CHAPTER 8		BLM 8.1.4A
ANSWER KEY	**Investigation 8.A: Identifying Structures of the Circulatory System Answer Key**	

Answers to Analysis Questions

1. **a)** Right atrium—upper right-hand chamber; have wrinkled, protruding appendages (auricles); slightly larger than a 2 dollar coin; in preserved specimens, they may have a slightly darker appearance; walls are relatively thin (only a few millimetres thick).

b) Left atrium—upper left-hand chamber; have wrinkled, protruding appendages (auricles); slightly larger than a 2 dollar coin; in preserved specimens, they may have a slightly darker appearance; walls are relatively thin (only a few millimetres thick).

c) Right ventricle—lower right-hand chamber; smooth with "fat" visible on surface; the coronary arteries and veins are visible; the wall of the right ventricle is thinner than that of the left; the right ventricle is triangular in form; it extends from the right atrium to near the apex of the heart.

d) Arteries, including the aorta—the aorta is the largest artery in the human body; arteries have thick and elastic walls; they stay open even without blood flowing through them.

e) Left ventricle—lower left-hand chamber; smooth with fat visible on the surface; the coronary arteries and veins are visible; the walls of the left ventricle are much thicker than those of the right ventricle; the left ventricle is longer and more conical in shape than the right ventricle.

f) Veins—they have thinner, less muscular walls (they collapse when not filled with blood); veins have valves that allow blood to flow in one direction.

g) Heart valves—thin flaps of tissues; supported by strong, fibrous strings called chordae tendineae; the chordae, which are attached to the muscular projections on the ventricular walls, support the valves and prevent them from inverting when the heart contracts.

2. Your drawing should include all of the structures identified below. The path of blood through the heart: superior and inferior vena cava → right atrium → right atrioventricular valve → right ventricle → pulmonary semilunar valve → pulmonary artery → lungs → pulmonary veins → left atrium → left atrioventricular valve → left ventricle → aortic semilunar valve → aorta → body

Answers to Conclusion Questions

3. **a)** Some mention should be made that the dissection gives you a true sense of what the organ is like—size, texture, coloration, and dimensions.

b) Some mention should be made that the virtual dissection gives you a sense of the structure and function of the heart. It may be particularly valuable if you have personal or cultural objections to dissection.

4. Your answer will vary based on your personal experiences in the investigation.