Year 6 – Term 3

How responsible are we for our own health?

SCIENCE

National Curriculum Links:

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.

Essential Prior Learning:

Our heart pumps our blood through our blood vessels in order to keep us alive.
Humans need to eat in order to get the nutrients we need as we cannot make our own food.
Exercise is an important part of a healthy lifestyle and there are different forms of exercise.

Progression in Skill:

Plan different types of scientific enquires (survey, fair test, research/secondary sources, classify, pattern seeking, modelling, investigation over time) to answer scientific questions, including recognising and controlling variable where necessary.
Choose/use the most appropriate equipment and take measurements with increasing accuracy and precision, taking repeat readings where appropriate.
Identify scientific evidence that has been used to support or refute ideas or arguments.
Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations, e.g. the ...er the ..., the ...er the ...

Long-term Memory Knowledge:

Name the three main parts of the circulatory system and the function of each: the heart (a muscular organ that pumps blood), blood vessels (arteries, veins and capillaries) and blood (which carries oxygen, nutrients, hormones and waste products).
Know some of the ways diet, exercise, drugs and lifestyle can affect the ways our bodies function.
Explain how nutrients and water are transported within animals.
Suggest ways to answer a scientific question through investigation and experimentation.
Identify possible variables in an investigation and suggest how these can be controlled.
Measure, using appropriate equipment, with accuracy.
Explain why repeat measurements may be taken.
Name key scientists in this field and their importance.
Suggest ways to present the results of your investigation, drawing conclusions that explain the relationship between factors.
Name factors that can affect the reliability of results.

Key Vocabulary

blood vessel	a tubular structure carrying blood through the tissues and organs; a vein, artery, or capillary
artery	a blood vessel which conveys oxygenated blood from the heart to all parts of the body
vein	a blood vessel which carries oxygen-depleted blood towards the heart
heart rate	the number of times your heart beats in a minute
nutrient	a substance that provides nourishment essential for the maintenance of life and for growth
capillary	tiny blood vessels that connect veins and arteries
lifestyle	the way someone chooses to live their life, e.g. what you eat, how much exercise you do, whether you drink/smoke, etc.
drugs	chemicals that change the way your body feels and acts
medicine	a substance that treats disease and illness
illegal	against the law
nicotine, caffeine, ethanol	examples of legal drugs
stimulant	a drug that can make people feel more alert, awake, confident
hallucinogen	a drug that changes the way someone experiences what is around them
depressant	a drug that relaxes the body, potentially leading to loss of concentration and co-ordination

Progression in Resources:

Heart rate monitor, oximeter, stopwatches
Equipment to 'make' blood: plastic bottle, water, red and yellow food colouring, objects to represent red and white blood cells and platelets
Gelatine to model the function of platelets
Images of heart monitoring equipment
Food packaging, diet case studies, medicine instructions

Relevance

Now	Children understand there is a connection between our diet, exercise and lifestyle and our health; they begin to take responsibility for making healthier choices.
Future	As adults, children recognise what a healthy lifestyle consists of and can make appropriate choices for themselves and others in their family; they understand what their body feels like when it is healthy and can recognise changes that may require medical treatment.
Aspiration	A career in health and fitness is chosen – doctor, nutritionist, personal trainer, etc. or work in research, investigating why some people's bodies react differently to the same lifestyles, for example.