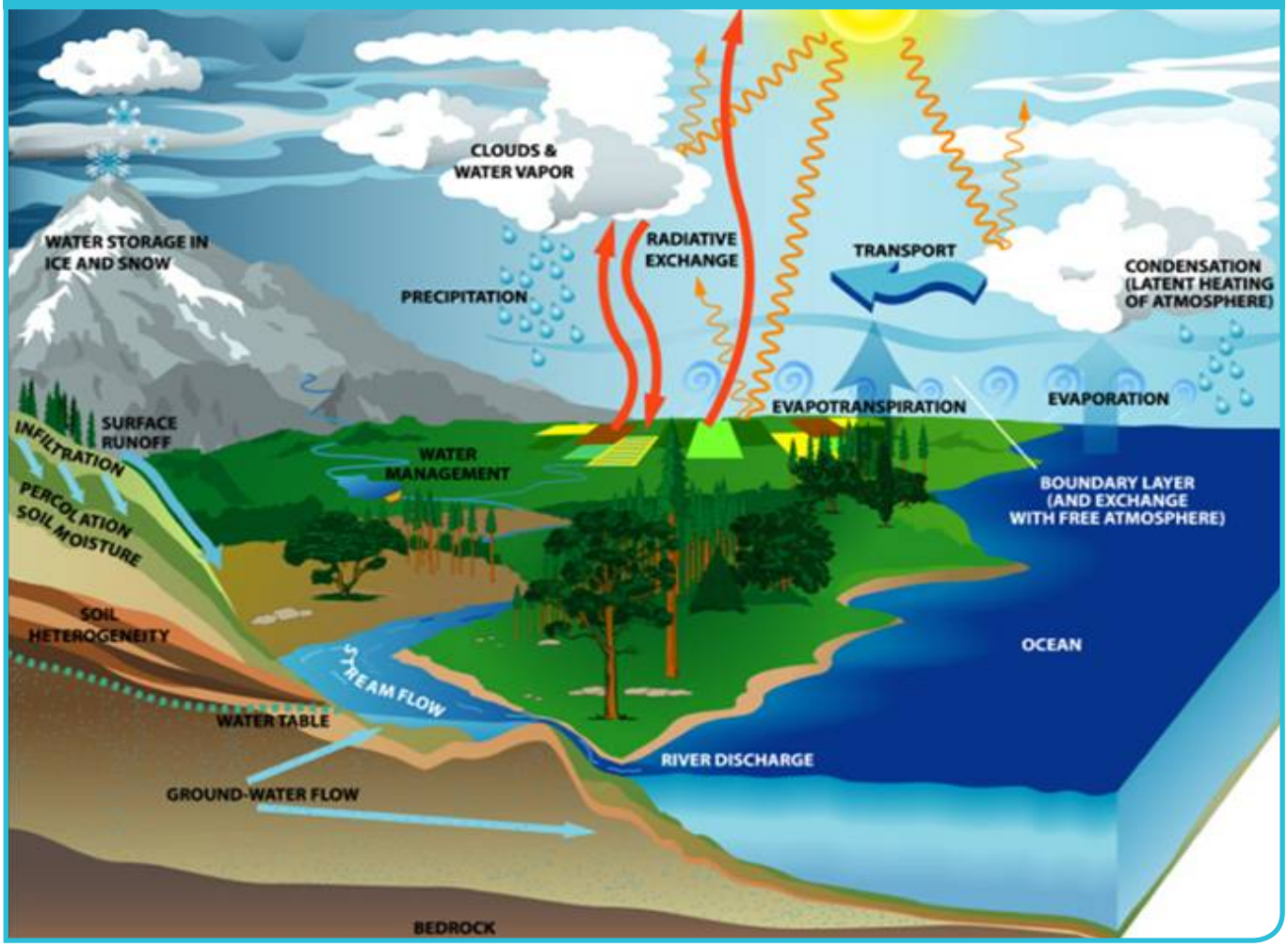
South East Water

Factsheet

The natural water cycle

The amazing thing about water is that it never disappears! All the water in the world has existed for millions of years! It has always been on the move in a cycle known as the natural water cycle.

1. The natural water cycle



Did you know?

When you drink a glass of water you could be drinking the same water that a dinosaur drank long ago!

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2. The elements of the wonderful water cycle

The natural water cycle is made up of several elements including evaporation, transpiration, condensation and precipitation.

Evaporation

Evaporation occurs when the sun heats the water on the ground (such as oceans, rivers and puddles). The heat gives the water molecules more energy which makes them move faster. When they gain enough energy, the molecules near the surface break away and enter the air as a gas (water vapour).

Challenge

Next time an adult boils some water at home, watch the steam coming out the top of the kettle – this is evaporation in action!

Transpiration

Transpiration is a process similar to evaporation but it involves plants. Water is removed from the leaves of the plants, in the form of water vapour, and released into the atmosphere.

Did you know?

Water in plants is drawn out of tiny little holes in the leaves called stomata.

Condensation

Condensation is the opposite of evaporation. Remember that evaporation happens when water molecules heat up. Well, when water vapour cools down, the water molecules lose energy and slow down. They move closer to other gas molecules and change back into a liquid state. This is how clouds are formed! Very high in the sky, where the temperature is much colder, the water drops 'join' together to form a cloud.

Did you know?

If you have walked through fog before, you probably have a good idea what a cloud looks and feels like from inside! Fog, mist and clouds are pretty much the same thing, a collection of tiny water drops.

Challenge

On a very cold morning, go outside, take a big breath in and then blow out. Watch as you make your own cloud from the warm water vapour in your breath!

Precipitation

Precipitation is water released from clouds in the form of rain, hail, sleet or snow. Most precipitation falls on earth as rain. For precipitation to happen, water drops inside the cloud must grow larger and heavier by combining with each other or with other particles in the air. Once precipitation reaches the ground, it flows into creeks, streams, rivers, lakes and dams, before returning to the ocean to complete the cycle.

Did you know?

Precipitation falls in different amounts in different parts of the world. Just because it's raining where you live doesn't mean it's raining in the next suburb, or even the next street!

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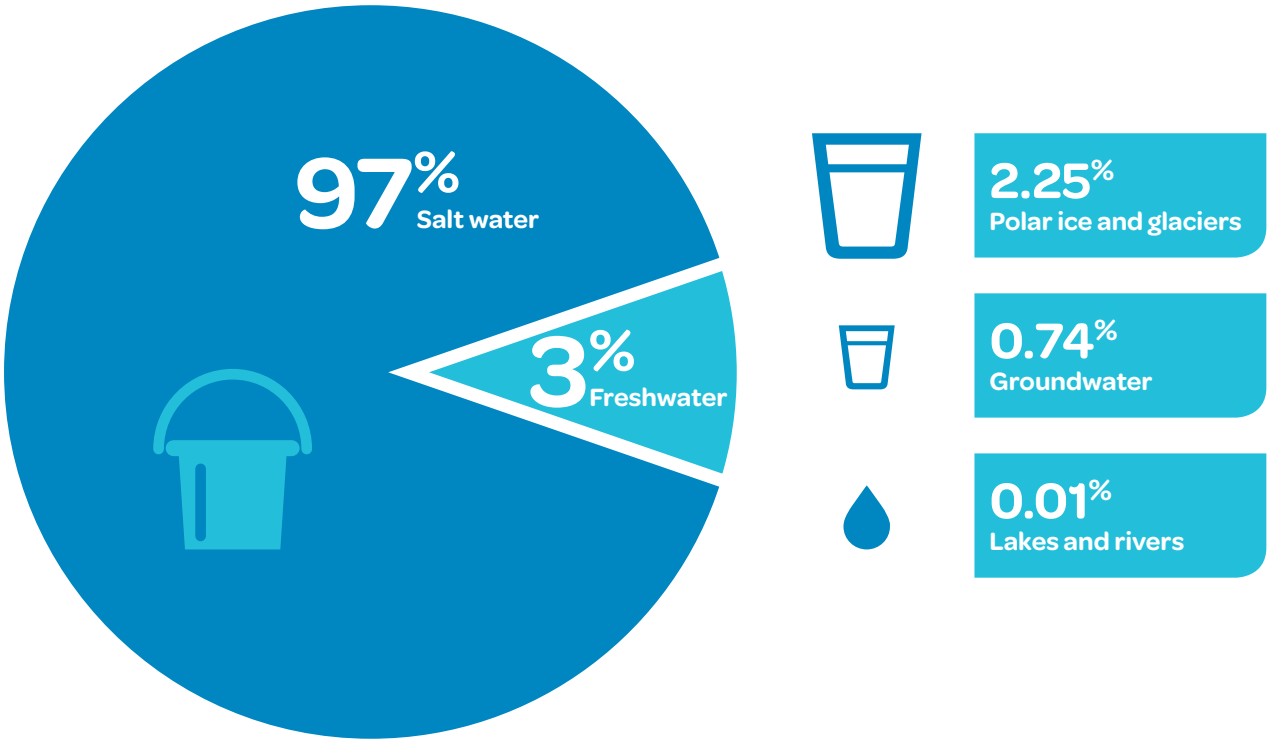
3. Distribution of earth's water

- There is approximately 1,397,918,500,000,000,000,000 litres of water on Earth.
- 97% of Earth's water exists in the oceans.
- Of all the water found on Earth, only 3% is fresh water and most of this fresh water is frozen as ice and snow.
- Almost 90% of the Earth's ice mass can be found in Antarctica. Ice is also found as glaciers on top of mountains. Glaciers cover approximately 10% of all land. Some researchers say that if all the glaciers melted today, the seas would rise by 70 metres!



4. Activity time

Test your knowledge! Find out how much you have learnt about the water cycle by completing our fun Natural Water Cycle game at **https://www.educationsoutheastwater.com.au/resources/natural-water-cycle-game**

5. More information

More interesting information and fact sheets about water can be found at **southeastwater.com.au**

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