

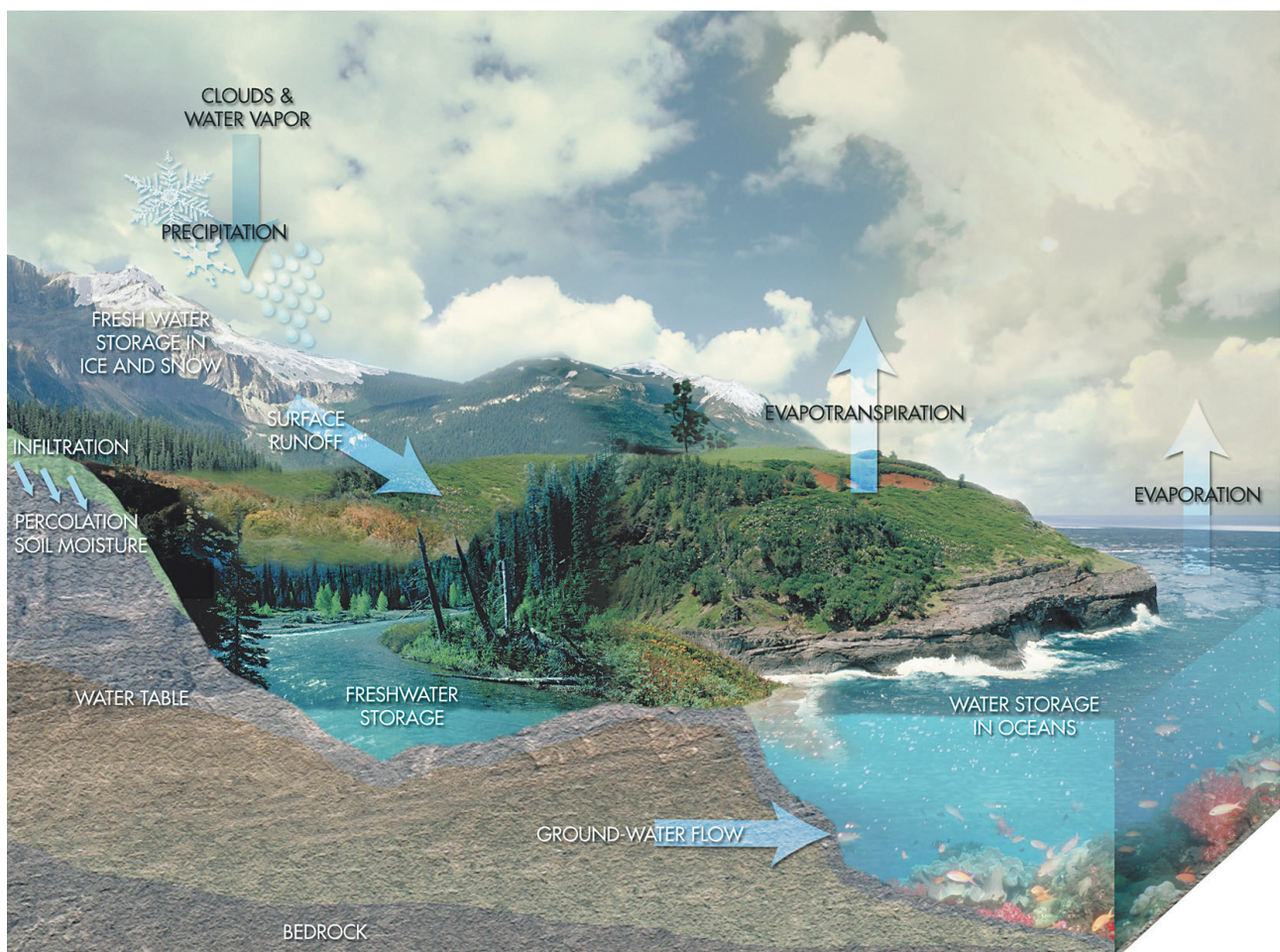
The water cycle

The water cycle describes the movement of water on, in and above the Earth.

Where does all the Earth's water come from? Millions of years ago the Earth was an incandescent globe made of magma, but all magmas contain water. Water set free by magma began to cool down the Earth's atmosphere, until it could stay on the surface as a liquid. Volcanic activity kept and still keeps introducing water into the atmosphere, increasing the surface and ground-water volume of the Earth.

The sun's heat provides energy to evaporate water from the Earth's surface (oceans, lakes,

etc.). Plants also lose water to the air (this is called transpiration). The water vapour condenses, forming tiny droplets in clouds. When the clouds meet cool air over land, rain, hail or snow start falling from clouds and the water returns to the land and the sea. Some of the precipitation soaks into the ground, some of the underground water is trapped between rock or clay layers, this is called groundwater. But most of the water flows downhill as runoff, above ground or underground and returns to the seas as slightly salty water.



Earth's water is always in movement and is always changing states, from liquid to vapour to ice and back again.

GLOSSARY



droplet: *gocciolina*
to soak in: *penetrare*

clay: *argilla*
runoff: *deflusso*

1 Match the words with the right definition.

- | | | |
|----------------------|--------------------------|--|
| a. accumulation | <input type="checkbox"/> | 1. rain, snow, hail fall from the clouds in the sky |
| b. condensation | <input type="checkbox"/> | 2. water pools in oceans, seas and lakes |
| c. evaporation | <input type="checkbox"/> | 3. some water within the plants evaporates into the atmosphere |
| d. groundwater | <input type="checkbox"/> | 4. water vaporizes from the surface of oceans, lakes and from the land |
| e. precipitation | <input type="checkbox"/> | 5. water flows in surface rivers and streams |
| f. subsurface runoff | <input type="checkbox"/> | 6. water vapour turns into liquid water in the clouds |
| g. surface runoff | <input type="checkbox"/> | 7. water flows in underground streams |
| h. transpiration | <input type="checkbox"/> | 8. underground water trapped between rock or clay layers |

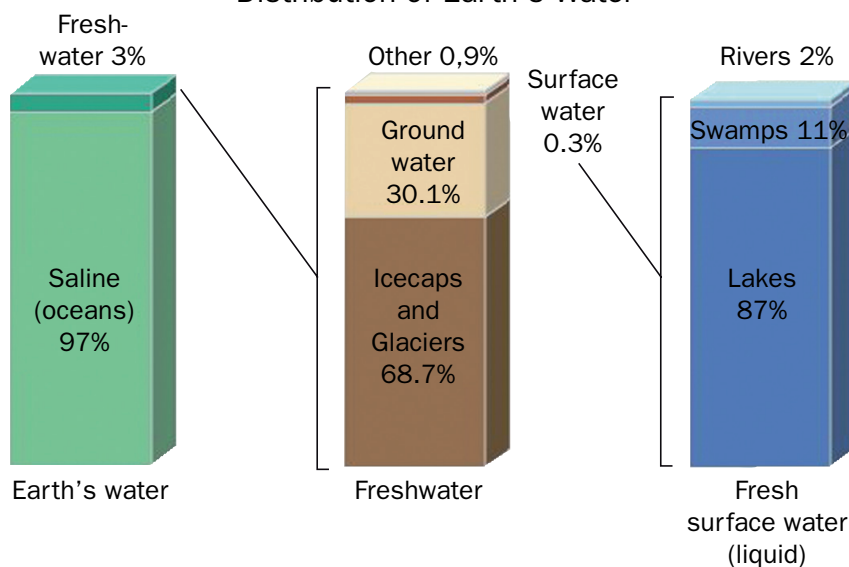


Global water distribution

- The world's total water supply is about 332.5 million cubic miles of water.
- Over 97 percent is saline.
- Over 68 percent of freshwater is locked up in ice and glaciers.
- Another 30 percent of freshwater is in the ground. Fresh surface-water sources, such as rivers and lakes, only constitute about 93,100 cubic kilometres, which is about 1/150th of one percent of total water.
- Rivers and lakes are the sources of most of the water people use everyday



Distribution of Earth's Water



Source: USGS (United States Geological Service)