

Name: _____

Blood Components and Blood Types

1. What is the name of the liquid component of blood? _____
2. What are the three solid components of blood? _____
3. What is the role of plasma?

4. What is the protein present in red blood cells that allows for the transport of oxygen and carbon dioxide? _____

5. What is the other name given to the solid components of blood?

- | | |
|---------------------|----------------|
| a. Red blood cell | 1. Leucocyte |
| b. White blood cell | 2. Thrombocyte |
| c. Platelets | 3. Erythrocyte |

6. Blood components present different characteristics and functions. Complete the following sentences by writing the name of the constituent described.

Platelets

Red blood cells

White blood cells

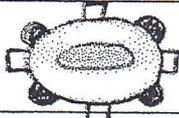
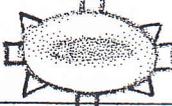
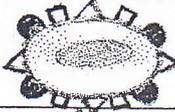
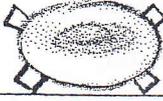
- a. The _____ are doughnut-shaped.
- b. The only blood cells that have a nucleus are the _____.
- c. The _____ are not real cells but fragments of cells.
- d. The _____ play an important role in immunity.
- e. The _____ are important for the coagulation of blood.
- f. The _____ are responsible for the transportation of oxygen and carbon dioxide.

7. What is the difference between an antigen and an antibody?

8. Name the three antigens that can be present on the surface of a red blood cell.

9. Name the three antibodies that can be present in the blood plasma (in relation to the blood types). _____
10. The antigens present at the surface of the red blood cells determine the blood type of a person. With the ABO and Rhesus systems, what are the eight possible blood types?

11. Complete the following table. Write the blood types, the antigens present at the surface of the red blood cells and the antigens present in the blood.

Blood types	Antigens present on red blood cells	Antibodies present in the blood
 _____		
 _____		
 _____		
 _____		
 _____		
 _____		
 _____		
 _____		

 = antigen A
  = antigen B
  = Rhesus factor

12. Complete the following table for blood compatibility (indicate with a X when it is compatible).

		Donor							
		A+	A-	B+	B-	AB+	AB-	O+	O-
Recipient	A+								
	A-								
	B+								
	B-								
	AB+								
	AB-								
	O+								
	O-								

13. To which blood type belongs a person who can give its blood to any recipient?
Explain your answer.

14. To which blood type belongs a person who can receive blood from any blood type?
Explain your answer.

15. You ask a person with an O- blood type to give blood and the person answers that there is not point for her to give blood because there is only 7% of O- blood type in Québec. What can you tell this person to make her change her mind?

16. The active ingredient in Aspirine is acetylsalicylic acid. This substance can be found in the bark of white willows but can be synthesized in laboratories since the end of the 19e century. This substance is known for its efficiency to reduce pain and fever. We have also discovered that it acts on the platelets and reduce their efficiency to coagulate blood. Why do you think we ask people not to take aspirin before undergoing surgery?
