

Nitrogen Cycle in Ecosystems

Nitrogen as a Nutrient

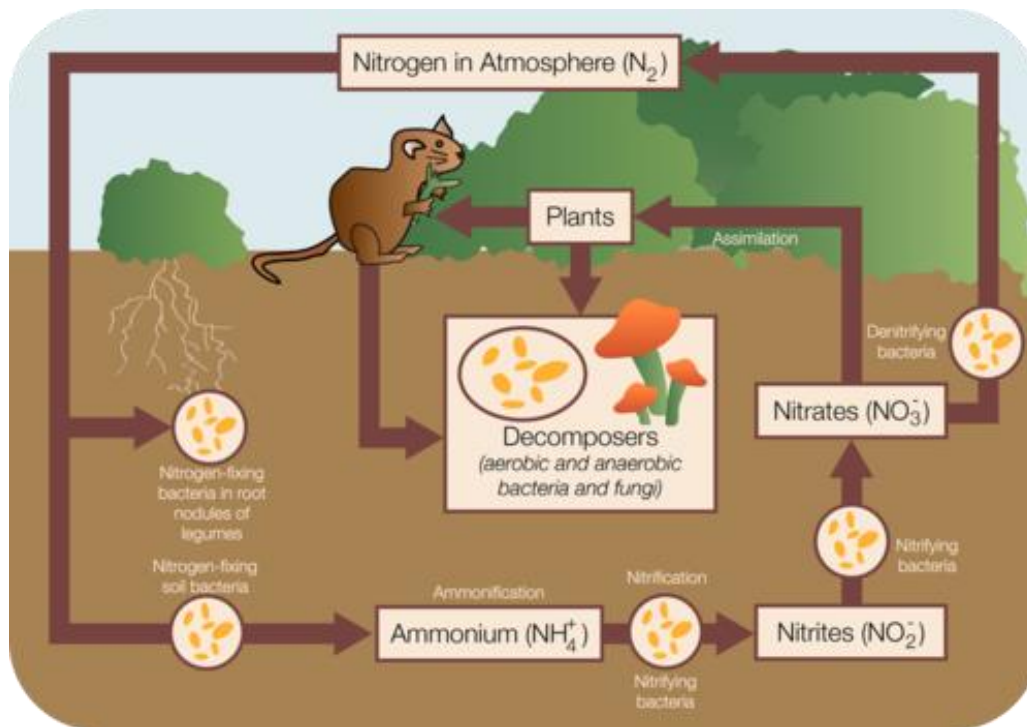
- Nitrogen is an important component of life. It is found in many organic materials.
- Amino acids, chlorophyll, and nucleic acids (DNA, RNA) all contain nitrogen.

Study Tip

Carbon, hydrogen, oxygen, nitrogen, phosphorus, and calcium are the most important materials for life. Although there is plenty of it, we cannot simply absorb nitrogen gas. Think about how organisms might get nitrogen.

The Nitrogen Cycle

- The nitrogen gas (N_2) in the air must be “fixed” before plants can use it. Lightening, algae, and forms of bacteria can convert nitrogen into nitrates or ammonia. Leguminous plants (beans, peas, peanuts) are then able to use this as food.
- Nitrogen is able to move up the food chain. When plants or animals die, they deposit ammonia back to the soil. Bacteria will create nitrates again, so nitrogen can be used again without entering the atmosphere as nitrogen gas.



Concept Check

- Why is nitrogen important?
- Briefly describe the nitrogen cycle. Be sure to explain how it moves up the food chain, as well as how it moves down.