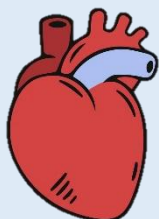


SCIENCE

How responsible are we for our own health?



Long-term Memory Knowledge:

The heart pumps blood in the blood vessels around the body.

In the lungs, oxygen goes into the blood and carbon dioxide is removed.

Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed.

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.

Diet, exercise, drugs and lifestyle have an impact on the way our bodies function: a balance in each is needed to maintain a healthy lifestyle.

Repeat measurements can give greater accuracy, reducing the possibility of random errors.

Key Vocabulary

| | |
|---------------------------|---|
| circulatory system | made up of the heart, blood and blood vessels; the body's delivery system: delivering nutrients, water, and oxygen to the body's cells and carrying away wastes (e.g., carbon dioxide) that the cells produce |
| blood vessel | a tubular structure carrying blood through the tissues and organs; a vein, artery, or capillary |
| artery | A blood vessel which conveys oxygenated blood from the heart to all parts of the body |
| vein | A blood vessel which carries oxygen-depleted blood towards the heart |
| heart rate | the number of times your heart beats in a minute |
| nutrient | a substance that provides nourishment essential for the maintenance of life and for growth |

| | |
|--------------------|---|
| capillary | tiny blood vessels that connect veins and arteries |
| heart valve | a flap that ensures blood flows in one direction only |
| ventricle | a main chamber in the heart |
| atrium | an upper cavity in the heart |
| clotting | When blood is exposed to the air, it coagulates to stop excessive bleeding. |

Progression in Resources:

Heart Rate Monitor
Oximeter

Relevance

| | |
|-------------------|--|
| Now | Children understand there is a connection between our diet, exercise and lifestyle and our health; they begin to take responsibility for making healthier choices. |
| Future | As adults, children recognise what a healthy lifestyle consists of and can make appropriate choices for themselves and others in their family; they understand what their body feels like when it is healthy and can recognise changes that may require medical treatment. |
| Aspiration | A career in health and fitness is chosen – doctor, nutritionist, personal trainer, etc. or work in research, investigating why some people's bodies react differently to the same lifestyles, for example. |

National Curriculum Links:

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 their bodies function.

Describe the ways in which nutrients and water are transported within animals, including humans.

Essential Prior Learning:

Our heart pumps our blood through our blood vessels in order to keep us alive.

Humans need to eat in order to get the nutrients we need as we cannot make our own food.

Exercise is an important part of a healthy lifestyle and there are different forms of exercise.

Progression in Skill:

Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat recordings when appropriate.

Report and present 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 presentation.