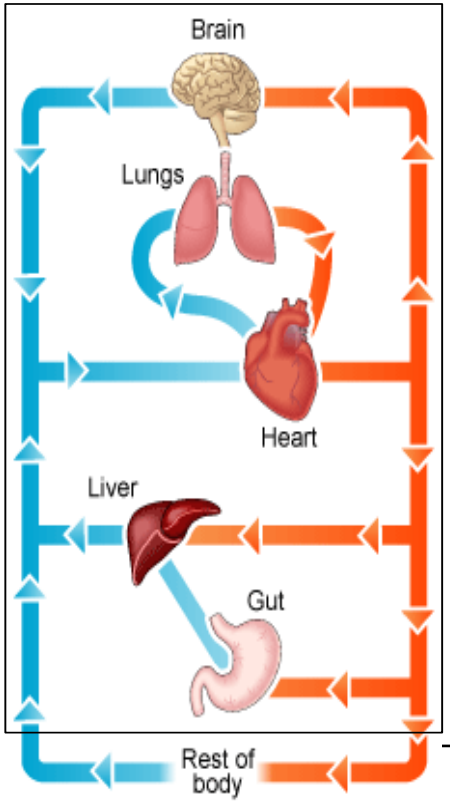
Year 6 Science

Inquiry Question: What affects the health of humans?

Animals Including Humans

Key Learning - The Circulatory System

The main parts of the circulatory system	heart, blood vessels, lungs
What does the heart do?	The heart pumps the blood through the blood vessels so that food and oxygen can get to all the parts of the body.
What do the blood vessels do?	The blood vessels carry blood around the body.
Three main blood vessels	**Arteries** carry blood away from the heart. **Capillaries** enable the actual exchange of energy between the blood and the tissues. **Veins** carry blood towards the heart.
What does the blood do in humans and animals?	Blood transports the necessary nutrients from food and oxygen around the body
What do the lungs do?	The lungs give the blood oxygen to take around the body. When the blood enters the lungs the alveoli (air sacs) give oxygen to the blood and then they get rid of the carbon dioxide.

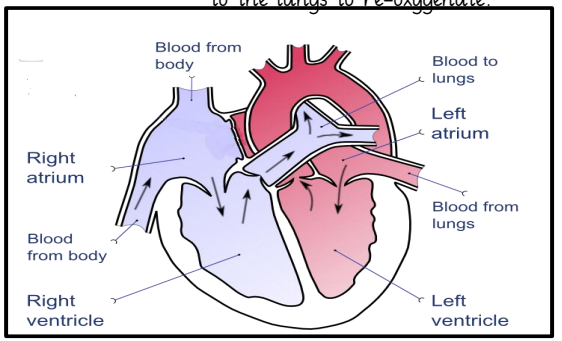


Key Learning - Healthy Lifestyle

Things humans need to be healthy	To have a balanced diet of the right amount of different types of food and drink To exercise regularly To have a healthy diet To be hygienic To have the right amount of rest To have a healthy lifestyle
Health risks that can damage the body	Smoking, drugs, alcohol, obesity
Dangers of smoking	Addictive Can cause heart disease and cancer
Dangers of drugs	Addictive Can damage the brain or cause death
Dangers of alcohol	Ok in small amounts for adults Can damage the liver, heart and stomach
Dangers of obesity	Can cause heart disease Can lead to cancer

oxygen	an element found in air
circulatory	to travel in a circle or circuit
system	the process in which something is done in an organised way

Oxygenated blood	Oxygenated blood comes out the left side of the heart ready to deliver it around the body.
Deoxygenated blood	Blood that has no oxygen in it enters the right side of the heart and is the pumped to the lungs to re-oxygenate.



In Year 5 you learnt:
- The life cycle of different living things, e.g. Mammal, amphibian, insect bird.
- The differences between different life cycles.
- The process of reproduction in plants.
- The process of reproduction in animals

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Working Scientifically – Animals Including Humans

Key Vocabulary and Phrases	
Ask questions	Use the question words **What, where, when why, how**
Compare and contrast	Look at two or more results and describe similarities and differences and discuss the reasons for these.
Observe and explain	Be able to observe changes and explain the reasons for these using scientific vocabulary.
Prediction	Predict the how the different exercises will effect the heart rate.
Record data	Drawings, scientific diagrams, photos, tables, bar graphs and line graph, writing and numbers are ways to show what I have found out. Measuring heart rate and weight.
Reporting and presenting findings	Giving reasons, explaining causes and relationships, explaining results and trusting its accuracy. A scientific explanation of my findings and conclusions.

What I could investigate or research

How does exercise impact the heart?
Which different types of exercise increase pulse rate and why?

How quickly does your pulse rate return to resting?

Can you explore the recovery rate for different types of people?

How much sugar is there in a can of fizzy pop?
How much sugar is included in the fizzy beverages we drink and how does this count as part of our daily calories and impact on a healthy diet?

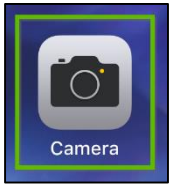
Equipment I could use

Water Tank used to measure weight of sugar in fizzy drinks

Weighing scales to weigh the sugar and compare amounts

Stop watch to measure amount of time spent on exercise

Paper, pen, pencil and photographs to observe and record what I find out.



How I could record my findings

Pictures
For EXPLORING

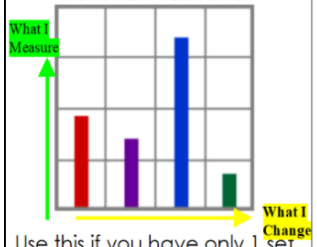
Use this if you want to tell the story of what you did or what you observed, e.g. bread going mouldy

Table
For FAIR TESTING/PATTERN SEEKING

What I Change	What I measure

Use this to record your information. You can transfer it into some of the other forms as well. It could be all numerical or words

Bar Chart
For FAIR TESTING



Use this if you have only 1 set of numerical (continuous) data and the other is words, e.g. type of material and volume of water it can hold