

Year Group	6
Term	Autumn 2
Subject	Science

Topic	Animals Including Humans
Curriculum Intent	Children will be able to identify the main parts of the human circulatory system and the functions of the parts. They will recognise the impact of diet, exercise and drugs on the way their bodies function. They will describe ways nutrients and water and transported around the body.

Key Vocabulary	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle, alcohol, smoking, drugs, plaque,
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Skills	<ul style="list-style-type: none"> • Use their science experiences to explore ideas and raise different kinds of questions. • Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions. • Choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate. • Make their own decisions about what observations to make, what measurements to use and how long to make them for. • Decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.
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Knowledge	<ul style="list-style-type: none"> • 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. <p><u>Common Misconceptions:</u> Some children may think:</p> <ul style="list-style-type: none"> • your heart is on the left side of your chest • the heart makes blood • the blood travels in one loop from the heart to the lungs and around the body • when we exercise, our heart beats faster to work the muscles more • some blood in our bodies is blue and some blood is red • we just eat food for energy • all fat is bad for you • all dairy is good for you • protein is good for you, so you can eat as much as you want • foods only contain fat if you can see it • all drugs are bad for you
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Wk	Learning Objective	Activities	Outcome
1	To identify the components of blood and describe their functions.	Mind map ideas about blood and the circulatory system. Can children write definitions of key vocabulary: artery, vein, capillary, blood, platelets, red blood cells, white blood cells, plasma, heart, circulatory system, haemoglobin. Look at glossary website to help. Watch video. Give children microscopic picture of blood. Name each part and describe its function.	Children will be able to identify the components of blood and describe their functions
2	To explore the structure and function of the human heart.	Give each child the heart photocopy, cut into several pieces. Children piece the heart together and stick in books. Show them what it should look like. Children hold up fists, showing where they think the heart is. Brainstorm ideas on the function of the heart.	Children will identify where the heart is and describe the functions of the heart.
3	To investigate the effects of exercise on heart rate.	Introduce a range of hypotheses e.g. The heart beats faster when we run. Jumping increases, the heart rate more than running. Do the children have hypotheses they could make about exercise and its effect on the heart rate?	Children will understand the impact of exercise on their heart rate.
4	To present data and draw conclusions	Look at experiment results from last week. What type of graph or chart do we think would best show these results? Line graphs are good for continuous data, showing a pattern, and bar charts are good for discrete data with different categories.	Cross curricular link to maths – children will use graphs to present data and draw conclusions.
5	To understand how to perform CPR and its effects on the heart.	Arrange for St. John's Ambulance to bring in a trainer and mannequins for the children to practise CPR.	Children understand when and how to perform CPR.
6	To be able to explain how diet and exercise affect the body.	Show children a variety of images regarding lifestyles. Which of these are necessary for a healthy lifestyle? Which ones would you not include?	Chn can discuss what might make a lifestyle more healthy or less healthy. They can interpret information about the diet and activities of different people.
7	To be able to recognise the impact of drugs and alcohol on the way bodies function.	What Are Drugs? Discuss prescription drugs, legal drugs, illegal drugs and alcohol and see what the children know about each of these terms and the effects of the different drugs. Can children explain how drugs and alcohol affect us?	Children can discuss the impact of drugs and lifestyle on the way their bodies function