

Name _____

Unraveling the World of Bugs: Exploring Their Diversity and Unique Characteristics

Open-Ended Response Answer Key

1. Bugs' specialized mouthparts, such as proboscis or stylet, are adapted for piercing plant tissues or animal skin to access fluids like sap, blood, or nectar. For example, stink bugs feed on plant sap using their piercing mouthparts, while mosquitoes use theirs to extract blood from animals.
2. Bugs play crucial roles in ecosystems. As pollinators, they transfer pollen between flowers, facilitating plant reproduction. As decomposers, they break down organic matter, recycling nutrients back into the soil. Additionally, bugs serve as prey for various animals, contributing to the food web.
3. Bugs are often considered pests because some species feed on crops, ornamental plants, or stored food products, causing economic damage. They can also transmit diseases to humans, animals, and plants, posing health risks.
4. One adaptation of bugs is their modified forewings, which form a protective shield over their bodies. This adaptation provides defense against predators and environmental hazards by minimizing exposure to potential threats. For example, the thickened forewings of stink bugs act as armor, protecting them from predators like birds or reptiles.

