



Subject	Science	Theme	Animals Including Humans	Term	Summer
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What should I already know?
<ul style="list-style-type: none"> 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 that humans and some other animals have skeletons and muscles for support, protection and movement how to describe the simple functions of the basic parts of the digestive system in humans

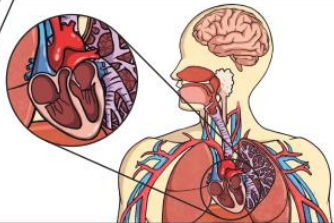
Working Scientifically
Collect and compare data presented on food packaging.
Collect results and measure a pulse accurately at different stages of physical activity, ensuring results are collected as part of a fair test.

Enquiries and Conclusions
- Use information from food packaging to investigate and evaluate the nutritional content of a range of food and draw conclusions about their impact on the human body.
- Take a pulse as an indicator of the role of the heart in the human circulatory system. Monitor and measure the changes in relation to different physical activities and conclude the relationship between exercise and a healthy heart.

What should I know by the end of the unit?
<p>- The human circulatory system is made up of the heart, blood and blood vessels. - Blood vessels include arteries, through which oxygen, nutrients and water are carried by red blood cells to the cells and organs of the body. Veins carry waste products such as carbon dioxide; capillaries are the smallest blood vessels and is where the exchange of these products takes place. - The heart is a strong muscular organ which acts like a pump. It is made up of four chambers and contains valves which ensure that the blood can only flow one way. This is so oxygenated blood does not mix with deoxygenated blood. The largest artery comes directly from the heart and is known as the aorta.</p> <p>- The body and its organs needs the right balance of nutrients to stay healthy and alive. Nutrients are obtained from food and enter the blood stream through the small intestine.</p> <p>- Regular exercise strengthens muscles, including those of the heart, and improves circulation – increasing the amount of oxygen which travels around the body. - Some lifestyle choices such as a poor diet, drugs and alcohol can have a negative impact on the body. Smoking contains the drug nicotine which could lead to a smoking habit which will damage the lungs, reducing the amount of oxygen entering the blood. A continued poor diet could block arteries and damage the heart, making it difficult to pump blood to where it is needed in the body.</p>

The **heart** pumps blood to the lungs to get oxygen.

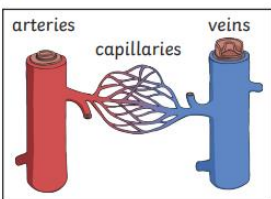
It then pumps this **oxygenated blood** around the body.



Capillaries are the smallest **blood vessels** in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.

Arteries carry **oxygenated blood** away from the **heart**.

Veins carry **deoxygenated blood** toward the **heart**.



Key Vocabulary	
Aorta	The largest artery in the body
Arteries	Blood vessels which carry oxygen, nutrients and water around the body
Blood vessels	Channels through which blood travels. They include arteries, veins and capillaries.
Capillaries	The smallest blood vessels. An exchange of products takes places through them.
Circulatory system	The system used to getting substances pumped around the body. Made up of the heart, blood and blood vessels.
Deoxygenated blood	Blood which has no oxygen in it, after being transferred to the cells and organs of the body
Drug	A substance which contains chemicals that have an effect on the body
Nutrients	Substances which humans need to stay healthy
Oxygenated blood	Blood which is rich is oxygen and is pumped from the heart to the rest of the body.
Red blood cells	Formed in the bone marrow, these carry oxygen around the body in the blood.
Veins	These blood vessels carry deoxygenated blood and waste products towards the heart.