Skills Worksheet

Active Reading

Section: The Nature of Science

Read the passage below. Notice that certain sentences are numbered. Answer the questions that follow.

1. Scientists study the natural world by observing. 2. That means they use their senses to notice characteristics of objects and living things and to learn information about natural events. Scientists use their observations to formulate questions. Questioning is a key feature of scientific thought. 3. Scientific thought is also based on skepticism—a doubting attitude. Scientists look carefully and questioningly at evidence used to support ideas. They do not simply accept opinions. 4. For example, according to conventional wisdom, stress is the cause of stomach ulcers. 5. However, some scientists studying this problem could not find any evidence to support the cause-and-effect relationship. 6. So they examined microorganisms in the stomachs of people with and without stomach ulcers. 7. They found people with ulcers had higher levels of bacteria called Helicobacter pylori in their stomachs than other people did. 8. Extensive research has shown that these bacteria cause stomach ulcers.

SKILL: READING EFFECTIVELY

Read each question, and write your answer in the space provided.

1. Based on Sentence 2, how would you define the word observe?

2. Based on Sentence 3, how would you define the word skepticism?

3. Use context clues to explain what conventional wisdom is.

4. A possible cause-and-effect relationship is presented in Sentence 4. What is it?
SKILL: RECOGNIZING CAUSE AND EFFECT

Read each question, and write your answer in the space provided.

5. Based on Sentence 5, how did some scientists assess this cause-and-effect relationship and why?

6. How did these scientists find evidence of a different cause-and-effect relationship? Which sentence supports your answer?

7. What have scientists found to be a cause of stomach ulcers?

8. Based on this paragraph, what would scientists do if they found that the cause for stomach ulcers you gave in Question 8 did not seem to explain why some people had stomach ulcers?

In the space provided, write the letter of the term or phrase that best answers the question.

9. To learn more about stomach ulcers, what did the scientists described in the paragraph do?
   a. They recorded what people with stomach ulcers ate.
   b. They gauged the stress levels of people with and without stomach ulcers.
   c. They observed the microscopic organisms in the stomachs of people with and without ulcers.
   d. They accepted the conventional wisdom about the cause for stomach ulcers.