

Blood Grouping

This activity takes 15 mins plus an introduction

Intro:

This activity introduces the concept of the universal donor and the universal recipient. The activity concentrates on blood grouping and doesn't include rhesus status but this could be covered in the introduction.

The science:

Red blood cells are covered in antigens which determine a person's blood group. Blood group A expresses one type, blood group B another type and AB expresses both types. Blood group O does not have any antigens and this is what makes O the universal donor. As blood group AB expresses both antigens, this means an AB person can receive a blood transfusion from all blood groups, making them universal recipients. Whether a person is Rh -ve or Rh +ve is dependent on whether the red blood cells also express the D antigen.

What you will need:

Test tubes (x16: 4 labelled A, 4 labelled B, 4 labelled AB and 4 labelled O)

Water

Water + red colouring

Water + blue colouring

Water + purple colouring

Pasteur Pipettes (x4)

Chart

Instructions:

Fill the test tube labelled A with red water, B with blue water, AB with purple water and O with plain water. Pipette a few drops of test tube A into each of the other tubes and record if there was a change in colour. Repeat for B, AB & O and record the results in the chart.



Blood Grouping Chart



Recipient \ Donor	A	B	AB	O
A				
B				
AB				
O				

- ✓ Tick the boxes of the test tubes that stayed the same colour
- ✗ Cross the boxes of the test tubes that changed colour