Where does the water in our tap come from?
- What would happen to the water cycle if there was no sun?
- Can you spot any part of the water cycle happening right now outside?

## KEY WORDS

| Word                  | Meaning                                                                       |
|-----------------------|-------------------------------------------------------------------------------|
| <b>Water cycle</b>    | The continuous movement of water through the environment                      |
| <b>Evaporation</b>    | Liquid water turns into water vapour (gas) when heated by the sun             |
| <b>Condensation</b>   | Water vapour cools and turns back into liquid water droplets — forming clouds |
| <b>Precipitation</b>  | Water falls from clouds as rain, snow or hail                                 |
| <b>Surface runoff</b> | Water flows over land into rivers, lakes and the ocean                        |
| <b>Transpiration</b>  | Plants release water vapour through their leaves into the air                 |
| <b>Groundwater</b>    | Water stored underground — an important source of drinking water              |

### What school will check

Your child needs to identify key water cycle processes and explain how water moves through the sky, land and ocean.

### Science inquiry at home

Encourage your child to ask 'Why?' and 'What if?' — What if there was no sun? What if it never rained?

### Key words to know

Water cycle · Evaporation · Condensation · Precipitation · Runoff · Transpiration · Groundwater