

Name _____

Unlocking the Secrets of the Nitrogen Cycle

Open-Ended Response Answer Key

1. Nitrogen fixation by bacteria provides plants with a vital nutrient source, promoting growth and productivity. Additionally, nitrogen-fixing plants contribute to soil fertility and biodiversity.
2. Excess nitrogen can lead to eutrophication, where algae blooms occur, depleting oxygen levels and harming aquatic life.
3. Sustainable practices such as crop rotation, cover cropping, and reduced fertilizer use can help minimize nitrogen runoff and protect water quality.
4. The nitrogen cycle interacts with other biogeochemical cycles, influencing nutrient availability, climate patterns, and ecosystem dynamics.

