

## Laboratory Exercise: Cow Heart Observations



### Part A: Outside the Heart

Put the two halves of the heart together. Check off the steps as you complete them.

1. \_\_\_\_ Hold up the heart. Decide how you think it would be positioned in your body.
2. \_\_\_\_ Find the fat. It is cream-colored. It does not look like muscle tissue.
3. \_\_\_\_ The large blood vessels at the top of the heart were cut when this heart was removed. How many can you find? \_\_\_\_\_ Gently put your finger in one. How does it feel? (Write rough or smooth.) \_\_\_\_\_
4. \_\_\_\_ Find the ventricles. They make up the most of the heart muscle. There are two ventricles – a right one and a left one. From the outside, they look like one structure.
5. \_\_\_\_ Find each atrium. The atria look like two flaps and are located on top of the heart. They are much smaller than the ventricles.
6. \_\_\_\_ A netlike system of blood vessels serves the heart muscle. You can see some of these vessels on the outside of the ventricles. They are called coronary vessels. (They may look like lines.) Identify them now.
7. \_\_\_\_ Have your teacher check off and initial this step.

### Part B: Inside the Heart

Separate the two halves and lay them open on your pan.

8. \_\_\_\_ Find the ventricles. Each ventricle is a chamber with a muscular wall. The left ventricle has thicker walls than the right. In fact, the left ventricle is the largest structure of the heart. Identify the left ventricle now.
9. \_\_\_\_ The right ventricle is smaller than the left one. Identify the right ventricle now.

10. \_\_\_\_ The left atrium is above the left ventricle. Identify it now.
11. \_\_\_\_ The right atrium is above the right ventricle. Identify it now.
12. \_\_\_\_ Blood flows from the right atrium into the right ventricle. The right AV valve prevents the blood from going back into the atrium. Valves are flaps of connective tissue. These flaps are connected by the ventricles by threadlike tendons. Identify the right AV valve now on both halves of the heart as it may have been cut when separating the heart.
13. \_\_\_\_ Find the left AV valve on both halves of the heart as it may have been cut when separating the heart.
14. \_\_\_\_ Carefully hold up both halves of the heart. The large vessels are at the top of the heart. Identify the aorta and the pulmonary artery.
15. \_\_\_\_ Imagine that this heart is in your chest. Notice where the left and right sides are. Identify the front of your heart.
16. \_\_\_\_ Identify the back of your heart.
17. \_\_\_\_ Have your teacher check off and initial this step.
18. \_\_\_\_ Place your heart back on the tray. **THOROUGHLY CLEAN** your work space. **AFTER** cleaning your work space **NOTIFY YOUR TEACHER FOR APPROVAL.**
19. \_\_\_\_ Once your teacher has approved your work space, **ONLY NOW MAY YOU REMOVE YOUR GLOVES.** Wash and dry your hands thoroughly and return quietly to your assigned seat.
20. \_\_\_\_ Based on what you observed today, label the diagram below.

