

Name \_\_\_\_\_

## Coral Reefs: Nature's Underwater Cities

### Short Answer Key

1. Coral polyps are tiny animals that extract calcium carbonate from seawater to build protective skeletons. These skeletons form the structure of coral reefs, and as new generations of polyps settle on top of them, the reefs grow and expand.
2. Coral polyps have a mutualistic relationship with zooxanthellae, microscopic algae that live within the coral polyps' tissues. The zooxanthellae provide nutrients to the coral through photosynthesis, while the coral provides a protected environment for the algae. This relationship contributes to coral health, vibrant colors, and rapid growth.
3. Major threats to coral reefs include rising sea temperatures, ocean acidification, pollution, and overfishing. These threats can lead to coral bleaching, a phenomenon where stressed corals expel their colorful algae, making them vulnerable to disease and death.
4. Coral reefs are significant for their biodiversity, acting as coastal protectors against storms and erosion, and supporting fishing and tourism industries that provide livelihoods for many. They also sequester carbon dioxide, helping to mitigate climate change.
5. Conservation measures for coral reefs include the establishment of marine protected areas, sustainable fishing practices, and reducing pollution. Public awareness and education are crucial for garnering support for these efforts.

