

Name \_\_\_\_\_

## Feasting Fungi: Unraveling the Mystery of Nutrient Acquisition

### Open-Ended Response Answer Key

1. Extracellular digestion is the process by which fungi secrete enzymes into their environment to break down complex organic molecules into simpler forms outside their cells. This allows fungi to absorb nutrients through their cell membranes, providing them with essential elements for growth and survival.
2. Mycorrhizal partnerships benefit both fungi and plants by enhancing nutrient uptake and plant growth. Fungi help plants absorb water and essential minerals from the soil, while plants provide sugars and other organic compounds produced through photosynthesis. This mutualistic relationship improves nutrient cycling and ecosystem productivity.
3. Parasitic fungi can have detrimental effects on their hosts, causing diseases that disrupt normal physiological processes and potentially leading to reduced growth, yield, or even death. These fungi obtain nutrients by invading living tissues and absorbing nutrients from their hosts, compromising their health and vitality.
4. One type of trap used by fungi to capture prey is adhesive hyphae. These specialized structures secrete sticky substances that adhere to passing microorganisms, trapping them and preventing their escape. Once trapped, the prey is digested, and the nutrients are absorbed by the fungus.

