

NAME:

PERIOD:

DATE:

## Water Cycle Notes

Earth is different from other planets due to the fact that its surface is 70% covered with water.

All the water on the Earth's surface is known as the **hydrosphere**.

In the hydrosphere:

- 97% of Earth's water is salt water and found in the oceans.
- 2% is frozen in continental glaciers at the North and South poles.
- 1% of Earth's water as freshwater on land or in the atmosphere.

The 1% of freshwater is drawn from the oceans and the ice caps, and deposited on land through the **Water Cycle**. The water cycle is powered by the sun, and moves water from the Earth's surface to the atmosphere and back again.

The steps of the water cycle are:

1. **Evaporation** – water molecules gain energy from the sun and gases in the atmosphere, and change from a liquid into a gas. They then enter the atmosphere as water vapor. This process is called evaporation.

Other processes that change liquid water into water vapor include:

- **Transpiration** – is when producers breathe water vapor back into the atmosphere
- **Respiration** – is when consumers breathe water vapor back into the atmosphere

2. **Condensation** – water molecules in the atmosphere lose energy due to cooling, and return to their liquid state. These tiny drops of water form clouds.

3. **Precipitation** – water molecules in clouds continue to condense and become too large to stay in the air. They then fall to the Earth in the form of rain.

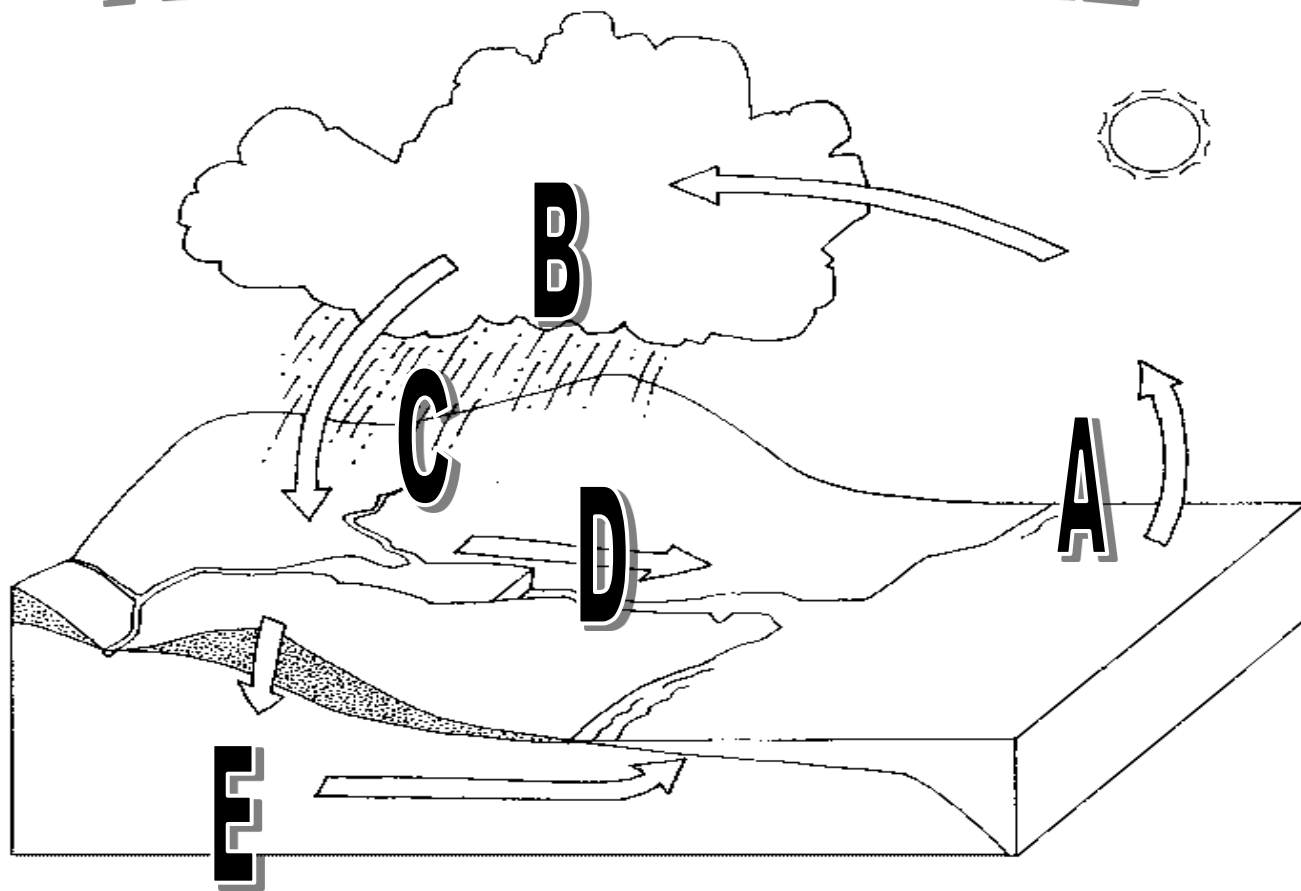
4. **Return to Earth** – water molecules that fall as precipitation are carried to the Earth's surface by gravity. Gravity continues to pull the water to the lowest convenient point on the Earth's surface. Either water flows along the surface in rivers, lands in a lake or pond, soaks into the ground and flows underground as groundwater, or goes back to the ocean. From here, they are ready to evaporate again, continuing the cycle.

- **Runoff** is water that does not soak into the ground or evaporate. Runoff causes erosion, rivers, streams, etc. When rain falls, depending on how hard the rain is and how steep the slope of the land is, water either soaks into the land, or becomes runoff. Steep slopes and hard rains produce more runoff.

- **Groundwater** is water that soaks into the Earth's crust. Groundwater can flow under the Earth's surface or be contained in underground spaces.



# THE WATER CYCLE



Color the water cycle. Label the parts and briefly describe what's happening below.

A:

B:

C:

D:

E: