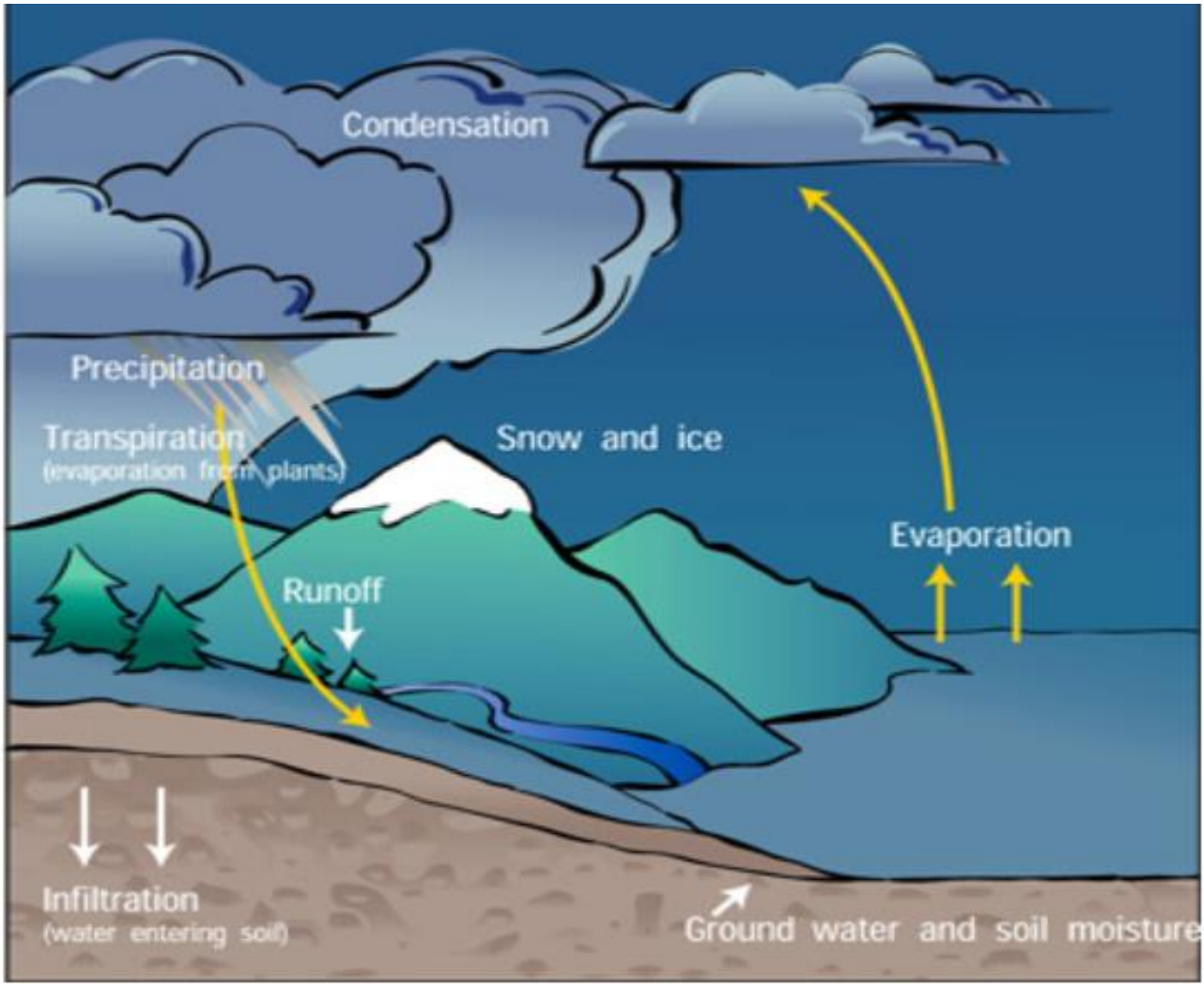
Name Date Period

Water Cycle



1. How is water stored on Earth during the water cycle? **Water is stored in snow caps on mountains, glaciers, lakes, streams and ponds but most of the water is stored in the oceans.**

2. Water moves into the atmosphere through **evaporation** and **transpiration** and returns to the Earth through **precipitation**.

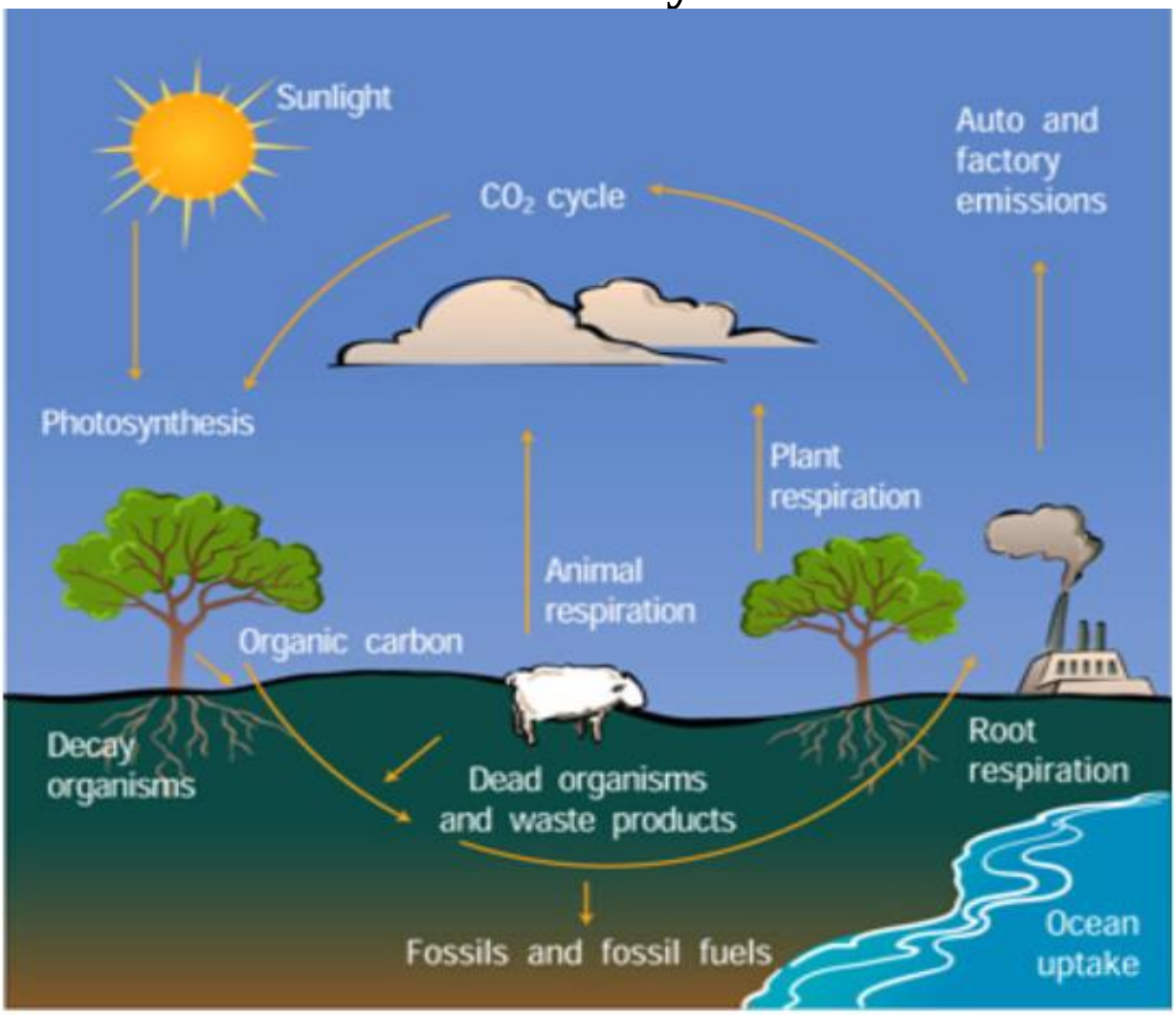
3. What is the difference between infiltration and runoff? **Infiltration: water soaks into the ground and is stored underground as ground water.**

Runoff: water flows along the surface of the Earth.

4. Where do groundwater and runoff usually end up? **Ground water and runoff usually end up back in the oceans.**

Name Date Period

Carbon Cycle



1. Why is Carbon important? **All living things are made up of carbon. Plants need carbon dioxide for photosynthesis.**

2. What are seven places that carbon exists? **In the atmosphere as carbon dioxide,**

3. How does carbon enter the <u>biotic</u> part of the ecosystem, namely plants from the atmosphere?
Carbon enters plants as carbon dioxide CO_2. (BIOTIC = Living)

4. How does it enter the soil? **Carbon enters the soil when dead plants and animals (organisms) decay or by the waste products from animals.**

5. How does carbon enter water? How do aquatic plants get carbon? **Aquatic plants get carbon from dissolved carbon dioxide in the water. This CO_2 is released into the water by aquatic animals due to cellular respiration.**

Name Date Period

6. How do animals get carbon? **Animals get carbon from the foods they eat. All living things are made up of molecules that contain carbon, such as glucose ($C_6H_{12}O_6$) and other carbohydrates.**

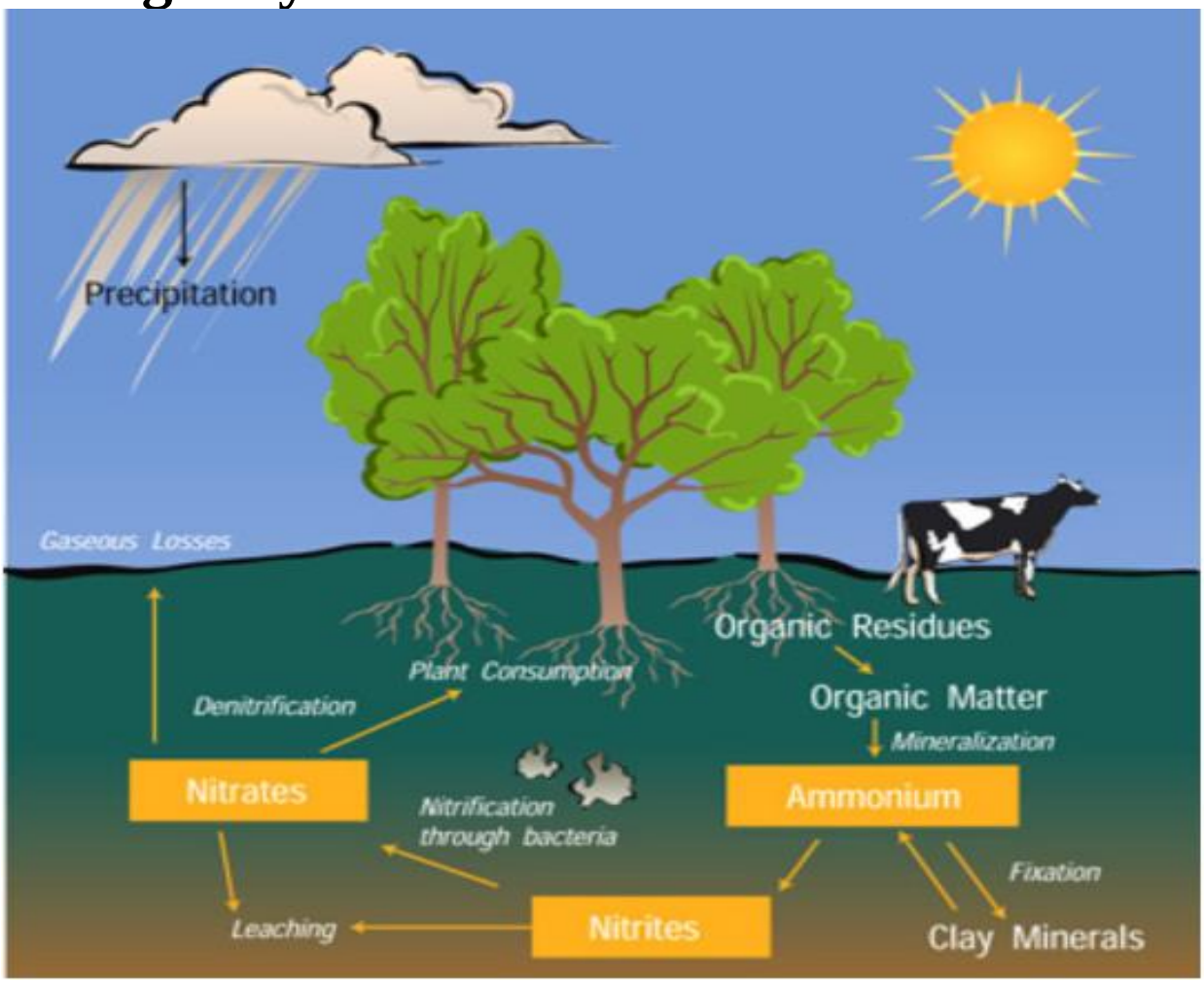
7. What are two ways carbon returns from animals into the water? **Through cellular respiration CO_2 is released by aquatic animals into the water and by waste products and decay of dead organisms.**

8. What is combustion, and how does it affect the carbon cycle? **Combustion is burning of materials. Burning fossil fuels in cars and factories releases large amounts of carbon, as carbon dioxide, back into the cycle.**

9. How does deforestation affect the carbon cycle? **Deforestation removes trees from the environment, usually by burning. Burning releases carbon dioxide, but there are now fewer trees to capture the carbon dioxide and continue the cycle.**

Name Date Period

Nitrogen cycle



1. Why is nitrogen important? **Nitrogen is important because both plants and animals need nitrogen for growth and to produce proteins and nucleic acids such as DNA.**

2. How is nitrogen from the atmosphere, the abiotic part of the ecosystem, converted in to the biotic part of the ecosystem in organisms? **Bacteria known as "nitrogen fixing bacteria" convert the nitrogen in the air into a biotic form.**

3. How do consumers get nitrogen? **From their food.**

4. How does nitrogen return to the atmosphere? **Decomposers perform "denitrification" which returns nitrogen back to the atmosphere.**

Name Date Period