

SECTION
30.1

RESPIRATORY AND CIRCULATORY FUNCTIONS

Study Guide**KEY CONCEPT**

The respiratory and circulatory systems bring oxygen and nutrients to the cells.

VOCABULARY

circulatory system	alveoli	vein
respiratory system	diaphragm	capillary
trachea	heart	
lung	artery	

MAIN IDEA: The respiratory and circulatory systems work together to maintain homeostasis.

Fill in the Q and A chart below about the circulatory and respiratory systems.

Questions	Answers
1. What are the main functions of the circulatory system?	
2. What are the main functions of the respiratory system?	

MAIN IDEA: The respiratory system moves gases into and out of the blood.

3. What pathway does air follow after it enters the nose and mouth?

4. Explain why so much surface area is needed in the lungs.

5. As shown in Figure 30.2, when you inhale, the muscles of the rib cage contract, expanding the rib cage. The diaphragm flattens and moves downward, and air flows into the lungs. What happens when you exhale?

Section 30.1 STUDY GUIDE CONTINUED

MAIN IDEA: The circulatory system moves blood to all parts of the body.

6. Fill in the chart to help you remember the parts of the circulatory system and their functions.

Part	Function
heart	
arteries	
veins	
capillaries	

7. How do the heart and blood vessels maintain a stable body temperature in hot and cold weather?

Vocabulary Check

8. The word *diaphragm* is based on the Latin word *diaphragma*, which means “midriff.” How does this term relate to the meaning of *diaphragm*?

9. The trachea, bronchi, and bronchioles have been compared to the trunk, branches, and twigs of a tree. What other analogy can you think of to describe these structures?
