

Blood Heart



YEAR 6: ONYX AND QUARTZ

SPRING TERM 2019

Connected Learning

This term's 'Imaginative Learning Project' has a science focus - Year 6 will embark on a scientific journey, exploring the human body.

In meeting the programmes of study for the science National curriculum, children will use the breadth of the curriculum to:

- Describe the changes as humans develop to old age.
- Identify and name the parts of the human circulatory system.
- Describe the function 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.



We will launch into learning with a trip to a secondary school, to learn how to dissect a heart.



Connected Writing

As writers, Year 6 will consolidate their writing skills and deepen their knowledge and understanding of the circulatory system, writing an explanation text about how it works. They will also consider the arguments for and against human organ transplantation and, following a class debate, write a discussion text to communicate views.

Our focus text will be **'Pig Heart Boy'** by Malorie Blackman.

Using this as our inspiration, we will explore our own narratives around the theme of the book, writing formal and informal letters regarding the heart involved; as well as a newspaper report broadcasting the story of events.

As readers, Year 6 will focus on their detective skills in order to infer from a text and make deductions.

There will be a continued focus on word meaning within context, and applying taught skills to find the meanings of unknown words.

Maths

As mathematicians, Year 6 will continue to consolidate their arithmetic skills based around the four operations, including fractions, decimals and percentages. This will be supported with high level reasoning and application across the curriculum.

Additionally, we will focus on geometry, learning specifically the properties of 2D and 3D shapes. Children will learn to recognise, describe, draw and build 3D shapes, including nets, with increasing accuracy. They will illustrate and name the key parts of circles, including the 'radius', 'diameter' and 'circumference'.

The children will compare and classify geometric shapes, based on their properties and sizes, and explain how to calculate unknown angles from known measurements. Angles will be named and defined.

2D shapes will be drawn accurately, to the nearest millimetre.

Children will solve a range of problems relating to area and perimeter.

Key Vocabulary

arteries

Blood vessels that transport blood containing oxygen away from the heart to the rest of the body.

blood donor

A person who gives their blood to be used for transfusions and other medical treatments.

blood groups

Blood can be grouped according to special markers (antigens) found on the surface of red blood cells. There are 33 different blood group systems; the ABO blood groups are one of the most important.

blood pressure

The force exerted by the heart when pumping blood.

blood vessels

Tubes that help to transport blood around the body. There are three main types of blood vessels: the arteries, the veins and the capillaries.

capillaries

Very small blood vessels, that connect arteries to veins and deliver oxygen to all parts of the body.

circulation

The movement of blood around the body.

heart

A fist-sized muscular organ which pumps blood through blood vessels around the body.

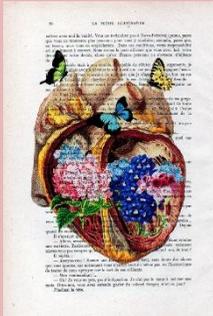
intravenous

The process of adding a liquid substance directly into someone's vein.

Art/DT

As artists, the children will use digital technology to manipulate colour, size and rotation of images, creating images of both a healthy and a damaged heart. They will also use, carve and sculpt materials, using a range of tools and finishing techniques, to make 3D models of the heart.

The children will also study the 'Human Heart Drawings' of Kenal Louis, using his work to influence and develop their own.



RE

In RE, the key question for children in Yr 6 is 'How can the crucifixion of Jesus be explained?' Children will also reflect on their values and consider the question of 'what matters the most?' This question will be explored within a range of religions and beliefs.

PSHE

In PSHE, the children will explore controversial and emotive issues, including those relating to organ transplantation and animal testing, considering both sides of an argument before explaining their personal views and opinions. They will learn basic facts relating to laws about alcohol, tobacco and drugs, and discuss the impact of 'habits' on health and lifestyle.



Music

As musicians, the children will describe how music can be used to create expressive effects and convey emotion. In doing this, they will listen to and evaluate the effectiveness of sound tracks from films. The children will then work together to compose a piece of music based on the theme of love, before maintaining their own part in a performance with confidence, accuracy and awareness of what others are playing.

PE

In sport, this term, Yr 6 will focus on gymnastics, combining and performing gymnastic actions using the whole body, adapting movements and balances to a routine so that they fit into a sequence. They will perform sequences to an audience, aiming to achieve control and grace, using available space expressively. They will evaluate their own and each other's performances to achieve their personal best.

Computing

In computing, the children will create data collection forms and enter data on these to record changes in heart rate before, during and after exercise. They will create graphs from the calculations and data on their spreadsheets and sort and filter information by a variety of criteria. Using the program Scratch, children will produce algorithms independently, using logical and appropriate structures to organise and record data and use this to produce animated diagrams of the circulatory system. Children will then build on their Oracy skills to explain how the process or model works.

Family Learning Opportunities

30 minutes reading and TT Rockstars DAILY.

Recommended Reads:

- 'Pig Heart Boy' by Malorie Blackman
- 'The Heart and the Bottle' by Oliver Jeffers.
- 'Heart and Lungs' by Andrew Solway
- 'Food and Eating' (Healthy for Life) – Anna Clayborne.

For additional ideas and activities, linked to this 'Imaginative Learning Project', please refer to the 'Home learning ideas' sheet attached.

Science

As scientists, the children will work to identify the major parts of the circulatory system and their functions. They will also learn how nutrients and water are transported in both humans and other animals.

Building on their discussions in PSHE, the children will recognise and describe the damaging impact that some drugs and other substances can have on the human body. They will describe how lifestyle is important for the health of the human circulatory system, which will contribute to a class policy on exercise and diet choices.

Linking further to the computing curriculum, the children will compare scientifically the effect that different exercises have on heart rate, making predictions and measuring heart rate accurately. They will present this information in a variety of ways.