

Ocean Habitats

POS. 187-191

Introduction

1. Is the following statement true or false? Only a few types of organisms inhabit the ocean.
2. Name three ocean organisms you might see during a walk on the beach.

Ocean Zones and Conditions

3. The part of the ocean that extends from the high-tide line to the low-tide line is called the _____.
4. The part of the ocean that extends from the low-tide line to the edge of the continental shelf is called the _____.
5. The part of the ocean that extends beyond the edge of the continental shelf is called the _____.
6. The open-ocean zone is divided into the surface zone, the transition zone, and the _____ zone.
7. Is the following statement true or false? Physical conditions are the same in each zone of the ocean.
8. Where do organisms that need light for photosynthesis live?
9. What must organisms that live deep in the ocean withstand?

Life in the Ocean

10. Is the following statement true or false? Organisms inhabit every depth of the ocean.
11. Scientists classify marine organisms according to
 - a. where they live and how they move.
 - b. size and where they live.
 - c. where they live and how long they live.
 - d. how they move and what they eat.
12. Describe plankton.
13. Name three examples of plankton.
14. Free-swimming animals that can move throughout the water column are called _____.

16. What are benthos?

17. Do benthos move from place to place or stay in one location?

18. Name six examples of benthos.

19. Algae that use sunlight to produce their own food through photosynthesis are called _____.

20. What are all nekton?

- a. producers
- b. consumers
- c. decomposers
- d. benthos

21. What do decomposers eat?

22. Explain what a food web is.

23. Which of the following may eat plankton?

- a. sea ducks
- b. blue whales
- c. other plankton
- d. all of the above

24. Draw a food web that shows the feeding relationships among three organisms found in the Arctic Ocean.

Name _____ Date _____ Class _____

Ocean Zones - Guided Reading and Study

Intertidal Zone

Rocky Shores

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1. List the conditions that organisms living in rocky intertidal zones must be able to tolerate.

- a. _____
 - b. _____
 - c. _____
 - d. _____
2. Circle the letter of the sentence that is true about water in tide pools.
- a. The salinity of the water in a tide pool decreases if it rains.
 - b. The water in a tide pool is always saltier than ocean water.
 - c. Water in a tide pool cools because it is evaporating.
 - d. When the water in a tide pool evaporates, all the animals trapped in it dry up and die.
3. What is the spray zone?
- _____
- _____

4. Complete the table.

Adaptations for Life in a Tide Pool	
Organism	How it is adapted to live in a tide pool
Barnacle	a. _____
Sea star	b. _____
Limpet	c. _____
Sea urchin	d. _____

5. Is the following sentence true or false? A stripe of black algae indicates the high-tide line in a tide pool. _____
6. The zone between the highest high-tide line and lowest low-tide line is called the _____.
7. What special conditions must organisms tolerate in the rocky intertidal zone?
- _____
- _____

7. Circle the letter of each type of organism you might see in a tide pool.

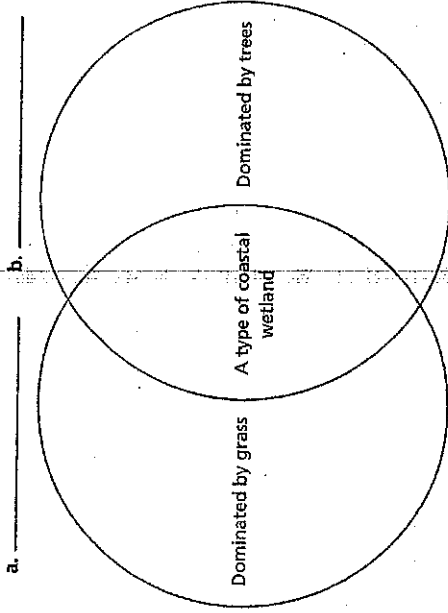
- a. sea stars
- b. sea urchins
- c. sponges
- d. blackline algae

Where River Meets Ocean

10. Coastal inlets or bays where fresh water from rivers mixes with the salty ocean water are called _____.

11. Water that is partly salty and partly fresh is referred to as _____.

12. Complete the Venn diagram.



13. How do pollutants enter estuaries?

- a. _____
- _____
- _____
- _____
- _____
- b. _____
- _____
- _____
- _____
- _____

14. Describe two ways in which mangrove forests are important to the environment.

- a. _____
- _____
- _____
- _____
- _____
- b. _____
- _____
- _____
- _____
- _____

Ocean Zones - Review and Reinforce

Intertidal Zone

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Understanding Main Ideas

Answer the following questions in the spaces provided.

1. Name two types of intertidal zones.
2. What are the two boundaries of the intertidal zone? Identify three conditions that organisms in this zone must overcome.

3. How do pollutants from the land get into estuaries?

Building Vocabulary

Fill in the spaces in the table below.

Habitat	Description
Rocky shore	4. _____
Mangrove forest	5. _____
Salt marsh	6. _____

Write the correct term on each line to complete the sentence.

7. Two kinds of coastal wetlands are _____ and _____
8. An _____ is a coastal inlet or bay where fresh water from a river mixes with ocean water.

The Neritic Zone and Open Ocean

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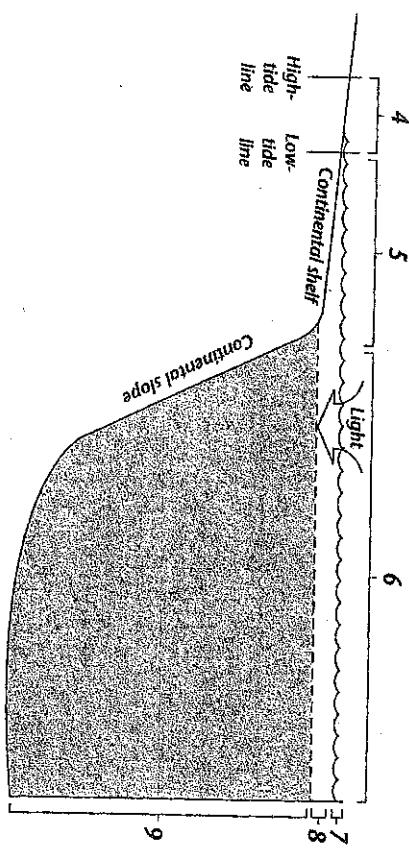
Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. What two conditions account for the great variety of organisms in the neritic zone?
2. Why are there no algae living in the deep ocean?
3. What organisms form the base of the food web at a hydrothermal vent? What do these organisms use to make their own food?

Building Vocabulary

Name and describe each numbered area shown in the diagram below. Write your answers in the spaces provided.



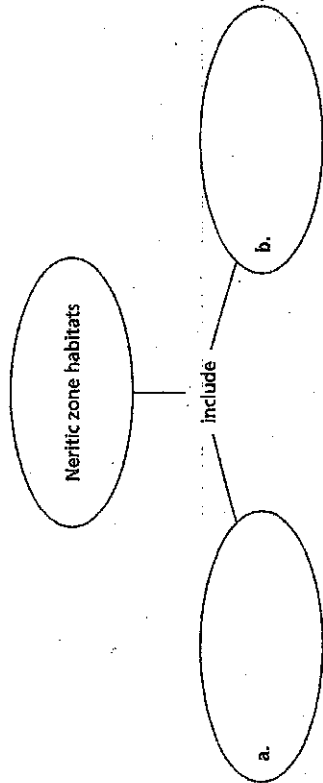
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

The Neritic Zone and Open Ocean

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Conditions in the Neritic Zone

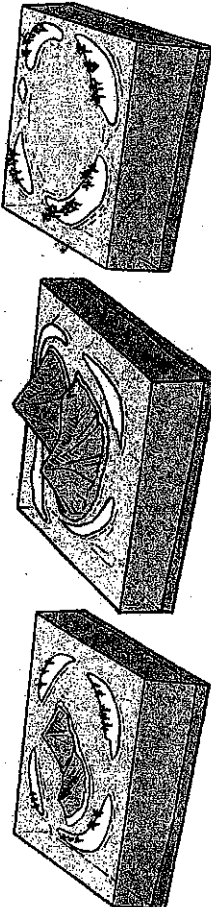
- The part of the ocean that extends from the low-tide line out to the edge of the continental shelf is called the _____. The part of the ocean that extends beyond the edge of the continental shelf is called the _____.
- Circle the letter of each sentence that helps explain why there is so much life in the neritic zone.
 - The water is shallow.
 - The water is high in nutrients.
 - Large, plantlike algae grow there.
 - Upwelling never occurs there.
- Complete the concept map.



The Neritic Zone and Open Ocean (continued)

Coral Reefs

- Is the following sentence true or false? A coral reef is made of living things. _____
- Number the drawings to show the correct sequence of steps in the formation of an atoll.



Match the type of coral reef with its description.

Type of Reef	Description
6. atoll	a. Reef that is separated from land by a lagoon
7. fringing reef	b. Ring-shaped reef that surrounds a shallow lagoon
8. barrier reef	c. Reef that closely surrounds the edges of an island

- Is the following sentence true or false? Reefs protect coastlines during violent storms. _____

Life in a Kelp Forest

- Circle the letter of each sentence that is true about kelp.
 - They are algae.
 - They produce their own food.
 - They provide food for sea otters.
 - They provide a home for sea slugs.
- What important role do sea otters play in a kelp forest? _____

Conditions in the Open Ocean

- Is the following sentence true or false? The open ocean supports fewer organisms than the neritic zone. _____
- Is the following sentence true or false? The surface zone is the only part of the open ocean that receives enough sunlight to support the growth of algae. _____
- How is the deep zone like a desert? _____
- The production of light by living things is called _____.
- An area in which heated ocean water rises through cracks in the ocean floor is a(n) _____.
- Circle the letter of each sentence that is true about organisms around hydrothermal vents.
 - Bacteria produce food from chemicals in the hot water.
 - Tubeworms get their food from the bacteria inside them.
 - Algae form the base of the food web.
 - Giant clams feed on the algae.

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Ocean Zones - Guided Reading and Study

Resources From the Ocean

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Living Resources

1. Is the following sentence true or false? Foods from the ocean make up about 10 percent of the world's total food supply. _____

2. List the six species of fish that make up the majority of fishes harvested for eating.

a. _____

b. _____

c. _____

d. _____

e. _____

3. Where are nearly all fishes caught? _____

4. The farming of saltwater and freshwater organisms is called _____

Nonliving Resources

5. What are some nonliving resources from the ocean floor? _____

6. When metals concentrate around pieces of shell on the ocean floor, they form black lumps called _____

7. Is the following sentence true or false? The technology to gather nodules was developed in the mid-1900s. _____

8. How is magnesium obtained from seawater? _____

9. Is the following sentence true or false? Fuels on and below the ocean floor come from the remains of dead marine organisms. _____

10. Two fuels that are found on and below the ocean floor are _____ and _____

11. Why are the richest deposits of oil and gas often located on the continental shelves? _____

Ocean Pollution

12. Circle the letter of each sentence that is true about ocean pollution.

a. The ocean is so vast that it cannot become polluted.

b. Most ocean pollution comes from the land.

c. The ocean is a self-cleaning system.

d. Most ocean pollution is due to natural causes.

13. Is the following sentence true or false? Some ocean pollution is the result of weather. _____

14. How can a sudden surge of fresh water from an estuary pollute the ocean? _____

15. List three ocean pollutants related to human activities.

a. _____ b. _____

c. _____

16. Circle the letter of the sentence that is true about oil from oil spills.

a. It is a minor threat to ocean life.

b. It is harmful to only a few organisms.

c. It can destroy an animal's natural insulation.

d. It is harmful only to animals that swallow it.

17. Describe the natural cleaning process that slowly takes place after oil spills. _____

18. Why is it difficult to determine who, if anyone, should control portions of the ocean? _____

19. Is the following sentence true or false? Approximately three quarters of the ocean's surface waters are owned by no nation. _____

20. Is the following sentence true or false? Ownership of the ocean floor beneath the high seas is no longer under debate. _____

Exploring the Ocean - Key Concepts

- People have studied the ocean since ancient times, because the ocean provides food and serves as a route for trade and travel. Modern scientists have studied the characteristics of the ocean's waters and the ocean floor.
- If you could travel along the ocean floor, you would see the continental shelf, the continental slope, the abyssal plain, and the mid-ocean ridge.
- Plate movements have shaped many of the most dramatic features of Earth, both on land and under the ocean.

Exploring the Ocean - Key Terms

- Sonar -
- continental shelf -
- continental slope -
- abyssal plain -
- mid-ocean ridge -
- trench -
- plate -
- seafloor spreading -

Ocean Habitats - Key Concepts

- Ocean zones include the intertidal zone, the neritic zone, and the open-ocean zone.
- Scientists classify marine organisms according to where they live and how they move.

Ocean Habitats - Key Terms

- intertidal zone -
- neritic zone -
- open-ocean zone -
- plankton -
- nekton -
- benthos -
- food web -

Intertidal Zone - Key Concepts

- Organisms that live in the rocky intertidal zone must be able to tolerate the pounding of the waves and changes in both salinity and temperature. They must also withstand periods of being underwater and periods of being exposed to the air.
- Along the coasts of the United States, most wetlands are mangrove forests or salt marshes.

Intertidal Zone - Key Term

Estuary -

Neritic Zone and Open Ocean - Key Concepts

- The shallow water over the continental shelf receives sunlight and a steady supply of nutrients washed from the land into the ocean. The light and nutrients enable large plantlike algae to grow.
- Coral reefs can form only in shallow, tropical ocean waters. Kelp forests grow in cold neritic waters where the ocean has a rocky floor.
- The open ocean differs from the neritic zone in two important ways. First, only a small part of the open ocean receives sunlight. Second, the water has fewer nutrients.

Neritic Zone and Open Ocean - Key Terms

- Atoll -
- Bioluminescence -
- hydrothermal vent -

Resources From the Ocean - Key Concepts

- People depend heavily on fishes and other ocean organisms for food. Ocean organisms also provide materials that are used in products such as detergents and paints.
- Some nonliving ocean resources include water, fuels, and minerals.
- Although some ocean pollution is the result of natural occurrences, most pollution is related to human activities.

Resources From the Ocean - Key Terms

- Aquaculture -
- Nodule -

Write a 2-3 sentence response for each of the following questions.

What is an estuary? Why are they significant to humans and the creatures that live there? Why are they especially vulnerable to pollution?

Identify the three categories of organisms in the ocean and describe their characteristics.