14.2 Blood and Lymph

Date _____

Last Name _____ First _____ period ___

1. Interpret the diagram: 4 Components of Blood

   a. What are the 4 components of blood?

   _____
   _____
   _____
   _____

   b. What happens to blood if you put it in a test tube? _____

   c. What percentage of blood is plasma? What percentage is blood cells? _____%

2. What are 4 things found in plasma?

   _____
   _____
   _____
   _____

3. What are 3 groups of plasma proteins?

   _____
   _____
   _____

4. Describe red blood cells

   a. What important protein is produced by red blood cells and enables the cell to pick up and carry oxygen and CO_2? _____

   b. What happens to the color of blood when the hemoglobin attaches to oxygen? To CO_2? _____

   c. What is the average life span of a red blood cell? _____

   d. Where are red blood cells produced?

5. Describe white blood cells

   a. What is the function of white blood cells?

   b. What is an approximate ratio between the amount of white blood cells (WBCs) and the amount of red blood cells (RBCs)?

   c. Which can outlive the other? WBCs or RBCs?

6. What are **three types of white blood cells**?
   _____
   _____
   _____

7. What are **platelets**?

   a. _____ are cell _____ that stick together to form clots when the body gets cut.

   b. What plasma **proteins create a fibrous n**et that catch and hold cells to stop bleeding? _____

8. What was the Austrian physician Ca**rl Landsteiner's** discovery?

9. Blood Types

   a. What are the 4 blood types?

   b. How are **blood types determined**?

10. Interpret the table. What are **markers and clumpers**?

    a. Unique proteins that are found in the cell membrane of every red blood cell that identify the type of blood are called _____
    b. Plasma proteins that cause blood cells to clump up when the wrong kind of blood mixes with it are called _____

    c. What type of **marker** do persons with **type A** blood have on their red blood cells?

    d. What type of **clumping proteins** do persons with type A have?

    e. What blood types can a person with **type A blood receive safely** in a transfusion?

11. What would happen to the blood of a person with type A if they received type B blood?

12. Which blood type can **receive any type blood**?

13. Which blood type can be a **safe donor to anyone**?

14. What is the **lymphatic system**?

15. What is l**ymph**?

16. What are ly**mph nodes** and what is their function?