

Ocean

The World Ocean

- 1 recognize that most of the Earth is covered with water.
- 2 list the Earth's four main ocean basins and identify their locations.
- 3 describe the topography of the ocean floor and compare it to land.
- 4 identify and describe three major technologies used to study the ocean floor.

Ocean Floor Features

- 1 list the three main regions of the ocean floor.
- 2 differentiate between the continental margins of the Atlantic and Pacific Oceans.
- 3 explain the formation of new ocean floor at deep-ocean trenches, abyssal plains and mid-ocean ridges.

Seafloor Sediments

- 1 list the three types of ocean floor sediments.
- 2 describe the formation of terrigenous, biogenous and hydrogenous sediments.

Resources from the Seafloor

- 1 identify ocean resources used for energy production.
- 2 explain how gas hydrates are formed.
- 3 list other types of ocean resources.

Composition of Seawater

- 1 identify the units used to express the salinity of ocean water.
- 2 list the sources of salt in ocean water.
- 3 recognize the factors that affect the density of ocean water.
- 4 compare and contrast the three main zones of the open ocean.

Diversity of Ocean Life

- 1 recognize how marine organisms can be classified.
- 2 differentiate between plankton and nekton.
- 3 describe the area of the ocean in which most benthic organisms live.
- 4 list the factors used to divide the ocean into marine zones.

Ocean Productivity

- 1 list the factors that influence a region's photosynthetic productivity.
- 2 describe the transfer of energy from one trophic level to another.
- 3 compare and contrast food webs and food chains.

Open Circulation

- 1 explain how surface currents develop.
- 2 describe how ocean currents affect climate.
- 3 state the importance of upwelling.
- 4 describe the formation of density currents.

Waves and Tides

- 1 describe how ocean waves get their energy.
- 2 state three factors that determine the characteristics of a wave.
- 3 describe how energy moves through a wave.
- 4 explain the forces that produce tides.

Shoreline Processes and Features

- 1 list the agents responsible for the movement of sediments along the shoreline.
- 2 explain how refraction affects wave action along the shore.
- 3 describe the processes that form shoreline features.
- 4 list the structures that can be built to protect a shoreline.