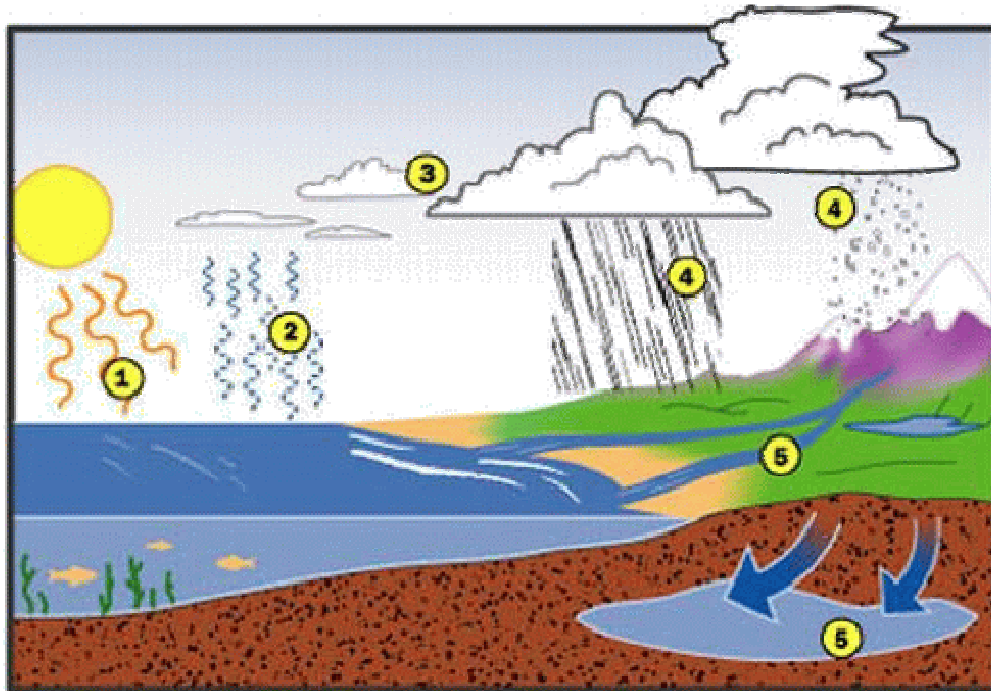


The life cycle of water at Jamberoo Action Park



First of all.... How does it all start??



- 1 The sun heats the ocean.
- 2 Ocean water evaporates and rises into the air.
- 3 The water vapor cools and condenses to become droplets, which form clouds.
- 4 If enough water condenses, the drops become heavy enough to fall to the ground as rain and snow.
- 5 Some rain collects in groundwells. The rest flows through rivers back into the ocean.

The basic water cycle for the planet Earth

FACT: **Nature does not produce ANY new water!** All the water on Earth is the same water that has been here for millions of years. You might be drinking the same water as ancient Egyptian pharaohs!

Keywords

Evaporate: When water turns from liquid into vapor

Condense: When water turns from vapor into liquid

EXERCISE 1: Fill a glass with water and place it on a windowsill. Each day, use a ruler to measure the water level in the glass. What is happening to the water?

How does the water cycle work at Jamberoo?

Stage 1: Precipitation

When the clouds fill up with so much water that they cannot hold anymore, rain falls onto Jamberoo! (Hopefully not when you are visiting 😊)



EXERCISE 2: You can see precipitation for yourself! Take a cloth or tissue and scrunch it into a ball. Fill a glass of water and very slowly drip the water onto the cloth. After a little while, it will be so full of water that it will start to drip out of the cloth - This is precipitation!

Stage 2: Collection

There are lots of places where rain might fall to the Earth around Jamberoo:

- The ocean at the beaches in the Kiama and Wollongong areas
- Lake Illawarra
- Small rivers and creeks running off the Lake
- Onto the ground
- Into catchment areas such as dams

Most important for Jamberoo is the water which falls into our catchment area. These are areas where water is collected for human use. Jamberoo Action Park has five dams around the property where our water is collected. The park has also been specially designed so that rain which falls in other parts of the park will run into our dams!



Jamberoo Dam – You can see the dams from the chairlift!

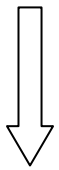
QUESTION 1: Do you know what a catchment area is? _____

Stage 3: Treatment Tanks

From the dams, water is pumped through water pipes into different storage tanks. The different tanks will be used for different jobs in the park and this means that the water is treated with special sets of chemicals, depending on where it is going to go.



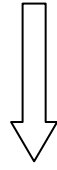
Water for rides



The ride water is treated with Chlorine to kill bacteria and germs



Drinking & hand wash Water



The drinking water is treated with chemicals to kill bacteria and germs as well as other types of chemicals to ensure it is safe to drink!



Water for gardens and toilets



The garden & bathroom water is not treated

QUESTION 2: Can you name a chemical used to treat water at Jamberoo and explain what it does?

Stage 4: Distribution

This stage is very important! This is how the water gets from the treatment plants to all the rides so everyone can have fun!

Pipes & pumps take the water from the treatment plants to the different park areas. Some of the water goes to the Slides, Outback Bay and Rapid River, while some of it is used in the buildings for drinking and everyday use. The rest goes to the bathrooms or onto the gardens.



QUESTION 3: Name three things that water is used for at Jamberoo?

DISCUSSION 1: What are some things you use water for at home? Are these different from how water is used at Jamberoo?

FACT: Jamberoo's ride water is checked every single hour from several different locations to make sure all the chemical levels are correct. More chemicals can be added manually or by computers!

Stage 5: RECYCLING!



FACT: Jamberoo Action Park does not use a single drop of water from the main water supply! All of the Park's water is captured from natural rainwater and then recycled.

Water is recycled in a number of different ways.

Treatment: This is where water from pools and rides is pumped back into the treatment tanks to be cleaned and re-treated so it can be used again as fresh, clean water.

Run off Capture: When water is collected in our drains, it runs back into the dams to be collected and used again! See how many drains you can spot during your visit.

Fertilising: Used water from the bathrooms can be treated and then used on the gardens to make them grow as natural fertiliser.

QUESTION 4: What are some ways that you could recycle water in your home?

DISCUSSION 2: Why is recycling water important?

Water Loss

Just like in the bigger water cycle of Earth, water at Jamberoo is lost in a number of different ways.

Evaporation: This is when the sun heats the water until it turns into vapor.

How does evaporation happen at Jamberoo?

- Gardening – water on the leaves of plants and surface of the ground
- Directly from the pools and rides
- Water left on the ground when people move around the park

Ground water: Water which soaks into the ground

How does ground water loss happen at Jamberoo?

- Gardening, when water soaks into the soil
- Water from people standing on grassy areas

Transportation: This is when water is taken out of Jamberoo. This can happen just from wet towels and hair!

Luckily, Jamberoo is very careful to ensure that water loss is kept to a minimum. Some ways in which the Park reduces water loss are:

- Watering gardens early in the morning before it gets too hot
- Using lots of mulch on the gardens to hold the water for a long time
- Monitoring water levels of pools and rides carefully to make sure there is no overflow
- Quickly fixing any leaking taps, pipes or pumps

QUESTION 5: Name two ways in which water can be lost at Jamberoo

DISCUSSION 3: Can you think of some ways you can reduce water loss at home?

Conclusion

Most of the Earth's water is in the oceans, lakes or underground. Only a small amount is the freshwater we use everyday in our homes.

Water is vital for all life on Earth so it is important we all take care Of our water and use it wisely.

While you are at Jamberoo, make sure you think about the water cycle and how it affects you. Think of ways you can help to reduce water wastage everyday so we will all have lots of water for the future and you can keep having fun at Jamberoo!