

Name _____

Earth's Microscopic Architects: Unveiling the Role of Bacteria in the Environment

Open-Ended Response Answer Key

1. Bacteria contribute to nutrient cycling by decomposing dead organic matter, releasing essential nutrients like carbon, nitrogen, and phosphorus back into the environment.
2. Bacteria help plants through symbiotic relationships by assisting in nutrient absorption from the soil, promoting plant growth and health.
3. Bacteria are essential for maintaining water quality in aquatic ecosystems by breaking down pollutants and harmful chemicals, keeping the water clean and habitable for other organisms.
4. An example of how bacteria benefit humans indirectly through their environmental roles is their contribution to nitrogen fixation, which enriches the soil and promotes crop growth, ultimately supporting food production for human consumption.

