

Blood and Organs

Functions of the Blood:

- Blood has four main components:
 - Plasma, platelets, red blood cells and white blood cells.

Plasma:

- Plasma is the pale yellow liquid which carries just about everything that needs transporting around your body:
- Red and white blood cells and platelets.
- Digested food products from the gut to all over the body.
- Carbon dioxide from the body cells to the lungs.
- Urea from the liver to the kidneys.
- Hormones and heat energy.

Platelets:

- When you damage a blood vessel, platelets clump together to plug up the damaged area.
- This is known as blood clotting. Blood clots stop you losing blood and prevent microorganisms from entering the wound.
- In a clot, platelets are held together by a mesh of a protein called fibrin.

Red Blood Cells:

- They transport oxygen from the lungs to all the cells in the body.
- Red blood cells are small and have a biconcave shape to give a large surface area for absorbing and releasing oxygen.
- They contain haemoglobin, which is what gives blood its colour. In the lungs haemoglobin reacts with oxygen to become oxyhaemoglobin. In body tissues the reverse reaction happens.
- Red blood cells don't have a nucleus – this allows more room for haemoglobin, meaning they can carry more oxygen.

White Blood Cells and Immunity:

The Immune System:

- Pathogens are microorganisms that cause disease.
- Once pathogens have entered your body they'll reproduce rapidly unless they're destroyed. White blood cells do this.
- There are two types of white blood cells; phagocytes and lymphocytes.