



Key Vocabulary

1	Aorta	The main artery through which blood leaves your heart before it flows through the rest of your body
2	Arteries	A tube in your body that carries oxygenated blood from your heart to the rest of your body
3	Atrium	One of the chambers in your heart
4	Blood	A red fluid that is pumped by the heart and supplies the body with nutrients and oxygen
5	Blood vessels	The narrow tubes through which blood flows. Arteries, veins and capillaries are blood vessels
6	Capillaries	Tiny blood vessels in your body
7	Circulatory system	The system responsible for circulating blood through the body, that supplies nutrients and oxygen to the body and removes waste products such as carbon dioxide
8	Deoxygenated	Blood that does not contain oxygen
9	Heart	The organ in your chest that pumps the blood around your body
10	Lungs	They are two organs inside your chest which fill with air when you breathe in. They oxygenate the blood and remove carbon dioxide from it.
11	Muscles	A band of fibrous tissue that can contract and produce movement in the body.
12	Nutrients	Substances that helps plants and animals grow
13	Oxygen	A colourless gas that plants and animals need to survive
14	Pulse	The pulse is the regular beating of blood through your body. How fast or slow depends on your activity level.
15	Pulmonary artery	This pumps deoxygenated blood to the lungs
16	Respiration	Process of respiring, breathing, inhaling and exhaling air
17	Veins	A tube in your body that carries deoxygenated blood to your heart from the rest of your body
18	Ventricle	One of the chambers of the heart

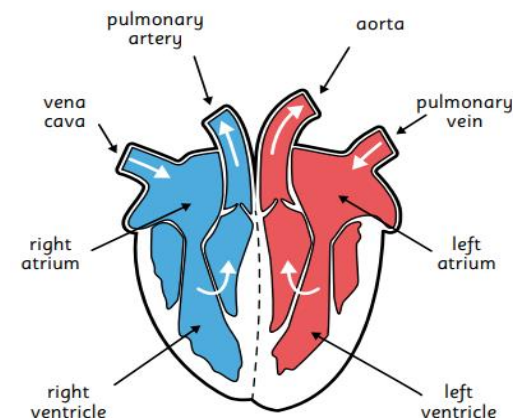
Sticky Knowledge

- 1 You can keep your body healthy by eating a balanced diet, ensuring you have good hygiene and exercising regularly.
- 2 You should avoid eating lots of unhealthy food, smoking, drinking alcohol and becoming inactive. Fatty rich foods can clog arteries and veins, preventing blood from delivering what is needed.
- 3 We absorb water and nutrients through the food we eat. The small intestine is lined with villi. Villi have veins and arteries running through them.
- 4 The blood in the arteries delivers oxygen to the intestine. Nutrients are absorbed into the blood, which are then taken away to other parts of the body.
- 5 Water is also absorbed in this way. The blood carries the water and nutrients to the parts of the body that need it.
- 6 An average-sized adult carries about 5 litres of blood
- 7 We have to exercise our heart to keep it strong. Doctors advise at least 30 minutes of activity a day that gets your heart rate up!
- 8 The heart pumps all the time. It pumps more than 2.5 billion times over an average lifetime

Key Questions

- 1 Can you identify and name parts of the human circulatory system?
- 2 Can you describe the functions of the heart, blood vessels and blood?
- 3 Can you recognise the impact of diet, exercise, drugs and lifestyle on the way their body functions?
- 4 Can you describe the ways in which nutrients and water are transported within animals, including humans?
- 5 Can you different types of scientific enquires to answer questions, including recognising and controlling variables where necessary?
- 6 Can you take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate?

The Human Heart



**Prior Vocabulary**

1	Carbon Dioxide	A gas produced by animals and people breathing out.
2	Offspring	A living thing's child/children
3	Survival	Continuing to live or exist.
4	Hygiene	Conditions that maintain health and prevent disease
5	Reproduction	The production of offspring.
6	Endoskeleton	An internal skeleton (such as humans)
7	Exoskeleton	A rigid external covering for the body (such as beetles)
8	Chromosomes	A structure found in most living cells which carry genetic information
9	Puberty	The transition between childhood and adulthood.
10	Menstrual cycle	A monthly cycle a woman's body goes through in preparation for the possibility of pregnancy.
11	Enzymes	A substance produced by a living thing which creates a chemical reaction.
12	Gastric acid	Substance produced by the walls of the stomach to breakdown food.

Prior Knowledge

- 1 There are four different types of teeth: incisors, canines, premolars and molars.
- 2 The main parts of the digestive system are the mouth, oesophagus, stomach, small intestines, large intestines and rectum
- 3 A life cycle is the series of changes in the life of a living thing and includes these basic stages: birth, growth, reproduction and death.
- 4 Mammals' life cycles include the stages: embryo, baby, adolescent and adult.
- 5 Good hygiene is also important in preventing infections and illnesses.
- 6 Humans have to get nutrition from what they eat. It is important to have a balanced diet made up of the main food groups, including proteins, carbohydrates, fruit and vegetables, dairy products and alternatives, and fats and spreads.

Future Learning

- KS3
- You will learn more about the importance of a healthy diet and how different foods are absorbed and used in the human body
- Gas exchange systems in the lungs of the human body.
- The effects of recreational drugs including substance misuse.

**Villi**