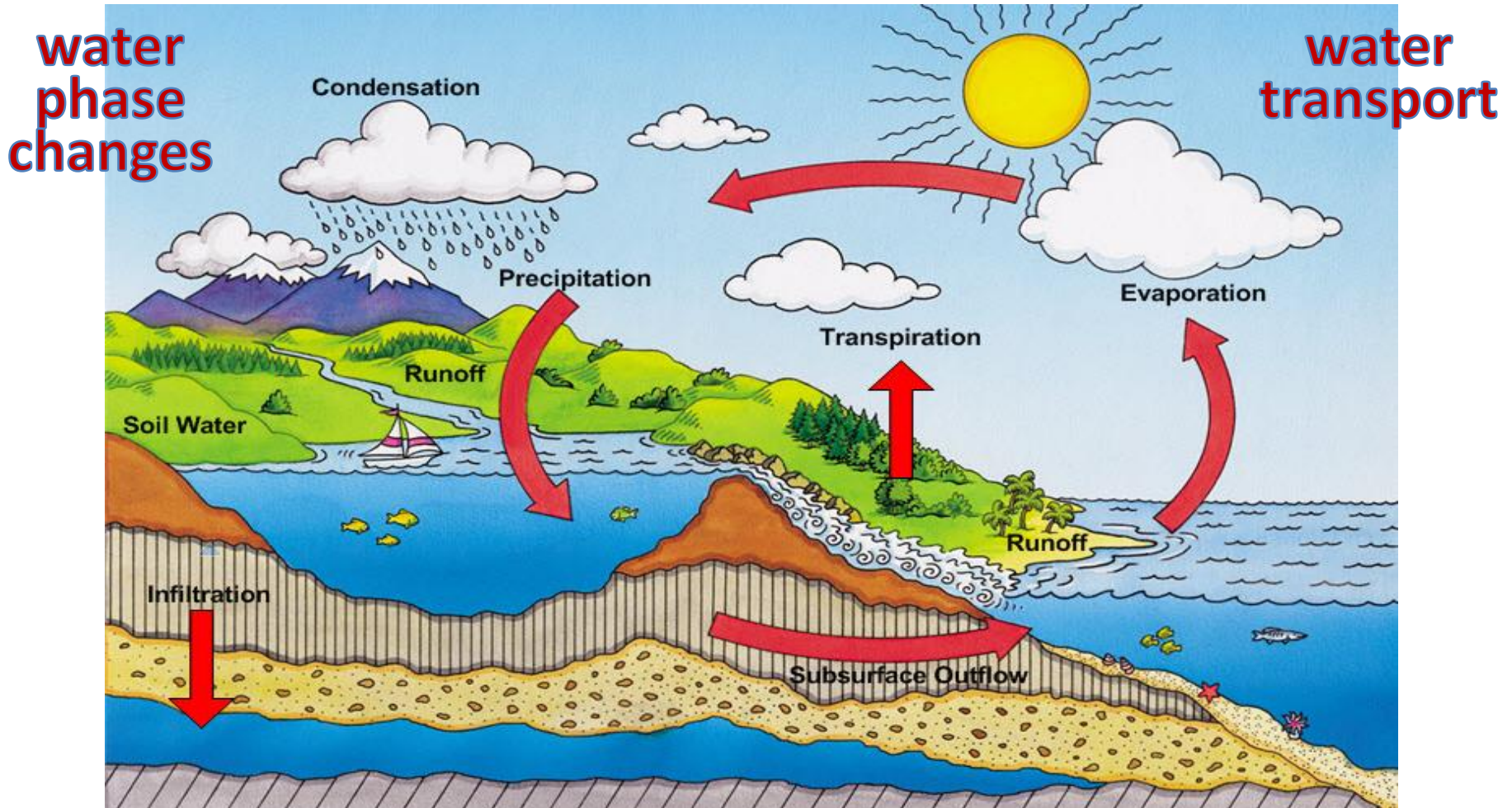


The Hydrologic (Water) Cycle



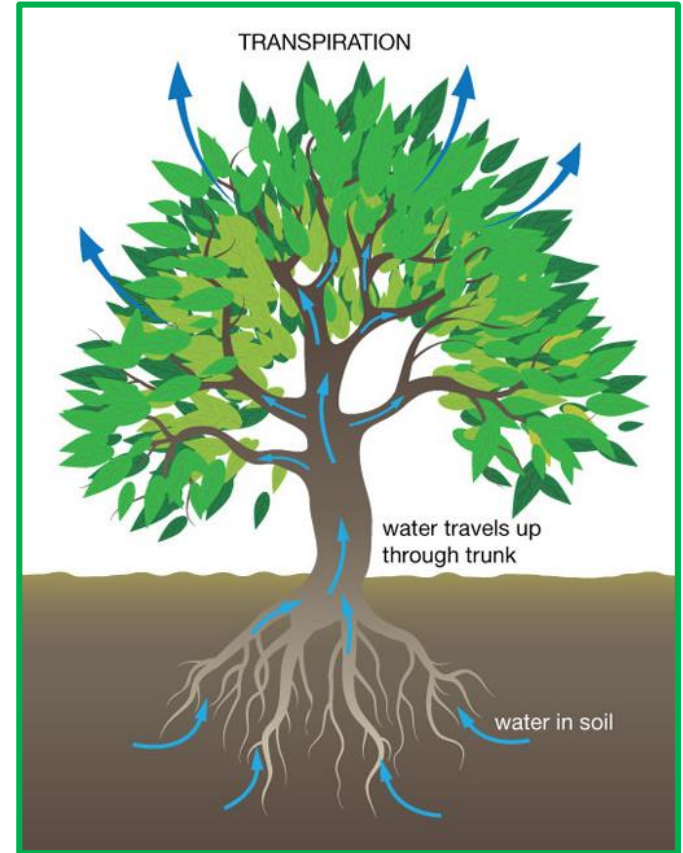
The water cycle is **driven by the Sun** and involves the exchange of energy in the form of heat.

Water Cycle Components



Evaporation

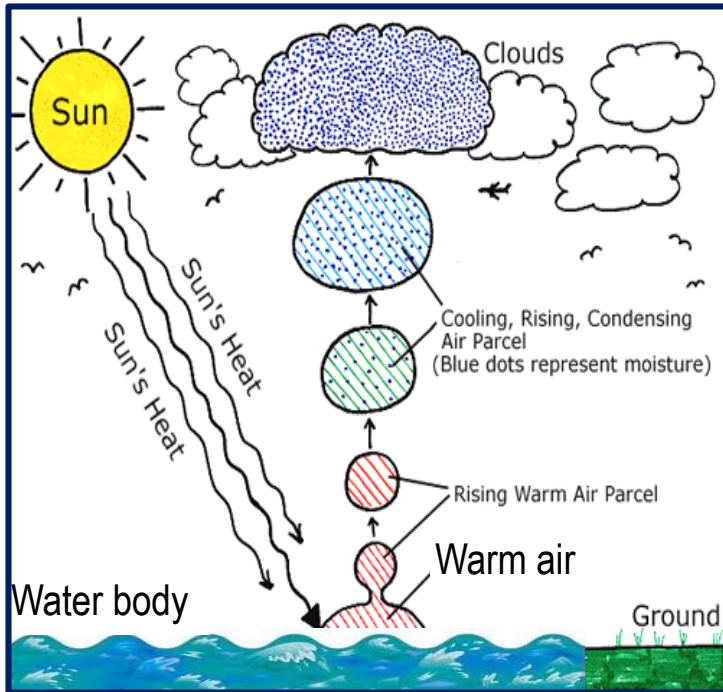
heated by the Sun, liquid water changes to water vapor over bodies of water



Transpiration

release of water vapor from plants and soil

Water Cycle Components



Condensation

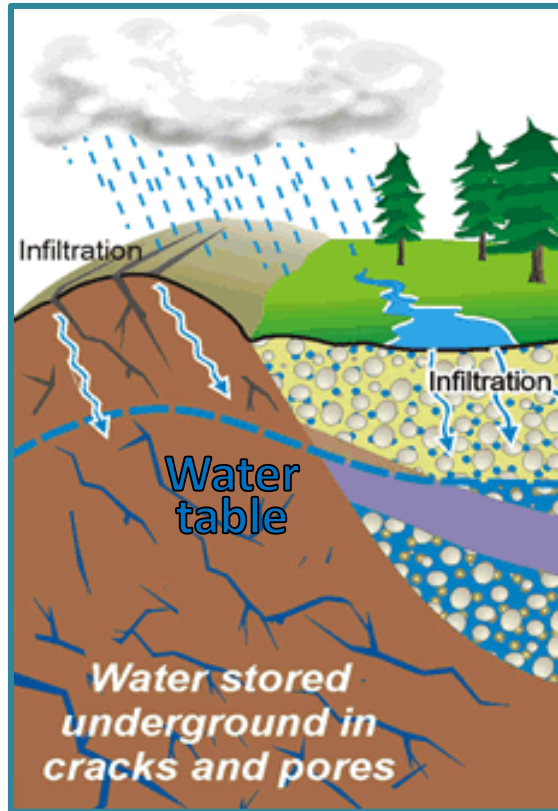
water vapor cools and changes to droplets of liquid water in the air



Precipitation

rain, snow, hail, sleet, etc.

Water Cycle Components



Infiltration

water filters from the surface into the ground



Surface Runoff

water flows across the land

Atmospheric Water

Atmospheric water plays a **crucial role** in the **weather**.



➤ **Clouds and precipitation**

(water droplets and ice crystals or a mixture of the two)

➤ **Water vapor**

(gas lighter than air; continuously generated by evaporation and removed by condensation)



- The mean global amount of water vapor in the atmosphere is roughly sufficient to cover the surface of the planet with a layer of liquid water about one inch (25 mm) deep.
- On average, the **residence time of a water molecule in the troposphere** is about **9 to 10 days**.