\*\*Cardiovascular System Worksheet\*\*

\*\*Name:\*\* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \*\*Date:\*\* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*Instructions:\*\* Answer the following questions based on what you have learned about the cardiovascular system. Write your answers in the space provided.

1. What is the cardiovascular system responsible for?

Answer: The cardiovascular system is responsible for transporting essential substances such as nutrients and oxygen to cells and removing waste products from the body.

2. Name the three main components of the cardiovascular system and briefly describe their roles.

- Blood: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Blood vessels: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Heart: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Explain the function of arteries, veins, and capillaries in the cardiovascular system.

- Arteries: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Veins: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

- Capillaries: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. How does the heart contribute to the cardiovascular system?

Answer: The heart pumps blood throughout the body, providing the necessary force for circulation.

5. Describe the process by which nutrients and oxygen are transported to cells and waste products are removed from cells.

Answer: Nutrients and oxygen are transported to cells through the bloodstream. Waste products are removed from cells and transported in the bloodstream to be eliminated from the body through organs such as the lungs or kidneys.

6. Explain why a transport system, like the cardiovascular system, is essential for multicellular organisms.

Answer: Multicellular organisms have a higher demand for nutrients and oxygen due to their larger size and higher metabolic rate. A transport system is needed to efficiently deliver these substances to all cells and remove waste products.

\*\*Pair-Share Activity:\*\* Discuss your answers with a partner. Compare your responses and clarify any points of confusion.

\*\*Evaluation:\*\*

1. What are the functions of the cardiovascular system? List at least three.

Answer: Carrying food from the gut to the cells, carrying oxygen from the lungs to the cells, carrying carbon dioxide from the cells to the lungs, carrying urea and other toxins from the liver to the kidneys, and distributing heat around the body.

2. Why is the double circulation system important in the human body?

Answer: The double circulation system ensures that oxygenated blood is efficiently distributed to all cells in the body while deoxygenated blood is directed to the lungs for gas exchange, maximizing oxygen supply to cells and removal of waste products.

\*\*Conclusion:\*\* Review your answers and discuss any questions or concepts you found challenging with your instructor or classmates.