

Activity 4.3.1 Show What I Know**Purpose**

As you discovered in the dissection activities in *Lesson 4.2 Putting the Puzzle Together*, there are many systems, parts, and functions within an animal's body. While you primarily studied anatomy or the parts in that lesson, the physiology of those parts is also essential in your quest to become an animal scientist. Physiology is the study of the function of plant and animal bodies, systems, organs, tissues, and cells.

The respiratory and circulatory systems are closely related in their functions in a body. These systems are essential to animal life. The respiratory system exchanges oxygen from the air with carbon dioxide, the product of respiration, to maintain a balance in the body. The circulatory system uses blood to serve as a carrier of oxygen (O₂) and carbon dioxide (CO₂) from cells to the lungs. How well do you know the respiratory and circulatory systems?

Materials**Per student:**

- 2 colored pencils
- Pencil
- *Agriscience Notebook*

Procedure

This activity reviews the anatomy of the respiratory and circulatory systems and defines the major functions of each part in preparation for a more in depth study of these systems.

Part One – What I Know

1. Using one of the colored pencils provided, label the diagrams on *Activity 4.3.1 Student Worksheet* and describe the function of each to the best of your ability.
2. Use the color key to identify how you use each color for future reference in this activity.

Color Key	
What I Know	
Additions and Corrections	

Parts of the Circulatory and Respiratory Systems	
Alveoli	Lung
Aorta	Nasal Cavity
Artery	Nose/Mouth
Bronchiole	Pharynx
Bronchus (bronchi)	Right atrium
Capillary	Right ventricle
Larynx	Trachea
Left atrium	Vein
Left ventricle	Vena cava

Name: _____

Activity 4.3.1 Student Worksheet

Table 1. The Respiratory System

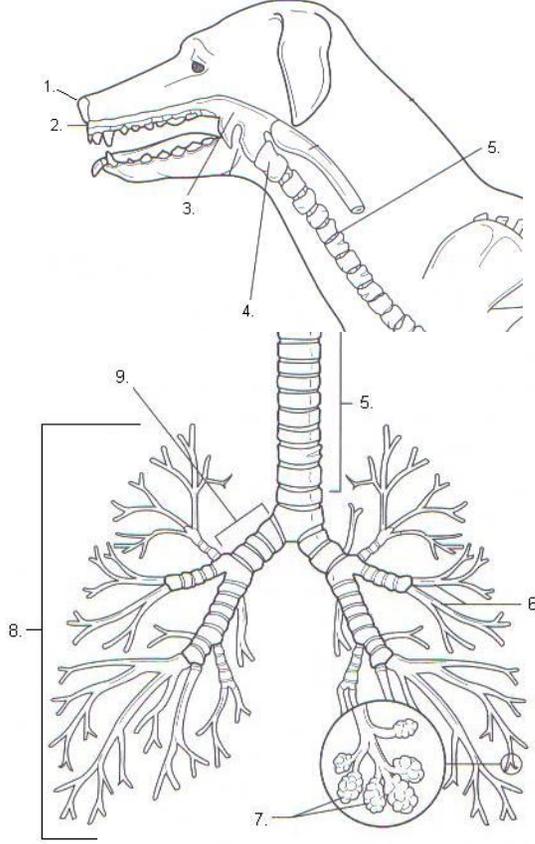
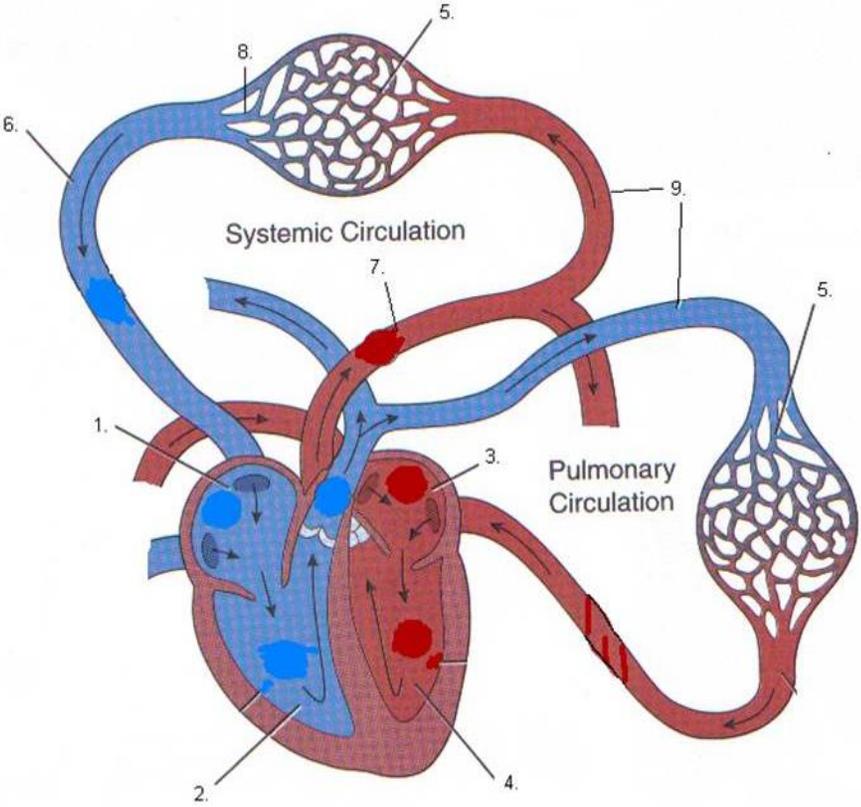
Diagrams	Part	Function
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	

Table 2. The Circulatory System

Diagram	Part	Function
 <p>The diagram illustrates the circulatory system with a four-chambered heart. The right side of the heart (blue) pumps blood to the lungs (pulmonary circulation), and the left side (red) pumps blood to the rest of the body (systemic circulation). Two capillary beds are shown, each with a network of vessels. Arrows indicate the direction of blood flow. Numbered labels point to various components: 1. Right atrium, 2. Right ventricle, 3. Left atrium, 4. Left ventricle, 5. Capillary beds, 6. Pulmonary artery, 7. Pulmonary vein, 8. Systemic artery, and 9. Systemic vein.</p>	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	

Sources:

Lawhead, J., & Baker, M. (2005). *Introduction to veterinary science*. Clifton Park, NY: Delmar.

Romich, J.A. (2006). *An illustrated guide to veterinary medical terminology* (2nd ed.). Clifton Park, NY: Thompson Delmar Learning.