



Science

Animals, including humans

Year 6

Autumn 2

Key Knowledge

The Human Circulatory System

Circulatory System The circulatory system is made of the heart, lungs and the blood vessels.

Heart The heart pumps the blood through blood vessels so that the food and oxygen can get to all the parts of the body.

Blood Vessels The blood vessels carry the blood around the body.

Main Types of Blood Vessels
Arteries: carry oxygenated blood from the heart to the rest of the body
Capillaries: enable the exchange of nutrients, oxygen and carbon dioxide
Veins: carry deoxygenated blood from the body to the heart

Blood Blood moves food and oxygen around the body

Healthy Lifestyle

Things humans need to be healthy

- To have a balanced diet of the right amount of different types of food and drink
- To exercise regularly
- To be hygienic

Balanced Diet Healthy, balanced diet with at least 5 portions of a variety of fruit and vegetables. You should drink 6-8 glasses of fluid each day.

Health risks that can damage the body
Smoking: it is addictive and can cause heart disease and cancer
Drugs: it is addictive and can damage the brain and cause death
Alcohol: can damage the liver, heart and stomach
Obesity: causes diabetes, heart diseases and cancer

Benefits of regular exercise

- Strengths muscles including the heart muscle
- Improves circulation
- Increases the amount of oxygen around the body
- Releases brain chemicals which help you feel calm and relax
- Strengths bones

Statutory Requirements

- Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- Describe the ways in which nutrients and water are transported within animals, including humans.

Key Vocabulary

Oxygen A colourless gas that exists in large quantities in the air. Living things need oxygen in order to live

Carbon Dioxide Gas produced when animals and humans breathe out

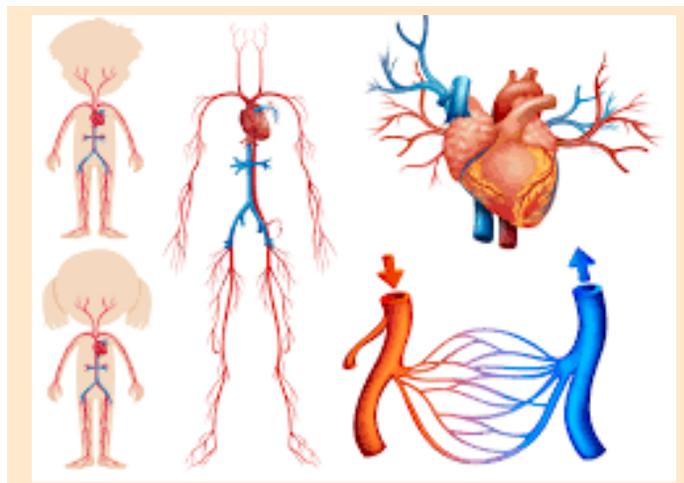
Oxygenated Enriched with oxygen

Deoxygenated Depleted of oxygen

Addictive Substance that causes you to need more and more (out of control)

Nutrients Substances that help plants and animals to grow

Pictures and Diagrams



Possible experiences

- Making a circulatory system with a pump
- Find out what causes the heart to work harder/maximise heart rates or reverse through guided meditation
- Investigate how your pulse changes with exercise and which exercise produces the fastest pulse