

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Blood Typing Internet Lesson

Directions: Answer the questions below by visiting the following website.

<https://educationalgames.nobelprize.org/educational/medicine/landsteiner/readmore.html>

1. What is another term for AGGLUTINATION? \_\_\_\_\_
2. What can happen to blood that can have fatal consequences? \_\_\_\_\_  
\_\_\_\_\_
3. Which award did Karl Landsteiner win for his blood discoveries? \_\_\_\_\_

### What is blood made up of?

4. How much blood is inside the average human body? \_\_\_\_\_
5. Describe the components of blood:
  - a. RBCs: \_\_\_\_\_
  - b. WBCs: \_\_\_\_\_
  - c. Platelets: \_\_\_\_\_
  - d. Plasma: \_\_\_\_\_

### What are the different blood groups?

6. a. Where are antigens located? \_\_\_\_\_ b. Antibodies? \_\_\_\_\_
7. CIRCLE ONE - True or False: Not all blood groups are compatible with each other.
8. What happens if you mix incompatible blood types? \_\_\_\_\_

### ABO blood grouping system

9. Fill in the blood type table below by reading the blood group descriptions.

Blood Group	Antigens on RBCs	Antibodies in your plasma
Group A		
Group B		
Group AB		
Group O		

### Rh factor blood grouping system

10. Circle one: Rh is a type of antigen/antibody.
11. a. What are people called if they possess the Rh factor? \_\_\_\_\_  
b. If they don't have the Rh factor? \_\_\_\_\_
12. How is it possible for an Rh- person to eventually become Rh+? \_\_\_\_\_  
\_\_\_\_\_
13. Examine the picture: a. Can an Rh+ person receive Rh+ blood? \_\_\_\_\_ b. Rh- blood? \_\_\_\_\_
14. Examine the picture: a. Can an Rh- person receive Rh+ blood? \_\_\_\_\_ b. Rh- blood? \_\_\_\_\_

### Blood Group Notation

15. How many different blood type and Rh type combinations exist? \_\_\_\_\_

### Blood Typing – how do you find out to which blood group someone belongs?

16. Summarize (in your own words) the three steps to find out which blood type a person belongs to.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

### What is happening when the blood clumps or agglutinates?

17. Why is clumping/agglutination dangerous? \_\_\_\_\_

18. a. What binds with the A antigen? \_\_\_\_\_ b. B antigen? . \_\_\_\_\_

### Blood transfusions – who can receive from whom?

19. Examine the blood group chart to answer the following questions.

- a. Which blood type can be donated to anyone? \_\_\_\_\_
- b. Which person can receive blood from anyone? \_\_\_\_\_
- c. Which blood type has no antibodies in blood plasma? \_\_\_\_\_
- d. Which blood type has both A and B antibodies in blood plasma? \_\_\_\_\_
- e. Which is the only blood type that can receive only 1 type of blood? \_\_\_\_\_

Click through the following tutorials (you don't need to take notes - just see how to determine what type of blood someone has)

<https://educationalgames.nobelprize.org/educational/medicine/bloodtypinggame/1.html>

<https://educationalgames.nobelprize.org/educational/medicine/bloodtypinggame/2.html>

At the top of the initial page, click on NEW GAME! Then click PLAY THE BLOOD TYPING GAME. Click PROCEED, then click on QUICK GAME- SAME PATIENTS

### Green Haired Male

20. Start with the green haired male. Inject the needle into his arm to draw his blood. Then insert his blood into the 3 test tubes.

Examine the results. What is the blood type of the green haired male? (Circle one) A+ A- B+ B- AB+ AB- O+ O-

21. Which blood type can you give him (circle two)? A+ A- B+ B- AB+ AB- O+ O-

### Purple Haired Female

22. Next, click on the purple haired female. Inject the needle into his arm to draw her blood. Then insert her blood into the 3 test

tubes. Examine the results. What is the blood type of the purple haired female? (Circle one) A+ A- B+ B- AB+ AB- O+ O-

23. Which blood type can you give him (circle four)? A+ A- B+ B- AB+ AB- O+ O-

### Red Haired Male

24. Now, click the red haired male. Inject the needle into his arm to draw her blood. Then insert his blood into the 3 test tubes.

Examine the results. What is the blood type of the red haired male? (Circle one)A+ A- B+ B- AB+ AB- O+ O-

25. Which blood type can you give her (circle one)?A+ A- B+ B- AB+ AB- O+ O-

**Results:** 26. What were your results? \_\_\_\_\_ out of 5 blood drops.