Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I CAN explain photosynthesis and cellular respiration.

Period\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DIRECTED READING CHAPTER 4 Section 2:**

**“Cell Energy”**

**Section 2: Cell Energy (p. 88)**

**1.** What is your body telling you when you feel hungry?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**From Sun to Cell (p. 88)**

**2.** Does your body need plants for energy?\_\_\_\_\_\_ Why or why not?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3.** Which of the following statements describe chlorophyll?

(Circle all that apply.)

a. It is a green pigment.

b. It is found in mitochondria.

c. It absorbs light energy.

d. It is found in plant cells.

**4.** Plant cells can store some energy in the form of lipids or carbohydrates. True or False? (Circle one.)

**5.** Which of the following **are** products of photosynthesis?

(Circle all that apply.)

a. glucose d. carbon dioxide

b. light energy e. water

c. oxygen f. ATP

**Getting Energy from Food (p. 89)**

**6.** How can your body get energy from a banana?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** Does **c**ellular respiration use oxygen? \_\_\_\_\_\_\_\_\_

**8.** How does breathing help your cells perform cellular respiration?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**9.** Which of the following are **NOT** released during cellular respiration?

(Circle all that apply.)

a. carbon dioxide d. oxygen

b. water e. glucose

c. chlorophyll f. energy

**10.** ATP is a molecule that supplies energy to cells. True or False? (Circle one.)

**11.** What does your body do with the heat released during cellular respiration?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12.** Cellular respiration in animals takes place in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ inside the cell.

**13.** Examine the diagram on page 90.

 Does cellular respiration occur only in animal cells or in both animal and plant cells?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Use** the diagram **on page 90** to answer questions 14–19. Choose the term in Column B that best matches the description in Column A, and write the corresponding letter in the space provided.

|  |  |
| --- | --- |
| **Column A** | **Column B** |
| \_\_\_*\_*\_14. Glucose is made inside this structure.\_\_\_*\_*\_15. Oxygen is released during this process.\_\_\_*\_*\_16. This is needed along with light and CO2 for photosynthesis. \_\_\_*\_*\_17. This molecule stores energy so cells can use it.\_\_\_*\_*\_18. This structure produces ATP.\_\_\_*\_*\_19. Energy is released during this process. | a. mitochondrionb. ATPc. cellular respirationd. watere. chloroplastf. photosynthesis |

**Fermentation Page 91**

**20.** Why do you get a burning sensation in your muscles during strenuous exercise?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**21.** How did fermentation help the bread in Figure 10 rise?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_