

Name: _____

Date: _____

Investigating the Circulatory System

Complete this worksheet as you view the **Circulatory System Views** in Human Anatomy Atlas and use information provided by your teacher and textbook.

1. Click the **Circulatory System Tile**. Using the Draw icon, identify the main structures of the circulatory system. Explain the function of each below. Click the Save to Pictures icon when you are finished.
 - a. Heart
 - b. Arteries
 - c. Veins
2. There are two circuits within the circulatory system. Select the **Pulmonary** tile to investigate the pulmonary circuit. Describe each component of the circuit below.
 - a. What is the purpose of the pulmonary circuit?
 - b. Pulmonary arteries
 - c. Pulmonary veins
 - d. Right atrium
 - e. Lungs
3. Select the **Circulatory System Tile** to investigate the systemic circuit. Describe each component of the circuit below.
 - a. What is the purpose of the systemic circuit?
 - b. Aorta
 - c. Inferior vena cava
 - d. Superior vena cava
4. Open the **Heart Section Tile**. Investigate the heart and describe each component of the heart.
 - a. Right atrium
 - b. Left atrium

- c. Right ventricle
- d. Left ventricle
- e. Mitral (bicuspid) valve
- f. Tricuspid valve
- g. Aortic valve
- h. Pulmonary valve

5. Investigate the **Heart Conduct Tile**. Draw and describe the steps in the cardiac cycle below. If necessary, research the cardiac cycle using other resources.

6. Challenge - Quiz yourself! Use the Circulatory quizzes to test your understanding of the structures of the heart.
 - a. Pulmonary Circulation
 - b. Coronary Circulation
 - c. Heart Chambers
 - d. Heart Valves

Make Connections

- a. Cardiac Cycle - Find the pulse in your neck. (Place two fingers on your neck right under your ear. Slide your fingers along your jawline until you feel the groove between your neck muscle and your trachea.)
- b. Have a partner time you as you could the beats of your pulse for 15 seconds. Multiply the number of beats by 4 to determine how many beats per minute. Repeat this process 3 times and average your totals to get a more accurate estimate of your current heart rate.
- c. Resting Heart Beats in 15 seconds counted 3 times
 - i. _____ x 4 = _____
 - ii. _____ x 4 = _____
 - iii. _____ x 4 = _____
 - Average = _____
- d. Now get up and move around for 2 minutes. You could do jumping jacks, run in place, do high knee steps, or another type of active exercise. After 2 minutes, collect heartbeat data again.
- e. After Exercise Heart Beats in 15 seconds counted 3 times
 - i. _____ x 4 = _____
 - ii. _____ x 4 = _____
 - iii. _____ x 4 = _____
 - Average = _____
- f. Analyze your data. Provide evidence to support if your heart rate changed or not.
- g. What has to happen within your heart to cause a change in heart rate?