UNIT 3

THE OCEAN

Sample material © Pearson 2023

THINK ABOUT THIS

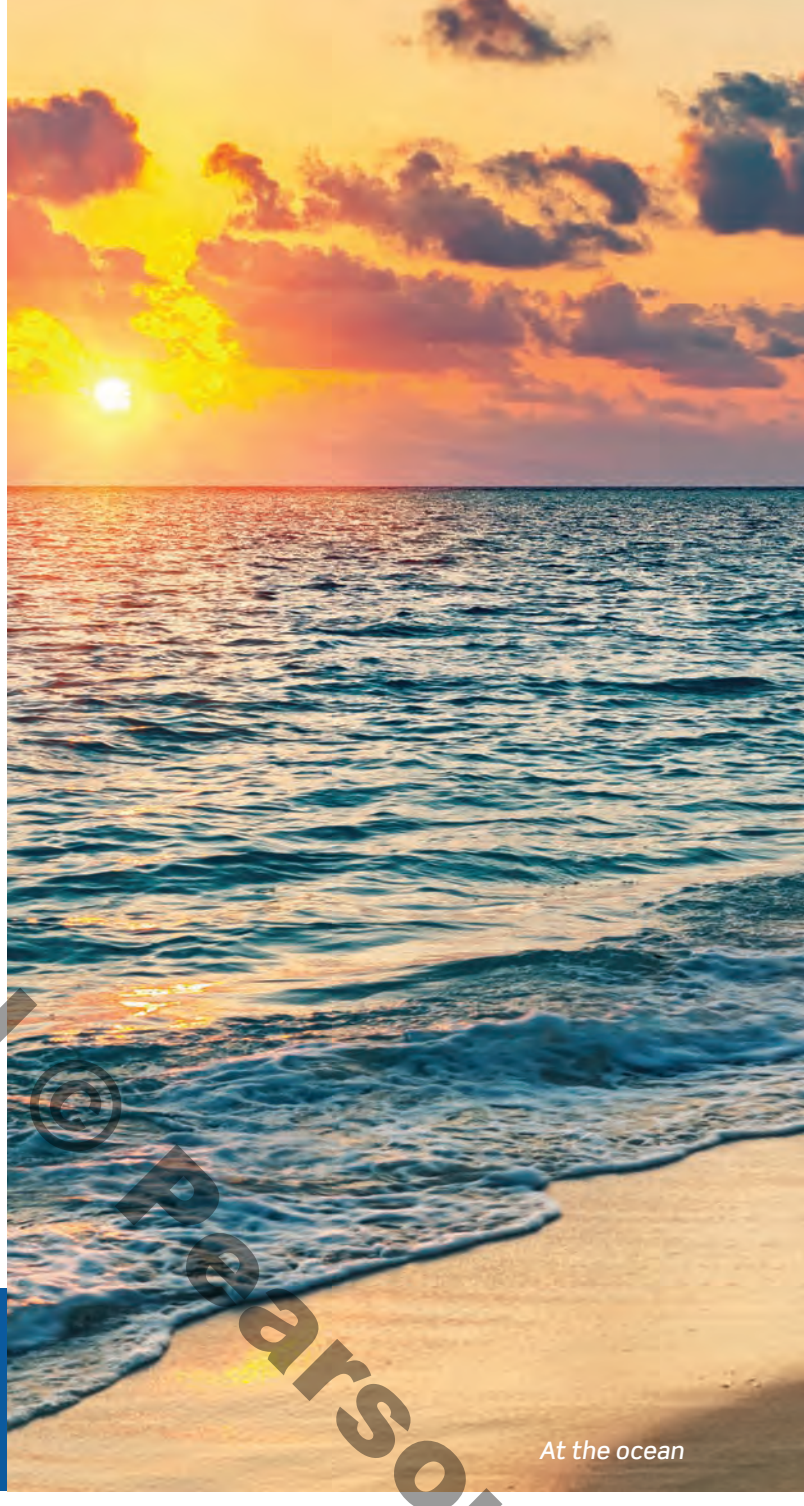
What was the topic of the last news report you saw or heard about the ocean?

Check ☑ your answer.

- ☐ The ocean and the weather
- ☐ Something we get from the ocean
- ☐ Living things in the ocean
- ☐ Changes happening in the ocean
- ☐ Other: _____

CHAPTER 9

What Does the Ocean Mean to Us?



At the ocean

LEARNING OUTCOME

› Learn about the relationship between people and the ocean

GETTING READY TO READ

Talk about these questions in a small group.

1. How do you say "ocean" in your first language? What does this word make you think about? How does it make you feel? Why?
2. What makes people want to live near the ocean? What are some reasons people do *not* want to live near the ocean? What do you think about living near the ocean?

Sample Material © Pearson 2023

READING

Read to Find Out: What draws people to the ocean?

Look at the words and definitions next to the reading. Then read without stopping.

What Does the Ocean Mean to Us?

1 Some people have no trouble explaining how the ocean is important in their lives. They live near it and depend on it for food. It gives them the work that supports their families. For people who live far from the ocean, the ways they are **connected** to it may not be so clear. However, if you know a few facts about the ocean, it's easy to see how important it is for *all* life on Earth. Did you know that the ocean covers 72 percent of the Earth's **surface**? It helps regulate the climate[1] by holding **heat** from the sun. It also **supplies** half of the **oxygen** in the air we breathe. The oxygen is produced by phytoplankton, tiny ocean plants that live just below the surface. These facts have led people to call the ocean Earth's "life support system."[2]

2 Did you know that eight of the world's ten largest cities are near the ocean? History explains why this is so. Cities began and grew on the **coast**, especially at the mouths of rivers,[3] because the ocean was so important for food and transport.[4] Today, almost half the people in the world live near the ocean.

3 **While** facts like these explain why the ocean matters, they do not answer another question: How does the ocean make us feel? The ocean has a strong effect on people's **emotions**. It can cause fear—of what we cannot see and do not know, of things that live in the ocean, or of big **storms**, like hurricanes and typhoons. It **makes sense** to be afraid of those. But the ocean can also make us feel **calm** and **relaxed**. How does it do that? Why do so many vacationers[5] want to be at the ocean? Why do people pay so much to live where they can see it? What is it that **draws** us to the ocean?

4 Many of us are drawn to it to have fun. We want to swim in it or go out in boats. Think of all the ways people have invented to play in and on the water! Others just want to be near the ocean. Perhaps it's because of the great open space, where we can see miles of open water and sky. Some say the space makes them feel free and full of hope. Others love the ever-changing colors of the sea. Still others are drawn by its sound. The crash of waves against rocks is exciting, while the **gentle** sound of small **waves** on the beach is calming and comforting.

5 Perhaps what draws people to the ocean is even more basic. Did you know that our brains are about 73 percent water? The answer to the question of what draws us to the sea may lie in the mysteries[6] of the human body.

[1] *regulate the climate* = control weather conditions around the world

[2] *life support system* = equipment for keeping someone alive (usually, in a hospital)

[3] *mouths of rivers* = the places where rivers meet the ocean

[4] *transport* = ways of taking people and things from one place to another

[5] *vacationers* = people taking a trip as a break from work or school

[6] *mysteries* = things that are unknown and cannot be explained

Sample Material © Pearson 2023

6 Many of us choose to be near the ocean when we can. We love seeing the ocean, hearing it, smelling it, playing in it, walking or sitting by it. We may not know why we feel the way we do about it. However, we do know how every person on Earth is connected to the ocean and how important that relationship is.

Quick Comprehension Check

A. Read these sentences **about the reading**. Circle T (true) or F (false). On the line, write the number of the paragraph with the answer.

1. There is more water than land on the Earth's surface. T F ____
2. The human brain is almost half water. T F ____
3. The ocean helps control how hot or cold the Earth gets. T F ____
4. The ocean takes oxygen out of the air. T F ____
5. Big storms make people love the ocean. T F ____
6. People may not be able to explain their own feelings about the ocean. T F ____

B. Work with your class. Share your answers from part A. Go back to the reading to find the reason why a sentence is true or false. Correct the false sentences.

EXPLORING VOCABULARY

Thinking about the Target Vocabulary

A. Look at the chart with the target vocabulary. Seven nouns are missing. Scan the reading to find them, and add them to the correct places in the chart. Write the singular form of any plural noun.

¶	Nouns	Verbs	Adjectives	Other
1		connect		
		supply		
2				
3				while

Sample Material © Pearson 2023

¶	Nouns	Verbs	Adjectives	Other
				make sense
			calm	
			relaxed	
		draw		
4			gentle	

B. Which words and phrases are new to you? Circle them in the list. Then find them in the reading. Look at the context. Can you guess the meaning?

Using the Target Vocabulary

A. These sentences are **about the reading**. Complete them with the words or phrases in the box.

calm	draws	heat	supplies	waves
connect	gentle	makes sense	surface	while

1. All human beings are in a relationship with the ocean. Many things _____ us to the ocean.
2. The ocean covers 72 percent of the _____, or outside layer, of the Earth.
3. The sun keeps the Earth warm. It gives us _____.
4. We get many things from the ocean. For example, it gives us oxygen. It _____ half the oxygen in the air we breathe.
5. The reading presents some facts about the ocean. _____ those facts explain how important the ocean is for life on Earth, they do *not* explain how the ocean makes us feel.
6. Hurricanes and typhoons are dangerous, so it _____ to be afraid of them. People *should* be afraid—and so be careful.

Vocabulary Tip: *The surface of the ocean* means the top of the ocean where it meets the air.

Reading Tip: *While* at the beginning of a sentence tells you the sentence will have two parts. Figure out if they have a relationship in time (*While I was out, it started to rain*) or show a contrast (see sentence 5).

Sample Material © Pearson 2023

7. Sometimes being at the ocean makes us excited or afraid—when there are strong winds, for example. At other times, it has the opposite effect. When the sea is quiet and we have no worries, we feel _____.
8. Something that interests us may make us want to go closer. It _____ us to it. The ocean does this to many vacationers, for example.
9. Sometimes the ocean is loud, and we are very aware of its power. At other times, when it makes only quiet sounds, it seems _____.
10. Sometimes the ocean looks flat, but at other times, you can see lines of water that move across its surface. Those are _____.

B. These sentences use the target words and phrases **in new contexts**. Complete them with the words in the box.

calm	drawn	heat	supplied	waves
connects	gentle	made no sense	surface	while

1. Some animals that live in the ocean have to come up to the _____ to breathe.
2. When the weather gets cold, I turn on the _____ in my home.
3. The Panama Canal _____ the Atlantic Ocean to the Pacific Ocean in Central America.
4. Pablo fell asleep to the sound of the _____ hitting the beach.
5. People whose jobs carry a lot of responsibility need to deal with emergencies without getting excited. They need to stay _____ to make good decisions.

Vocabulary Tip: *Calm* can also describe the ocean. When it's calm, there are no waves.

6. Maria's parents wanted her to join the family business, but Maria was _____ to a career in medicine instead.
7. The city _____ a piece of land and some seeds, but all the work on the garden was done by local people.

Sample Material © Pearson 2023

8. Be careful how you hold the baby! You must be _____ with babies.

9. No one understood what the scientist was talking about. It _____ to them.

10. _____ it's not easy to get work as an actor, our son has a great deal of talent, so we encouraged him to try.

Vocabulary Tip: *While* can be a synonym for *although*. (Synonyms are words with the same meaning.) Check your dictionary for other meanings of *while*.

C. Read the sentences. Guess the meaning of the **boldfaced** target words from the context. Match them with their definitions.

a. There are some amazing beaches on the **coast** of Australia.

b. I managed to sound **relaxed** during my job interview, but I felt nervous.

c. The fishing boats returned home because a terrible **storm** was coming.

d. Fear is a powerful **emotion**.

e. The doctor gave the patient extra **oxygen** to breathe.

Target Word		Definition
1. _____	=	a strong human feeling, such as love or hate
2. _____	=	the area where the land meets the ocean
3. _____	=	feeling comfortable and not worried
4. _____	=	a gas in the air that all forms of animal and plant life need to live
5. _____	=	a time of very bad weather with strong winds, rain, snow or dust, and sometimes lightning

Sample Material © Pearson 2023

Building on the Vocabulary

Word Grammar: *Ocean* and *Sea*

Using *Ocean*

- *The ocean* means the whole area of salt water that covers much of the Earth's surface.
- There are five large areas of salt water that are named oceans: the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean, and the Arctic Ocean.

Using *Sea*

- *The sea* often means *the ocean: Why are people drawn to the sea/the ocean?*
- There are many named seas, all smaller than any named ocean: the Mediterranean Sea, the South China Sea, the Caribbean Sea, the Sea of Japan, etc.
- Use *sea,* not *ocean,* in these phrases:

  They traveled both on land and ***by sea*** (= by ship on the ocean).

  The fishing boats spend weeks ***at sea*** (= on the ocean far from land).
- *Sea* is often used before another noun, as in *seafood, sea level* (the average height of the ocean), and *sea creatures* (animals that live in the ocean).

Complete the sentences. Write *ocean* or *sea.*

1. The Pacific is the largest _____.
2. The Caribbean _____ is larger than the Mediterranean.
3. The waves at the beach were big because of a storm at _____.
4. The top of Mount Everest in the Himalayas is 29,035 feet above _____ level.
5. The _____ covers 72 percent of the Earth's surface.

DEVELOPING YOUR READING SKILLS

Topics of Paragraphs

Look at the list of paragraph topics from "What Does the Ocean Mean to Us?" Find the paragraph on each topic in the reading. Write the paragraph number (1–6).

a. the ocean and our emotions — Paragraph ____

b. reasons people want to be at the ocean — Paragraph ____

c. how important the ocean is — Paragraph ____

d. our bodies and the ocean — Paragraph ____

e. numbers of people living near the ocean — Paragraph ____

f. what we do and do not know about our relationship with the ocean — Paragraph ____

Sample Material © Pearson 2023

Main Ideas

A. Which paragraph best explains the main idea of the reading? Check ☑ your answer.

- ☐ Paragraph 1
- ☐ Paragraph 2
- ☐ Paragraph 6

B. Write one or two sentences that give the main idea of the reading in your own words.

_____

_____

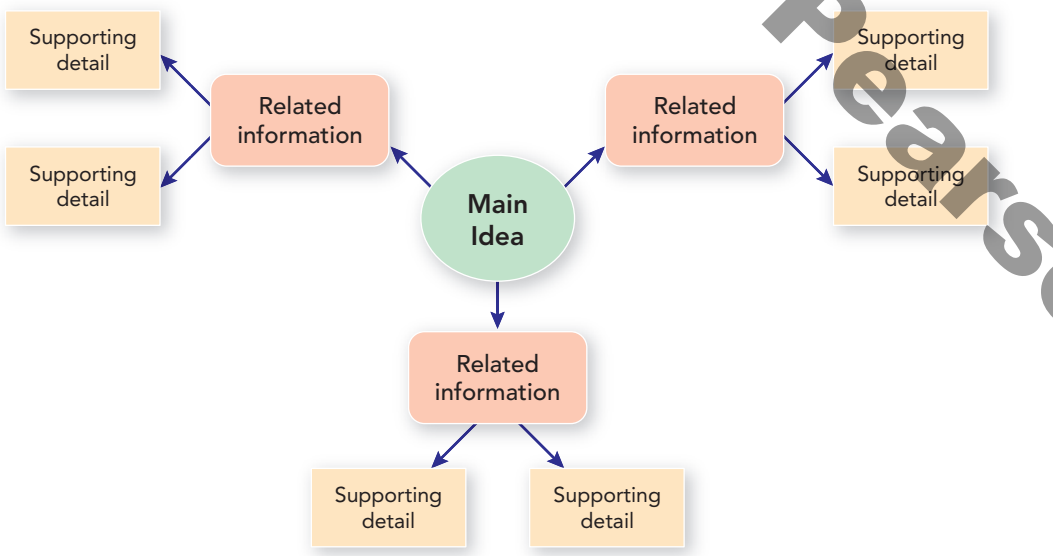
C. What is the main idea of paragraph 3 in the reading? Check ☑ your answer.

- ☐ 1. There are many good reasons for people's fear of the ocean.
- ☐ 2. The ocean has power over our feelings because we depend on it.
- ☐ 3. While we are sometimes afraid of the ocean, it also has a strong pull on us.

Using Graphic Organizers

A Concept Map

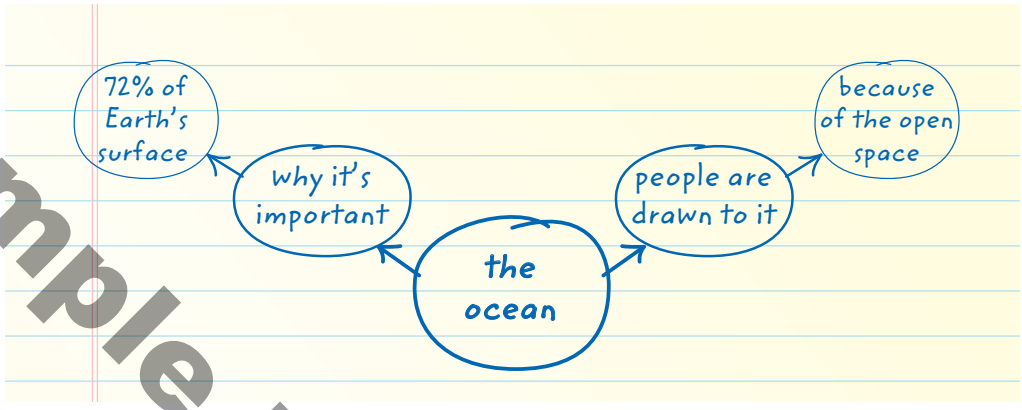
A **concept map** (or *idea web*) is a type of graphic organizer. It can help you identify important ideas from a reading and show how they connect or relate.



Critical Thinking Tip: When you choose information from a reading and enter it into a graphic organizer, you will often understand and remember the information better.

Sample Material © Pearson 2023

On a piece of paper, copy the concept map below. Complete the map by adding more circles and information from the reading about why the ocean is important and how people are drawn to it.



CRITICAL THINKING

Discussion

Talk about these questions with your class.

1. What two groups of people does the writer describe in paragraph 1? How are they different? Do you belong to one of these groups? Explain your answer.
2. The five senses are hearing, sight, smell, taste, and touch. The writer describes ways that the ocean has an effect on people through their senses. Can you find an example in the reading for each of the five? What other examples can you add?
3. In paragraph 4, the writer invites you to think about "all the ways people have invented to play in and on the water." How many can you name? Which ones have you experienced? Which ones might you like to do in the future?
4. Do you agree that people are drawn to the ocean? Do you feel drawn to the ocean yourself? Explain your answer.
5. What are the two questions about the ocean that the writer tries to answer in this reading? What information in the reading best answers each question? What information was new to you? What would you like to know more about?

Sample Material © Pearson 2023

WRITING

A. Use the Target Vocabulary: Choose five target words or phrases from the list on pages 98–99. On a piece of paper, use each word or phrase in a sentence. Then find a partner and read each other's sentences.

B. Practice Writing: Choose one of these topics and write a short paragraph about it. Then find a partner and read each other's paragraphs.

1. Do you agree or disagree that the "ocean has a strong effect on people's emotions" (paragraph 3)? Explain your answer, giving specific examples.
2. Choose a different sentence, or part of a sentence, from the reading to write about. You can begin, *In "What Does the Ocean Mean to Us," the writer says, "…."* Copy the writer's words. Then explain your thoughts about this part of the reading.

Writing Tip: When you take a sentence, or part of one, from a reading to use in your own writing, remember to copy carefully and put quotation marks before and after the other writer's words.

Sample Material © Pearson 2023

CHAPTER 10

The Crab

*Christmas Island red crabs**

LEARNING OUTCOME

› Learn about an unusual animal that depends on the ocean

GETTING READY TO READ

Take a survey of your class.

How many people in the class have ever:

- seen a crab on the beach? _____
- seen a crab underwater? _____
- eaten a crab? _____
- cooked a crab? _____
- had a crab as a pet? _____
- been bitten by a crab? _____
- watched a crab climb a tree? _____

* *Every year, 120 million Christmas Island red crabs travel from the rainforest to the ocean.*

Sample Material © Pearson 2023

READING

Read to Find Out: What information in the reading surprises you?

Look at the words, definitions, and pictures next to the reading. Then read without stopping.

The Crab

1 **Introduction**

Someone with an **interest** in sea creatures[1] could easily spend their **entire** life studying crabs. The crab is one of the oldest living types of animals, and there are about 4,500 kinds of them. Among all these crabs, there are many differences, but there are **certain** things that all crabs **have in common**.

[1] *sea creatures* = animals that live in the ocean

2 **Ways That All Crabs Are Alike**

- All crabs are invertebrates. That means they have no backbone. (Did you know that invertebrates **make up** about 95 percent of all known animals?)
- All crabs have a hard **shell**, called an exoskeleton.
- They have ten legs, with five on each side, and they have an unusual way of walking. Crabs can go forward or back but usually move sideways.[2]
- The first, or front, pair of a crab's legs are its claws. (See the photo.)

A Japanese Blue Crab shows its claws.

[2] *Crabs are known for moving sideways.*

3 **Some Differences Among Crabs**

- Not all crabs are sea creatures. Some types of crabs do live underwater, but others live on land, and some can live in either **environment**. Some manage to survive[3] in the hot water near underwater volcanoes,[4] while others live under the ice in Antarctica.
- Crabs are often the same color as their environment. The most common colors are gray, brown, and white. However, some crabs are beautiful reds, blues, and purples.
- Some crabs are herbivores (plant-eaters), others are carnivores (meat-eaters), and others are omnivores (plant- and meat-eaters).

[3] *survive* = manage to live

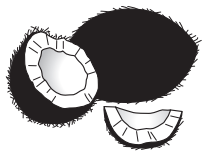
[4] *a volcano*

4 **Did You Know?**

- Christmas Island red crabs must put their eggs into the ocean so that the baby crabs can hatch (come out of the egg). The adult crabs cannot swim or breathe underwater. That makes it a dangerous business to be a mother!

Sample Material © Pearson 2023

- The largest crab in the world, the Japanese Spider Crab, can be **up to** four meters across (about 13 feet). The smallest is the pea crab. It's about the size of—can you guess?
- The largest land crab is the robber crab, or coconut crab. It can climb trees to pick coconuts.[5] Its claws are strong and **sharp** enough that it can open the coconuts, too.
- The crab in the photo on page 107, the Japanese Blue Crab, is the kind of crab most often eaten.



[5] *coconuts*

5 **An Especially Helpful Crab**

The tiny trapeziid crab (only one centimeter long, or ⅓ of an inch) helps keep coral reefs[6] **alive**. It cleans **dirt** from the reefs, letting the coral get the sunlight it needs to live. Today, much of the coral in the ocean is dying, so we should be glad for any help it can get.

[6] *coral reefs* = See the photo of a coral reef on page 127.

6 **The Last Word on Crabs**

If someone calls you crabby, they are not paying you a compliment.[7] A person who is crabby seems unhappy and often **complains**. They might always be like that, or they might get that way only at certain times. Some of us get crabby when we are tired or hungry or have too much work to do. It may not be **fair** to the poor crab to use its name this way, but English speakers have been doing it since the 1700s and will probably **go on** doing it. So the crab will just have to **put up with** it.

[7] *paying you a compliment* = telling you something nice about yourself

Quick Comprehension Check

A. Read these sentences **about the reading**. Circle T (true) or F (false). On the line, write the number of the paragraph with the answer.

1. Some crabs can climb trees. T F ____
2. Crabs live in a wide variety of places. T F ____
3. Most crabs have ten legs. T F ____
4. Crabs always walk sideways. T F ____
5. Crabs eat only plants. T F ____
6. Crabby people are fun to be with. T F ____

B. Work with your class. Share your answers from part A. Go back to the reading to find the reason why a sentence is true or false. Correct the false sentences.

Sample Material © Pearson 2023

EXPLORING VOCABULARY

Thinking about the Target Vocabulary

A. Look at the chart with the target vocabulary. Three phrasal verbs and four adjectives are missing. Scan the reading to find them, and add them to the correct places in the chart. Write the base form of each verb.

¶	Nouns	Verbs	Adjectives	Other
1	interest			
				certain
				have in common
2				
	shell			
3	environment			
4				up to
5				
	dirt			
6		complain		

B. Which words and phrases are new to you? Circle them in the list. Then find them in the reading. Look at the context. Can you guess the meaning?

Sample Material © Pearson 2023

Using the Target Vocabulary

A. These sentences are **about the reading**. What is the meaning of each **boldfaced** word or phrase? Circle a, b, or c.

1. Someone with an **interest** in crabs can study more than 4,000 kinds of them. An interest in something is a feeling of wanting to
   a. eat it. **b.** turn into it. **c.** know more about it.
2. Some scientists spend their **entire** careers researching crabs. *Entire* means
   a. lonely, sad. **b.** whole, complete. **c.** calm, patient.
3. Every crab **has** some things **in common with** other crabs. *Have something in common with someone* means
   a. have a problem with them. **b.** have the same thing they do. **c.** be the opposite of them.
4. Different types of crabs live in different **environments**. An animal's environment is
   a. the kind of place it lives in. **b.** a place to hide. **c.** its family group.
5. One type of crab can be **up to** four meters across (about 13 feet). *Up to* means
   a. equal to or less than. **b.** a great deal of. **c.** more than.
6. Don't shake hands with a robber crab. Their claws are very strong and **sharp**. *Sharp* means
   a. with a thin edge that can cut. **b.** wise. **c.** showing a lot of talent.
7. When the trapeziid crab helps clean off a reef, it helps keep the coral **alive** because coral will die if it can't get sunlight. *Alive* means
   a. clean. **b.** local. **c.** living.
8. Crabby people seem unhappy and often **complain**. If you complain about something, you
   a. are annoyed or upset about it. **b.** believe in it. **c.** are in shock over it.
9. Crabs aren't crabby, so it doesn't seem **fair** to use their name that way. *Fair* means
   a. calm, relaxed. **b.** acceptable, right. **c.** awful, terrible.
10. People probably won't stop using the word *crabby*, so crabs will have to **put up with** it. When you put up with something, you
   a. figure it out. **b.** take part in it. **c.** accept it without complaining.

Vocabulary Tip: *Interest* can be a noun or a verb. See your dictionary for other meanings of the noun.

Sample Material © Pearson 2023

B. These sentences use the target words and phrases **in new contexts**. Complete them with the words in the box.

alive	entire	fair	interest	sharp
complain	environment	have something in common	put up with	up to

1. It's amazing that no one was hurt in the accident. Everyone is _____ and well.
2. They _____: They both love good food and hate to rush through a meal.
3. Monique doesn't like snow, but she lives in Montreal, so she has to _____ it.
4. Be careful with that knife. It's very _____.
5. The job was rather boring, but Max didn't _____. He just did his work and accepted it.
6. Did you really manage to eat that _____ pizza?
7. You've done all the work on the project, with no help from your team. It hardly seems _____.
8. We can afford to give _____ $50 to support the group's work, but not more than that.
9. I've been reading a lot about the case. I took an _____ in it after hearing about it on the news.
10. The phrase "the _____" means the air, land, and water in which all the people, animals, and plants on Earth live.

Vocabulary Tip: The adjective *alive* cannot come before a noun. Use it after *be* or another linking verb. Other adjectives like this are *afraid, alike, alone, asleep, awake,* and *aware*.

C. Read the sentences. Guess the meaning of the **boldfaced** target words and phrases from the context. Match them with their definitions.

a. We wash our clothes to get the **dirt** out.
b. Some people go to the beach to collect **shells**.
c. The 206 bones in the human body **make up** a person's skeleton.
d. Some fruits are available only at **certain** times of the year.
e. I won't give up! I'll **go on** trying until I succeed.

Sample Material © Pearson 2023

Target Word or Phrase		Definition
1. _____	=	something that makes things not clean, like dust
2. _____	=	continue
3. _____	=	come together and form a group or system
4. _____	=	the hard outer part that covers and protects some animals
5. _____	=	used to talk about a specific person, thing, group, etc. without naming or describing them

Vocabulary Tip: The phrasal verb *make up* has many meanings. Read about them in your dictionary. Look for *make up* at the end of the entry for *make*.

Building on the Vocabulary

Word Grammar: *Certain*

- Use *certain* + noun to mean a specific person, thing, group, etc., that is not named.

  Certain people at work are hard for me to deal with.

- Use *certain* after *be* or another linking verb to mean "sure, confident, without having any doubts."

  Olivia was certain she had done well in the interview.

  When *certain* means "sure," it cannot come before a noun.

  This sentence is correct: *The man was certain that he was right.*

  This sentence is incorrect: *He was a ~~certain~~ man.*

Read the sentences. Does *certain* mean "specific" or "sure"? Circle your answers.

1. Ali seemed certain of the facts. specific sure
2. Do people in cross-cultural marriages face certain challenges? specific sure
3. No one is certain how the man escaped. specific sure
4. Leaders need certain talents. specific sure

DEVELOPING YOUR READING SKILLS

Understanding Text Features

Text Features: Subheadings

Each part of the reading "The Crab" has its own title, or **subheading**. Subheadings help you see how the information in a text is organized. They tell you what to expect in each section of the text.

Sample Material © Pearson 2023

Match the six subheadings from "The Crab" with the main ideas of the six sections of the text. Write the letters.

____ 1. Introduction

____ 2. Ways That All Crabs Are Alike

____ 3. Some Differences Among Crabs

____ 4. Did You Know?

____ 5. An Especially Helpful Crab

____ 6. The Last Word on Crabs

a. The trapeziid crab helps coral reefs by cleaning dirt from them.

b. The 4,500 kinds of crab are alike in some ways and different in others.

c. There are certain ways that crabs are different, as in their environments and eating habits.

d. There are certain things that all crabs have in common, such as a hard shell and claws.

e. The crab has given its name to an English word (*crabby*) that people have been using since the 1700s.

f. There are many unusual crabs, such as one that can be 13 feet across and another the size of a pea.

Reading Tip: When a text has subheadings, read those first. They tell you something about the main ideas so you understand the text better as you read.

Reading for Details

Are these statements about the reading true or false? If the reading doesn't give the information, check (✓) ***It doesn't say.***

	True	False	It doesn't say.
1. The crab is one of the oldest living types of animals.			
2. An invertebrate is an animal that has no backbone.			
3. Crabs can move fastest if they go sideways.			
4. Herbivore crabs eat other crabs.			
5. The Japanese Spider Crab lives underwater.			
6. The Japanese Blue Crab is smaller than the pea crab.			
7. A person who is crabby looks like a crab.			

Sample Material © Pearson 2023

Definitions

Writing Definitions

Sometimes a reading gives you a definition of a new word or phrase. Especially in textbooks, you will find definitions of words that are important both for understanding a reading and for further study of that subject.

A common sentence pattern for definitions of nouns is:

A/An _____ is a _____ who/that _____.
(noun)

An invertebrate is an animal that has no backbone.

A professor is a person who teaches at a university and does research.

Reading Tip: Look for definitions in the reading itself and in margin notes.

Complete the definitions using information from the reading. Use the sentence pattern from the box above.

1. An herbivore is an animal that _____
2. _____ carnivore _____
3. _____ omnivore _____

Main Ideas and Supporting Details

A. Read the three statements that give main ideas from the reading. Then read the details. Which details support each main idea? Write them on the lines.

1. All crabs have certain things in common.

   They are invertebrates. _____

   _____

2. Crabs can survive in a variety of environments.

   _____

   _____

3. There are other differences among types of crabs, too.

   _____

   _____

DETAILS

a. Their shells can be a variety of colors.

b. Crabs manage to live in very cold and hot water.

c. They are invertebrates.

Sample Material © Pearson 2023

d. They have a hard shell and claws.

e. Some eat plants, some eat meat, and some eat both.

f. Some live on land, some underwater, and some can do either.

B. Write two details from the reading that support the statement below.
Some facts about crabs are rather surprising.

_____

_____

CRITICAL THINKING

Discussion

Talk about these questions in a small group.

1. Most of the language in "The Crab" is general English, but there are a few technical terms. *Technical terms* means very specific words of the kind used by people who know a lot about a subject. In this case, they are scientific terms relating to animals. For example, the writer says "Some crabs are herbivores (plant-eaters), others are carnivores (meat-eaters), and others are omnivores (plant- and meat-eaters)." What is the purpose of the parentheses in this sentence?

   Look at the section "Did You Know?" and the section "An Especially Helpful Crab." What is the purpose of the parentheses used in those sections? Can you find any other ways the writer uses parentheses in this reading?

Critical Thinking Tip: Notice how writers use parentheses to add information that may help you understand something they have said.

2. What do you think *business* means in the phrase "a dangerous business"? What do Christmas Island red crabs do that is dangerous for them? Use information from the reading and also from the photo and footnote on page 106 to support your answer.
3. What does the reading say is special about the trapeziid crab? What does the reading say is happening to coral? What do you think might be causing the problem?
4. Why does the writer use the phrase "the poor crab" in the section "The Last Word on Crabs"? Do you think the writer is being serious in this paragraph? Explain your answer.
5. On page 106, the writer says that in this chapter, you will learn about "an unusual animal." What facts in the reading best support the writer's idea that the crab is an unusual animal? What information in the reading surprised you? Did reading "The Crab" change any ideas you had about crabs? Explain your answer.

Sample Material © Pearson 2023

WRITING

A. Use the Target Vocabulary: Choose five target words or phrases from the list on page 109. On a piece of paper, use each word or phrase in a sentence. Then find a partner and read each other's sentences.

B. Practice Writing: Choose a topic and write a paragraph. Then find a partner and read each other's paragraphs.

1. Do some research about crabs. Find a fact about crabs that surprises you and that you think will surprise your classmates. Write a paragraph to explain what you found out. Include the source of your information (the title and author of the book or article or the address of the website).
2. Think of another animal that lives in or depends on the ocean. Do some research on it. Write a paragraph to report one or more interesting facts about it. Start by explaining why you chose this animal. You can begin:

   The (animal) interests me because . . . . One of the most interesting facts about the (animal) is that . . . .

   After your paragraph, list your sources (the titles and authors of books or articles or the website addresses).

Writing Tip: When you write the title of a book, underline it (if you are writing by hand) or put it in *italics* (if you are typing on a computer).

Sample Material © Pearson 2023

CHAPTER 11

Cleaning Up the Ocean

Boyan Slat's invention

LEARNING OUTCOME

› Learn about efforts to deal with plastic in the sea

GETTING READY TO READ

Talk about these questions in a small group

1. Look at the photo. What do you think this invention does?
2. Have you heard of "garbage patches" in the ocean? What do you know about them? What questions would you ask about them?
3. The International Coastal Clean-up takes place one day every year in more than 100 countries. What do you know about it? What questions would you ask about it?

Sample Material © Pearson 2023

READING

Read to Find Out: How are people trying to clean up the ocean?

Look at the words and definitions next to the reading. Then read without stopping.

Cleaning Up the Ocean

1 The Pacific Ocean **contains** more than half the water on the **planet**. It also holds a lot of trash, much of it plastic. There are plastic bottles, plastic bags, food wrappers,[1] and many other kinds of packaging.[2] Many of them were used only once before becoming trash and ending up in the ocean. Trillions[3] of pieces of plastic are **floating** in the Pacific, and more go into its waters each year.

2 All this trash is an ugly **mess**. It's an expensive problem, too. It costs billions of dollars each year to the fishing, shipping, and tourism industries.[4] More than that, it's dangerous. Every year, at least one million seabirds and many thousands of other animals die because of plastic **pollution**. People's health is also **affected** because the plastic is full of toxic chemicals.[5] Fish eat the plastic, and people eat the fish.

3 Some of the trash ends up on beaches. The United States spends about $500 million a year to clean up its West Coast beaches alone. Around the world, people are working to clean up the beaches in their own countries. Since 1986, hundreds of thousands of **volunteers** have joined the International Coastal Cleanup. On the day of the 2014 Cleanup, volunteers picked up more than 16 million pounds of trash.

4 Other people are trying to figure out how to get the plastic out of the ocean. This is what Boyan Slat is working on. At age 16, he started studying the problem. He soon invented a **system** for catching plastic floating on or near the surface.

5 At 19, Boyan left his university in the Netherlands to start a foundation,[6] The Ocean Cleanup. He now leads a large team of scientists and engineers. They are **developing** the **technology** to clean millions of pounds of plastic from the sea. Their goal is to clean up the largest "garbage patch" in the Pacific. They expect the job will take years. For his **efforts**, Boyan received the United Nations' highest environmental award.[7] The UN named him a Champion of the Earth.

Boyan Slat

[1] *food wrappers* = pieces of plastic or paper that cover food when it is sold

[2] *packaging* = bags, boxes, etc., that contain products to be sold

[3] *trillions* = 2,000,000,000,000 or more

[4] *industries* = specific types of businesses, trades, or services

[5] *toxic chemicals* = substances that can kill

[6] *a foundation* = an organization that gives or collects money for a specific purpose, such as research

[7] *environmental award* = a prize for protecting the environment

Sample Material © Pearson 2023

6 Boyan and his team are in a hurry to get plastic out of the ocean. Right now, most of it is in large pieces. However, sunlight is turning it into microplastics (very tiny pieces). Those are even more dangerous. They're also harder to collect.

7 Boyan does not believe that the system he invented will end the problem of "garbage patches" in the sea. He asks, "How are we now going to **make sure** no more plastic enters the oceans **in the first place**?" About eight million tons[8] of plastic go into the sea every year. More and more plastic bags, bottles, and food wrappers. More and more plastic cups, forks, knives, and spoons. What can we do?

8 People fighting the problem say one answer is to change laws. They want to make the producers of plastic take more responsibility for it. They say another way is for people to make small changes in how they live. Some people are trying to **make a difference** by:

- taking their own bags to the store instead of accepting plastic bags,
- buying products that can be re-used,
- **recycling** plastic and buying recycled products, and
- volunteering to clean up their own part of the planet.

[8] *tons* = a ton is equal to 2,000 pounds (907.2 kilograms)

Quick Comprehension Check

A. Read these sentences **about the reading.** Circle T (true) or F (false). On the line, write the number of the paragraph with the answer.

1. Plastic in the ocean is a problem for several reasons. T F ____
2. The biggest pieces of plastic are the biggest problem. T F ____
3. International Coastal Cleanup volunteers take plastic out of the sea. T F ____
4. Boyan Slat studied ocean pollution at a U.S. university. T F ____
5. Boyan invented a system to clean plastic off the ocean floor. T F ____
6. A lot of plastic products are probably going into the sea today. T F ____

Sample Material © Pearson 2023

B. Work with your class. Share your answers from part A. Go back to the reading to find the reason why a sentence is true or false. Correct the false sentences.

EXPLORING VOCABULARY

Thinking about the Target Vocabulary

A. Look at the chart with the target vocabulary. Seven nouns are missing. Scan the reading to find them, and add them to the correct places in the chart. Write the singular form of any plural noun.

¶	Nouns	Verbs	Adjectives	Other
1		contain		
		float		
2				
		affect		
3				
4				
5		develop		
7				make sure
				in the first place
8				make a difference
		recycle		

B. Which words and phrases are new to you? Circle them in the list. Then find them in the reading. Look at the context. Can you guess the meaning?

Sample Material © Pearson 2023

Using the Target Vocabulary

A. These sentences are **about the reading.** Complete them with the target words and phrases in the box.

affects	develop	floats	make sure	system
contains	efforts	in the first place	mess	the planet

1. The Pacific Ocean holds a lot of water. It _____ more than half the water on Earth.
2. The Pacific Ocean is one of five oceans on _____.
3. No doubt some of the trash in the Pacific is deep down on the ocean floor, but much of the plastic _____ on or near the surface of the water.
4. The plastic floating in the Pacific forms "garbage patches." They're a terrible sight. The writer calls all this trash "an ugly _____."
5. Plastic is not food. In fact, it's dangerous to eat. But fish eat the plastic, and people eat the fish, so the ocean pollution _____ people's health.
6. Boyan Slat thought of a way to take plastic out of the ocean. He has a _____ for doing this.
7. It is the job of the scientists and engineers at The Ocean Cleanup to _____ the system Boyan invented and try to improve it over time.
8. Boyan has worked hard to try to do something about the problem of ocean pollution. He won a UN award for these _____ .
9. Boyan asks what actions we can take to be certain that plastic stops going into the ocean. He wants to _____ that it stops.
10. It will be great if Boyan's invention works to clean plastic out of the ocean, but plastic should not be going into the ocean _____.

Vocabulary Tip: *A planet* means one of the large round objects that move around the sun like Earth, Mars, etc. *The planet* means Earth when talking about the environment.

Vocabulary Tip: *Affect* is usually a verb: *How did the problem affect you?* *Effect* is usually a noun: *What effect did it have on you?*

Sample Material © Pearson 2023

B. These sentences use the target words and phrases **in new contexts.** Complete them with the words and phrases in the box.

affects	developing	float	make sure	system
contains	effort	in the first place	mess	the planet

1. *Climate change* means changes on _____ that are making the ocean and the rest of the environment warmer.
2. Ocean pollution _____ everyone in the world. No one is free from its effects.
3. Chocolate _____ more than 300 chemicals, and some affect the human brain.
4. Something that contains a lot of air will probably _____ when you put it in the water.
5. The company spends a great deal of money _____ new products that will draw new customers.
6. The purpose of a life support _____ is to keep someone alive when they are very sick.
7. The interview will start at 10 o'clock. Please _____ you're on time.
8. He was very sure about his decision, so we made no _____ to change his mind.
9. After the storm, the entire island was a _____. The cleanup took months.
10. I'm glad he wasn't hurt in the accident, but he shouldn't have been driving my car _____!

Writing Tip: Use *in the first place* at the end of a sentence to stress what was true or should have been done earlier.

Sample Material © Pearson 2023

C. Read each definition and look at the paragraph number. Look back at the reading on pages 118–119 to find the **boldfaced** word or phrase to match the definition. Copy it in the chart.

Definition	Paragraph	Target Word or Phrase
1. things that make air, water, soil, etc., dangerously dirty	2	
2. people who help or work not for pay but because they want to	3	
3. new machines, equipment, and ways of doing things that are based on modern understanding of science	5	
4. have an effect, especially to improve something	8	
5. putting used objects or materials through a special process so that they can be used again	8	

Vocabulary Tip: *Make a difference* is often used in the context of environmental or social problems, when people are trying to fix the problem. See your dictionary for other meanings.

Building on the Vocabulary

Collocations: *Do* and *Make* + Noun

Collocations are words that we often use together. Some words can go together and some cannot. *Do* and *make* are often used in collocations with certain words. For example, we can say, *Please make an effort to be on time,* but we can't say *Please ~~do an effort~~*. . . .

Other verb + noun pairs are

make + a mess, a difference, a choice, a mistake, money

do + a job, business, homework, the dishes

Use ***make*** or ***do*** to complete each sentence.

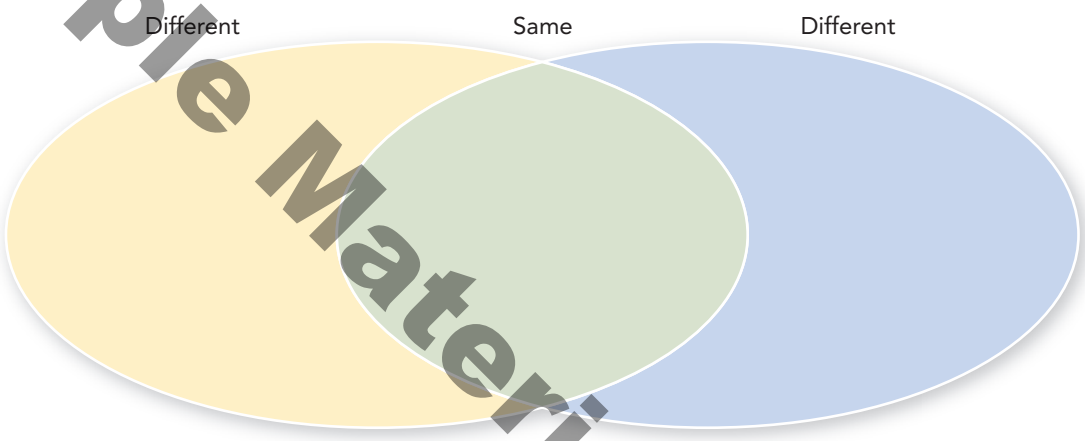
1. When we do art projects with the children, we usually _____ a mess.
2. You can depend on Ruth to _____ a good job.
3. We _____ business with several companies in that area.
4. They hope to _____ a lot of money with the new technology.
5. Volunteers for the International Coastal Cleanup want to _____ a difference.

Sample Material © Pearson 2023

Using Graphic Organizers

A Venn Diagram

Use a **Venn diagram** when you want to compare two people, things, ideas, or events. It makes it easy to see what the two have in common and what the differences are. In the part of the diagram on the left, write what is true for only one of the two. On the right, write what is true only for the other. In the middle, write what is true for both of them.



On a piece of paper, draw a Venn diagram. Write notes in the spaces on the left and right to show differences between the International Coastal Cleanup and the Ocean Cleanup. Write notes in the space in the middle about the ways they are alike, such as, "Both want to save the environment."

Topics of Paragraphs

What is each paragraph in the reading about? Write the topics of the paragraphs.

1. Paragraph 1: _____
2. Paragraph 2: _____
3. Paragraph 3: _____
4. Paragraph 4: _____
5. Paragraph 5: _____
6. Paragraph 6: _____
7. Paragraph 7: _____
8. Paragraph 8: _____

Reading Tip: When you read about several problems, as in paragraph 2, notice the order. Writers often start with the least serious problem and put the one they think most important last.

Sample Material © Pearson 2023

Summarizing

Write a summary of "Cleaning Up the Ocean." Write it as a paragraph. Include the answers to these questions:

What problem does the reading describe?

Why does it matter?

What are some people trying to do about it?

What do we still need to figure out?

You can begin: *The Pacific Ocean contains trillions of pieces of plastic.*

Writing Tip: Before you write a summary of a text, prepare to write by listing the topic of each paragraph, or section of the text, and the main idea about it.

CRITICAL THINKING

Discussion

Talk about these questions in a small group.

1. The reading says, "Every year, at least one million seabirds and many thousands of other animals die because of plastic pollution" (paragraph 2). Why do you think they die? What is the writer's opinion about this? How do you know? Do you agree? Explain your answer.

   Later, the reading says that microplastics "are even more dangerous" (paragraph 6). Dangerous for whom? Why do you think this is?
2. In paragraph 3, the writer reports that the United States is spending "about $500 million a year to clean up its West Coast beaches alone." What does *alone* mean in this context? Why do you think beach clean-ups cost so much? Do you think this is money well spent? Explain your answer.
3. Read paragraph 5 again. What do you think *Champion of the Earth* means? What do you think is the writer's purpose in giving this information about Boyan's award from the United Nations?
4. Read these definitions:
   - An optimist is a person who is always hopeful and believes good things will happen.
   - A pessimist is the opposite: Pessimists expect bad things to happen.

   Would you describe Boyan Slat as an optimist or a pessimist? Underline information in the reading that supports your opinion.

Critical Thinking Tip: Thinking about the writer's purpose can help you identify the writer's **point of view** (their personal opinion or way of thinking about something).

Sample Material © Pearson 2023

5. Read aloud the information in each part of the chart. What do you think about it? How does it make you feel?

September 20, 2014 International Coastal Cleanup	Plastic going into the ocean	Do the math
16,000,000 pounds of trash picked up from beaches by 56,000 volunteers in 91 countries	over 16,000,000,000 pounds of plastic every year	To clean up all that plastic, you would need more than 1,000 one-day Coastal Cleanups each year.

Do you think the one-day-a-year International Coastal Cleanups make a difference? Explain your answer.

6. What five changes are mentioned in paragraph 8? Put the changes in order from *easiest to do* to *most difficult*. What other ideas could you add to the list?

Reading Tip: The list on page *119* is a **bulleted list**. Bulleted lists are used to present information in an easy-to-read way. Notice how the four points in the list are alike in the way they are written.

WRITING

A. Use the Target Vocabulary: Choose five target words or phrases from the list on page 120. On a piece of paper, use each word or phrase in a sentence. Then find a partner and read each other's sentences.

B. Practice Writing: Choose a topic. Write a paragraph. Then find a partner and read each other's paragraphs.

1. Think of a person you know who is trying to make a difference. Describe what this person is trying to do. Then explain what you think about their efforts.
2. Some of the ideas in paragraph 8 of the reading are about asking people to change their habits. (A habit is something you do often, usually without thinking about it because you have done it so many times before.) Write about an experience you have had trying to change a habit.

Writing Tip: When you use the phrase *make a difference* to mean "make things better," use the phrase alone or add *in* (+ something/a place) or *for* (+ someone/a group).

Sample Material © Pearson 2023

CHAPTER 12

Underwater Wonderland

Visitors to a coral reef

LEARNING OUTCOME

› Learn about coral reefs

GETTING READY TO READ

Read the statements about the Great Barrier Reef, one of the Seven Wonders of the Natural World.[1] Circle True or False. Talk about your answers with your class.

1. The Great Barrier Reef is near the coast of Australia. True False
2. It is about 600 miles (1000 kilometers) long. True False
3. Astronauts can see it from space. True False
4. The entire Great Barrier Reef is made of coral reefs. True False
5. It has grown bigger every year for thousands of years. True False

[1] *the Seven Wonders of the Natural World* = seven of the most beautiful places on the planet

Sample Material © Pearson 2023

READING

Read to Find Out: What is happening to the Great Barrier Reef?

Look at the words, definitions, and pictures next to the reading. Then read without stopping.

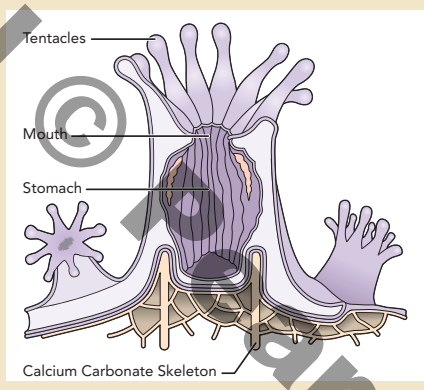
Underwater Wonderland

1 The Great Barrier Reef, **off** the coast of Australia, draws people from all over the world. It's a beautiful place to swim, go boating, and relax on the beach. However, what is most special about the Great Barrier Reef is what you can see underwater.

2 The Great Barrier Reef is 1,400 miles long (over 2,200 kilometers). It's made up of almost 1,000 islands and nearly 3,000 coral reefs, making it the world's largest coral reef system. It's the only living thing on the planet that can be seen from **space**. The reefs were built over thousands of years by billions of tiny sea creatures[1] called coral polyps.

3 It may be difficult to think of coral polyps as animals. They do not swim or move themselves across the ocean floor. They do not have eyes, ears, a heart, or a brain. A coral polyp is **basically** a tiny soft body with a mouth and a stomach. It also has tentacles that help it protect itself and catch food.

4 Some coral polyps live alone, but most live in groups called colonies. Each differently shaped part of a reef is its own colony. A colony has a single species, or type, of coral. In the Great Barrier Reef, there are about 400 species of coral **in all**.



A coral polyp can be from 0.25 to 12 inches tall (0.63 to 30.5 centimeters).

5 Most of the 400 are hard coral species, the type that builds reefs. They produce calcium carbonate—the same thing shells are made of—at the **base** of their bodies. They use it to **attach** themselves to a rock or the sea floor. Then it becomes hard, like a shell. Reefs are built over time, as coral produce more and more calcium carbonate. Reefs then **attract** many other types of sea creatures and plants. **Exactly** how many no one can say. Counting just the fish, the Great Barrier Reef is home to more than 1,500 species.

6 In 1975, the Australian government established[2] the Great Barrier Reef Marine Park. The **point** was to protect the reefs. However, these reefs, like coral reefs everywhere, are in danger. A great deal of the coral has already died. Researchers studying the **situation** found that between 1985 and 2012, the Great Barrier Reef had lost *half* its coral cover.[3]

[1] *sea creatures* = animals that live in the ocean

[2] *establish* = start something (a company, university, system, etc.) that is expected to last a long time

[3] *coral cover* = living coral on the sea floor

Sample Material © Pearson 2023

7 **Violent** storms called cyclones **destroyed** many of the reefs. The researchers say storms caused about half the damage[4] to the coral. Climate change[5] could cause storms like these to hit more often. If they do, the coral cover won't have enough time between storms to grow back. The second largest problem was a growing number of crown-of-thorns starfish.[6] They eat coral polyps. Between 1985 and 2012, they ate them faster than the coral cover could grow back.

8 Coral everywhere face the problem of higher ocean temperatures caused by climate change. Some coral species cannot deal with the warmer waters. Then there is ocean pollution. No species deals well with that.

9 In the past few years, many countries have established new Marine Protected Areas (MPAs). That's great news. These are parts of the ocean that are like **national** parks on land. In an MPA, human **activities**—especially commercial fishing[7]—are controlled to protect the plants and animals. More MPAs are needed. Right now, only one percent of the ocean is protected in this way. However, even in MPAs, as in the Great Barrier Reef, **nature** is not safe from pollution or climate change.

[4] *damage* = a bad effect on something

[5] *climate change* = changes on the planet (largely caused by human activity) that are making the environment warmer

[6] a *starfish* (or sea star)

[7] *commercial fishing* = the business of catching and selling fish and other sea creatures

Quick Comprehension Check

A. Read these sentences **about the reading**. Circle T (true) or F (false). On the line, write the number of the paragraph with the answer.

1. The Great Barrier Reef is in international waters.	T	F	____
2. The Great Barrier Reef is the largest coral reef system in the world.	T	F	____
3. The reefs are made of calcium carbonate, like shells.	T	F	____
4. The calcium carbonate comes from the bodies of coral polyps.	T	F	____
5. Warmer ocean water is good for coral.	T	F	____
6. Coral reefs all around the world are in danger.	T	F	____

B. Work with your class. Share your answers from part A. Go back to the reading to find the reason why a sentence is true or false. Correct the false sentences.

Sample Material © Pearson 2023

EXPLORING VOCABULARY

Thinking about the Target Vocabulary

A. Look at the chart with the target vocabulary. Six nouns, three verbs, and two adjectives are missing. Scan the reading to find them, and add them to the correct places in the chart. Write the singular form of any plural noun. Write the base form of each verb.

¶	Nouns	Verbs	Adjectives	Other
1				off
2				
3				basically
4				in all
5				
				exactly
6				
7				
9				

B. Which words and phrases are new to you? Circle them in the list. Then find them in the reading. Look at the context. Can you guess the meaning?

Using the Target Vocabulary

A. These sentences are **about the reading**. What is the meaning of each **boldfaced** word or phrase? Circle a, b, or c.

1. The Great Barrier Reef is **off** the coast of Australia. Here, *off* means
   - **a.** a short distance from.
   - **b.** connected to.
   - **c.** up to.

Sample Material © Pearson 2023

2. A coral polyp is **basically** a body with a mouth, stomach, and tentacles. *Basically* means

   a. in the first place. b. hardly. c. in the main or most important ways.

3. The Great Barrier Reef has about 400 species of coral **in all.** *In all* means

   a. so far. b. after all. c. as a total.

4. A coral polyp puts out soft calcium carbonate at the **base** of its body. The base of something is

   a. the lowest or bottom part. b. the surface. c. the cover.

5. Coral polyps use calcium carbonate to **attach** themselves to a rock or the sea floor. *Attach* means

   a. float. b. connect. c. escape.

6. Coral reefs **attract** many types of sea creatures who are looking for food or places to hide. *Attract* means

   a. manage. b. draw. c. produce.

7. **The point of** establishing a marine park is to protect a part of the sea. The point of doing something is its

   a. effect. b. result. c. purpose.

8. Cyclones, typhoons, and hurricanes are all **violent** storms. *Violent* means happening with a lot of

   a. advanced technology. b. dangerous power. c. mess and pollution.

9. A Marine Protected Area is like a **national** park, but one is in the sea, the other on land. *National* means

   a. not yet developed. b. popular. c. belonging to a country.

Reading Tip: Make sure to read the captions for photos and illustrations that go with a text. They may help you understand new vocabulary, like *tentacles*.

Vocabulary Tip: *Point* has many meanings and uses. See your dictionary to learn more.

B. These sentences use the target words and phrases **in new contexts**. Complete them with the words and phrases in the box.

attach	base	in all	off	violent
attract	basically	national	point	

1. One role of the government is to protect our _____ interests.
2. I sometimes _____ a photo to an email message.
3. The two fish belong to different species, but _____, they look alike.

Sample Material © Pearson 2023

4. The hotel was on a quiet side street just _____ the main street.

5. The beautiful beaches _____ many visitors to the island.

6. There were _____ winds of over 100 miles per hour.

7. I sat down at the _____ of a tree and rested my back against it.

8. What did the researchers want to know? What was the _____ of their study?

9. Volunteers from 91 countries took part in the Coast Cleanup, nearly 60,000 of them _____.

Vocabulary Tip: *Attract* can mean to make someone go to, or move closer to, something. It can also mean to make someone feel interested in a person or thing.

C. Read the sentences. Guess the meaning of the **boldfaced** target words from the context. Match them with their definitions.

a. A "natural wonder" is something amazing found in **nature**.
b. Would you want to leave Earth and travel into **space**?
c. The enemy attacked the town and **destroyed** many buildings.
d. A quotation repeats **exactly** what someone said or wrote.
e. What is your favorite weekend **activity**?
f. He was unhappy with the **situation** at work and said he would no longer put up with it.

Vocabulary Tip: See your dictionary for other meanings of *nature*. Look up *natural* and *naturally* to learn how they relate to each meaning of nature.

Target Word		Definition
1. _____	=	the area beyond Earth where the stars and other planets are
2. _____	=	something that people do, because they enjoy it or to reach a goal
3. _____	=	everything in the physical world not controlled by human beings, such as wild plants and animals and the weather
4. _____	=	hurt something so badly that it is gone or cannot be used or fixed
5. _____	=	used to stress that a number or piece of information is completely correct in every detail
6. _____	=	all the things that are happening at a specific time in a specific place

Sample Material © Pearson 2023

Building on the Vocabulary

Word Grammar: Transitive and Intransitive Verbs

Some verbs are **transitive** ([T]). After a transitive verb, there must be a direct object (D.O.). It is usually a noun or pronoun.

[T] D.O.
Coral reefs attract fish. (NOT: "~~Coral reefs attract.~~" *Attract* needs a direct object.)

Some verbs are **intransitive** ([I]). After an intransitive verb, there can be no direct object.

[I]
Plastic is light, so it floats. (NOT: *"Plastic is light, so ~~the ocean floats plastic.~~" Float* cannot take a direct object.)

Some verbs, like *develop,* can be either transitive or intransitive. Check your dictionary to learn if a verb can be both. Also, notice what abbreviations your dictionary uses for *transitive* and *intransitive.*

He has developed a new system. [T]

A problem has developed. [I]

Read the example sentences. Is the **boldfaced** verb transitive or intransitive in this sentence? Circle your answer.

Writing Tip: Knowing if a verb takes a direct object or not will help you use it correctly in a sentence.

1. A storm **destroyed** buildings near the beach. transitive intransitive
2. When John left the party, no one **noticed**. transitive intransitive
3. Everyone **noticed** Penny when she walked into the room. transitive intransitive
4. How does pollution **affect** coral? transitive intransitive
5. They **escaped** during the night. transitive intransitive
6. Heat **melts** ice and turns it to water. transitive intransitive
7. You'll love the way this chocolate **melts** in your mouth. transitive intransitive
8. This product may **contain** nuts. transitive intransitive

DEVELOPING YOUR READING SKILLS

Topics of Paragraphs

Look at the list of paragraph topics from "Underwater Wonderland" Find the paragraph on each topic in the reading. Write the paragraph number (1–9).

a. colonies of coral polyps Paragraph ____

b. describing coral polyps Paragraph ____

c. how coral polyps build reefs Paragraph ____

Sample Material © Pearson 2023

d. Marine Protected Areas Paragraph ____

e. introducing the Great Barrier Reef Paragraph ____

f. the size of the Great Barrier Reef Paragraph ____

g. some history of the Great Barrier Reef Paragraph ____

h. two problems affecting coral worldwide Paragraph ____

i. two problems that have affected the Great Barrier Reef Paragraph ____

Clues to Meaning

Noticing Clues to Meaning

Sometimes writers state the meaning of a word in a sentence.

- This sentence from "Underwater Wonderland" explains Marine Protected Areas: "These are parts of the ocean that are like national parks on land."
- This sentence from "The Crab" defines *exoskeleton:* "All crabs have a hard shell, called an exoskeleton."

Writers also have other ways to help the reader understand word meanings. Clues to meaning may be set off by punctuation—parentheses, commas, or dashes—or they may be found in a footnote, an illustration, a caption, or a note in the margin.

Find information in "Underwater Wonderland" that helps you understand the words in this list. Write definitions.

1. coral polyps _____

_____

2. a tentacle _____

_____

3. a coral colony _____

_____

4. species _____

_____

5. calcium carbonate _____

_____

6. cyclone _____

_____

Sample Material © Pearson 2023

Reading for Details

Are these statements about the reading true or false? If the reading doesn't give the information, check (✓) ***It doesn't say.***

	True	False	It doesn't say.
1. The Australian government does not let people enter the Great Barrier Reef Marine Park.			
2. The Great Barrier Reef is made up of both islands and coral reefs.			
3. The Great Barrier Reef has attracted over 1,500 species of fish.			
4. A coral polyp has no eyes, no heart, and no brain.			
5. About 400 species of coral polyps live in the Great Barrier Reef.			
6. It is safe for swimmers to touch the coral.			
7. There are rules about what you can and cannot do in an MPA.			

Main Ideas

Answer the questions using information from the reading.

1. What is special about the Great Barrier Reef?

_____

_____

_____

2. How are coral reefs built?

_____

_____

_____

3. What has been happening to the Great Barrier Reef?

_____

_____

_____

Sample Material © Pearson 2023

CRITICAL THINKING

Discussion

Talk about these questions in a small group.

1. In paragraph 3, the writer says, "It may be difficult to think of coral polyps as animals." What does the writer mean? Do you agree? Why or why not?
2. On a piece of paper, make a chart like the one below. In the Causes column, list at least four causes of coral reef destruction in the Great Barrier Reef. In the Solutions column, list things that people can do to fix the problem.

Problem	Causes	Solutions
coral reef destruction in the Great Barrier Reef		

3. The reading mentions "human activities" in paragraph 9 and gives the example of commercial fishing. What other kinds of human activities do you think the writer means? What does it mean to say "human activities are controlled?" Tell what controls you think are needed, if any, and why.
4. The writer says, "More MPAs are needed." Is this a fact or an opinion? What support for this idea does the writer give? Does the writer believe that establishing more MPAs will save the coral? Explain your answer.
5. In the first paragraph, the writer made the point that "what is most special about the Great Barrier Reef is what you can see underwater." How does the writer support that point in the reading? Is there enough support to convince you (to get you to agree)? Why or why not?

Critical Thinking Tip: Remember that a fact is something that can be shown to be true. An opinion is something that a person or a group feels or believes but is not true for everyone.

WRITING

A. Use the Target Vocabulary: Choose five target words or phrases from the list on page 130. On a piece of paper, use each word or phrase in a sentence. Then find a partner and read each other's sentences.

B. Practice Writing: Choose a topic and write a paragraph. Then find a partner and read each other's paragraphs.

1. Go online and look up the Seven Wonders of the Natural World. Choose one to write about. Give some important facts about it, and explain why it interests you.
2. For the people of Australia, the Great Barrier Reef is a national treasure. *A national treasure* means something that a country is very proud of and places a high value on. Is there something in your country, something in nature, that you consider a national treasure? Describe it and explain why you chose it.

Sample Material © Pearson 2023

UNIT 3

Checkpoint

LEARNING OUTCOME

- Review and expand on the content of Unit 3

LOOK BACK

A. Think About This

Think again about the *Think About This* question on page 95:
What was the topic of the last news report you saw or heard about the ocean?
Do you want to add anything new?

B. Remember the Readings

What do you want to remember most from the readings in Unit 3? For each chapter, write one sentence about the reading.

Chapter 9: What Does the Ocean Mean to Us?

_____

Chapter 10: The Crab

_____

Chapter 11: Cleaning Up the Ocean

_____

Chapter 12: Underwater Wonderland

_____

Sample Material © Pearson 2023

REVIEWING VOCABULARY

A. Write the nouns next to their definitions. There are two extra nouns.

activity	coast	emotion	oxygen	pollution
base	effort	nature	point	storm

1. _____ = the area where the land meets the ocean
2. _____ = things that make air, water, soil, etc., dangerously dirty
3. _____ = something that people do, either for fun or to reach a goal
4. _____ = a time of very bad, even violent, weather
5. _____ = a strong human feeling, such as love or hate
6. _____ = the action of trying to do something or the energy spent trying to do it
7. _____ = a gas in the air that all forms of animal and plant life need to live
8. _____ = the lowest or bottom part of something

B. Complete the sentences with phrases from the box. There is one extra phrase.

have in common	keep on	make a difference	makes sense	up to
in all	made sure	make up	puts up with	

1. Earth is the only planet we have, so we should take care of it. Do you agree that _____?
2. Those two friends seem so different. I wonder what they _____.
3. They are hoping to get _____ ten volunteers. There isn't room for any more than ten.
4. The boat on the beach looked very old, so we _____ it would float before we got in.

Sample Material © Pearson 2023

5. There are five named oceans _____: the Atlantic, the Pacific, the Indian, the Southern, and the Arctic.
6. The five named oceans, together with all the named seas, _____ "the ocean."
7. It doesn't matter if we fail on our first try. We'll _____ trying.
8. Oksana shows a lot of patience when tourists complain to her. I couldn't do her job. I don't know how she _____ it.

EXPANDING VOCABULARY

Adverbs

Adverbs have many uses. An adverb can modify, or describe, (1) a verb, (2) an adjective, (3) another adverb, or (4) an entire sentence. An adverb can be one word or a phrase.

1. verb + **adverb**	*She spoke* **calmly**.	*He covered the baby* **gently**.
	They worked **fast**.	*You speak English* **well**.
2. **adverb** + adjective	*You are* **exactly** *right.*	*I'm not* **entirely** *sure.*
	The water was **too** *cold.*	*They got* **violently** *seasick.*
3. **adverb** + adverb	*He can sing* **fairly** *well.*	*The situation turned out* **rather** *badly.*
4. **adverb** + sentence	**Basically**, *nothing has changed.*	
	He should not have been there **in the first place.**	

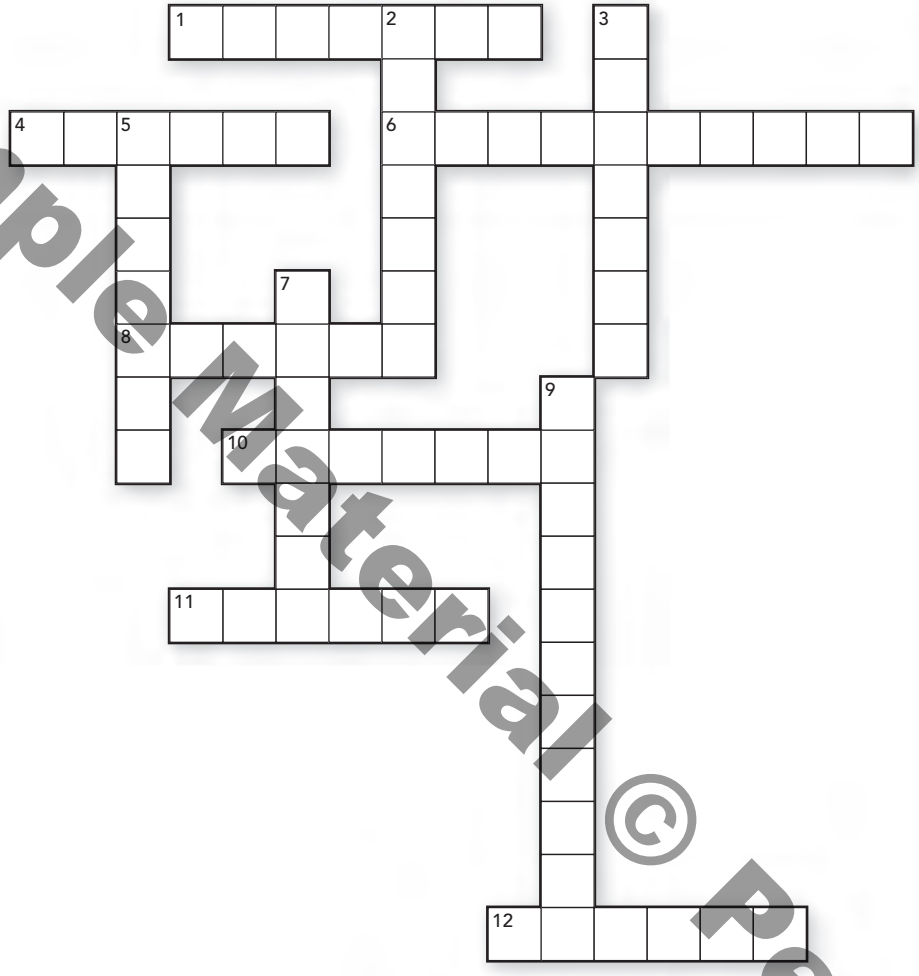
Complete the sentences. Use adverbs from the box above. For some sentences, there can be more than one answer.

1. Your situation and mine are _____ different.
2. Please try to answer _____ if any of our customers complain.
3. _____, the coral reef was entirely destroyed.
4. The coastal cleanup is going _____ well.
5. Why is all that plastic in the ocean _____?

Sample Material © Pearson 2023

A PUZZLE

Complete the sentences with words you studied in Chapters 9–12. Write the words in the puzzle.



ACROSS

1. Coffee, tea, and chocolate all _____ caffeine.
4. My room is always a mess. I need a _____ for keeping it in good order.
6. Computers and cell phones are examples of _____.
8. How does space travel _____ the human body?
10. He likes most vegetables but won't eat _____ ones.
11. I depend on you to _____ me with the latest news.
12. Before you mail the letter, make sure you _____ a stamp.

Sample Material © Pearson 2023

DOWN

2. At night, the outdoor lights _____ flying insects.

3. I use my phone or my computer to _____ to the Internet.

5. Plastic usually floats on the _____ of the ocean.

7. The technology wasn't working well, so the team is trying to _____ something better.

9. Pollution is bad for the _____—and for us!

BUILDING DICTIONARY SKILLS

A. Look at the two entries for ***heat*** and answer the questions below.

> **heat**[1] /hit/ *n.* **1** [U] warmth or the quality of being hot: *heat from the sun* **2** [U] very hot weather: *I can't work in this heat*. **3** [U] the system that keeps a place warm, or the warmth from this system: *Let's turn the heat on*. **4** [C] one of the parts of a sports competition from which the winner goes on to the next part
>
> **heat**[2] *v.* [T] make something warm or hot: *I'll heat some soup for lunch*. **heat up** *phr.* v. **1** [T/I] to make (something) or become warm or hot: *The car takes time to heat up./heat it up in the microwave* **2** if a situation heats up, it becomes dangerous or full of problems

1. Which parts of speech can *heat* be? Circle your answers.

   noun verb adjective adverb

2. How many meanings for *heat* does this dictionary give? ____

3. Does the verb *heat* take a direct object? YES NO SOMETIMES

B. Look at this entry for the noun ***wave***. Write the number of the meaning used in each sentence below.

____ a. The child gave her mother a wave and ran to join her friends.

____ b. The waves are too big for people to swim today.

____ c. When I heard the news, I felt a wave of fear come over me.

____ d. Light and sound move in waves.

> **wave**[1] /weɪv/ *n* [C] **1** an area of raised water that moves across the surface of the ocean or another large area of water: ***waves breaking*** *on the beach* **2** a sudden increase in a particular emotion, activity, number, etc.: *a recent* ***crime wave*** | *a* ***wave of*** *nostalgia for his childhood* | *a sudden wave of nausea* | *a* ***great wave*** *of immigrants from Eastern Europe* **3** the movement you make when you wave your hand: *She left with* ***a wave of*** *her* ***hand***. **4** a part of your hair that curls slightly: *a wave in her hair* **5** the form in which some types of energy move: *light/sound/radio waves* **6** ***make waves*** *informal* to cause problems: *We have a job to finish, so don't make waves, OK?*

Sample Material © Pearson 2023

Sample Material © Pearson 2023