

BLOOD TYPING: AN EASY WAY TO SEE WHO CAN DONATE TO WHOM!

Have you ever wondered how doctors know which blood types can be given to which people in a hospital? In this activity we will simulate blood transfusions in order to gain an understanding of which blood types may be received from /donated to other types.

1. Take 4 plastic cups and label each cup with one blood type. One cup will be A, the second B, the third AB, and the fourth O. You will need one glass to use when “mixing the blood.”
2. Fill each cup half full of water.
3. Using food coloring, tint the cups as follows:
 - a. Cup A- 5 drops of red coloring
 - b. Cup B- 5 drops of blue coloring
 - c. Cup AB- 5 drops of red and 3 drops of blue coloring
 - d. Cup O- NO COLORING- leave clear.
4. In order to determine which blood types can safely donate to/receive from, we are going to mix drops of water together.
5. THINK OF IT THIS WAY: If a color can receive another color with a color change, then it is a SAFE transfusion. If the color changes, it is UNSAFE.
6. Place a small amount of “type A blood” (water from the red cup) into the glass.
7. Carefully add another “blood type” (like water from the blue cup) into the glass a few drops at a time. Watch for color changes. REMEMBER: the “blood type” you are adding is being “donated.”
8. Record your answer. (Yes, if it is safe: meaning no color change. No, if it is not safe: meaning color change)
9. Rinse the glass and continue performing the transfusions until all the combinations are done.
10. Answer the questions provided.

QUESTIONS:

1. What blood types can TYPE A blood:
 - a. receive? A and O
 - b. Donate to? A and AB
2. What blood types can TYPE B blood:
 - a. receive? B and O

- b. Donate to? B and AB
- 3. What blood types can TYPE AB blood:
 - a. receive? all
 - b. Donate to? AB
- 4. What blood types can TYPE O blood:
 - a. receive? O
 - b. Donate to? all
- 5. Which blood type can give blood to ALL other blood types and thus is called the UNIVERSAL DONOR? O
- 6. Which blood type can receive blood from ALL other blood types and thus is called the UNIVERSAL RECIPIENT? AB

RECEIVING

Type A (red) Type B (blue) Type AB (purple) Type O (clear)

Type A	Yes	No	Yes	no
Type B	No	Yes	Yes	no
Type AB	No	No	Yes	no
Type O	Yes	Yes	Yes	yes