Year 6– Animals, including Humans

Working Scientifically	Sticky Knowledge	Linked Texts	Key Scientists
- Recall and use specific scientific vocabulary accurately (year group key vocabulary) - Plan different types of scientific enquiries to answer questions, include recognise and control variables where necessary - Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why - Take measurements, use a range of scientific equipment, with increasing accuracy and precision, take repeat readings when appropriate - Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs - Use test results to make predictions to set up further comparative and fair tests - Report and present findings from enquiries, include conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations - Identify scientific evidence that has been used to support or refute ideas or arguments.	- The heart pumps blood around the body. - Oxygen is breathed into the lungs where it is absorbed by the blood. - Muscles need oxygen to release energy from food to do work. (Oxygen is taken into the blood in the lungs; the heart pumps the blood through blood vessels to the muscles; the muscles take oxygen and nutrients from the blood.) From Yr 5 Different animals mature at different rates and live to different ages. - Puberty is something we all go through, a process which prepares our bodies for being adults, and reproduction - Hormones control these changes; which can be physical and/or emotional. - Some organisms reproduce sexually where offspring inherit information from both parents. - Some organisms reproduce asexually by making a copy of a single parent. - Environmental change can affect how well an organism is suited to its environment. - Different types of organisms have different lifecycles.	***Pig-Heart Boy*** *(Malorie Blackman)* ***Skellig*** *(David Almond)* ***A Heart Pumping Adventure*** *(Heather Manley)*	**Justus von Liebig** (Theories of Nutrition and Metabolism) **Sir Richard Doll** (Linking Smoking and Health Problems) **Leonardo Da Vinci** (Anatomy) Santorio Santorio- Anatomist Dr. Katherine Dibb – Expert in Cardiovascular Sciences

Key Question(s):	Key Question(s):	**WS vocabulary**
- Can you identify and describe the main parts of the human circulatory system? = What are the functions of the heart and blood vessels in the human body? - Can you describe the effects that diet, exercise and lifestyle have on the human body? - How are the nutrients and water transported around the human body? - What is a pulse and how does it work? What is a pulse used for? - Can you explain how three different parts of the human body work and how they depend on each other?	- Why do we need oxygen? - How do we breathe? - Do fish and plants breathe? - Do all living things need oxygen? - How does the size of a person's lungs affect their lung capacity? - Are there ways to increase/decrease our lung capacity? Is lung capacity fixed? - Why do we have blood? - How does our heart work? - How does size of muscle affect our pulse rate? - How might the circulatory system of an elephant, a	Investigation, enquiry, prediction, variable, dependent variable, independent variable, constant, patterns, equipment, apparatus, method, results, conclusion, graph, patterns, distance, data, theory, fair test, reasoning

- Is the air you breathe out, the same as that you breathe in?	hummingbird, or a polar bear differ?	

Teaching suggestions in Enquiry types

Comparative tests	Identify & Classify	Observation over time	Pattern Seeking	Research	BIG Question – Problem solving
How does the length of time we exercise for affect our heart rate? Can exercising regularly affect your lung capacity? Which type of exercise has the greatest effect on our heart rate? 	Which organs of the body make up the circulation system, and where are they found? 	How does my heart rate change over the day? How much exercise do I do in a week? 	Is there a pattern between what we eat for breakfast and how fast we can run? 	How have our ideas about disease and medicine changed over time? 	How do our choices affect how our bodies work? Why does my heart beat? (Also use EXPLORIFY)  Assessment Opportunity