

Name _____

Inside the Plant: Exploring the Anatomy of Vascular Plants

Open-Ended Response Questions

1. Discuss the relationship between roots and stems in vascular plants and how they work together to support the growth and development of the plant. Describe how roots anchor the plant in the soil and absorb water and nutrients, while stems provide support for leaves and flowers and transport water and nutrients between roots and leaves.
2. Explore the role of leaves in photosynthesis and how their structure and function are adapted to maximize sunlight absorption and gas exchange. Discuss the importance of leaves in providing energy for plant growth and reproduction and their role in regulating water loss through transpiration.
3. Investigate the reproductive strategies of vascular plants and how flowers play a central role in sexual reproduction. Describe the process of pollination and fertilization in vascular plants and how flowers attract pollinators for successful reproduction. Discuss the significance of fruits in seed dispersal and the survival of vascular plant species.
4. Examine the structure and function of vascular tissues in vascular plants and how they facilitate the transport of water, nutrients, and sugars throughout the plant. Describe the differences between xylem and phloem and how their specialized cells enable efficient nutrient distribution and support plant growth and development.

