

## Active Reading

### Section: Chemistry of Cells

Read the passage below. Notice that the sentences are numbered. Then answer the questions that follow.

<sup>1</sup> Carbohydrates are organic compounds made of carbon, hydrogen, and oxygen atoms in the proportion of 1:2:1. <sup>2</sup> Carbohydrates are a key source of energy, and they are found in most foods—especially fruits, vegetables, and grains. <sup>3</sup> The building blocks of carbohydrates are single sugars called **monosaccharides**, such as glucose,  $C_6H_{12}O_6$ , and fructose. <sup>4</sup> Glucose is a major source of energy in cells. <sup>5</sup> Disaccharides are double sugars formed when two monosaccharides are joined. <sup>6</sup> For example, sucrose, or common table sugar, consists of glucose and fructose. <sup>7</sup> Polysaccharides are chains of three or more monosaccharides. <sup>8</sup> A polysaccharide is an example of a macromolecule, a large molecule made up of many smaller molecules.

#### SKILL: READING EFFECTIVELY

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

1. What elements form an organic compound classified as a carbohydrate?

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2. What does the 2 represent in the proportion given in Sentence 1?

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3. What three food groups are good sources of carbohydrates?

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4. The prefix *mono-* means “one.” What word in Sentence 3 contains this prefix? What is the meaning of this word?

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**Active Reading** *continued*

5. What chemical formula is given in Sentence 3? How many atoms are in a molecule of this compound?

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6. The prefix *di-* means "two." What term in Sentence 5 contains this prefix? What is the meaning of this term?

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7. In Sentence 6, which two monosaccharides join to form table sugar?

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8. The prefix *poly-* means "more than one." What term in Sentence 7 contains this prefix? What is the meaning of this term?

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**In the space provided, write the letter of the term or phrase that best completes the statement.**

- \_\_\_\_\_ 9. An example of a macromolecule is a(n)
- a. oxygen atom.
  - b. monosaccharide.
  - c. glucose molecule.
  - d. polysaccharide.