

Name _____

Oceanic Carbon Captains: The Role of Oceans in the Global Carbon Cycle

Short Answer Key

1. The biological pump operates by phytoplankton taking up carbon during photosynthesis, and when they die or are consumed, they transport carbon to the ocean depths as organic particles through marine snow.
2. Ocean upwelling brings nutrient-rich water to the surface, promoting the growth of phytoplankton, which can increase carbon exchange between the ocean and the atmosphere.
3. Ernst Haeckel's artwork promotes an understanding of the role of marine organisms in the carbon cycle by illustrating the beauty and diversity of microscopic life, emphasizing their significance in carbon sequestration.
4. A disrupted global carbon cycle could lead to more carbon dioxide in the atmosphere, resulting in increased global warming, sea-level rise, and disruptions to ecosystems.
5. Calcium carbonate shells found in marine organisms, like corals and mollusks, play a role in the carbon cycle by storing carbon and providing habitats for other organisms.

