

WHERE DOES WATER COME FROM?

All water circulates continuously in the water cycle

Rain falls and runs down plant stems into the spaces between the soil, ending up as groundwater which collects on top of, or inside rocks. Water that lands on hard soil or concrete runs over the surface into watercourses like rivers, and into ponds and lakes. Eventually, the river water runs to the sea. Water evaporates (turns into gaseous form) when it heats up, rising into the air and then the upper atmosphere. There, in the cool air, it condenses into clouds, creating water droplets again which fall down as rain.

The water cycle is 'watertight': no water ever leaves and no new water enters.

Groundwater

In some places groundwater is continuously recharged, in others it is not. In Southern Africa, 65% of rainfall evaporates quickly from the surface, 14% runs off into rivers, 20% goes into the air from plant leaves - a process known as evapotranspiration. Only 1% of rainwater ends up replenishing groundwater supplies. There is a vast groundwater aquifer under the Sahara Desert. Some is 'fossil water' that has been there for one million years: rainwater and runoff add 1.4 km³ every year!

FUN facts

'Hydrology' is the study of water. Hydrologists are people who specialise in studying or working with water

