**Cardiovascular System (Part I) Study Guide**

1. Major Functions of the Cardiovascular system

To pump and circulate blood throughout your body, but why?

* 1. Blood gains oxygen in the lungs and that oxygen must be distributed to cells throughout your body.
  2. Blood gains nutrients from your digestive tract and those nutrients must be distributed to cells throughout your body.
  3. Cells throughout your body produce CO2 (carbon dioxide) as a waste. Your blood transports that CO2 waste to your lungs to be exhaled.
  4. Cells throughout your body produce other waste molecules that must be delivered to your liver to be broken down or to your kidneys to be excreted.
  5. Your blood circulates and delivers white blood cells to any areas of infection or injury in the body.
  6. Distributes hormones and other chemical signals throughout the body from the organs that produce them. For example: adrenaline from the adrenal glands, insulin from the pancreas, growth hormone from the pituitary gland, etc.
  7. Our cardiovascular system can help regulate body temperature. Blood vessels can dilate (widen) near the skin to release heat or blood vessels can constrict (narrow) near the skin to retain heat.

1. Know the diagram of blood circulation
   1. Figure 11.3 “The systemic and pulmonary circulations” page 352.
   2. Read page 352 (the section next to the diagram).
2. External and internal anatomy of the heart
   1. Figure 11.2 pages 350 and 351.
   2. Read pages 348-354.
3. Coronary arteries and heart attack
   1. Read sections “Cardiac circulation” and “Homeostatic imbalance” on page 354.