

Warm-Up

Body Organization and Homeostasis



Lesson Question



Lesson Goals

Explore how the human body is organized to maintain homeostasis.

Identify and order the of organization in the body.

Analyze how organ systems function together to maintain homeostasis.



Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

homeostasis	the state of maintaining a <input type="text"/> internal environment despite changing external conditions
organ	a group of <input type="text"/> that work together to perform a common function
organ system	a group of <input type="text"/> that work together to perform a common function
tissue	a group of <input type="text"/> that work together to perform a common function



Cells

• All things are made of one or more cells.

• The cell is the basic unit of and of all living things.

• Cells are made of parts that work together to keep the cell .



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Tissue

A **tissue** is a group of that work together to perform a common function.

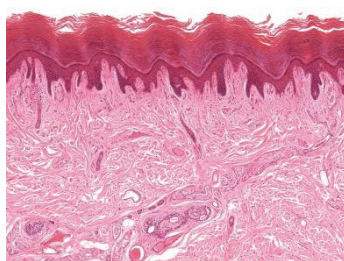
- cells work together to keep the mouth moist.

Examples of Tissue

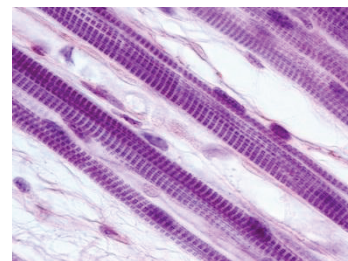
Tissues make up bones, skin, and muscles.



tissue



tissue



tissue

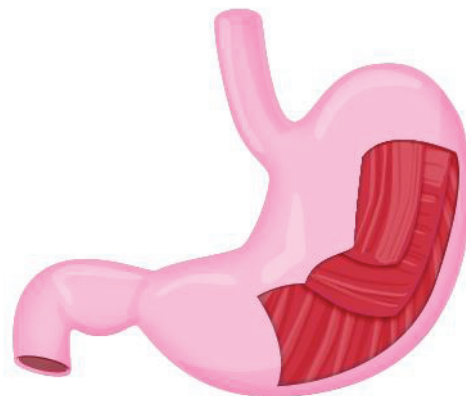
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Organ

An **organ** is a group of tissues that work together to perform a common

.

- Muscle tissues in the (organ) work together to break down food.



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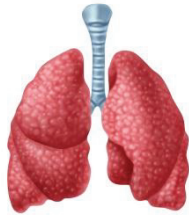
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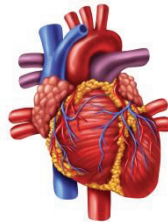
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Examples of Organs in the Human Body

The human body is made of many organs.



The lungs help transfer oxygen to the



The helps blood travel through the body.



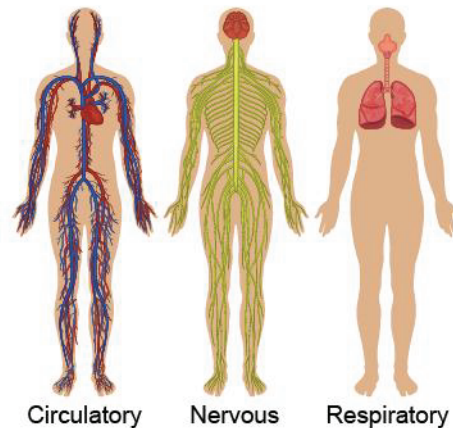
The brain helps the and the heart to work properly.

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Human Organ Systems

- An **organ system** is a group of organs that work together to perform a common function. There are human systems:

- The system transports oxygen to cells of the body.
- The system helps humans understand and react to the environment by sending information to the brain.
- The system delivers oxygen to the blood.



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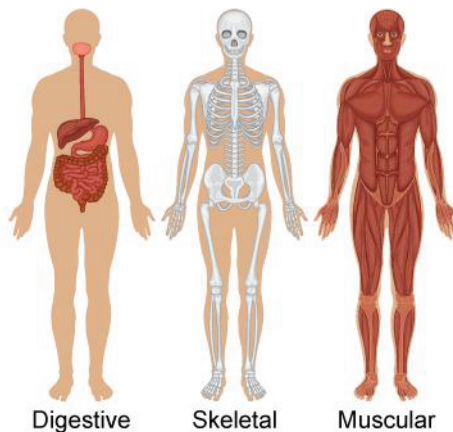
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Human Organ Systems

- The system helps break down food in a form that cells can use.
- The system helps support and move the human body.
- The system helps the human body move.



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The Right Conditions

- The cells in the body require the right conditions.
 - Temperature
 - Amount of sugar
 - Amount of water
- When all the conditions are just right, the body is and properly.

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Homeostasis

Homeostasis is the state of maintaining a stable environment despite changing conditions.

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Body Temperature

The normal body temperature is between about and .

- Our body releases heat through .
- Hairs on the lie flat so heat can escape from the body.

Homeostasis

The normal body temperature is between about 36°C and 38°C.

- Shivering is a result of muscles moving quickly, which produces in the body.
- Goosebumps are a result of muscles becoming and , causing to stand up, which traps heat.

Summary

Body Organization and Homeostasis



Lesson Question

How is the human body organized to maintain homeostasis?



Answer

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Review: Key Concepts

Level of Organization	Description	Examples
Cell	The basic unit of structure and function of all living things	Skin, muscle, and blood cells
Tissue	A group of <input type="text"/> that work together to perform a common function	Bone, skin, and muscle tissue
Organ	A group of <input type="text"/> that work together to perform a common function	Stomach, lungs, heart, brain
Organ system	A group of <input type="text"/> that work together to perform a common function	Circulatory, nervous, respiratory, digestive, muscular, and skeletal systems

Summary

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Review: Key Concepts

- The cells in the body work in just the “right” conditions.
- The maintenance of these conditions is called .
- Homeostasis is the state of maintaining a stable internal environment despite changing conditions.

Use this space to write any questions or thoughts about this lesson.