

Blood

Learning Objective

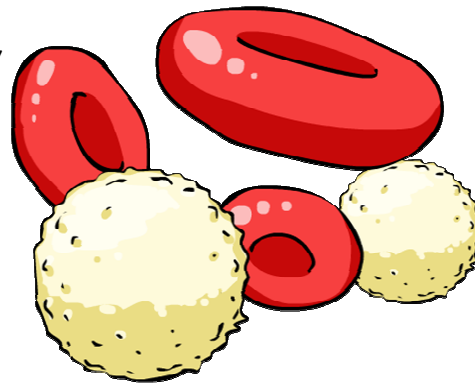
I can describe the functions of blood and blood vessels.

Blood

Blood is made up of different components. Some of the main components of blood are **red blood cells**, **white blood cells** and **plasma**.

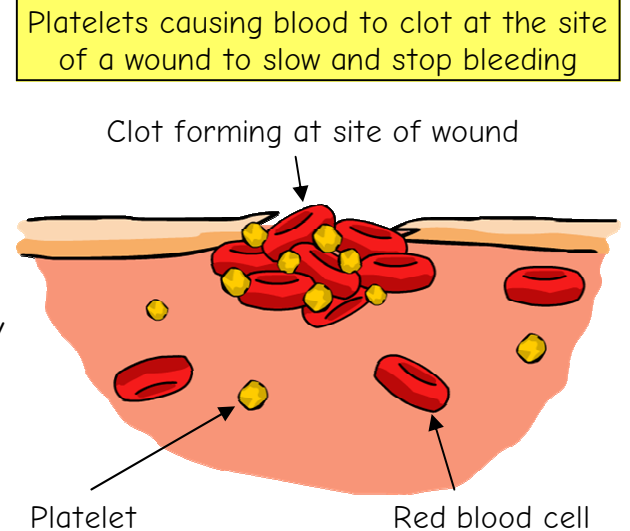
Red blood cells carry **oxygen**, which is needed by every cell in the body. They absorb oxygen in the **lungs** and release it as they pass through the body. Red blood cells contain a chemical called **haemoglobin** which gives blood its deep red colour.

White blood cells are part of the body's **immune system**. They attack and **destroy** any foreign material which could threaten us, such as infectious **viruses** and **bacteria**. The circulatory system allows white blood cells to travel wherever they are needed in the body.



Red blood cells carry oxygen.
White blood cells fight infection.

Platelets are broken pieces of cells with an important function. They prevent or stop bleeding by causing blood to **clot**, or form into a gel, at the site of a wound. The circulatory system allows platelets to travel wherever they are needed.



Plasma

Blood plasma is the liquid which contains all of the other components of blood. It is mostly composed of **water** and is pale yellow in colour. Plasma absorbs the waste products from cells, especially **carbon dioxide**, which then leaves the body through the lungs.

Activity

You will need a protractor for this activity. Look at the diagram on the following page. In your own words, describe the different components of blood. Next, complete the **pie chart**. Calculate the size of the angle needed for each sector of the pie chart by using the following formula:

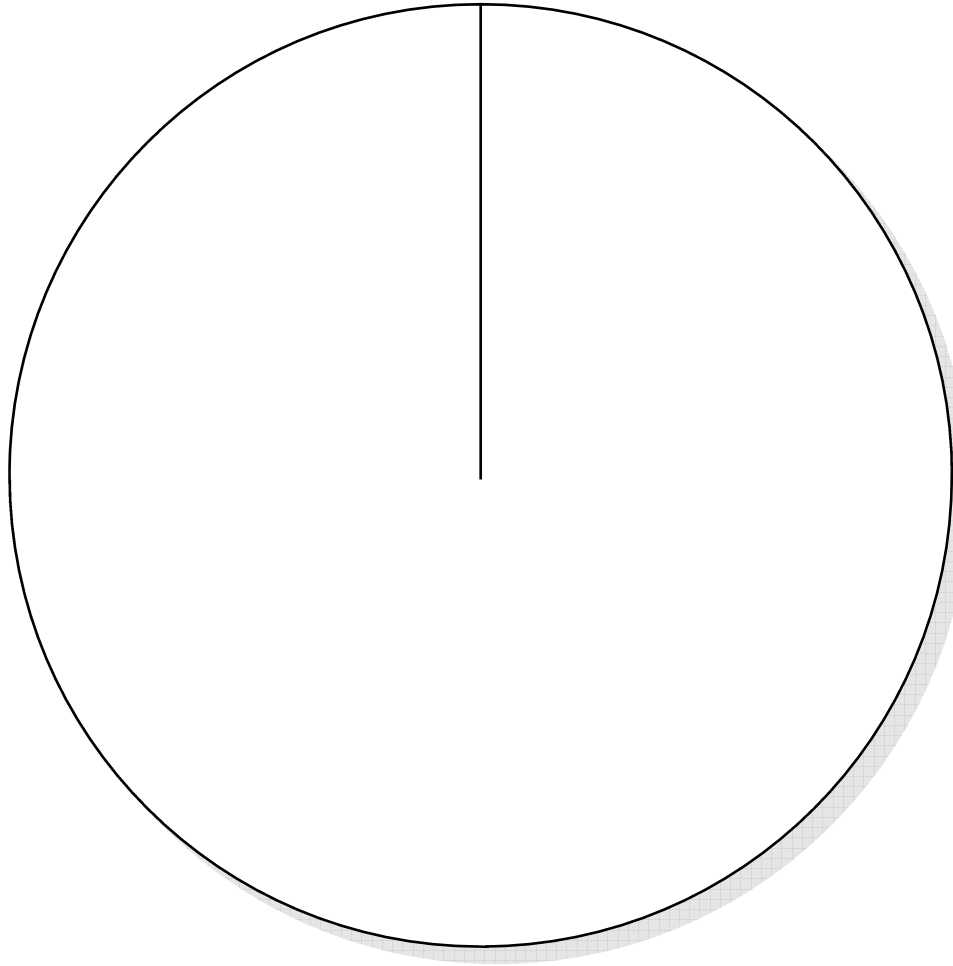
$$\text{Percentage} \div 100 \times 360 = \text{size of angle in degrees}$$

Draw the 3 different sectors on the pie chart. Colour them in and label them.

Pie chart showing the composition of blood by volume

Red blood cells
45% by volume

Blood plasma
54% by volume



White blood cells and platelets
1% by volume

White blood cells

Platelets
