

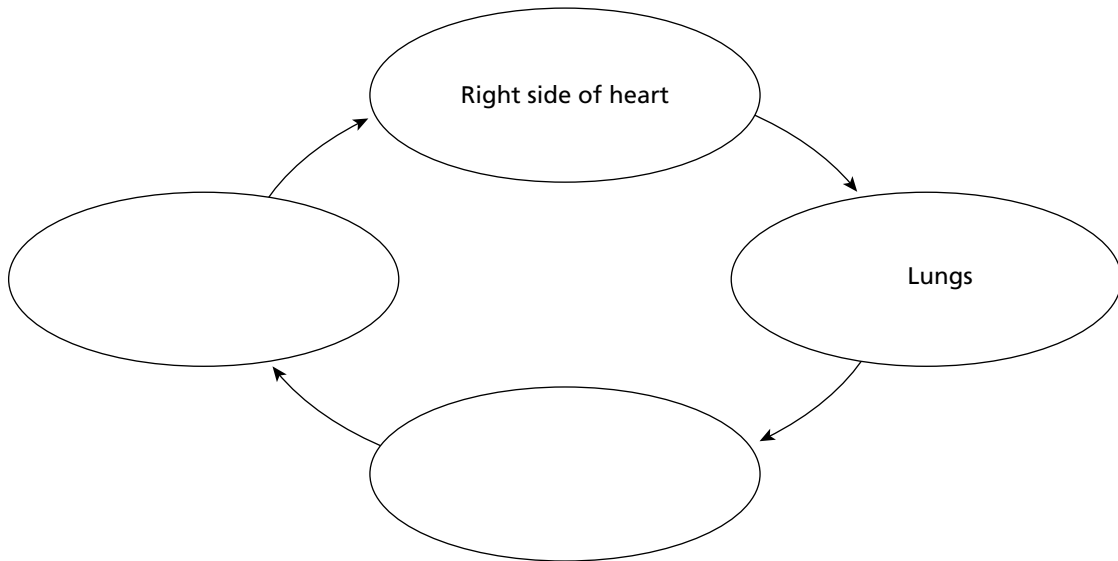
Circulation ▪ *Guided Reading and Study*

The Body's Transport System

This section describes how the heart, blood vessels, and blood work together to carry materials throughout the body.

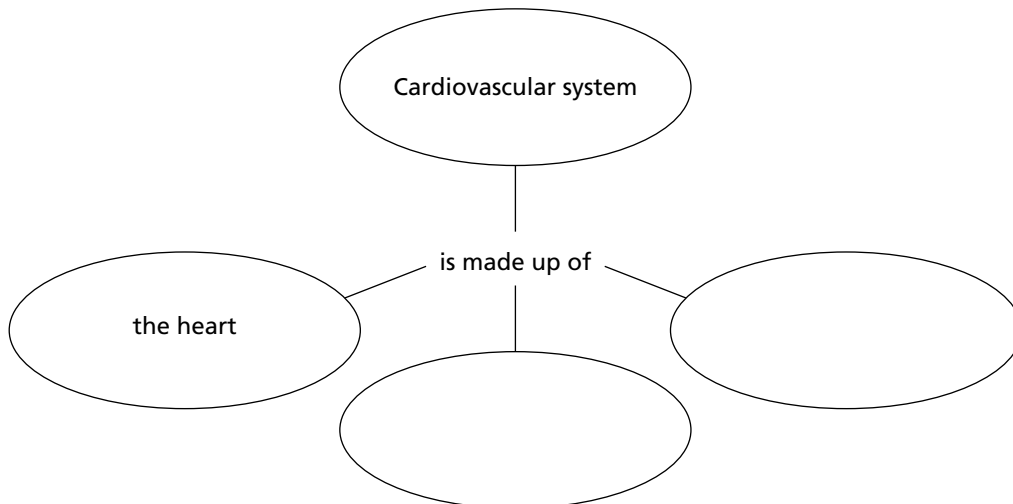
Use Target Reading Skills

As you read, complete the cycle diagram below that shows the path that blood follows as it circulates through the body. Write each step of the pathway in a separate circle.



The Cardiovascular System

1. Another name for the cardiovascular system is the _____ system.
2. Complete this concept map to show what makes up the cardiovascular system.



Circulation

Circulation ▪ *Guided Reading and Study*

The Body's Transport System *(continued)*

3. What three things are carried throughout the body by the cardiovascular system?

The Heart

4. Each time the heart beats, what does it do to blood?

5. Complete the table about the chambers of the heart.

Chamber of the Hearts		
Questions	Upper Chambers	Lower Chambers
What are these chambers called?		
How many are there?		
What is the function, or job, of these chambers?		

6. A flap of tissue that prevents blood from flowing backward is a(n) _____.
7. The group of cells that adjusts the speed of the heart beat is called the _____. The heart rate depends on how much _____ the body needs.
8. What does an artificial pacemaker do?

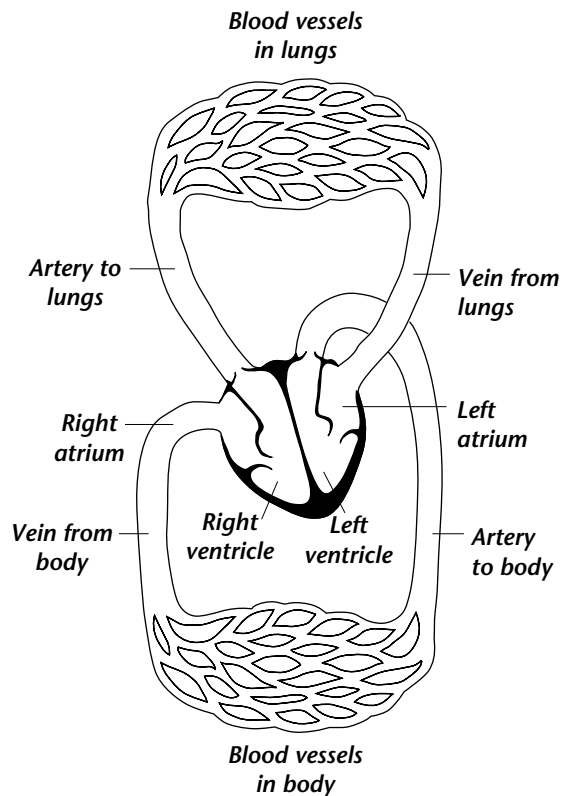
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Two Loops

9. Name the three kinds of blood vessels.

10. Describe the loop in which the blood picks up oxygen.

11. Draw arrows on the diagram below to show how blood circulates through the body. The first arrow should start in the right atrium.



12. The largest artery in the body is called the _____.

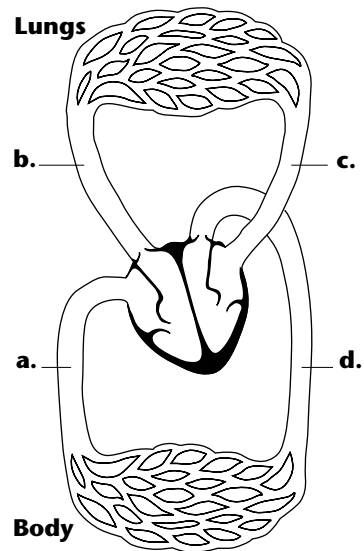
Circulation ▪ *Review and Reinforce*

The Body's Transport System

Understanding Main Ideas

Use the diagram to answer the following questions on a separate sheet of paper.

1. Draw arrows on the diagram to show the path of the blood flow throughout the body.
2. What is the function of each atrium? What is the function of each ventricle?
3. Which of the large blood vessels labeled *a*, *b*, *c*, and *d* are arteries and which are veins? Explain how you know.



Building Vocabulary

From the list below, choose the term that best completes each sentence.

- | | |
|-----------------------|-----------|
| aorta | heart |
| capillaries | pacemaker |
| cardiovascular system | valve |

4. The _____ is a group of cells that adjusts the heart rate.
5. The muscular organ that pumps blood through the body is called the _____.
6. The _____ is made up of the heart, blood vessels, and blood.
7. A(n) _____ is a flap of tissue that prevents blood from flowing backward.
8. The largest artery is called the _____.
9. Substances are exchanged between the blood and body cells in the _____.

Circulation ▪ *Guided Reading and Study*

A Closer Look at Blood Vessels

This section describes the three kinds of blood vessels that are found in your body.

Use Target Reading Skills

As you read, compare and contrast the three kinds of blood vessels by completing the table below.

Comparing Blood Vessels

Blood Vessel	Function	Structure of Wall
Artery	Carries blood away from heart	
Capillary		
Vein		

Arteries

- Arteries carry blood away from the _____.
- Is the following sentence true or false? The coronary arteries provide the stomach with its blood supply. _____
- Circle the letter of each sentence that is true about pulse.
 - The faster your heart beats, the slower your pulse will be.
 - Pulse is caused by the expanding and narrowing of artery walls.
 - When you count pulse beats, you are also counting heartbeats.
 - You can feel pulse in veins but not in arteries.
- Is the following sentence true or false? Arteries control the amount of blood that different organs receive. _____

Circulation ▪ *Guided Reading and Study*

Capillaries

5. What important thing happens in the capillaries?

6. One process in which materials are exchanged between the blood and the body cells is _____.

Veins

7. What job do veins carry out?

8. What three things help push blood through veins?

- a. _____
- b. _____
- c. _____

Blood Pressure

9. What is blood pressure?

10. Circle the letter of the name of the instrument that measures blood pressure.

- a. stethoscope
- b. X-ray machine
- c. sphygmomanometer
- d. mercury



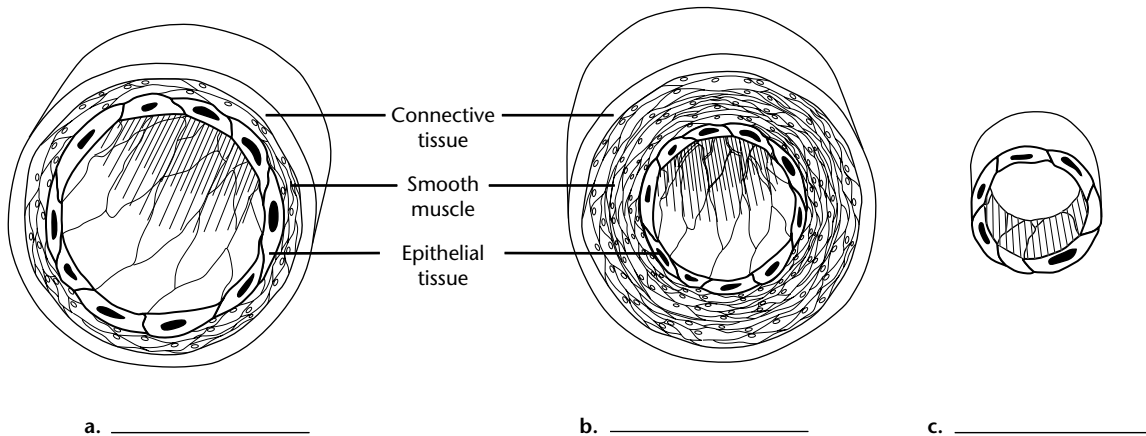
Circulation ▪ *Review and Reinforce*

A Closer Look at Blood Vessels

Understanding Main Ideas

Answer the following questions.

- Label the diagram with the names of the three kinds of blood vessels.



- After blood leaves the heart, through what kinds of vessels and in what order does blood move? _____
- In which kind of blood vessel is blood pressure usually highest?

- Which blood vessel allows diffusion through its walls? _____
- What causes blood pressure?

- What factors help blood move through veins?

Building Vocabulary

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

- | | |
|---------------------------|---|
| _____ 7. blood pressure | a. the movement of molecules from an area in which they are highly concentrated to an area in which they have a low concentration |
| _____ 8. pulse | b. the repetitious rise and fall of the artery in your wrist caused by the expansion and relaxation of the artery wall |
| _____ 9. diffusion | c. caused by the force with which the ventricles contract |
| _____ 10. coronary artery | d. a vessel that supplies the heart itself with blood |