



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

Working Scientifically:

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using test results to make predictions to set up further comparative and fair tests
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Key Knowledge:

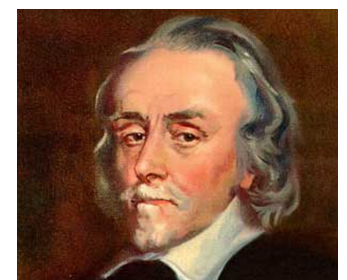
- **The Heart:** The heart is a hollow muscle. It is about the size of your fist. It is located slightly to the left of the centre of your chest. It is divided into four sections called chambers which receive blood from the body and then pump the blood back around the body.
- Human hearts have double systems – one loop sends blood to the brain and back whilst the other loop sends blood around the rest of the body.
- Arteries carry oxygenated blood away from the heart, whilst veins carry deoxygenated blood back to the heart.
- Water serves as the body's transportation system and, after oxygen, is the second most important substance for human health. It is the basis of all biological processes in the human body.

Water is mainly important for the digestive system, because it contributes to the constant supply and export of products and substances. Water acts as the main transport medium of nutrients. Water also attends heat regulation in our bodies. It takes up heat and transports it out of the body while we are transpiring.

Key Vocabulary:

- Circulatory system
heart, blood, veins, capillaries, arteries, pulse, clotting, double system, systolic, diastolic
- Heart rate, blood pressure
- Diet – balanced, vitamins, minerals, proteins, carbohydrates, sugars, fats
- Drugs – ibuprofen, paracetamol, antibiotics, caffeine, nicotine, alcohol, cannabis, cocaine, heroin
- Lifestyle – healthy, exercise, aerobic

Key Scientists:



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