

 **CHECK YOUR LEARNING****Suggested Answers**

1. The circulatory system moves oxygen, carbon dioxide, nutrients, and waste between the lungs, body tissues, digestive system, and kidneys. The heart pumps blood; arteries carry blood away from the heart; capillaries carry blood through tissues, where exchange of nutrients, oxygen, and waste takes place; and veins return blood to the heart.
2. Arteries from the right side of the heart deliver blood to the lungs, where gas exchange takes place. Veins then return oxygenated blood to the left side of the heart. The entire right side of the heart functions for the sake of delivering blood to the lungs.
3. The type of blood vessel shown in Figure 7 on page 93 of the Student Book is a capillary. It is just wide enough for red blood cells to pass through single file and in many areas has gaps in the sides so that substances carried by the red blood cells can make their way in and out of tissues.
4. Immediately after the race, he will find that his heart is beating faster than it was before the race. This is because carbon dioxide is made more quickly when he exerts himself, resulting in signals being sent to the brain to increase the heart rate in order to increase circulation to the lungs to accelerate gas exchange.
5. A red blood cell entering the right side of the heart is pumped through arteries to the lungs, where after passing through smaller and smaller arteries it passes through a capillary in an air sac, releases some carbon dioxide, and takes in a lot of oxygen from the air. It then moves through veins to the left side of the heart, which pumps it through more arteries, ultimately to a capillary of a tissue in some part of the body, where it releases oxygen before returning to the right side of the heart through veins.