BEFORE YOU READ

DEFINITIONS

A. Read the caption below. Then circle the correct words to complete these definitions.

1. If you **disguise** yourself, you change how you look so others *know / don't know* who you are.
2. A **predator** is an animal that eats *other animals / plants*.
3. If two animals **look like** each other, they look *different / the same*.

SKIMMING

Review this reading skill in Unit 1A

B. Look at the picture on page 15 and read the caption and labels. Then skim the passage and complete the sentence below. Read the passage to check your answer.

Most of the passage explains *why / how* octopuses disguise themselves.

Octopuses **disguise** themselves so **predators** (e.g., dolphins or sharks) don't see them. Here, the octopus **looks like** the coral nearby.

LIVEWORKSHEETS

MASTER OF DISGUISE

A Octopuses are famous for their round bodies, big eyes, and eight arms. There are many different types of octopuses, but all are alike in one way: They are masters[1] of disguise. Octopuses can change their **appearance** in less than a second to look like rocks, plants, or even other animals. How do they do this?

B An octopus can disguise itself in three ways. One is by using color. An octopus's skin has special cells[2] called *chromatophores*. These cells are filled with yellow, brown, and red pigment.[3] When an octopus moves its **muscles** a certain way, the cells become large and **produce** colorful spots and other **patterns** on its skin. Chromatophores can also reflect light. In blue light, for example, an octopus's skin will look blue. In white light, its skin will look white. With these cells, an octopus can produce many different skin colors and patterns.

C An octopus can also change its skin texture.[4] When the octopus moves its muscles, its skin can go from smooth to spiky. It might then look like a plant, or coral. Another way an octopus disguises itself is by changing its **shape**. Some, for example, roll their bodies into balls so they look like rocks. One type of octopus can change its form to look like other sea **creatures**—especially dangerous ones, such as sea snakes.

D Why are octopuses so good at disguising themselves? They have to be. The ocean is not a safe place for them. Because they have no bones in their bodies, octopuses are like large pieces of meat. Many predators want to eat them—and they can eat them whole. To **survive**, octopuses have **developed** the amazing **ability** to change their appearance very quickly in order to **hide** from predators.

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1 A **master** is very good at doing something.

2 A **cell** is the smallest living part of an animal or plant. Most animals have billions of cells in their bodies.

3 **Pigment** is a substance that gives something color. For example, green pigment makes most plants look green.

4 **Texture** is how something looks and feels (e.g., soft, smooth, spiky).

LIVEWORKSHEETS

ALL MUSCLE, NO BONES

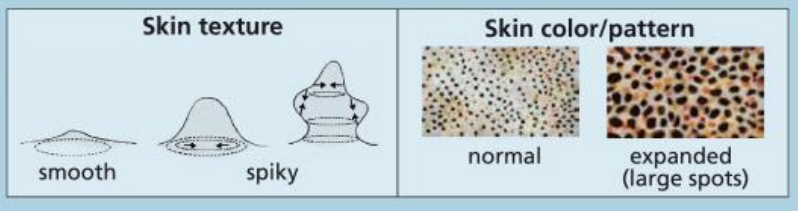
An octopus's body has many muscles. This makes it strong and fast. Octopuses also have no bones, so they can change their shape very quickly.

An octopus brain holds only one-third of the animal's neurons (nerve cells). It handles functions such as decision-making, learning, and memory.

An octopus has three hearts: one large central heart and two smaller ones on either side.

About two-thirds of an octopus's neurons are in its arms. These neurons control the arm movements.

Octopuses can change their appearance to match their surroundings. Once the brain gives a signal, the octopus's muscles move in a certain way, changing its skin from smooth to spiky and producing colorful spots or stripes on its skin.



LIVEWORKSHEETS

READING COMPREHENSION

A. Choose the best answer for each question.

GIST **1.** What would be the best alternative title for this passage?

a. The Mind of an Octopus
b. How an Octopus Hides
c. Octopus Numbers on the Rise

DETAIL **2.** Which of these sentences is NOT true?

a. Chromatophores are light-reflecting cells.
b. Chromatophores can change in size.
c. Chromatophores produce an animal's skin texture.

INFERENCE **3.** In red light, an octopus probably appears _____.

a. red
b. blue
c. white

INFERENCE **4.** In paragraph C, the author suggests that some corals _____.

a. can change their color
b. can roll themselves into balls
c. have spiky outer surfaces

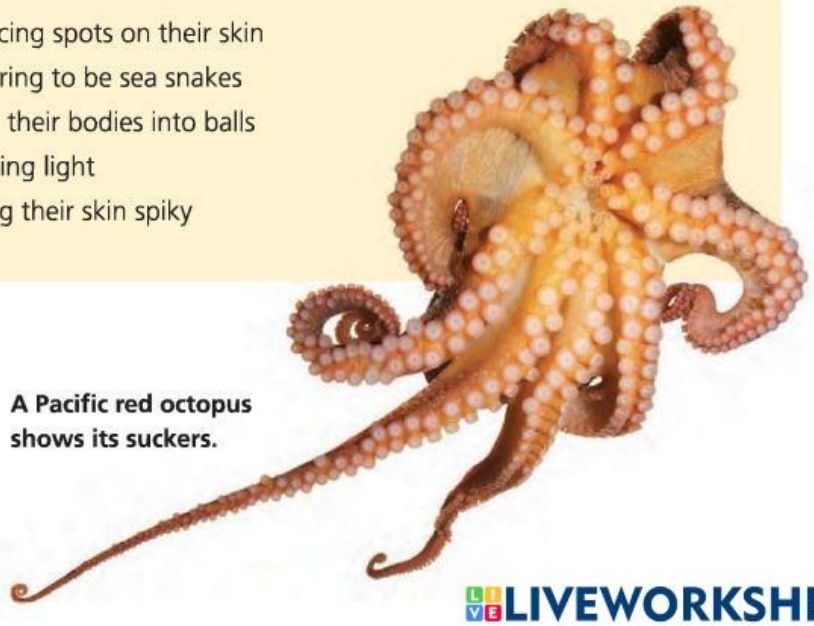
REFERENCE **5.** What does *they* refer to in paragraph D, line 4?

a. octopuses
b. bones
c. predators

MATCHING **B. Look at the list of ways octopuses disguise themselves (a–c) and the statements (1–5). Match each statement with the method of disguise. Write a, b, or c.**

a. color b. skin texture c. shape

_____ **1.** by producing spots on their skin
_____ **2.** by appearing to be sea snakes
_____ **3.** by rolling their bodies into balls
_____ **4.** by reflecting light
_____ **5.** by making their skin spiky



A Pacific red octopus shows its suckers.

LIVEWORKSHEETS

Identifying Main Ideas in Paragraphs

A paragraph usually has one main idea and some details that support it. Paragraphs often include a topic sentence that describes the main idea. Usually—but not always—a topic sentence is at or near the start of the paragraph, or at the end. One way to find the main idea quickly is to read the sentences at the beginning and end of the paragraph. A paragraph's heading (if it has one) can also give a clue to its main idea.

MAIN IDEA

A. Read the paragraph below. Which sentence gives the main idea? Circle a, b, or c.

Is it a stick? Or is it an insect? It's a stick insect—an insect that looks like a stick. The stick insect is an example of an animal that uses color, texture, and shape to disguise itself. It lives—and can easily hide—among the leaves and twigs of plants. Most stick insects are either brown or green. The smallest types are just over a centimeter long. The largest is about 33 centimeters, making it one of the world's longest insects.

A Malayan giant stick insect

a. The stick insect is an example of an animal that uses color, texture, and shape to disguise itself.

b. It lives—and can easily hide—among the leaves and twigs of plants.

c. The largest is about 33 centimeters, making it one of the world's longest insects.

MAIN IDEA

B. Look back at Reading B. Match each paragraph with its main idea (a–d).

1. Paragraph A •	• a. An octopus can change its shape and skin texture.
2. Paragraph B •	• b. Octopuses can change how they look very quickly.
3. Paragraph C •	• c. An octopus can change its skin color.
4. Paragraph D •	• d. Octopuses disguise themselves for their own protection.

CRITICAL THINKING Comparing **Which animal do you think is smarter—the dolphin or the octopus? Why? Note your ideas and discuss with a partner.**

_____

_____

_____

LIVEWORKSHEETS

VOCABULARY PRACTICE

COMPLETION **A.** Complete the paragraph with words from the box.

ability	appearance	hide	patterns	produce

Reef squid—like their relatives, octopuses—have an amazing [1]_____: They can quickly change their physical [2]_____ in order to [3]_____ from predators. They also use this skill to send messages; they can even [4]_____ two messages at the same time! For example, a male reef squid swimming near a female squid can create colorful, attractive [5]_____ on the side of its body closest to the female. On the other side, it shows black and white lines that tell other male squid to stay away.

A bigfin reef squid

WORDS IN CONTEXT **B.** Complete each sentence with the correct answer (a or b).

1. A **creature** refers to any living _____.
   a. plant b. animal
2. A circle has a _____ **shape**.
   a. round b. square
3. If you **survive** a dangerous situation, you _____ through it.
   a. live b. don't live
4. The **muscles** in the human body control how we _____.
   a. think b. move
5. If you **develop** a skill or ability, it becomes _____.
   a. better or stronger b. worse or weaker

WORD FORMS **C.** The verb **survive** can be made into a noun by adding the suffixes *-or* or *-al*. Complete the sentences with the correct words from the box.

survive	survivor	survival

1. The _____ of whales is connected to the health of the ocean.
2. These plants cannot _____ in very cold conditions.
3. The plane crash had only one _____.

LIVEWORKSHEETS