
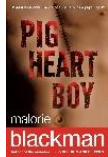





Medium-Term Planning Format		
Cohort	Year 6	
Enquiry Question (QUESTIONING)	What makes you tick?	
Enquiry Driver	Science	
Enquiry Enhancer	Design and Technology	
Main Enquiry Theme	The heart and circulatory system	
National Curriculum Objective	<p>Science:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: 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>Design and Technology (cooking and nutrition):</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	
Key Knowledge and Skills (driver)	<ul style="list-style-type: none"> Can I identify and explain the function of the organs of the human circulatory system? (heart, blood vessels, blood, blood pressure, clotting) Can I identify and explain the function of the organs of the human gaseous exchange system? (lungs, nose, throat, bronchi, bronchial tubes, diaphragm, ribs, breathing) Can I name the major organs in the human body? Can I locate the major human organs? Can I make a diagram that outlines the main parts of a body? 	
Key Knowledge and Skills (enhancer)	<ul style="list-style-type: none"> Can I talk about the importance of correct storage and handling of ingredients, using knowledge of micro-organisms? Can I create and refine recipes, including ingredients, methods, cooking times and temperatures? Can I set out to grow my own product, taking account of time required to grow different foods? Can I work within a budget? <p><i>Children will research, plan and make foods which are suitable for 'good heart health'.</i></p>	

Main Text	Pig Heart Boy by Malorie Blackman														
Main Writing Genre	Non-chronological report	<p>Children will research and apply their scientific knowledge to create an information text about the heart and the circulatory system.</p>  <p>Children will participate in debates/scenarios and will write their own argument based around smoking and on the impact of drugs on the body.</p> 													
Enquiry Hook (Questioning) [Experiences/experts]	<p>Dissect a lamb or cow heart. British Heart Foundation 'Jump Rope' sponsored skip event. First Aid workshop with St John's Ambulance.</p>														
Subsidiary Enquiries	<table border="1" data-bbox="375 1019 1385 1344"> <tr> <td>LC1</td> <td>Why is the heart so fascinating?</td> </tr> <tr> <td>LC2</td> <td>How do we know so much about the heart? What achievements were made by Christiaan Barnard and William Harvey?</td> </tr> <tr> <td>LC3</td> <td>What keeps your heart healthy?</td> </tr> <tr> <td>LC4</td> <td>What types of substances have a detrimental effect on the human heart?</td> </tr> <tr> <td>LC5</td> <td>How does exercise affect your heart?</td> </tr> <tr> <td>LC6</td> <td>Can you eat your way to a healthy heart?</td> </tr> </table>			LC1	Why is the heart so fascinating?	LC2	How do we know so much about the heart? What achievements were made by Christiaan Barnard and William Harvey?	LC3	What keeps your heart healthy?	LC4	What types of substances have a detrimental effect on the human heart?	LC5	How does exercise affect your heart?	LC6	Can you eat your way to a healthy heart?
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Reflection of Learning (SHARING)	<p>Children will plan and deliver workshops to other children in school to raise awareness of ways to maintain a healthy lifestyle and they will share their knowledge gained of basic first aid.</p>														
Potential Sticky Knowledge	<ul style="list-style-type: none"> Your heart will beat about 115,000 times each day. Your heart pumps about 2,000 gallons of blood every day. The entire trip around your body only takes blood about 20 seconds in total. Blood is what is used to transport oxygen, waste, nutrients, and more throughout the body. The heart pumps blood through 60,000 miles of blood vessels. If all the blood vessels were stretched out, then they would go around the world twice. The circulatory system includes the heart, blood vessels and blood, and is vital for fighting diseases and maintaining proper temperature. With your heart being crucial to our survival, it is important to keep it healthy with a well-balanced diet and exercise and avoiding things that can damage it like smoking. William Harvey was an English physician who was first to correctly describe blood's circulation in the body. 														

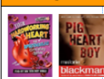
Knowledge Mat

Year 6 Knowledge Organiser: What makes you tick?

Subject Specific Vocabulary	
aorta	The two largest chambers of the heart are the right atrium and the left atrium. Blood is pushed from the atria to the ventricle.
aorta	The aorta is the main artery that carries blood away from your heart to the rest of your body.
arteries	Arteries are a type of blood vessel. They carry oxygenated blood away from the heart. In contrast, veins carry blood back to the heart. Arteries are thicker and more elastic than veins.
blood vessels	Blood vessels (arteries and capillaries) transport blood cells, nutrients, and oxygen to the tissues of the body. This also takes waste and carbon dioxide away from the tissues.
capillaries	Capillaries are very tiny blood vessels – so small that a single red blood cell can barely fit through them. They help to connect your arteries and veins.
cardiologist	A cardiologist is a doctor with special training and skills in finding, treating and preventing disease of the heart and blood vessels.
cardiovascular	The blood circulatory system (cardiovascular system) delivers oxygen and nutrients to all cells in the body.
Christian Barnard	Christian Barnard was a South African cardiac surgeon who performed the world's first highly successful heart transplant and the first one in which the recipient remained alive.
drugs	A drug is a chemical that is not food and that affects your body. Some drugs are given to you to help you to recover from illness or to help you to feel a little better in your everyday life.
pulse	Your heart has to push or pump blood through your body that you can feel a little bump in your wrist or neck over the heart beats.
ultrasound	An ultrasound machine uses sound waves to take pictures of the inside of the body.
veins	Veins are blood vessels that carry blood towards the heart.
ventricles	The ventricles are the two lower chambers in the heart.
William Harvey	He was the first doctor to accurately describe the function of the heart and the circulation of blood around the body.



Exciting Books



Sticky Knowledge about the heart and circulatory system

Your heart will beat about 100,000 times each day. Your heart pumps about 2000 gallons of blood every day.

The circulatory system includes the heart, blood vessels and blood, and is vital for fighting disease and maintaining the correct temperature.

The arteries around your body only take blood about 10 minutes to get. Blood is what is used to transport oxygen to and nutrients throughout the body.

Keep your heart being usual to our survival. It is important to keep it healthy with a well-balanced diet and exercise and avoiding things like smoking.

The heart pumps blood through 60,000 miles of blood vessels. If all the blood vessels were laid out in a line they would go around the world 10 times.

William Harvey was an English physician who was the first person to normally describe the blood's circulation in the body.

Learning Challenges

LCS Why is the heart so important?

LCS How do doctors know so much about the heart? What advice can you give to Christian Barnard and William Harvey?

LCS What does your heart health?

LCS What does it mean to have a doctor's office on the human heart?

LCS How does exercise affect your heart?

LCS Can you tell your heart is a healthy heart?

Other curriculum areas which are to be taught discretely:

Religious Education

- How and why do some people inspire others?**
- Can I explain beliefs about how inspirational people can bring believers closer to God?
 - Can I describe examples of texts or quotes, which explain what an ideal way of life might be?
 - Can I compare different inspiring leaders from different religions?
 - Can I make clear connections between belief about living a good life and the leaders studied?
 - Can I give examples of the impact of faith on life?
 - Can I explain differences between leaders from different religions?
 - Can I raise questions about the concept of 'inspirational people', suggesting good answers?
 - Can I explain the importance of role models from different religions?
 - Can I express my own response to the inspiring lives I have studied?

PSHCE

- Understanding groups and Understanding me**
- If it happens all the time, does it mean it's right?
 - What is puberty?
 - How do humans reproduce?
- (see Talking Points curriculum for the full programme breakdown)*

Music

See the Charanga programme for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.

Unit 4- A New Year Carol

Physical Education

- Net and Wall Games**
- E.g. badminton, tennis and volleyball*
- Can I use basic skills and techniques in a small sided game and replicate shots with reasonable accuracy and success?
 - Can I demonstrate techniques usually applied with coordination and control to gain an advance over an opponent?
 - Can I start to maintain a conditioned rally with varying degree of success and use basic game strategies?
 - Can I use a variety of tactics and think of ways to improve performance?
 - Can I keep to the rules of a net/wall games and suggest how they can be adapted?

Computing	<p><i>See DB Primary Programming for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.</i></p> <p>Y6 Unit 34- computer science, programming and e-safety</p>		
MFL	<p><i>See the Primary Languages Network programme for an in-depth overview of the National Curriculum links, key outcomes, learning challenges and skills.</i></p> <p>Unit 4- This is me, hobbies and fun</p>		
Additional Links	British Values	Outdoor Learning	Community
		Outdoor physical activities including cycling at Boggart Hole Clough and British Heart Jump Rope event.	Find out about defibrillators in our local area.
	Citizenship (Beaver Pledge)	Global Neighbours	Home Learning
Complete a children's Basic First Aid course with St John's Ambulance.		Keep a food and exercise diary which will be used for analysis. Change4Life Sugar swap app.	