Aims National Curriculum Aims for Key Stage 1 & 2
All Pupils should have opportunity to:

- *Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.*
- *Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.*
- *Be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.*

Science
Year 6

Statutory Curriculum Objectives	*Can I statement*	*Healthy Habits*	*Arabian Nights*	*Powerful Planet*	*Fortress Plymouth*
LIVING THINGS & THEIR HABITATS: *Pupils should read, spell and pronounce scientific vocabulary correctly.*	*Can I read, spell and pronounce scientific vocabulary correctly? Micro- organisms, plants, animals, invertebrates, vertebrates, fish, mammal, insect, reptiles, amphibians, classify*			✓	
LIVING THINGS AND THEIR HABITATS: *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*	*Can I describe how things are classified into broad groups according to observational characteristics and similarities and differences?*			✓	
LIVING THINGS AND THEIR HABITATS: *Give reasons for classifying plants and animals based on specific characteristics.* **W/S:** *Reporting and presenting 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*	*Can I give reasons for classifying plants and animals based on specific characteristics? Can I classify commonly found living things into vertebrates and invertebrates?*			✓	
LIVING THINGS & THEIR HABITATS: *Uses and implications of science today and for the future*	*Can I find out about the work of Carl Linnaeus, a pioneer in classification?*			✓	

EXPERIENCES- LIVING THINGS & THEIR HABITATS: *Pupils should build on their learning about grouping living things in year 4 by looking at the classification system in more detail. They should be introduced to the idea that broad groupings (e.g. plants, mammals) can be sub-divided. Pupils should classify animals commonly found in to vertebrates and invertebrates. They should use living things in their immediate environment and those in a broad range of other habitats, deciding and explain where they belong in the classification system.*

ANIMALS, INCLUDING HUMANS: *Pupils should read, spell and pronounce scientific vocabulary correctly.*	*Can I read, spell and pronounce scientific vocabulary correctly? Heart, artery, vein, blood, nutrients, oxygen, circulation, health*	✓			
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*	*Can I identify and name the main parts of the human circulatory system?* *Can I describe the functions of the heart, blood vessels and blood?*	✓			
ANIMALS, INCLUDING HUMANS: *Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function*	*Can I recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function?*	✓			
ANIMALS, INCLUDING HUMANS: *Describe the ways in which nutrients and water are transported within animals, including humans*	*Can I describe the ways in which nutrients and water are transported within animals, including humans?*	✓			
ANIMALS, INCLUDING HUMANS: *Uses and implications of science today and for the future*	*Can I find out about scientific research on the relationship between diet, exercise and health?*	✓			
EXPERIENCES- ANIMALS, INCLUDING HUMANS: *Pupils should build on their learning from yeas 3 and 4 about the main body parts and internal organs (skeleton, muscles, digestive system) to explore and answer questions that help them to understand how the circulatory system functions.*					
EVOLUTION & INHERITANCE: *Pupils should read, spell and pronounce scientific vocabulary correctly.*	*Can I read, spell and pronounce scientific vocabulary correctly? Variation, offspring, evolution, hereditary, habitat, characteristic*			✓	
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*	*Can I recognise that living things have changed over time?* *Can I understand that fossils provide information about living things that inhabited*			✓	

	the Earth millions of years ago?				
EVOLUTION & INHERITANCE: *Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents* **W/S**: *Identifying scientific evidence that has been used to support or refute ideas or arguments.*	*Can I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents?* *Can I identify scientific evidence that supports or refutes my own ideas around variation? (Compare photographs of siblings? Eye colour, face shape, hair colour)*			✓	
EVOLUTION & INHERITANCE: *Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.*	*Can I identify and analyse how animals and plants are adapted to suit their environment in different ways?* *Can I recognise that adaption may lead to evolution?*			✓	
EVOLUTION & INHERITANCE: *Uses and implications of science today and for the future*	*Can I find out about the work of Mary Anning?* *Can I explore how Charles Darwin developed his ideas on evolution?*			✓	
EXPERIENCES- EVOLUTION & INHERITANCE: *Building on what pupils learned about fossils in year 3 (Rocks) pupils should explore how living things on Earth have changed over time. Pupils should learn about variation in offspring and the idea that characteristics are passed on for examples breeds of dog and cross breeds. They should also appreciate that variation over time can make living things more or less likely to survive in certain environments or conditions.*					
LIGHT: *Pupils should read, spell and pronounce scientific vocabulary correctly.*	*Can I read, spell and pronounce scientific vocabulary correctly?* *Light, reflect, source, shadow, spectrum,*		✓		
LIGHT: *Recognise that light appears to travel in straight lines* **W/S:** *Using test results to make predictions to set up further comparative and fair tests*	*Can I explore the way light behaves and make predictions based on what I see?*		✓		

	Can I recognise that light appears to travel in straight lines?				
LIGHT: *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*	*Can I 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?*		✓		
LIGHT: *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*	*Can I 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?*		✓		
LIGHT: *Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them* **W/S:** *Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary* **W/S:** *Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate*	*Can I use the idea that light travels in straight lines to explain why shadows have the same shape as the object that cast them?* *Can I investigate if objects always cast a shadow the same shape as the object that cast them? (by moving the light source- does it alter the shape of the shadow?)* *Can I take measurements with accuracy?*		✓		
LIGHT: *Uses and implications of science today and for the future*	*Can I explore a range of phenomena (such as rainbows, colours in soap or oil, objects appearing different in water)?* *(Pupils do not need to know why these phenomena occur)*		✓		
EXPERIENCES- LIGHT: *Pupils should build on light work in year 3. They should talk about the way light behaves and make predictions.*					
ELECTRICITY: *Pupils should read, spell and pronounce scientific vocabulary correctly.*	*Can I read, spell and pronounce scientific vocabulary correctly? Circuit,*				✓

	current, buzzer, cell, voltage, lamp, renewable				
ELECTRICITY: *Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit*	*Can I associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit?*				✓
ELECTRICITY: *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*	*Can I compare and give reasons for variations in how components function?*				✓
ELECTRICITY: *Use recognised symbols when representing a simple circuit in a diagram* **W/S**: *Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs*	*Can I use recognised symbols when representing a simple circuit in a diagram?*				✓
ELECTRICITY: *Uses and implications of science today and for the future*	*Can I consider how electricity is made and how this can be applied to innovate renewable sources of electricity?*				✓
EXPERIENCES- ELECTRICITY: *Pupils should ask and answer questions, through experimentation, about what happens when they change different components in a circuit. They should consider the uses of electricity in their lives. Pupils must be taught about how to work safely with electricity.*					
Working Scientifically *Statutory Curriculum Objectives*		*Healthy Habits*	*Arabian Nights*	*Powerful Planet*	*Fortress Plymouth*
W/S: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary			✓		
W/S: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate			✓		
W/S: Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs					✓
W/S: Using test results to make predictions to set up further comparative and fair tests			✓		

W/S: Reporting and presenting 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			✓	
W/S: Identifying scientific evidence that has been used to support or refute ideas or arguments.			✓	