

Name \_\_\_\_\_

## Unraveling the Mysteries of Nitrification and Denitrification

### Short Answer Key

1. Nitrification is the process by which certain bacteria convert ammonium into nitrite and then into nitrate in soil ecosystems, contributing to soil fertility and plant growth.
2. Examples of bacteria involved in denitrification include Pseudomonas and Bacillus. They use nitrate as an alternative electron acceptor in anaerobic conditions, converting it into nitrogen gas.
3. Denitrification helps regulate the nitrogen cycle in aquatic environments by removing excess nitrate from water bodies and releasing nitrogen gas back into the atmosphere.
4. Excess nitrate accumulation in water bodies can lead to eutrophication, algal blooms, oxygen depletion, and harm to aquatic organisms.
5. Nitrification requires oxygen and occurs in aerobic conditions, while denitrification occurs in anaerobic conditions where oxygen is scarce.

