



Knowledge Organiser

Subject: Science

Topic: Healthy Bodies

Year: 6

Key Knowledge

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

Common misconceptions

- Your heart is on the left side of your chest.
- The heart makes blood.
- The blood travels in one loop from the heart to the lungs and around the body.
- When we exercise, our heart beats faster to work the muscles more.
- Some blood in our bodies is blue and some blood is red.
- We just eat food for energy.
- All fat is bad for you.
- All dairy is good for you.
- Protein is good for you, so you can eat as much as you want.
- Foods only contain fat if you can see it.
- All drugs are bad for you.

Key Concepts

Structure and Function of the Circulatory System

Identify and describe the main parts of the human circulatory system, including the heart, blood vessels, and blood, and explain their functions.

Nutrient and Water Transport in the Body

Describe how nutrients, water, and oxygen are transported within the body to support the functioning of muscles and other organs, and how waste products are carried back for removal.

Impact of Lifestyle on Body Functioning

Recognize the effects of diet, exercise, drugs, and lifestyle choices on the body, including their influence on the heart, lungs, and overall health.

Key Learning

- The heart pumps blood in the blood vessels around to the lungs. Oxygen goes into the blood and carbon dioxide is removed. The blood goes back to the heart and is then pumped around the body.
- Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed.
- As they are used, they produce carbon dioxide and other waste products. Carbon dioxide is carried by the blood back to the heart and then the cycle starts again as it is transported back to the lungs to be removed from the body. This is the human circulatory system.
- Diet, exercise, drugs and lifestyle have an impact on the way the body functions. They can affect how well our heart and lungs work, how likely we are to suffer from conditions such as diabetes, how clearly we think, and generally how fit and well we feel.
- Some conditions are caused by deficiencies in our diet – for example, lack of vitamins.

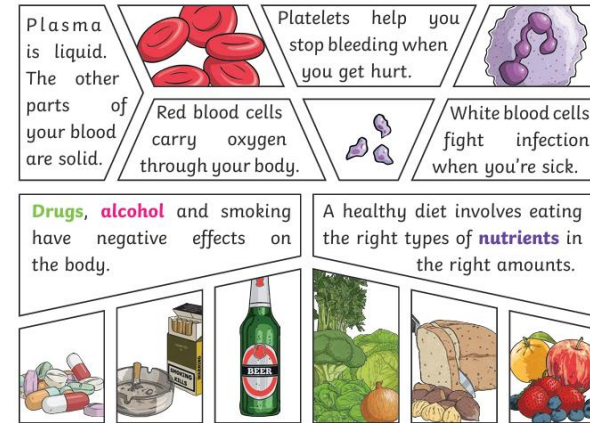
Disciplinary Skills

- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Reporting and presenting findings from enquiries, taking measurements, using a range of scientific equipment, with increasing accuracy and precision.

The Big Question

What is the importance of keeping our bodies healthy?

Key Vocabulary	
blood vessels	The tube-like structures that carry blood through the tissues and organs. Veins, arteries and capillaries are the three types of blood vessels.
oxygenated blood	Oxygenated blood has more oxygen. It is pumped from the heart to the rest of the body.
deoxygenated blood	Deoxygenated blood is blood where most of the oxygen has already been transferred to the rest of the body.
drug	A substance containing natural or man-made chemicals that has an effect on your body when it enters your system.
alcohol	A drug produced from grains, fruits or vegetables when they are put through a process called fermentation.
nutrients	Substances that animals need to stay alive and healthy.



Regular exercise:

- strengthens muscles including the heart muscle;
- improves circulation;
- increases the amount of oxygen around the body;
- releases brain chemicals which help you feel calm and relaxed;
- helps you sleep more easily;
- strengthens bones.

It can even help to stop us from getting ill.



Linking Thinking Across Our Learning Journey						
Early Years	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
	Animals, including humans Identify and name animals including fish, amphibians, reptiles, birds and mammals. Identify and name animals that are carnivores, herbivores and omnivores.	Animals, including humans Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Animals, including humans Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.	Animals, including humans Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions.	Animals, including humans Describe the changes as humans develop to old age.	Animals, including humans