

Science

All children – regardless of gender, starting point or background – will have the opportunity to engage with a high-quality science education. They will be equipped with the knowledge, skills and vocabulary to understand how science can be used to explain what is occurring, predict how things will behave and analyse caused. We intend to inspire a sense of enjoyment and curiosity about science.

Animals Including Humans

Spring 2

Prior Knowledge

Year 2 - Animals Including Humans

Year 4 - The Digestive System.

New Knowledge:

- The circulatory system is made up of three main parts, the heart, blood vessels, and blood.
- The heart is a muscle. Its function is to keep all the blood in the circulatory system flowing.
- The heart first pumps blood to the lungs. In the lungs, the blood picks up oxygen from the air that has been breathed in, and carbon dioxide is removed.
- The blood carrying oxygen (oxygenated) then travels back to your heart. The heart then pushes the blood all around the body to the various organs and tissues.
- This means that blood goes through the heart twice on every loop- so it is called a double circulatory system.
- The blood (deoxygenated) travels back to the heart and it all begins again.
- Blood travels through a network of blood vessels which is a series of tubes inside the body. The function of the blood vessels is to carry blood to everywhere in your body.
- The function of blood is to carry oxygen and nutrients to all parts of the body so they can keep working. Blood also carries carbon dioxide and other waste materials to the lungs, kidneys, and digestive system to be removed from the body. Blood also fights infections and carries hormones around the body.
- The circulatory system transports water and nutrients around the body.
- Nutrients and water removed from food and drinks in the digestive system, and oxygen from the air breathed in, are transported in the blood in the blood vessels 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 the cycle begins 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. 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 e.g. lack of vitamins.
- A drug is something that you put into your body that has an effect on your body. The effect can be good or bad.
- Drugs can be medicines that are helping your body, but they can also be substances such as alcohol or chemicals found in cigarettes that have a very bad effect on your body.

Key Vocabulary:

Circulatory System

Heart

Pulse

Rate

Pumps

Blood

Blood vessels

Artery

Veins

Transported

Lungs

Oxygen

Carbon Dioxide