The Circulatory System

Year 6

Knowing More, Remembering More

Remembering previous learning

What is digestion? Digestion is the breaking down of larger pieces of food into smaller pieces so that the body can use it for energy. It begins when food is bitten by the teeth.

What is saliva? Saliva turns smaller pieces of food into a more liquid substance so it travels smoothly down the oesophagus to the stomach.

What happens in the stomach? Food is churned and acid is added to break it down further before it passes to the small intestine.

What happens in the small intestine? Nutrients from the body are absorbed in the small intestine before passing to the large intestine.

What happens in the large intestine? Water from the remaining food is absorbed and then waste is passed to the rectum.

In this unit children will:

- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- Describe the ways in which nutrients and water are transported within animals, including humans.

Working Scientifically:

6.1 Ask relevant scientific questions and choose which enquiry type would be best suited to answer them.

6.6 Use a range of scientific equipment to make systematic and careful observations with increased complexity.

6.10 **Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.**

6.12 Use scientific evidence to answer questions.

6.13 Make conclusions based on scientific evidence and how their own testing and findings.

6.15 **Use test results to make predictions to set up further comparative and fair tests.**

Key Learning Steps:

1. The circulatory system
2. Blood
3. The heart
4. Blood flow in the heart
5. Oxygenated and deoxygenated blood
6. Dissection of the heart

Key Scientists:

Classic

Santorio Santorio (1561-1636)

First used pendulums to measure pulse rates.

Classic

William Harvey (1578 - 1657) Discovered the circulatory system.

Contemporary

Christiaan Barnard A South African cardiac surgeon who performed the world's first human-to-human heart transplant.

Key Vocabulary:

- circulatory system
- heart
- blood vessels
- veins
- arteries
- capillaries
- red blood cells
- white blood cells
- lungs
- nutrients
- plasma
- oxygen
- heart
- atria
- ventricles
- right atrium
- left atrium
- right ventricle
- left ventricle
- oxygenated blood
- deoxygenated blood
- dissection

Knowing More, Remembering More

Knowing more in Y6

What is the function of the circulatory system? The circulatory system moves blood around the body.

What are the three main parts of the circulatory system? It is made up of the heart, blood vessels and blood.

What is the function of the veins? Veins move blood towards the heart.

What is the function of the arteries? Arteries move blood away from the heart.

What is the function of the capillaries? Capillaries are small blood vessels that link veins and arteries together.

What is the role of blood in the circulatory system? Blood transports nutrients and oxygen to all parts of the body, and takes waste, such as carbon dioxide, away.

What is plasma? Plasma contains nutrients to provide the nourishment cells need to repair themselves and grow.

Where do we get oxygen from? Oxygen is carried in red blood cells from the lungs to all cells in our body.

Why do we need white blood cells? White blood cells help to fight bacteria and viruses in our body to prevent illness.

What is the role of the heart in the circulatory system? The heart pumps blood around the body.

What are the four chambers of the heart?

What is oxygenated blood? Oxygenated blood is blood that carries lots of oxygen. It mostly travels from the heart through the arteries.

What is deoxygenated blood? Deoxygenated blood is blood that has little oxygen in it. It mostly travels from the parts of the body back to the heart, through veins.