

Name \_\_\_\_\_

## Guardians of the Earth: Exploring the Vital Functions of Ecosystems



Ecosystems, ranging from wetlands to forests, play crucial roles in maintaining the health of our planet. Each type of ecosystem has unique functions that contribute to the overall balance of Earth's systems.

### Wetlands

Wetlands, including marshes, swamps, and bogs, serve as nature's water filters. Their sponge-like soils and vegetation help absorb excess water during floods and release it during dry periods, reducing the risk of flooding and drought. Additionally, wetlands act as natural water purifiers, trapping pollutants and sediment before they reach larger bodies of water. They also provide habitat for diverse plant and animal species, supporting rich biodiversity.

### Forests

Forests are often referred to as the lungs of the Earth due to their role in producing oxygen and absorbing carbon dioxide through photosynthesis. They help regulate the climate by storing carbon and releasing moisture into the atmosphere through a process called transpiration. Forests also provide habitat for countless species, including mammals, birds, insects, and microorganisms. Furthermore, they offer valuable resources such as timber, food, and medicine, sustaining both human livelihoods and biodiversity.

### Other Ecosystems

Other ecosystems, such as grasslands, deserts, and coral reefs, also have essential functions. Grasslands, for instance, support grazing animals and store carbon in their soils, helping to mitigate climate change. Deserts play a vital role in water and nutrient cycling, while coral reefs provide habitat for marine life and protect coastlines from erosion.