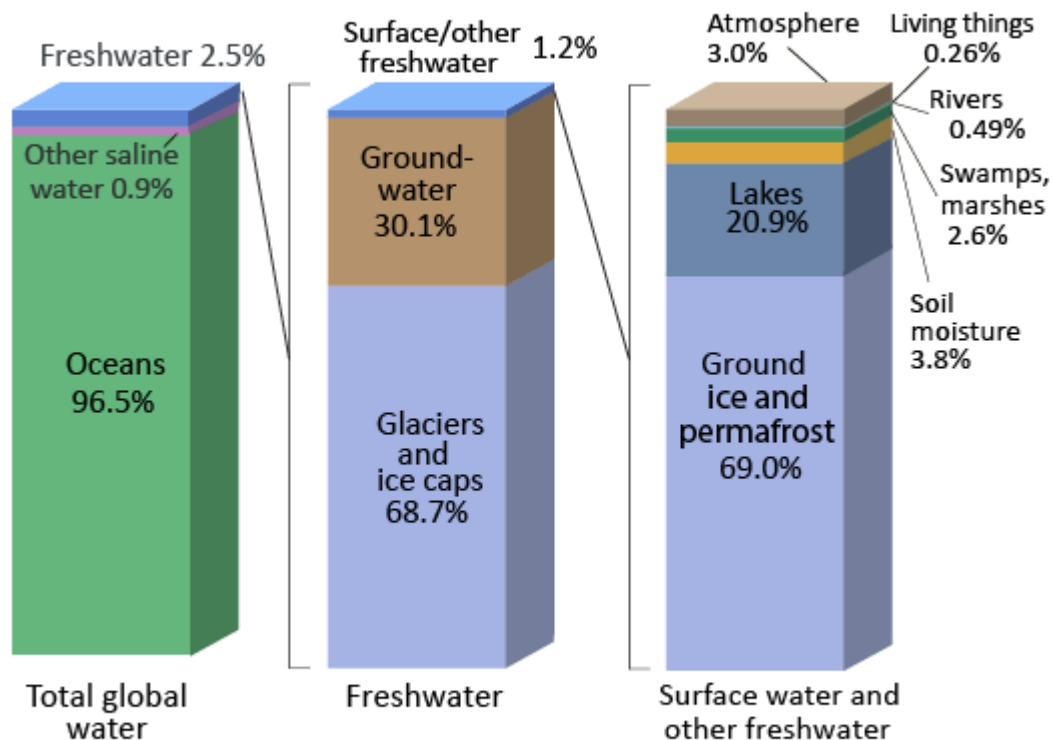


Water or Hydrologic Cycle

The quantity of water on earth is fixed, if we consider it on a 100 year scale or so. It's around 1.386 billion cubic km. The distribution is as follows :

Where is Earth's Water?

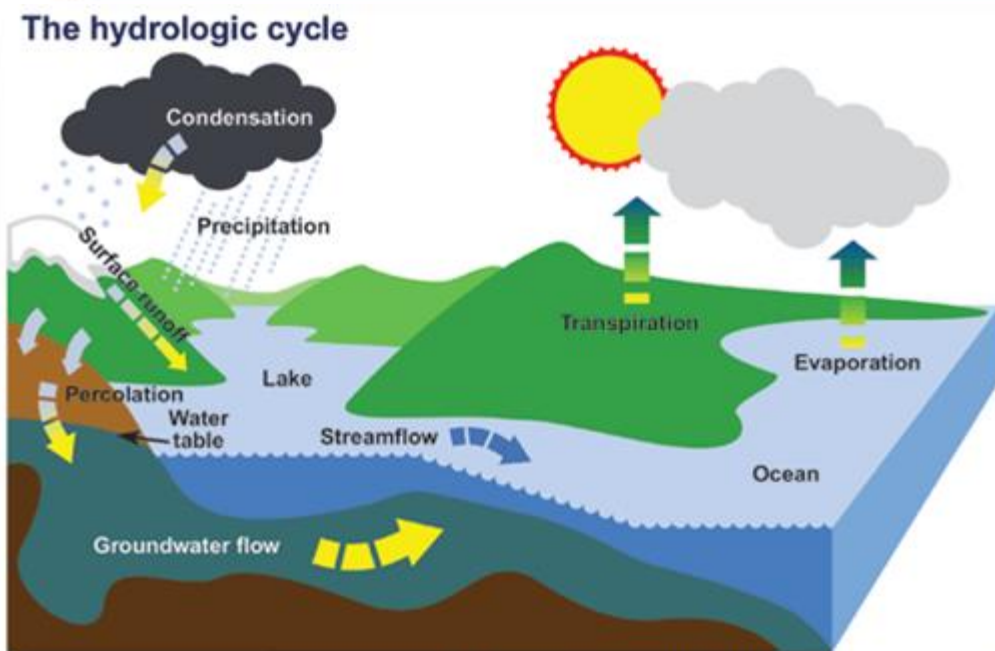


Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*.

NOTE: Numbers are rounded, so percent summations may not add to 100.

This water is constantly in motion. It loops endlessly between ocean, atmosphere and land. Also it changes form, from gas to liquid to solid. The energy driving this is solar and earth's gravity.

**A drop of rain falling on the ocean may
take as long as 37,000 years before it returns
to the atmosphere**



Source : Environment and Climate Change, Canada

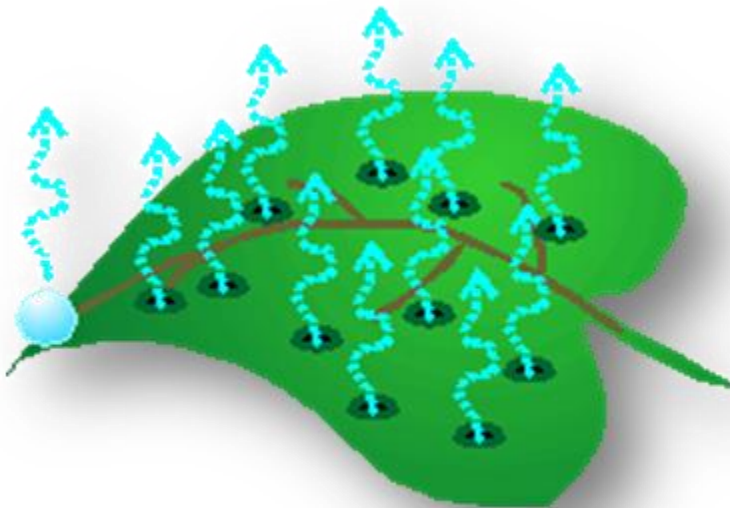
Major Components of Water Cycle

Evaporation



Sunlight heats the water which evaporates and rise as vapour to the atmosphere.

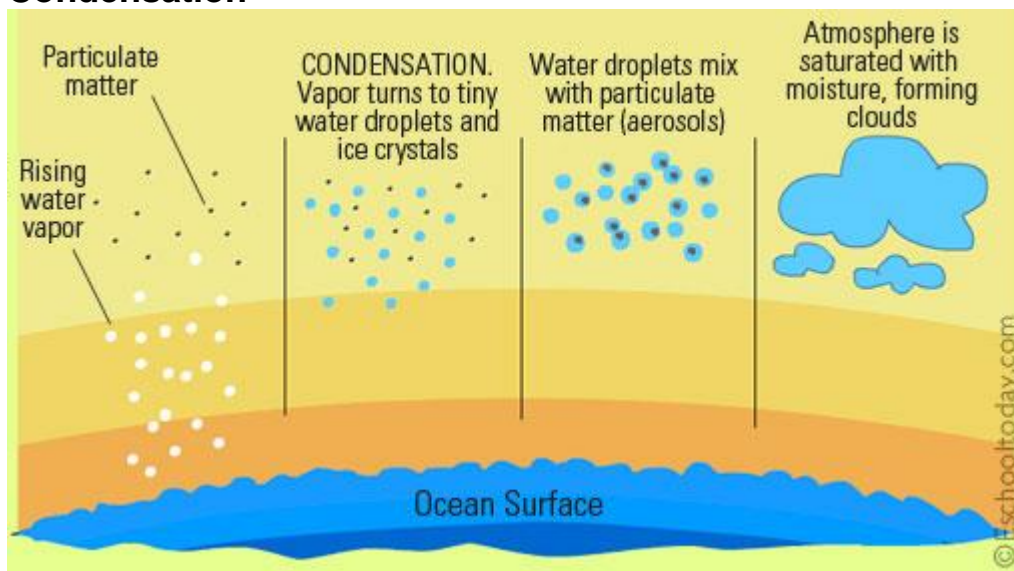
Transpiration



Transpiration is the evaporation of water from the leaves of the plants.

**Only 2% of water intake by plant is approximately used for photosynthesis
Rest is transpired!**

Condensation



The evaporated or transpired water vapour cools as it rises in the atmosphere. The cooled vapour again becomes liquid or ice and settles on the dust particles present in the atmosphere. This is called condensation. This forms the cloud.

Precipitation

Types of Precipitation

Rain



Sleet



Hail



Snow



Precipitation mechanism

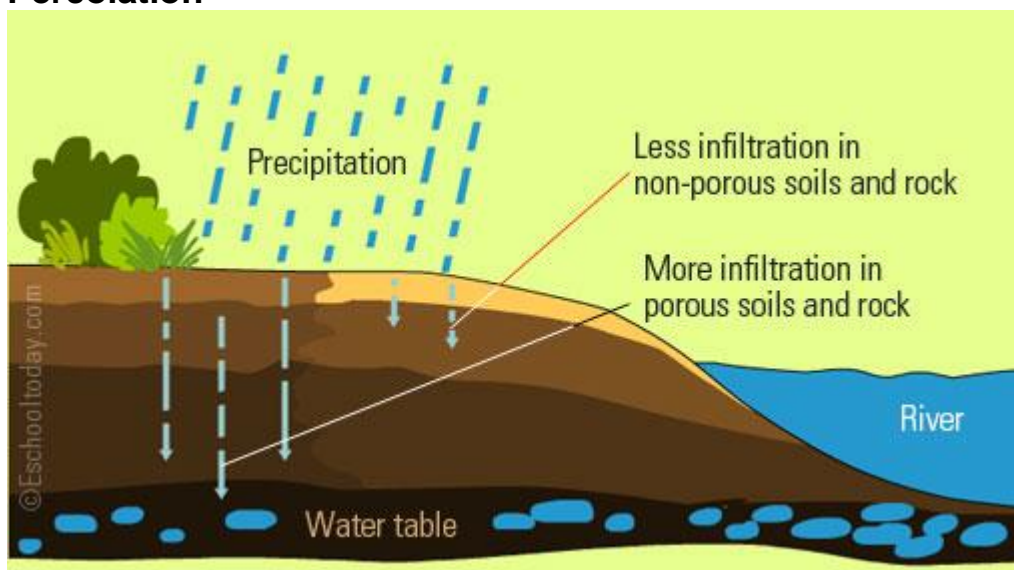


Runoff



Runoff can be described as the part of the water cycle that flows over land as surface water instead of being absorbed into groundwater or evaporating

Percolation



Percolation is the seepage of water through cracks, joints and pores in soil and rocks until it reaches the water table where it becomes groundwater.