

Forensics

Lesson: April 6th

Learning Target:

Students will be able to understand how blood typings work and how those blood types can be used as evidence in a crime investigation.

Lesson Activity:

Directions: Watch the video from Crash Course.

Link(s): [True Blood: Crash Course](#)

Click on the following link and read about blood typing:

[Article](#)

Practice

You will use the information from the activity on slide 3 to answer the following questions.

Practice Questions

1. Following a motor vehicle accident, a patient is rushed to the emergency department with multiple traumatic injuries, causing severe bleeding. The patient's condition is critical, and there is no time for determining his blood type. What type of blood is transfused, and why?
2. In preparation for a scheduled surgery, a patient visits the hospital lab for a blood draw. The technician collects a blood sample and performs a test to determine its type. She places a sample of the patient's blood in two wells. To the first well she adds anti-A antibody. To the second she adds anti-B antibody. Both samples visibly agglutinate. Has the technician made an error, or is this a normal response? If normal, what blood type does this indicate?

Answer Key

Once you have completed the practice questions check with the work.

1. In emergency situations, blood type O- will be infused until cross matching can be done. Blood type O- is called the universal donor blood because the erythrocytes have neither A nor B antigens on their surface, and the Rh factor is negative.
2. The lab technician has not made an error. Blood type AB has both A and B surface antigens, and neither anti-A nor anti-B antibodies circulating in the plasma. When anti-A antibodies (added to the first well) contact A antigens on AB erythrocytes, they will cause agglutination. Similarly, when anti-B antibodies contact B antigens on AB erythrocytes, they will cause agglutination.

Additional Practice

Read the following about blood types. [Blood Type Reading](#)