SCIENCE Long Term Planning – Summary of YEAR 6 Units

AUTUMN 1	AUTUMN 2
Animals including Humans - Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood - Recognise and describe the damaging impact that some drugs and other substances can have on the human body - Describe how lifestyle, including diet and exercise, is important for the health of the human circulatory system - Describe the ways in which nutrients and water are transported within animals, including humans - Compare scientifically the effect that different exercises have on heart rate; making predictions and measuring heart rate accurately - Study the work of William Harvey in relation to the circulatory system	Evolution & Inheritance - Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago - Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents - Identify features which are inherited from parents, such as eye colour and those that are not, such as tattoos and dyed hair colour - Identify how animals and plants are adapted to suit their environment in different ways - Describe how variation in living things leads to the evolution of a species, using specific examples. - Suggest ways in which future changes in the world's climate may impact on ourselves and other living species, and suggest ideas for how we may adapt to these changes - Research the work of Darwin and / or Wallace to explain how the theory of evolution developed
SPRING 1	**SPRING 2**
Electricity - Identify and name components of a circuit and define terms such as voltage and current - Use recognised symbols when representing a simple circuit in a diagram - Demonstrate how to work safely with electrical circuits - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit - Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches - Work scientifically to construct a series circuit for a specific device or outcome and explain how it works	Living Things & Their Habitats - Research and describe similarities and differences between petals, leaves, stamen and stigma on a variety of plants found in the locality and elsewhere - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals - Recognise the importance of the classification system and its inception, giving reasons for how the groups and subgroups are chosen - Understand the basic concepts of the Linnaean classification system, by studying the work of Carl Linnaeus - Give reasons for classifying plants and animals based on specific characteristics - Devise classification keys to identify plants in the immediate environment. - Consider and counteract risks associated with handling plants
SUMMER 1	**SUMMER 2**
Light - Identify parts of the eye and draw a diagram showing how light enters our eyes in order to see, using the correct scientific vocabulary	Light - Identify parts of the eye and draw a diagram showing how light enters our eyes in order to see, using the correct scientific vocabulary

- Recognise the dangers of using lasers and how they can be used safely - Recognise that light appears to travel in straight lines - Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye - Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them - Compare how a beam of light changes direction (refraction) when passing through different mediums, such as water and air (Continued in Summer 2)	- Recognise the dangers of using lasers and how they can be used safely - Recognise that light appears to travel in straight lines - Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye - Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them - Compare how a beam of light changes direction (refraction) when passing through different mediums, such as water and air