



SfS Away from the Classroom!

SCIENCE
FROM SCIENTISTS

AP06: Blood Typing (Recommended for Grades 6-8)

Please use the following resources to learn about Blood Typing.

Watch these Videos:

<https://www.youtube.com/watch?v=xfZhb6lmxjk> and <https://www.youtube.com/watch?v=ttjn1jVACk8>

Answer these questions:

- What are the 4 blood types?
- Which parent determines the blood type of a child?
- Why is it important to match a blood type when giving a blood transfusion?

Activities:

You will need:

<ul style="list-style-type: none">• 26 cups (6 each for blood types A, B and AB, 7 for type O) cups can be rinsed and reused• Water	<ul style="list-style-type: none">• Blue food coloring or paint• Red food coloring or paint• pencil and paper to record data
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Follow these directions to test blood type compatibility

1. Fill cups halfway with water
2. Add red coloring to six cups. These cups will represent Type A blood.
3. Add blue coloring to six cups. These cups will represent Type B blood.
4. Add blue and red coloring to six cups to make a purplish color. These cups will represent Type AB blood.
5. Leave only water in the last seven cups. These cups will represent blood Type O.
6. Pour the liquid of a red "A" blood type cup into another one of the "A" blood type cups.
 - a. If the color in the cup changes then the blood types are not compatible, if the color does not change then they are compatible.
7. Use the table below to record your results.
8. Repeat this step pouring another cup of Type A liquid into the cup of Type B liquid, then another cup of Type A liquid into the cup of Type AB liquid, and then another cup of Type A liquid into a cup of Type O liquid. Record your results.
9. Repeat steps 6, 7 and 8 with the liquid in Type B cups, Type AB cups, and Type O cups.



Blood mixes	Does the color in the second cup change?	Can the first blood type be a donor to the second?
A → A		
A → B		
A → AB		
A → O		
B → B		
B → AB		
B → O		
AB → AB		
AB → O		
O → A		
O → B		
O → AB		
O → O		

Test your new knowledge on blood types and transfusions by playing “the blood typing game”

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

Make observations & use Claims, Evidence, and Reasoning!

- Claim:** If you have Type AB blood, you can receive blood from a person with any other blood type. (Type AB is called the universal acceptor of blood).

 - Evidence:**
 - Reasoning:**
- Claim:** If you have Type O blood, you can give blood to anybody with any blood type. (Type O is called the universal donor of blood).

 - Evidence:**
 - Reasoning:**

