

Figure 15.4.2**Vertebrate Heart Anatomy**

Fish have a two-chambered heart—1 atrium and 1 ventricle. The atrium receives the deoxygenated blood returning to the heart from the body, and the ventricle pumps it back out to the gills and then onto rest of the body. Remember that atria always receive blood coming into the heart from the veins, and ventricles always pump it out into arteries. Amphibians and most reptiles have a three-chambered heart. The right atrium receives the blood returning from the tissues, and the left atrium receives the blood returning from the lungs. Blood returning to the heart from tissues is always deoxygenated because the tissues have extracted all the oxygen. Blood returning from the lungs is always oxygenated because it picks up oxygen as it passes through the lungs. In the three-chambered heart, the common ventricle pumps both oxygenated blood out to the tissues and the deoxygenated blood to the lungs. Mammals, birds, alligators, and crocodiles have a four-chambered heart. The right atrium receives the blood returning from the tissues and pumps it to the right ventricle. The right ventricle pumps the blood to the lungs, and the left atrium receives the blood returning from the lungs. The muscular left ventricle pumps the blood from the heart to the tissues.

