



Study Guide

Ocean Water

Chapter

18

Directions: Use the word bank provided to complete the following ocean summary.

desalination	halite	salinity
dissolved gases	nitrogen	steady state
fish	oxygen	volcanoes
groundwater	photosynthesize	water

Ocean water contains many (1)_____. The greatest portion of natural elements in the ocean, 96.5%, is oxygen and hydrogen combined in pure (2)_____. Other gases dissolved in ocean water are carbon dioxide, (3)_____, and oxygen. (4)_____ comes directly from the atmosphere, as well as from ocean plants that (5)_____. Chloride and sulfate ions are deposited into the ocean from (6)_____, while sodium, magnesium, and calcium are deposited from rocks dissolved slowly in rivers and (7)_____. Scientists measuring the (8)_____, the amount of salts dissolved in seawater, have discovered that the oceans are not growing saltier. (9)_____ and other ocean creatures use the gases and salts to make bones and shells. Elements naturally are being added back to the oceans at the same rate that they are removed—a concept called (10)_____. Scientists continue to experiment with methods of (11)_____, where salts are separated from pure water through evaporation, use of straining membranes, or melting frozen ice. This process leaves behind the natural salt, (12)_____, also known as sodium chloride, or table salt.

Directions: Give an example of how humans use ocean resources in each of the following ways.

13. Food from the ocean: _____
14. Ocean transportation: _____
15. Energy and minerals from the ocean: _____
16. Oceans affect weather and climate: _____
17. Ocean currents: _____

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Study Guide

Ocean Currents

Chapter

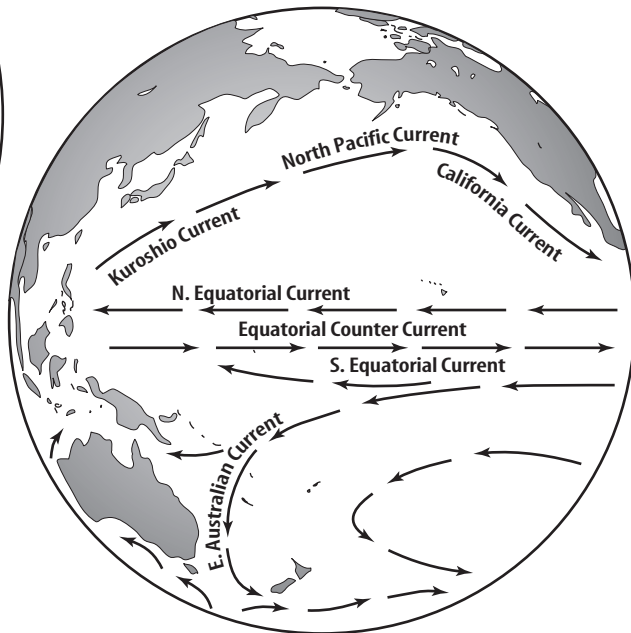
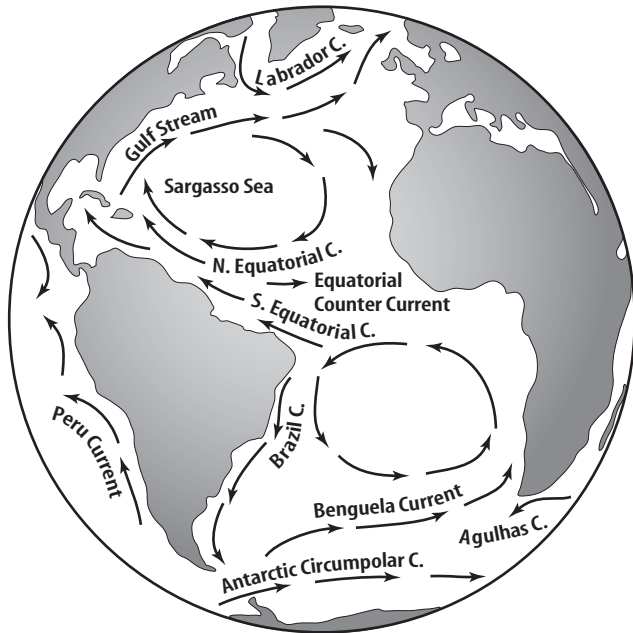
18

Directions: Answer the following questions on the lines provided.

1. What kind of current forms when more dense seawater moves toward less dense seawater?

2. What causes an upwelling?

Directions: Use the information from the figures below to help answer the following questions.



3. What is the name of the current that flows southerly along the west coast of the United States?

Is this current warm or cold? _____

4. In what direction do cold currents generally flow in the northern hemisphere?

5. Because of the influence of the Coriolis effect, what is the general motion of surface currents

north of the equator? _____

south of the equator? _____

SECTION
3

Study Guide

Ocean Waves and Tides

Chapter
18

Directions: Write the term that matches each description below on the spaces provided. Unscramble the boxed letters to answer question 11.

1. collapsing wave _ _ _ _ _ _ _ _ _ _
2. kind of tide that occurs when the Sun, Earth, and the Moon form a right angle _ _ _ _ _ _
3. horizontal distance between two waves or two crests _ _ _ _ _ _ _ _ _ _
4. lowest point of a wave _ _ _ _ _ _ _
5. rise and fall in sea level _ _ _ _ _ _
6. rhythmic movement that carries energy through matter or space _ _ _ _ _
7. kind of tide that occurs when the Sun, Earth, and the Moon line up together _ _ _ _ _ _ _
8. pulls the water back into the sea after a wave breaks _ _ _ _ _ _ _
9. highest point of a wave _ _ _ _ _
10. vertical distance between a wave's crest and trough _ _ _ _ _ _ _ _ _ _
11. What is the difference between the level of the ocean at high tide and low tide?


Study Guide

The Seafloor

Chapter
19

Directions: Write the correct oceanography term on the line in front of its definition.

abyssal plains	continental shelf	continental slope	deep-water deposits
manganese nodules	mid-ocean ridge	ocean basin	oceanic trench
placer deposits	seafloor spreading	seamount	subduction zone
_____	1. the area in all ocean basins where new ocean floor is formed		
_____	2. steep slope between the continental shelf and the ocean floor		
_____	3. location of deep ocean trenches where crustal plates of old ocean floor slide beneath another plate		
_____	4. lumps of mineral resources that formed from minerals dissolved in sea-water which then came out of solution to form solids, rich in manganese, copper, iron, nickel, and cobalt		
_____	5. concentrated deposits of denser mineral-grains from rivers dropped on continental shelves, may contain gold, titanium, or diamonds		
_____	6. underwater, inactive volcanic peaks, most common in the Pacific Ocean		
_____	7. low areas of Earth that are filled with ocean water		
_____	8. flat seafloor, valleys filled with sediment		
_____	9. location of underwater vents of superheated water that cool, creating sulfur, iron, zinc, copper, and silver; too expensive to mine		
_____	10. process of ocean plates separating, hot magma rising from Earth's crust forming new crust		
_____	11. gradual sloping edge of a continent that extends under the ocean		
_____	12. long, narrow, deep-sided depression where one crustal plate sinks beneath another; most common in the Pacific Basin		

Directions: Answer the question below.

13. Discuss the importance of mid-ocean ridges, subduction zones, and ocean trenches and how these land-forms work to create and recycle Earth's crustal plates.
