

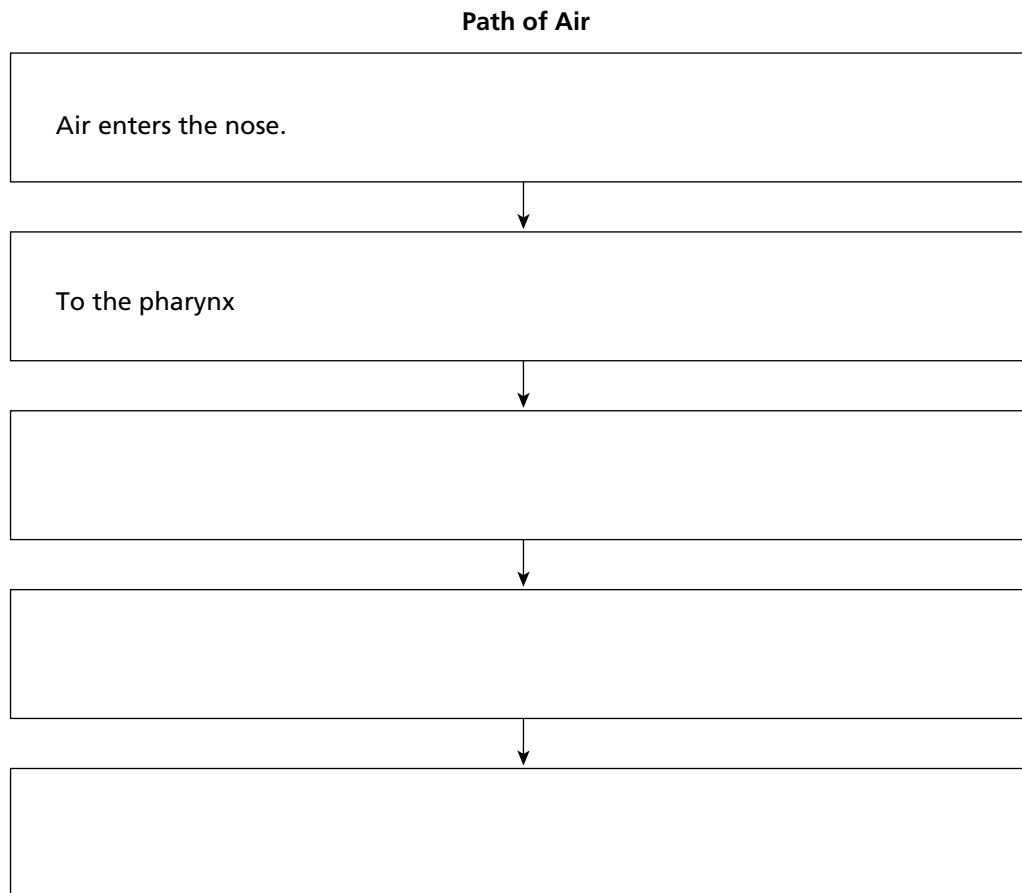
**Respiration and Excretion** ▪ *Guided Reading and Study*

# The Respiratory System

*This section describes the parts of the respiratory system and how they work to help you breathe and speak.*

## Use Target Reading Skills

*As you read, complete the flowchart below to show the path of air in the respiratory system. Write each step of the process in a separate box in the order in which it occurs.*



## Respiratory System Functions

1. Circle the letter of each sentence that is true about oxygen.
  - a. The air you breathe is part of the Earth’s atmosphere, the blanket of gases that surrounds Earth.
  - b. Oxygen makes up about 78 percent of the gases in the atmosphere.
  - c. Your body uses all of the air that you breathe into your lungs.
  - d. Most of the air you breathe in goes back into the atmosphere when you exhale.

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**The Respiratory System** *(continued)*

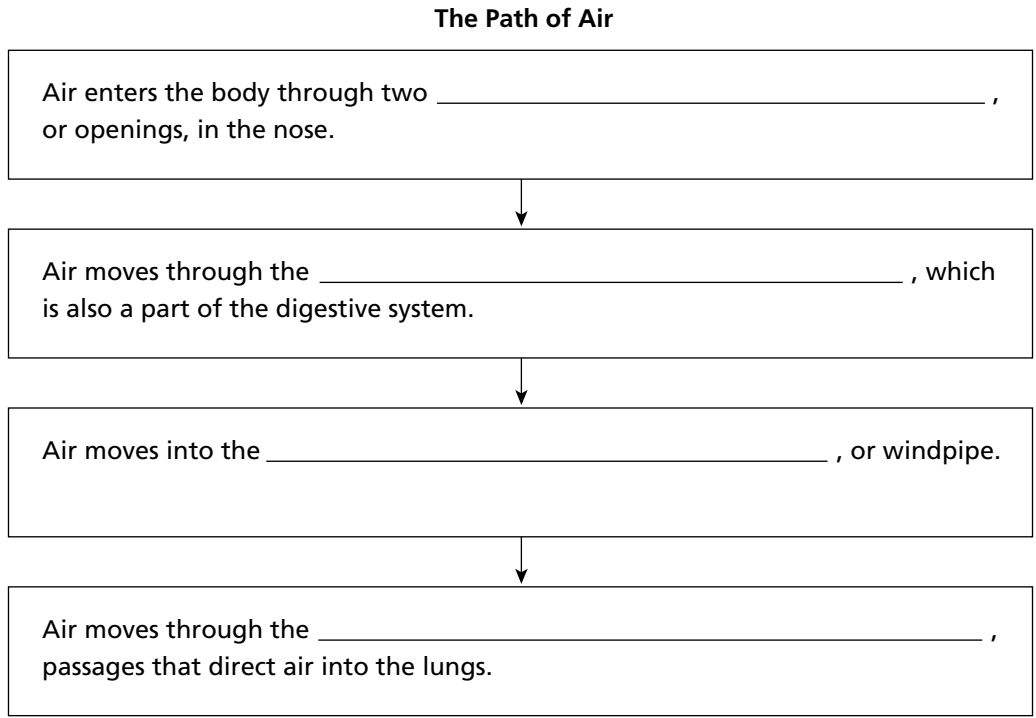
2. What are two functions of the respiratory system?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
3. \_\_\_\_\_ is needed for the energy-releasing chemical reactions that take place inside your cells.
4. What is respiration?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. List three products of respiration.
  - a. \_\_\_\_\_ b. \_\_\_\_\_
  - c. \_\_\_\_\_
6. Is the following sentence true or false? To a scientist, *breathing* and *respiration* mean the same thing. \_\_\_\_\_
7. Circle the letters of the organ systems that make respiration possible.
  - a. circulatory system
  - b. reproductive system
  - c. respiratory system
  - d. digestive system

**The Path of Air**

8. Is the following sentence true or false? When you breathe in air, you also breathe in dust, pollen, and microorganisms. \_\_\_\_\_

**Respiration and Excretion** ▪ *Guided Reading and Study*

9. Complete the flowchart to show the path of air as it travels to the lungs.



10. What does a sneeze do?

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11. Another name for the pharynx is the \_\_\_\_\_.

Match the parts of the nose with their functions.

<b>Parts</b>	<b>Functions</b>
____ 12. nostrils	a. Moistens the air and traps particles in the air
____ 13. nasal cavities	b. Openings in the nose through which air enters
____ 14. mucus	c. Tiny hairlike extensions that sweep mucus into the throat
____ 15. cilia	d. Spaces lined with cilia and mucus

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**The Respiratory System** *(continued)*

- 16. Circle the letter of each body part that is connected to the pharynx.
  - a. stomach
  - b. nose
  - c. mouth
  - d. ears
  
- 17. The walls of the trachea are made up of rings of \_\_\_\_\_ that strengthen the trachea and keep it open.
  
- 18. Is the following sentence true or false? The cilia and mucus in the trachea sweep upward, moving the mucus toward the nose where it is sneezed out. \_\_\_\_\_
  
- 19. If food enters the trachea, a person can \_\_\_\_\_.
  
- 20. Circle the letter of the respiratory organs that the air reaches after the bronchi.
  - a. trachea
  - b. nose
  - c. lungs
  - d. pharynx
  
- 21. Is the following sentence true or false? Inside the lungs, each bronchus divides into smaller and smaller tubes. \_\_\_\_\_
  
- 22. What happens in the alveoli?  
\_\_\_\_\_  
\_\_\_\_\_

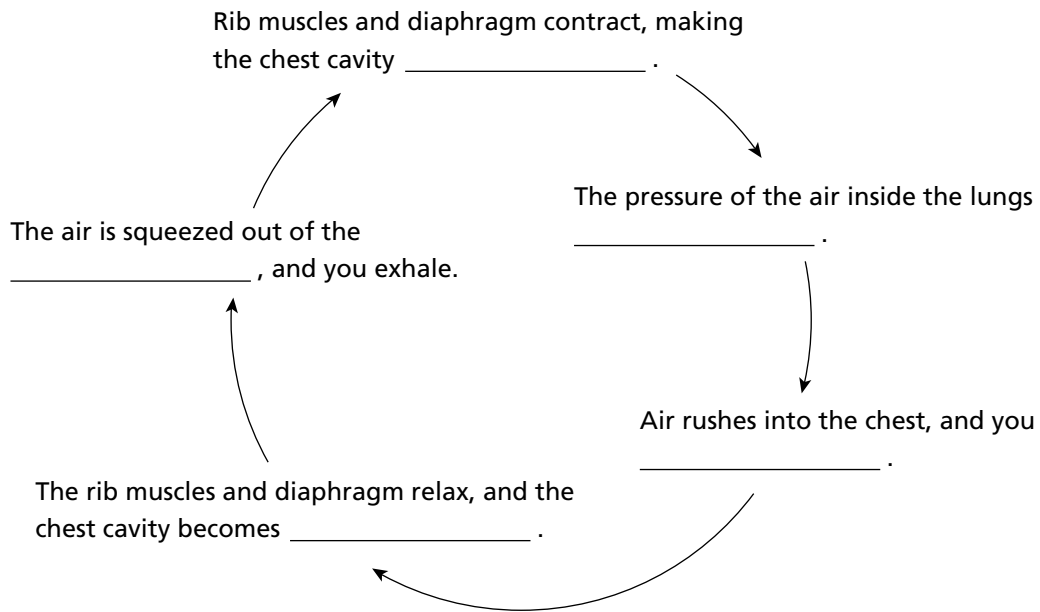
**Gas Exchange**

- 23. What occurs during the process of gas exchange?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 24. Why can the lungs absorb a large amount of oxygen?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Respiration and Excretion** ▪ *Guided Reading and Study*

**How You Breathe**

- 25. Is the following sentence true or false? The more oxygen you need, the more slowly you breathe. \_\_\_\_\_
- 26. What is the diaphragm? \_\_\_\_\_  
\_\_\_\_\_
- 27. Complete the cycle diagram to show the process of breathing.



- 28. Another name for the voice box is the \_\_\_\_\_ .
- 29. What are vocal cords?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 30. How do vocal cords create your voice?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Respiration and Excretion** ▪ *Review and Reinforce*

# The Respiratory System

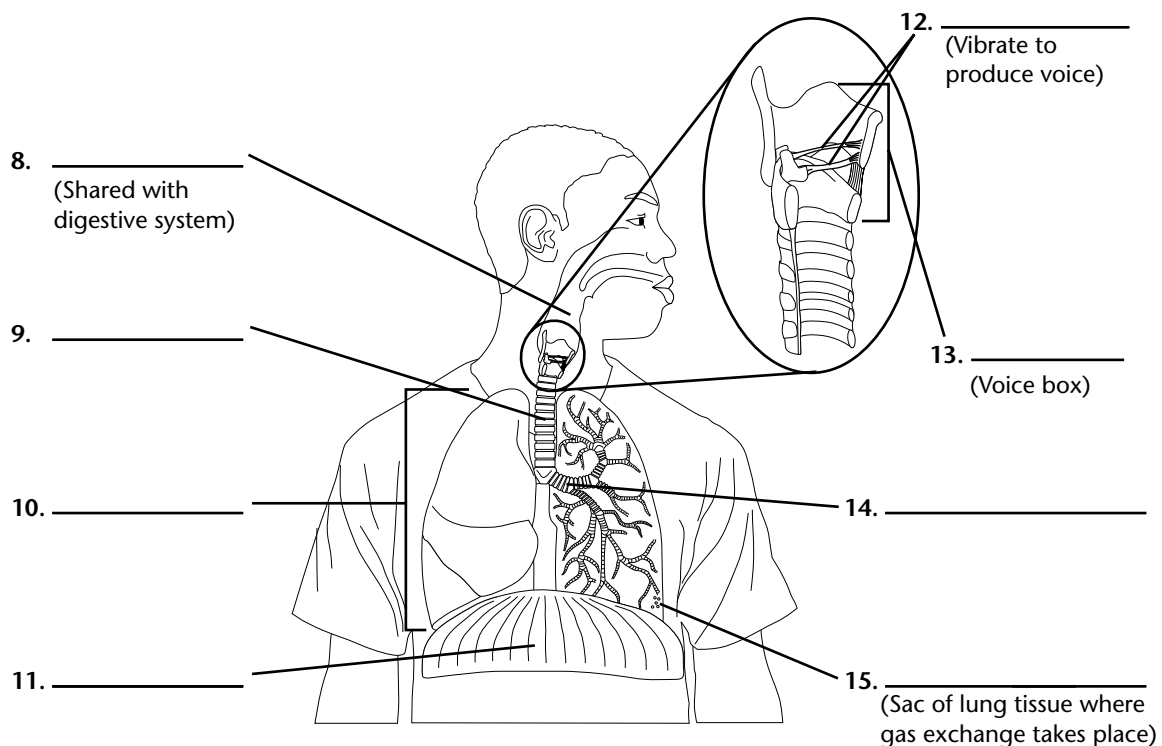
## Understanding Main Ideas

Answer the following on a separate sheet of paper.

1. How does respiration differ from breathing?
2. What are the two functions of the respiratory system?
3. Through what structures does air pass to get to the lungs?
4. What three ways does the respiratory system modify air before it reaches the lungs?
5. What gases are exchanged in the respiratory system?
6. How do you inhale and exhale?
7. How is the sound of your voice produced?

## Building Vocabulary

Label the diagram with the parts of the respiratory system.



**Respiration and Excretion** ▪ *Guided Reading and Study*

# The Excretory System

*This section explains how the parts of the excretory system work.*

## Use Target Reading Skills

*Before you read, preview Figure 11. Then write two questions that you have about the diagram in the graphic organizer below. As you read, answer your question.*

Q. Where are the nephrons located?
A.
Q.
A.

## Introduction

1. What is the function of the excretory system?

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2. The process of removing wastes from the body is \_\_\_\_\_.

## The Excretory System

3. What are two wastes that the body must get rid of?

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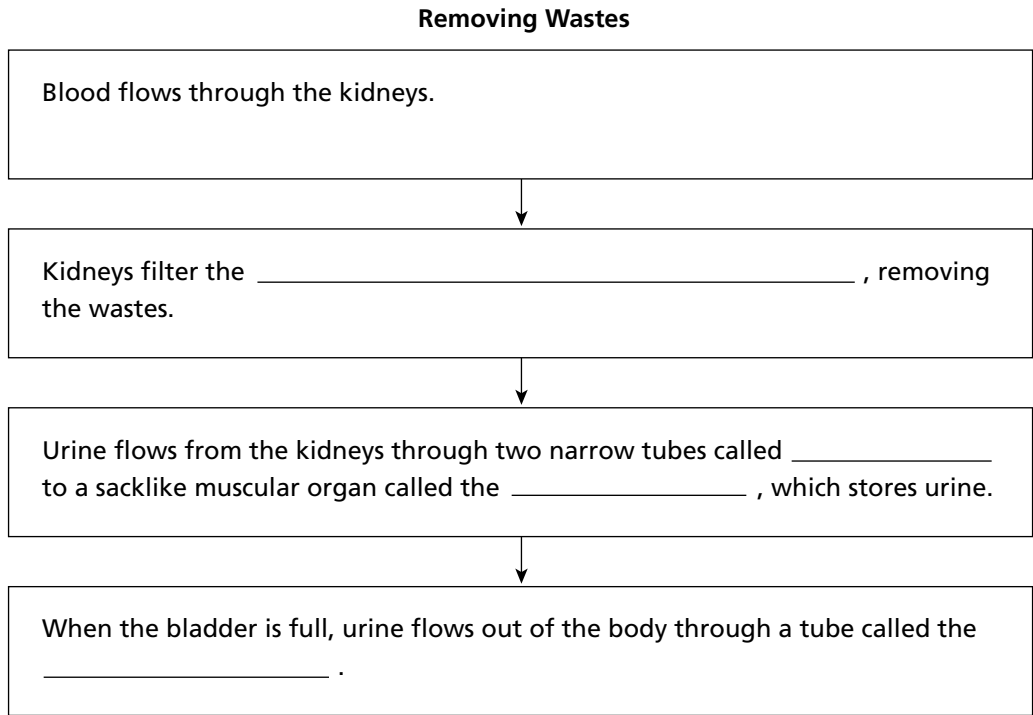
Match the term with its definition.

Terms	Definitions
___ 4. urea	a. The major organs of the excretory system
___ 5. kidneys	b. A watery fluid that contains urea and other wastes
___ 6. urine	c. A chemical that comes from the breakdown of proteins

**Respiration and Excretion** ▪ *Guided Reading and Study*

**The Excretory System** *(continued)*

7. Complete the flowchart to show how wastes are removed from the body.



**Filtration of Wastes**

8. What are nephrons?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. What are the stages of urine formation?

a. \_\_\_\_\_

\_\_\_\_\_

b. \_\_\_\_\_

\_\_\_\_\_

**Respiration and Excretion** ▪ *Guided Reading and Study*

10. Is the following sentence true or false? Urea and glucose stay in the capillaries while blood cells and protein molecules move into the capsule of a nephron. \_\_\_\_\_
11. List the substances that are returned to the blood and those that stay in the kidneys after the kidneys filter the blood.
- Returned to blood: \_\_\_\_\_
- Stay in kidneys: \_\_\_\_\_

12. Why is a chemical analysis of urine useful to doctors?

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**Excretion and Homeostasis**

13. The kidneys help maintain homeostasis by regulating the amount of \_\_\_\_\_ in the body.
14. Is the following sentence true or false? If you've been sweating a lot and haven't had much to drink, your body will absorb less water and produce a larger volume of urine. \_\_\_\_\_
15. What are three other organs of excretion, not including the kidneys?
- a. \_\_\_\_\_ b. \_\_\_\_\_
- c. \_\_\_\_\_
16. What is the function of the liver?

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**Respiration and Excretion** ▪ *Review and Reinforce*

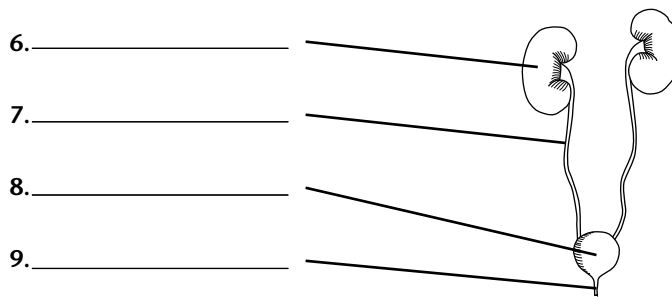
# The Excretory System

## Understanding Main Ideas

*Answer the following on a separate sheet of paper.*

1. What are three substances that the excretory system removes from the body?
2. Describe the path of urine through the body from its formation to its elimination from the body.
3. What is the main organ of excretion? What are three other organs of excretion?
4. How do the kidneys maintain water balance in the body?
5. Where in the body are nephrons? Briefly describe the two-stage process in which they help to produce urine.

*Label the diagram with the names of the parts of the excretory system.*



## Building Vocabulary

*Answer the following in the spaces provided.*

10. What is excretion?

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11. Compare and contrast the ureters and the urethra.

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12. What is urea?

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13. What is urine?

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