Blood Basics

Name _____

Directions: Complete this section as you discuss the notes in class.

1. Blood Facts

A. The average adult has about _____ liters of blood inside of their body, which makes up 7-8% of their body weight.

B. This red liquid is living _____that carries oxygen and nutrients to all parts of the body, and carries carbon dioxide and other waste products back to the lungs, kidneys and liver for disposal. It fights against _____ and helps heal _____.

C. There are about one _____ red blood cells in two to three drops of blood. For every red blood cells, there are about _____ platelets and _____white cell.

2. Components of Blood

_____ (erythrocytes) – The most abundant cells in our blood; they are produced in the bone marrow and contain a protein called hemoglobin that carries oxygen to our cells.

_____ (leukocytes*)* – They are part of the immune system and destroy pathogens.

_____– The yellowish liquid portion of blood that contains electrolytes, nutrients and vitamins, hormones, clotting factors, and proteins such as antibodies to fight infection.

_____ (thrombocytes*)* – The clotting factors that are carried in the plasma; they clot together in a process called coagulation to seal a wound and prevent a loss of blood.

3. Genetics of Blood

Your blood type is established before you are _____, by specific _____inherited from your parents. These two genes determine your blood type by causing proteins called _____ to exist on the surface of all of your red blood cells.

4. Blood Types

A. What are the three alleles for human blood types? ____, ____, & _____

B. Fill in the chart to show the genotypes for each type of blood and its distribution (%).

Type	Genotypes	%
A		
B		
O		

5. Rh (Rhesus) Factors

A. What animal helped scientists discover Rh proteins in blood? _____

B. If someone has the Rh protein, they are said to have Rh _____ blood. If someone does not have this protein, they have Rh _____blood.

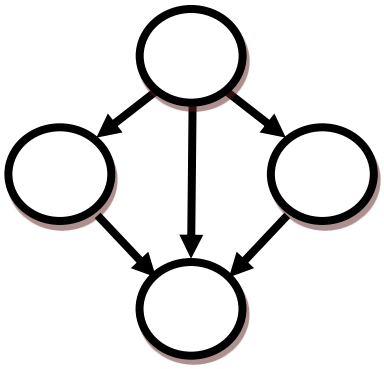
6. Blood Transfusions

A. Label the diagram at right.

B. What blood type is known as the "Universal Donor"? _____

C. What blood type is known as the "Universal Recipient"? _____

D. Complete this statement: A person with Rh + blood may receive blood that is ____, while a person with Rh - blood can only receive _____ blood.



Online Activity – Follow the directions to complete the **Blood Typing Game**. Fill in the chart with a description of the patient (hair color/gender) and enter the other information needed as you complete each task.

Patient Description	Blood Type (+/-)	# of Bags, Types Used