

Name _____

Unraveling the Mystery of Plant Roots: Exploring Their Vital Functions

Open-Ended Response Questions

1. Discuss the importance of each function of plant roots in supporting the overall growth and survival of plants, considering their roles in anchoring, water and nutrient absorption, storage, and soil stabilization.
2. Describe one example of a plant adaptation related to root structure that enhances the plant's ability to survive in its environment, such as specialized roots for water storage in desert plants or aerial roots in epiphytic plants.
3. Explain how the function of plant roots contributes to ecosystem health and biodiversity, considering their roles in soil formation, nutrient cycling, and habitat creation for soil organisms.
4. Discuss the potential impact of environmental factors such as soil pollution or deforestation on the function and health of plant roots, and propose strategies for mitigating these effects to support plant growth and ecosystem resilience.

