

Science Y6 Spring 2 – The Circulation

In this unit the children will build on their learning from KS1 about the main body parts and internal organs to explore and answer questions that help them to understand how the circulatory system enables the body to function. They will learn how to keep their bodies healthy and how their bodies might be damaged.

In this unit children will:

- 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.
- Find out how their bodies might be damaged through some drugs and harmful substances.
- Explore the work of scientists and scientific research about the relationship between diet, Exercise, drugs, lifestyle and health.

Prior Learning

F.S Know that there are similarities and differences between materials

Y1 Classification of animals

Y2 Basic needs of animal for survival

Y3 Animals get nutrition from what they eat

Y4 Basic parts of the digestive system

Y5 Changes as humans develop to old age

Cross Curricular Links

D&T – Making healthy savoury dishes

Key Vocabulary

Aorta– The main artery through which blood leaves your heart before it flows to the rest of your body.

Arteries – A tube in your body that carries oxygenated blood from your heart to the rest of your body.

Atrium – One of the chambers in your heart.

Blood vessels – Narrow tubes through which your blood flows.

Circulatory system– System responsible for circulating blood through the body, that supplies nutrients and oxygen to the body and removes waste products such as carbon dioxide.

Oxygenated– Blood that contains oxygen.

Respiration – Process of respiring; breathing; inhaling and exhaling air.

Vena Cava – Large vein through which deoxygenated blood reaches your heart.

Key Knowledge

- This is the process of the circulatory system - Arteries carry oxygenated blood from the heart to the rest of the body. Veins carry deoxygenated blood from the body to the heart. Nutrients, oxygen and carbon dioxide are exchanged via the capillaries.
- The heart is composed of 4 chambers – the right atrium, the right ventricle, the left atrium and the left ventricle.
- How often your heart pumps is called your pulse.
- Some choices can harm the circulatory system. These include smoking and drinking alcohol. Tobacco can cause short term effects such as shortness of breath, difficulty sleeping and loss of taste. Long term effects include lung disease, cancer and death. Alcohol can cause short term effects such as addiction and loss of control and long term effects such as organ damage, cancer and death.



- Exercise is important because it tones our muscles and reduces fat. It increases your fitness and makes you feel physically and mentally healthier. It strengthens your heart, improves lung function and improves your skin.

Key Questions

- What type of blood do the veins carry?
- What activities would increase your pulse rate the most?
- What is the function of the blood?
- What are arteries, veins and capillaries all examples of?