



MANZI'S NEWS



A Newsletter for Manzi's Water Wise Club Members

October 2015

WATER AS A RESOURCE

Hi Friends,

Did you know that you are possibly drinking the same water that was drank by the dinosaurs millions of years ago. The Earth has only a certain amount of fresh water which keeps moving in a big cycle called the **water cycle**. Water always changes forms from liquid to solid to gas, depending on the conditions it gets exposed to.

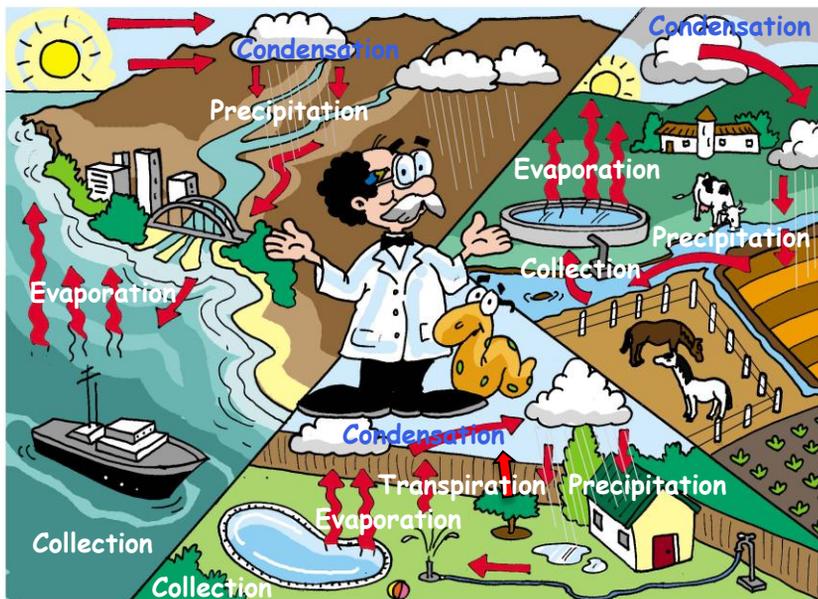
Water travels through the natural water cycle in three different states:

- Solid such as ice glaciers, snow, hail, etc.
- Liquid in rivers, dams, swimming pools, ponds, groundwater and the ocean
- Gas as water vapour or steam.

As water gets exposed to different conditions like the sun, or extremely cold weather, it changes its state from one phase to the next. Liquid is the main state in which water can be used.

Water can change from liquid to solid, liquid to gas, gas to liquid, solid to gas or solid to liquid. In these states, water moves from the Earth to the sky as water vapour and from the sky to the Earth as rain, hail, snow, etc. The water cycle consists of five (5) stages

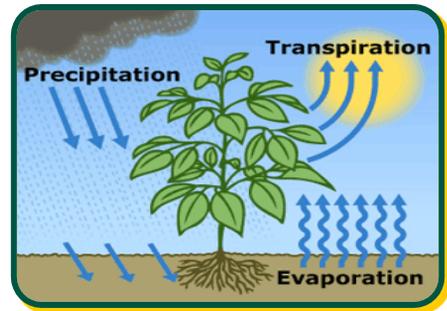
The Water Cycle



5 Stages of the Water Cycle

Evaporation:

The process by which the sun heats the water in rivers, dams or any open water surface like a swimming pool or pond. The water changes from a liquid to a gas.



Transpiration:

The loss of water as vapour from plant leaves. The water changes from a liquid to a gas.

Condensation:

The process by which water vapour (gas) changes into liquid when it cools. This is when clouds are formed.



Precipitation:

When water falls from the sky in the form of rain, hail, snow or sleet.

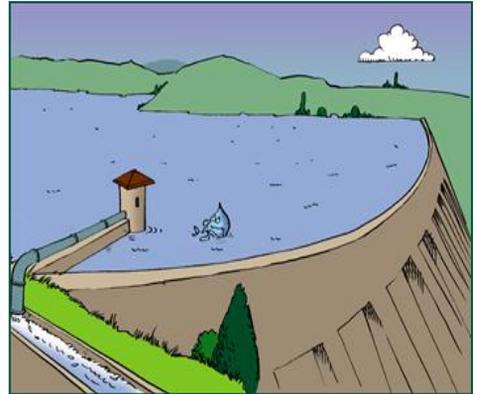
Collection :

When water ends up on the Earth it will collect in the ocean, rivers, lakes, dams, swimming pools, ponds, underground, etc.

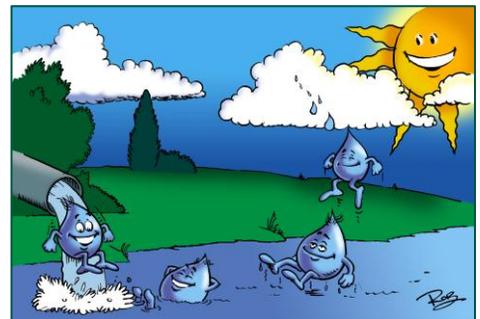


Water Cycle and Man-Made Water Cycle

Now that you understand the natural water cycle, you must also understand that there is a man-made water cycle. With the man made cycle, water is transported from one place to another, collected in dams and recycled. Rand Water uses water that comes from the rain (precipitation) and from various rivers and dams, such as the Vaal Dam. Some of it comes from Lesotho where it travels through underground pipes to South Africa. Rand Water takes water out of the Vaal Dam and places it in a canal where it travels to a purification station. Here it gets cleaned, gets put into pipes and is sent to our homes, businesses and factories. When you use the water it goes down the drain and then goes to a wastewater treatment plant. Here it is cleaned again and then put back into rivers which flow to the ocean. This is the man-made water cycle.



Water taken from the Vaal Dam for purification



Treated water from wastewater treatment plants is put back into the river

Fresh clean water is a limited resource, meaning that there is only a certain amount on Earth for all life to use. It's availability is also being reduced by pollution. We need to be Water Wise because all life on Earth needs water to survive. Both the man-made and the natural water cycle need to be kept clean. Not only humans depend on the water but also animals and plants too. Let's be wise with the water in the water cycle and keep it clean.



Hope you have learned a lot from this topic.
Now try and do the activity on the next page.

Till next time!

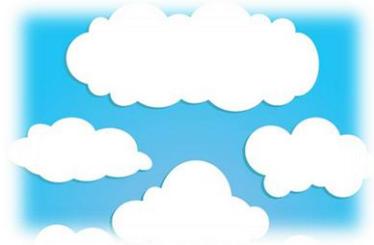
Love
Manzi

References:
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slideshare.net; www.bakewellhorner.co.uk;
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youtube.com

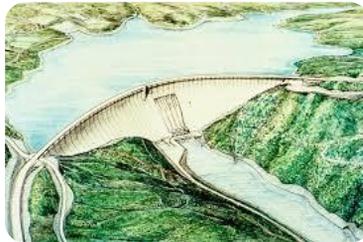
DO YOU KNOW THE WATER CYCLE?

Match the picture to the correct stage in the water cycle.
Use a pencil to draw a link.

Precipitation



Condensation



Transpiration



Collection



Evaporation

