Body Organization and Homeostasis (pages 468–473)

Cells (page 469)

Key Concept: Cells are the smallest unit of organization in the human body.

- The cell is the basic building block of living things. Most cells are too small to see, even with a microscope. Some living things, including you, are composed of trillions of cells.
- Each cell has many parts. The cell membrane is the outside covering of the cell. Inside the cell is a part called the nucleus. The nucleus controls everything the cell does.
- Cells do several jobs that help keep the body alive. For example, cells give the body energy for everything it does.

Answer the following questions. Use your textbook and the ideas above.

1. The basic building block of living things is the _____________.
2. Is the following sentence true or false? The nucleus controls everything the cell does. _________
3. Circle the letter that describes the cell membrane.
   a. makes energy for the body
   b. outside covering of the cell
   c. controls everything the cell does
Tissues (page 470)

Key Concept: After cells, tissues are the next unit of organization in the human body.

• A tissue is a group of similar cells that do the same job. There are four main kinds of tissue in the human body. They are muscle tissue, nervous tissue, connective tissue, and epithelial tissue.

• Muscle tissue helps move body parts such as arms and legs.

• Nervous tissue carries messages back and forth between the brain and the rest of the body.

• Connective tissue supports the body and holds it together. Bone is one kind of connective tissue.

• Epithelial tissue covers and protects body surfaces. Skin is one kind of epithelial tissue.

Answer the following question. Use your textbook and the ideas above.

4. Fill in the blanks in the table about types of tissue.

<table>
<thead>
<tr>
<th>Types of Tissue</th>
<th>Job in the Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle tissue</td>
<td>moves body parts</td>
</tr>
<tr>
<td>Nervous tissue</td>
<td>carries messages</td>
</tr>
<tr>
<td>a.</td>
<td>supports the body</td>
</tr>
<tr>
<td>b.</td>
<td>covers the body</td>
</tr>
</tbody>
</table>
Organs and Organ Systems (pages 470–471)

Key Concept: After tissues, organs are the next unit of organization in the human body. Organs are combined into organ systems.

- An organ is a body part that is made up of different kinds of tissue. Each organ does a certain job. The heart is an example of an organ. The heart’s job is to keep blood moving through the body.

- An organ system is a group of organs that work together to do a major job. Your body has 11 organ systems. One is the circulatory system. It includes your heart. It also includes blood vessels. The job of the circulatory system is to carry materials to and from cells.

Answer the following questions. Use your textbook and the ideas above.

5. Is the following sentence true or false? An organ is made up of just one kind of tissue. __________

6. Circle the letter of an example of an organ system.
   a. heart
   b. circulatory system
   c. blood vessels

7. Draw a line from each term to its meaning.

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>organ</td>
<td>a. a group of organs that work together</td>
</tr>
<tr>
<td>organ system</td>
<td>b. body part made of different kinds of tissue</td>
</tr>
</tbody>
</table>
Homeostasis (pages 472–473)

**Key Concept:** Homeostasis is the process by which an organism’s internal environment is kept stable in spite of changes in the external environment.

- **Homeostasis** (hoh mee oh STAY sis) is all of the ways the body tends to keep itself in balance. For example, when your body is too warm, you sweat. Sweating helps to cool your body.

- If something scares you or excites you, it can throw your body out of balance. Your heart races, and your breathing speeds up. These changes in your body are called **stress**. When the stress is over, your body becomes balanced again.

**Answer the following questions. Use your textbook and the ideas above.**

8. Read the words in the box. In each sentence below, fill in one of the words.

| homeostasis | sweating | stress |

a. How your body reacts to something scary or exciting is called ________________.

b. All of the ways your body tends to keep itself in balance is ________________.

9. Is the following sentence true or false? Sweating to cool your body is an example of homeostasis.

_________