

Name _____

The Nitrogen Cycle's Impact on Aquatic Worlds

Short Answer Key

1. Denitrifying bacteria convert nitrate back into nitrogen gas, which is released into the atmosphere, completing the nitrogen cycle.
2. Eutrophication can occur when excessive nitrogen inputs lead to algal blooms, oxygen depletion, and ecological imbalances in aquatic ecosystems.
3. Sources of nitrate pollution include agricultural runoff, sewage discharge, and industrial effluents, which can harm aquatic organisms by causing oxygen depletion and promoting algal growth.
4. Balanced nitrogen levels are essential for maintaining biodiversity in aquatic ecosystems by preventing eutrophication and supporting the health of aquatic plants, animals, and microbes.
5. Aquatic plants and phytoplankton absorb nitrogen compounds, such as nitrates and ammonium ions, from the water and incorporate them into organic molecules during photosynthesis and cellular metabolism.

