Heart

1. Name the parts of the circulatory system. What are the functions of these parts?
2. Label drawings of the heart, name the function of each part.
3. Outline the features of cardiac muscle that contribute to heart function.
4. Trace the flow of blood through the heart naming the chambers, valves and major blood vessels in sequence.
5. Describe the phases of the cardiac cycle. How does each set of valves work to ensure one way flow? Why does the left ventricle have a thicker wall than the right ventricle? What are the roles of papillary muscles and chordae tendineae?
6. Describe the coronary circulation. Describe the progression of plaque in blood vessels.
7. Describe or label a drawing of the conduction system of the heart. Describe the process of electrical excitation. How does the current show up on an ECG?
8. Define ECG, myocardial ischemia, myocardial infarction, hypoxia.
9. Using a picture of the fetal circulation, describe the unique features. How does the fetal circulation change at birth? What are the ligamentum arteriosum and fossa ovalis?

Blood

10. Describe the functions of blood. What type of tissue is it? What is the matrix of blood? What are the formed elements.
11. What are characteristics of blood? Volume, circulatory flow, color, etc.
12. Describe each component of plasma.: its relative mass, its function(s), and characteristics.
13. Recognize a red blood cell (erythrocyte). Describe the characteristics of RBCs: their lifespan, color, concentration, location of formation and death.
14. Recognize hemoglobin. Name its parts. Describe its role in the blood cells. Describe how hemoglobin is recycled upon the death of RBCs.
15. Describe the different blood types and the antibodies that are produced against these blood types. Explain erythroblastosis fetalis.
16. Describe the different classes of leukocytes. Identify each one and describe its characteristics, and functions, and relative concentration in the blood. For lymphocytes describe the subtypes and their significance.
17. Describe platelets and their role in blood clotting.

Blood Vessels

18. Describe the path of blood flow through the cardiovascular system, naming the blood vessel types along the way.
19. Use a picture of the blood vessel walls to identify and describe the layers found in an artery and vein. Describe muscular arteries and elastic arteries. List the similarities and differences between arteries and veins.

20. How does blood move through arteries? Through veins?

21. Describe capillaries. Why are these called exchange vessels? What are the characteristics of the three types? Where are they located?

**Lymphatic System**

22. List the functions of the lymphatic system. For each organ describe its location, general anatomy, and functions. Describe the features of the lymphoid follicle, identify one from a histology photograph.