



## Cycles of Matter Activity

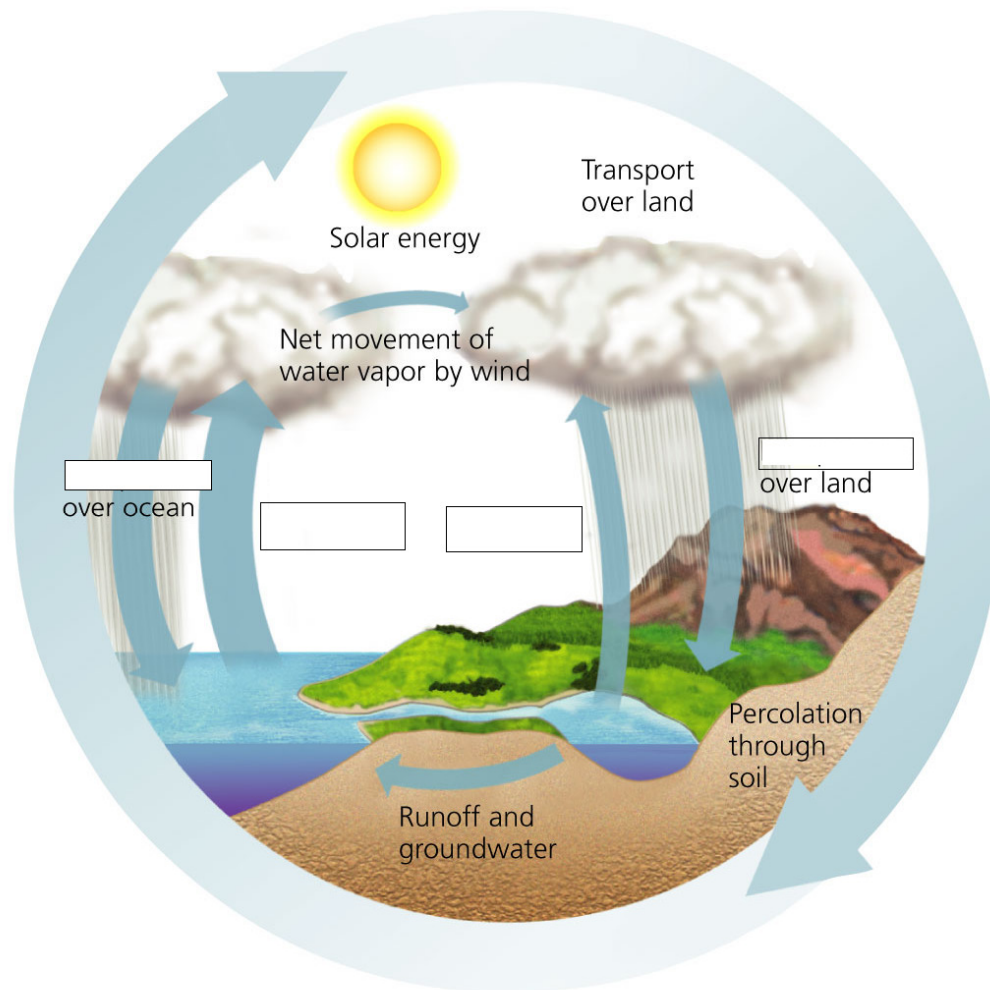
**Purpose:** To trace water and nutrients through the ecosystem.

**Materials:** cycle sheets, colored pencils, textbook

**Procedures:**

1. As a class we will complete the blanks on each of the four cycles. As we review each cycle you may wish to make additional notes next to the cycle. Be sure to leave the space under the cycle blank for questions later.
2. Answer the following questions below each cycle. Some of the questions are the same for each cycle; some questions are specific for each cycle. You may use the textbook in addition to your notes. *\*The cycles in the books may look slightly different, but they represent the same information!\**

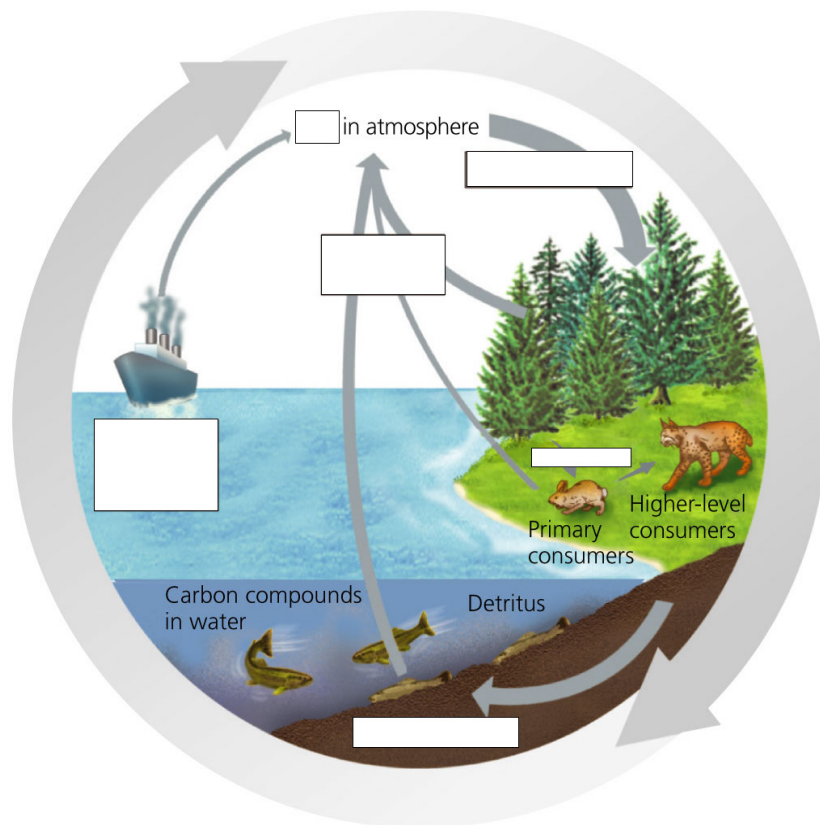
## Water Cycle



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1. What is being cycled?
2. In what ways does water leave Earth's surface and enter the atmosphere?
3. How does water return to the Earth's surface?
4. What is the major reservoir for this molecule?
5. Why is this cycle important to the ecosystem?
6. What is the difference between evaporation and transpiration?
7. Identify two ways humans may impact the cycle, be sure to clarify if the human impact is positive or negative.

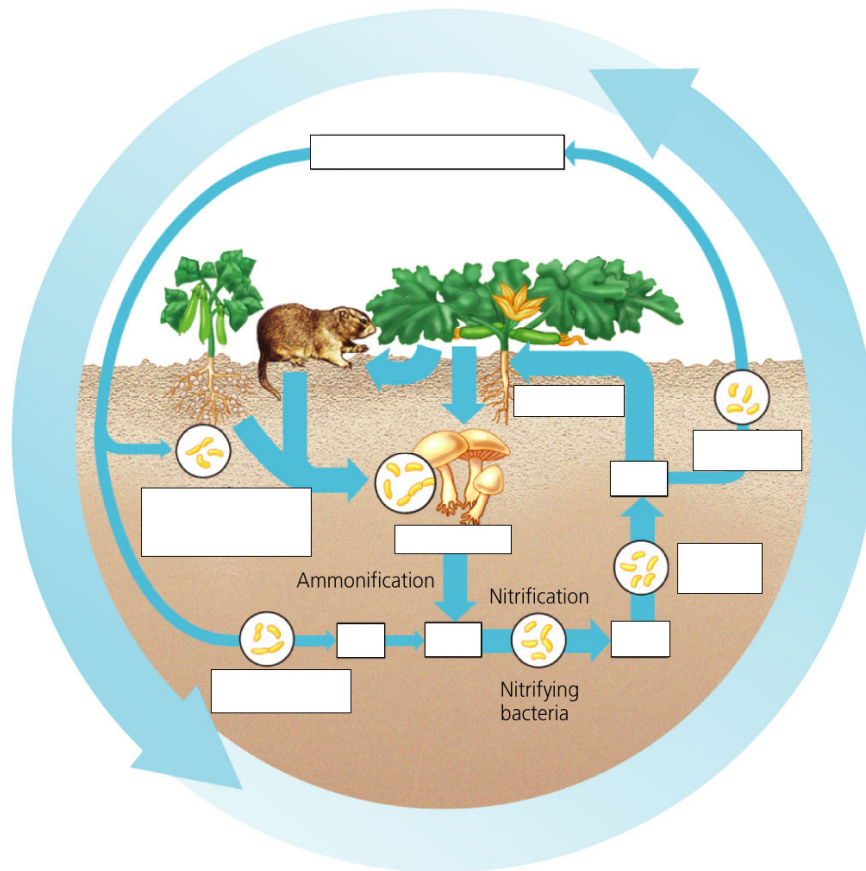
## Carbon Cycle



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1. What is being cycled?
2. What molecules are involved?
3. List the biotic components of the cycle.
4. List the abiotic components of the cycle.
5. What is the major reservoir of carbon?
6. Plants remove  $\text{CO}_2$  from the atmosphere is a process called
7. Plants and animals release  $\text{CO}_2$  into the atmosphere is a process call
8. How is carbon returned to the atmosphere?
9. Why is this cycle important to the ecosystem?
10. Identify two ways humans may impact the cycle, be sure to clarify if the human impact is positive or negative.

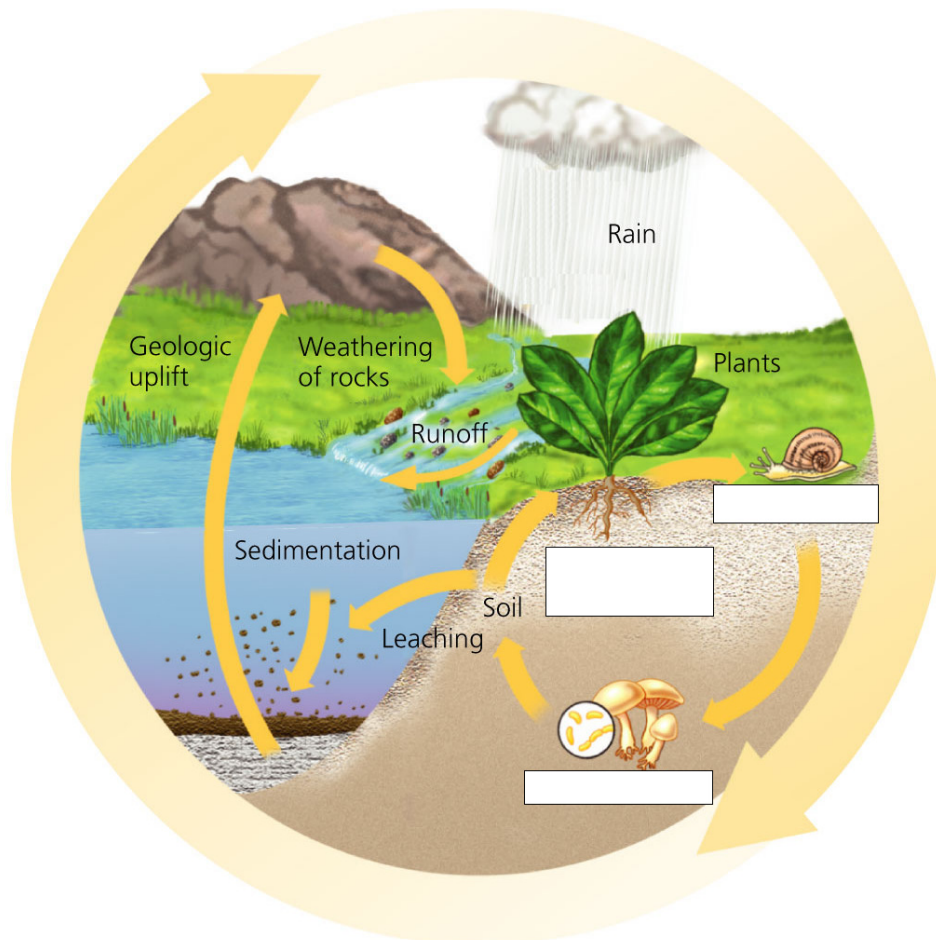
# Nitrogen Cycle



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1. What is being cycled?
2. What molecules are involved?
3. List the biotic components of the cycle.
4. List the abiotic components of the cycle.
5. What is the reservoir of nitrogen?
6. What happens to the nitrogen stored in dead plants and animals?
7. Plants use nitrogen in the form of
8. Why is this cycle important to the ecosystem?
9. Identify two ways humans may impact the cycle, be sure to clarify if the human impact is positive or negative.

## Phosphorous Cycle



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1. What is being cycled?
2. What molecules are involved?
3. List the biotic components of the cycle.
4. List the abiotic components of the cycle.
5. What is the reservoir of phosphorus?
6. Why is phosphorous referred to as a local cycle?
7. Why is this cycle important to the ecosystem?
8. Identify two ways humans may impact the cycle, be sure to clarify if the human impact is positive or negative.