Name KEY Date Class

Note-taking Worksheet

Oceanography

Seamounts- Under water, inactive volcanoes.

Section 1 The Seafloor

A. Ocean Basin —low areas of Earth filled with water

1. Continental Shelf —gradually sloping end of a continent that extends under the ocean
2. Continental Slope —steeper slope that extends from the outer edge of the continental shelf down to the ocean floor
3. Abyssal Plains —flat seafloor areas from 4,000 m to 6,000 m below the ocean surface

B. As Crustal Plates move, the ocean floor changes.

1. Mid-Ocean Ridge —new ocean floor is formed.
   a. Eruption of Magma from Earth's interior
   b. Process called Sea-floor Spreading
2. Trenches —long, narrow, steep-sided depressions
   a. Form at Subduction Zones, where one crustal plate sinks beneath another
   b. Example: Mariana Trench

C. Many Mineral resources can be found in the ocean.

1. Petroleum, natural gas, phosphorite, limestone, sand, and gravel—examples of continental shelf deposits
   a. Economically Important—can be mined
   b. Placer Deposits—can form where rivers enter oceans
2. Sulfur, iron, copper, zinc, and silver—examples of deep water deposits
   a. Too difficult and Expinsive to mine
   b. Manganese Nodules—deposits that form from seawater

Section 2 Life in the Ocean

A. Ocean organisms carry out life Processes every day.

1. Photosynthesis—marine plants and algae use energy from the Sun to make food.
   a. Producers—organisms that undergo photosynthesis
   b. Consumers—organisms that feed on producers

Meeting Individual Needs

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Note-taking Worksheet (continued)

2. chemosynthesis—the process of using sulfur or nitrogen compounds as energy to produce food
3. Energy is passed from one organism to another organism in a food chain
4. Complex feeding system of overlapping food chains—food webs

B. Varieties of ocean life

1. Plankton—marine organisms that drift with the current
   a. Phytoplankton—producers ex: diatom
   b. Zooplankton—feed on phytoplankton
2. Nekton—animals that actively swim rather than drift in the current
   a. Can control their buoyancy
   b. Some deep-dwelling nekton produce their own light. (Bioluminescence)
3. Benthos—plants and animals living on or in the seafloor

C. Habitats along the near-shore areas of the continental shelf—Ocean margin habitat

1. Beach-dwelling organisms are adapted to a constantly changing environment.
2. Tide pools formed in Rocky Shores areas contain food and provide protection.
3. Estuaries provide a lower salt environment with many nutrients.
4. A coral Reef forms in clear, warm water and provides a habitat for many species.

Section 3 Ocean Pollution

A. Pollution — introduction of harmful waste products, chemicals, and other substances not native to an environment

1. Sewage—pollutant that acts like fertilizer
   a. Creates algal blooms
   b. Uses up oxygen so other organisms die
2. chemicals—wastes from industrial and agricultural products
3. Oil—from tankers and land runoff
4. Solid wastes—debris washed up on beaches that can kill or create hazards for animals
5. Silt—sediment from erosion that can cover coral reefs or fill marshes

Meeting Individual Needs

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Note-taking Worksheet (continued)

B. Pollution effects—ocean environments are drastically changing

C. Pollution control—international organizations and treaties are working to reduce ocean pollution.

1. No international agreement exists to control land based activities that affect the oceans.
2. Everyone's cooperation is needed.
3. Continue to learn about marine pollution.

Meeting Individual Needs