

Name \_\_\_\_\_

## Algae Unveiled: How They Stand Apart in Aquatic Realms

### Open-Ended Response Answer Key

1. Answers may vary but could include comparisons of asexual and sexual reproduction, highlighting the differences in mechanisms and advantages of each.
2. Algae play a crucial role in nutrient cycling by converting carbon dioxide and sunlight into organic matter through photosynthesis. This process helps regulate the balance of nutrients in the water, providing food and oxygen for other organisms.
3. Algae's adaptability allows them to thrive in various aquatic environments by tolerating fluctuations in temperature, salinity, and nutrient levels. This adaptability enables them to colonize diverse habitats and contribute to ecosystem dynamics.
4. Algae lack specialized structures like roots, stems, and leaves, distinguishing them from plants and some other aquatic organisms. Instead, they come in a wide variety of forms, ranging from single-celled organisms to large, multicellular seaweeds.

