Around and Around We Go

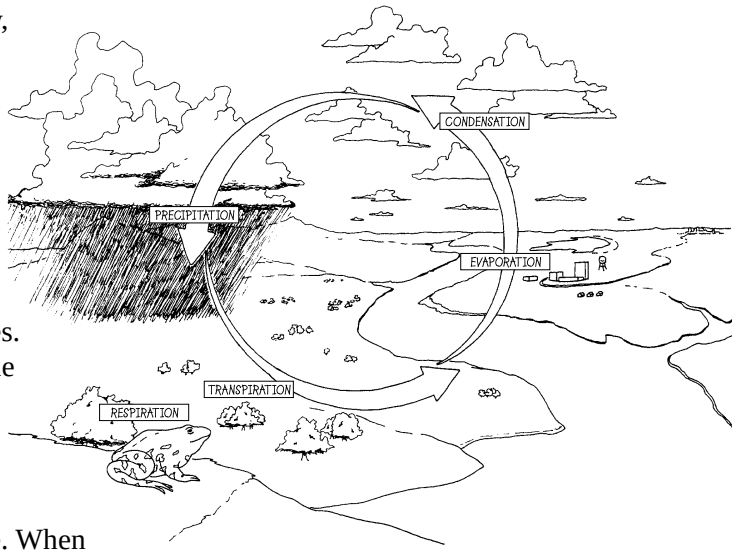
One mature oak tree may transpire 100 to 1,000 gallons of water each day during its growing season, or about 6,000 to 60,000 gallons each year!

Word Bank

condensation	precipitation	transpiration
evaporation	respiration	

Directions: Label the water cycle diagram with the words from the Word Bank, showing whether the water is moving into the atmosphere, being deposited on the surface or entering the groundwater. Discuss how the cycle works and the history of the water we are using today

Water Cycle Diagram



This diagram contains the basic elements of the water cycle. Condensation takes place on the surface (dew, frost) or in the clouds as gaseous water becomes liquid or solid water. Evaporation takes place from any moist surface, including moist ground, surface water, and plant or animal tissues. Groundwater includes any water below the surface of the ground. It may become surface water by way of springs, seeps or artesian aquifers. Infiltration is the process that allows surface water to enter the groundwater through the pores between soil particles. Precipitation is the process of condensed water in the atmosphere falling to the earth's surface as rain, snow, sleet or hail. Respiration forms water as a by-product of metabolism. Oxygen from the air combines with hydrogen from the carbohydrates consumed as food to form water and carbon dioxide. When plant photosynthesize (produce carbohydrates by capturing energy from light) they split water molecules, combining the hydrogen atoms with carbon dioxide to produce carbohydrates and releasing oxygen as a by-product. Runoff is precipitation in excess of what can infiltrate into the soil. It runs off into surface waters. Transpiration is the water given off by a plant through its stomata (stomates). These are holes in the leaves that allow water drawn from the ground through the plant's vascular system to escape into the atmosphere. Plants also respire, producing smaller amounts of water through that process. Both the physical and biological sides of the water cycle are important contributors to the process.

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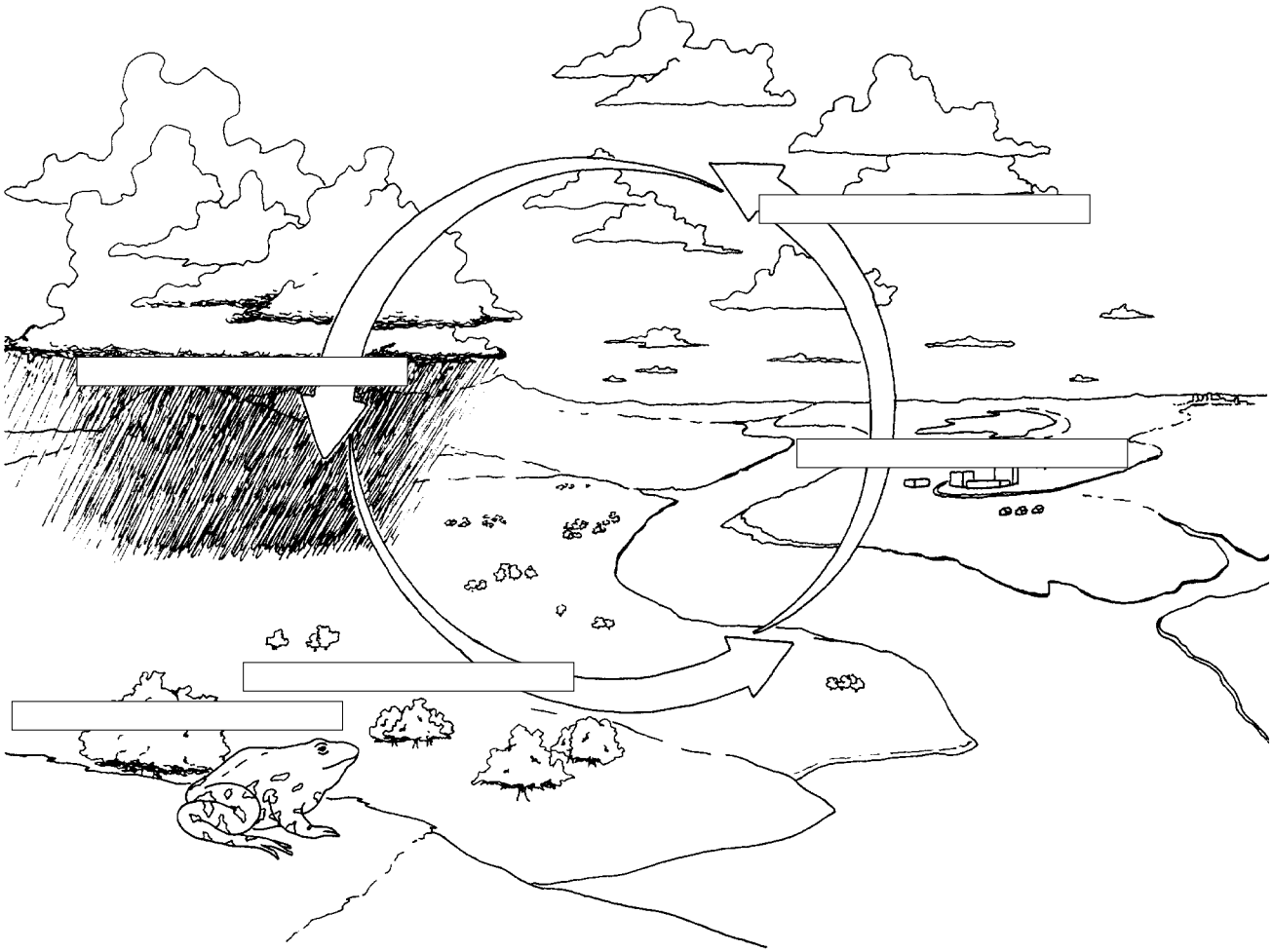
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