

Name \_\_\_\_\_

## The Oceanic Carbon Pump: Nature's Hidden Carbon Cleaner

### Short Answer Key

1. Phytoplankton absorb carbon dioxide during photosynthesis, incorporating it into their cells. When they die or are eaten, this carbon sinks into the ocean, contributing to the Oceanic Carbon Pump.
2. The Twilight Zone is a region hundreds of meters below the ocean's surface, where organisms like zooplankton and small fish feed on sinking organic matter, releasing some carbon back into the water.
3. Organic matter that reaches the seafloor can become buried in sediments for thousands of years, effectively removing it from the carbon cycle.
4. The Oceanic Carbon Pump helps regulate Earth's carbon balance by removing excess carbon dioxide from the atmosphere and storing it deep in the ocean, preventing climate change.
5. If the Oceanic Carbon Pump stopped functioning, excess carbon dioxide would accumulate in the atmosphere, leading to more severe climate change.

