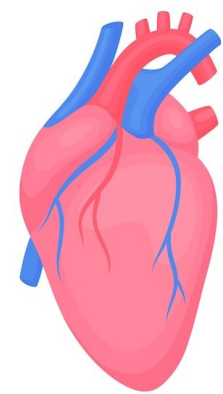
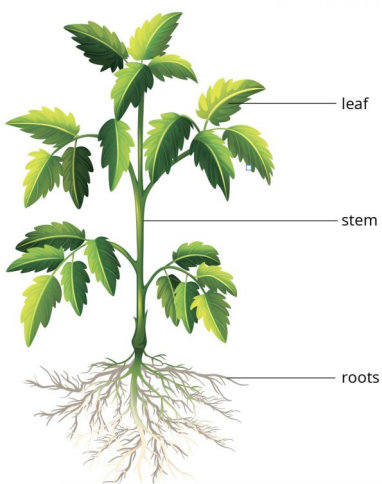


Science Progression Document



Science

Curriculum Intent

It is our intent that children will leave our schools resilient, emotionally literate, aspirational, effective communicators who are happy and therefore ready for the next stage of their life through the behaviour, knowledge and skills they have learnt whilst in our care. If we can achieve this for our children then we believe we are giving them the best opportunity to achieve success in their life. Through an inclusive and stimulating environment we will develop every child and allow them to write their own story in life. This intent is defined as our REACH principles.

Resilient: Every child is resilient.

Emotionally Literate: Every child is aware of their feelings and those of others.

Aspirational: Every child aspires for more in their learning and in life.

Communicators: Every child is an effective communicator.

Happy: Every child has the right to be happy. Bilton Community Federation



Our vision is to empower children to make a positive impact on the world and to apply the following values in all they do: **Care, Co-operation, Honesty, Forgiveness, Respect and Resilience.**

At BJS, our vision is to give all children a science curriculum that allows them to be ambitious for their future by providing a strong understanding of the world around them and a curiosity about natural phenomena whilst acquiring specific skills and knowledge to help them to think scientifically.

The 5 types of scientific enquiry (see our school logos on the next page) are embedded throughout each year group's topics. All children are given a variety of opportunities to work scientifically and develop a range of skills including observing, planning and investigating, working practically, evaluating, making choices, working independently and collaboratively and using scientific vocabulary, developing both substantive and disciplinary knowledge. Topics are revisited from Key Stage One and many are built on each year in Key Stage Two, which allows children to build upon their prior knowledge whilst embedding procedural knowledge into long-term memory. Specialist vocabulary for topics is taught and effective questioning to communicate ideas is encouraged. Children learn about the relevance of science through its cross-curricular approach, science weeks, the entering of competitions and visits to and from places of scientific interest.

Implementation:

At BJS, Science topics are taught within each year group in accordance with the National Curriculum. We follow the Plymouth Science SOW.

The 5 topics for each year group are blocked to each half term, with the addition of an investigative block in which questions can be asked and theories can be tested. Both of these disciplines, allow children to focus on developing their substantive and disciplinary knowledge, studying each topic in depth as well as raising their knowledge of scientific enquiry.

Every year group will build upon the learning from prior year groups therefore developing depth of understanding and progression of skills.

Children can ask questions & plan enquiries, set them up, observe & measure, record, interpret & report and evaluate findings. These can be evidenced in books alongside the working scientifically assessment checklist.

Children present their findings and learning using science specific language, observations and diagrams.

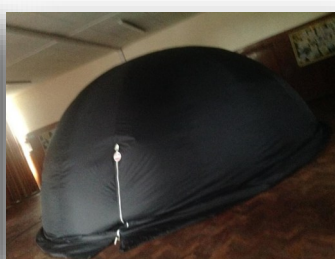
At the start of each topic children will review previous learning and will have the opportunity to share what they already know about a current topic. Children are given a knowledge organiser at the start of each topic which details some key Science Curriculum Statement information and vocabulary. This is to support children with their acquisition of knowledge and are used as a reference document. At the end of each topic children will review their learning and have opportunity to demonstrate their new knowledge through posters, fact files and assessments. Through using a range of assessment tools, differentiation is facilitated by teachers, to ensure that each pupil can access the Science curriculum. Effective modelling by teachers ensures that children are able to achieve their learning intention, with misconceptions addressed within it. Assessment for learning is used in each lesson to ensure misconceptions are highlighted and addressed. Pupils are regularly given the opportunity for self or peer assessment, which will then be used to inform planning, preparation, differentiation and address misconceptions within that lesson, or for the next lesson. Effective CPD and training opportunities are available to staff to ensure high levels of confidence and knowledge are maintained. Effective use of education visits (including to local secondary schools) and visitors are planned, to enrich and enhance the pupil's learning experiences within the Science curriculum. Cross-curricular links are planned for, with other subjects such as Maths, English and Computing.

Our Christian Values

Our Christian Values of care, honesty, respect, co-operation, forgiveness and resilience are all skills required to become a successful and inquisitive scientist. In Science, care manifests through ethical considerations and responsible handling of data. Honesty is crucial to the reporting of results and findings in an investigation. Respect for peers and equipment as well as for the rules of investigating. Co-operation facilitates teamwork and diverse perspectives. Importance of challenge and questioning. There are likely to be ethical dilemmas with current and future developments in the World of Science. We aim for our children to draw upon their morals and Christian Values to do the right thing. Ultimately, being resilient helps Scientists adapt to new information and refine their understanding. All these core values allow children to become successful and inquisitive scientists.

Enrichment

There are a wide range of enrichment opportunities beyond the classroom. We are lucky to have a fantastic school site where learning can take place outside of the classroom. There is a CREST Award Science club which extends opportunities beyond the National Curriculum. We have a yearly Science week and have wide links with local secondary schools to support this. There are cross-curricular links which provide application of knowledge and deepen understanding. An example of this is when Year 4 visit Cadbury's World for their humanities topic—there are great links to Science work on States of Matter. We capitalise on these links where possible to support children to retain new learning in their long term memory. We invest in opportunities such as the Space Planetarium to support the learning in the Earth and Space topic. Our aim is to develop their interests and talents of our children and prepare them for future success.



Curriculum Overview

<table><tr><td>Physics</td><td>Chemistry</td><td>Biology</td></tr></table>							Physics	Chemistry	Biology
Physics	Chemistry	Biology							
Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
3	Animals, including humans	Light	Rocks	Forces & magnets	Plants	Scientific enquiry investigations			
4	States of Matter	Scientific enquiry investigations	Electricity	Sound	Living things, their habitats	Animals, including humans			
5	Properties and changes of materials	Forces	Space	Living things, their habitats	Scientific enquiry investigations	Animals, including humans			
6	Animals including humans	Light - linked to history with periscope	Electricity	Scientific enquiry investigations	Living things, their habitats	Evolution and Inheritance			



Our Vision:



This is **not** what a scientist looks like!

At BJS, a scientist:

Observes Questions Classifies
Identifies Hypothesises
Researches Experiments Investigates
Analyses Records
Gathers Presents Reports



Our Principles:

Created by staff, children and the science council

S Scientific vocabulary is used and understood.
C Concepts are learnt through practical experiments and investigations.
I Independent and group tasks are carried out.
E Engaged, enthused and motivated children.
N New ideas create curiosity and lead to quality questions being asked.
C Connects existing knowledge to new learning and to the real world.
E Exciting lessons are taught by teachers who are confident in their subject knowledge.

Our Scientific enquiry skills



Comparative/Fair testing



Research



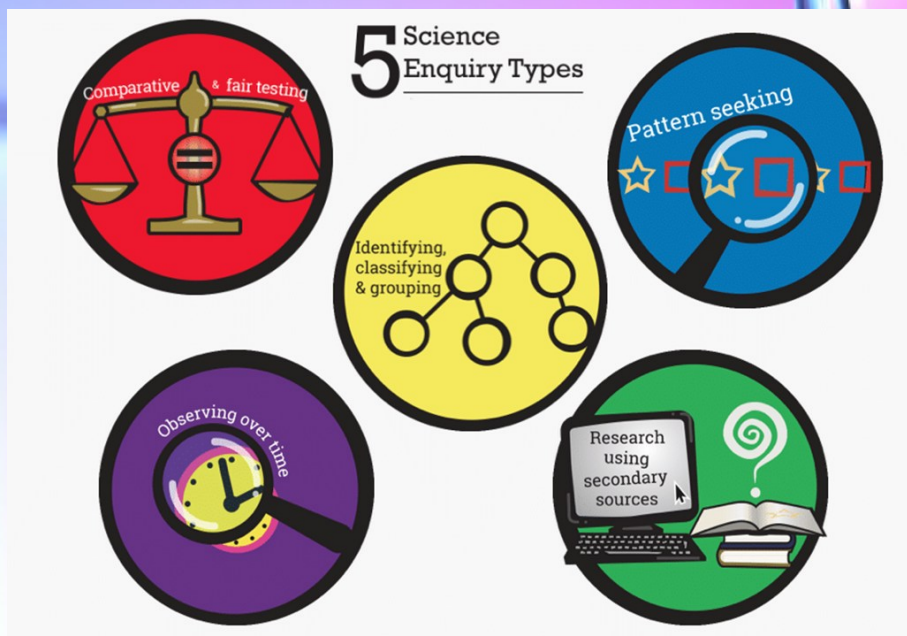
Observation over time



Pattern seeking



Identifying and classifying



Asking questions

Asking questions that can be answered using a scientific enquiry.



Making predictions

Using prior knowledge to suggest what will happen in an enquiry.



Setting up tests

Deciding on the method and equipment to use to carry out an enquiry.



Observing and measuring

Using senses and measuring equipment to make observations about the enquiry.



Recording data

Using tables, drawings and other means to note observations and measurements.



Interpreting and communicating results

Using information from the data to say what you found out.



Evaluating

Reflecting on the success of the enquiry approach and identifying further questions for enquiry.



A BJS scientist can do this ..

In Year 3, Children will be asking questions about the local environment and using their observation skills to identify parts of a flower and know how water transports around the plant. Children will understand the lifecycle of a plant by drawing diagrams and using research to find the function of each part. Children will know that humans and animals have skeletons and understand why. They know how humans get nutrients. They will carry out comparative and fair tests to compare and classify rocks and soils based on their properties.

In Year 4, Children will be asking questions about the local environment and observe how the environment can change along with the dangers this can cause. They will understand the functions of the teeth and the importance of oral hygiene. Children will know about how the digestive system works. Children will be grouping, identifying and classifying living things and materials and using classification keys. Children will understand the water cycle and effect of heat with evaporation and condensation as well as materials changing state. Children will use representations to understand how we hear through vibrations and know how to create simple circuits including a switch. Comparative and fair tests will be used to test conductivity of materials.

In Year 5, Children will understand the changes that occur in humans from birth to old age and understand reproduction in plants and animals. They explore different lifecycles and can understand the similarities and differences between mammals, amphibians, insects and birds. Children will be able to explain the uses of everyday materials and describe some reversible and irreversible changes. They will be able to present their results from fair tests using tables and charts. Children will use diagrams to show the movement of the Earth and the moon and can explain how different time zones occur. They explain day and night. They will have an understanding of forces including gravity, air resistance, water resistance and friction. They will be able to mechanisms such as levers, pulleys and gears to explain forces and making jobs easier.

In Year 6, Children will understand how the circulatory system works and will be able to use this to explain the positive and negative effects of diet, exercise, drugs and lifestyle on the body. They will be able to recall animals from the 5 vertebrate group and some from non-vertebrate groups including their key characteristics. They will understand how plants and animals are suited to their environment and the process of evolution. Children will be able to use classification keys to identify unknown plants. They will know what fossils are and can use research and observations to show that things lived billion years ago. Children will use diagrams to explain how light travels and understand shadows. They will be able to make simple circuits using recognised symbols in their drawings. They can conduct a range of fair tests identifying cause and effect when testing brightness of a bulb or volume of a buzzer. Children will be able to conduct a range of investigations with accuracy using repeat measurements and using a range of equipment. They will use scientific theory to refute or support their arguments.

Year 3



Our unit learning objectives	Pupil Self-reflection
I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.	☐ ☐ ☐
I can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.	☐ ☐ ☐

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
nutrition	nutrients	carbohydrates	sugar	protein
vitamin	vitamins	minerals	fibre	fat
water	skeleton	bones	muscles	support
protect	move	skull	ribs	spine
muscles	joints			



I don't know it.



I know what it means.



I can use it in a sentence.



Our unit learning objectives	Pupil Self-reflection
To recognise we need light in order to see things and that dark is the absence of light.	  
Light is reflected from surfaces	  
Recognise that light from the sun can be dangerous and that there are ways to protect your eyes.	  
Recognise that shadows are formed when light from a light source is blocked by an opaque object.	  
Find patterns in the way that the shadows change.	  

Our Scientific Enquiry Skills

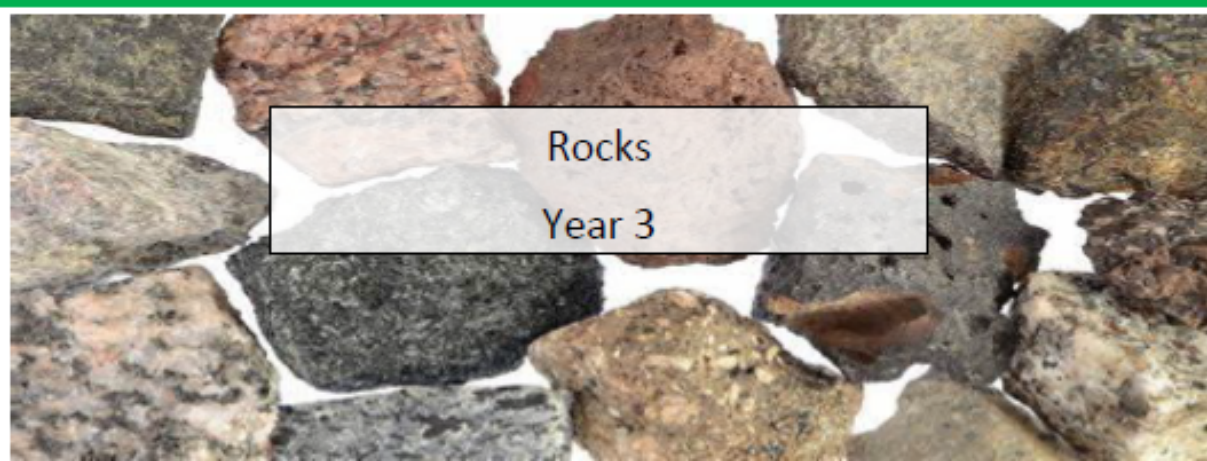
 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
light	light source	dark	absence of light	transparent
translucent	opaque	shiny	matt	surface
shadow	reflect	mirror	sunlight	dangerous
 I don't know it.  I know what it means.  I can use it in a sentence.				



Rocks Year 3

Our unit learning objectives	Pupil Self-reflection
To compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	
To describe in simple terms how fossils are formed when things that have lived are trapped within rock.	
To recognise that soils are made from rock and organic matter.	

Our Scientific Enquiry Skills

 Comparative/Fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
rock	stone	pebble	boulder	grain
crystal	layers	hard	soft	texture
absorb	water	soil	fossil	marble
chalk	granite	sandstone	slate	soil
peat	sandy	chalky	clay	
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
I can compare how things move on different surfaces.	
I notice that some forces need contact between two objects, but magnetic forces can act at a distance.	
I can observe how magnets attract or repel each other and attract some materials and not others.	
I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials.	
I can describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	

Our Scientific Enquiry Skills

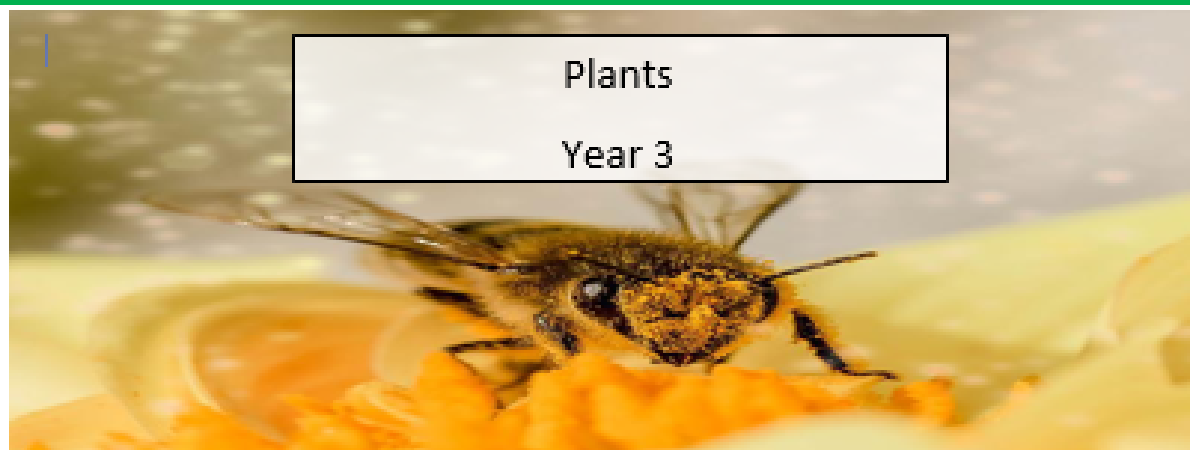
 Comparative/Fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
force	push	pull	twist	contact force
non-contact force	magnetic force	magnet	button magnet	horseshoe magnet
attract	repel	magnetic material	metal	iron
steel	poles	north pole	south pole	
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
I can identify and describe the functions of different parts of a flowering plant.	
I can explore the requirements of plant life and growth.	
I can investigate the way in which water is transported within plants	
I can explore the part that flowers play in the lifecycle of flowering plants including pollination, seed formation and seed dispersal.	

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
photosynthesis	pollen	pollination	seed formation	seed dispersal
wind dispersal	animal dispersal	water dispersal	nutrients	Fertiliser
Stem/trunk	absorb	reproduce	stamens	style
I don't know it. I know what it means. I can use it in a sentence.				

Year 4

STATES OF MATTER



Our unit learning objectives	Pupil Self-reflection
To compare and group materials together, according to whether they are solids, liquids or gases	☐ ☐ ☐
Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius	☐ ☐ ☐
Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	☐ ☐ ☐

Our Scientific Enquiry Skills

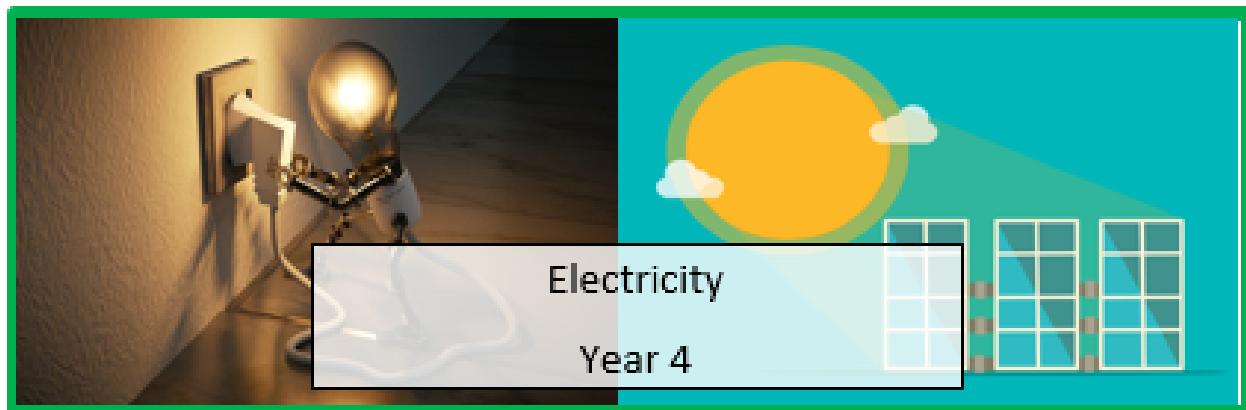
Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Vocabulary

Vocabulary Words I Know				
solid	liquid	gas	state change	melting
freezing	melting point	boiling point	evaporation	temperature
water cycle	water vapour	precipitation	oxygen	molecules
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
I can identify common appliances that run on electricity	
I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers	
I can identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery	
I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit	
I can recognise some common conductors and insulators, and associate metals with being good conductors.	

Our Scientific Enquiry Skills

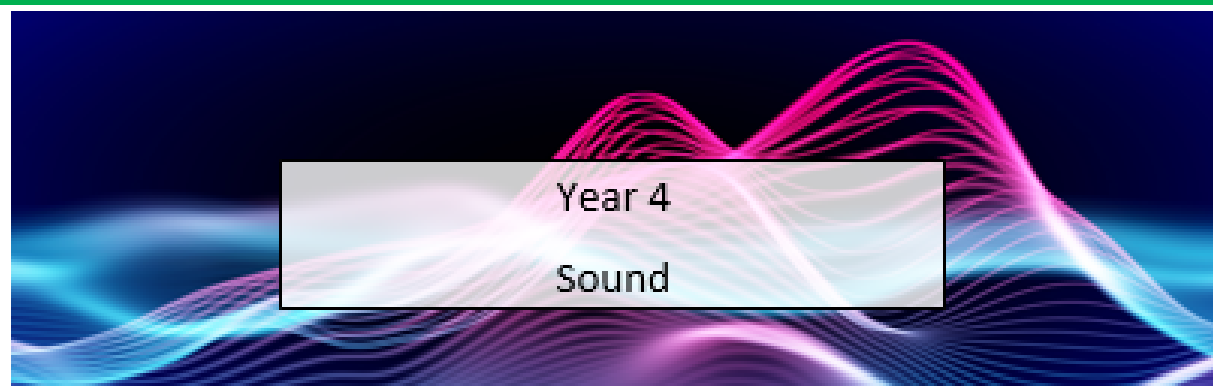
Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Vocabulary

<u>Vocabulary Words I Know</u>				
electricity	electrical device	mains	plug	electrical circuit
complete circuit	component	cell	battery	positive
negative	connect	loose connection	short circuit	crocodile clip
bulb	switch	buzzer	motor	conductor
insulator	metal	non-metal	symbol	
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
To identify how sounds are made, associating some of them with something vibrating. (Vibration stations)	
Recognise that vibrations from sounds travel through a medium to the ear. (String phones)	
Find patterns between pitch of a sound and features of the object that produced it.	
Find patterns between the volume of a sound and the strength of the vibrations that produced it.	
Recognise that sound gets fainter as the distance from the sound source increases	

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Vocabulary

<u>Vocabulary Words I Know</u>				
sound	source	vibrate	vibration	travel
pitch	high	low	volume	faint
loud	quiet	insulation	soundwaves	decibels
I don't know it. I know what it means. I can use it in a sentence.				



Living Things and Habitats

Year 4

Our unit learning objectives	Pupil Self-reflection
To recognise that living things can be grouped in a variety of ways.	☐ ☐ ☐
To explore and use classification keys to help group.	☐ ☐ ☐
Identify and name a variety of living things in the environment.	☐ ☐ ☐
Recognise that environments can change and this can sometimes pose dangers to living things.	☐ ☐ ☐

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying

Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating

Unit Vocabulary

Vocabulary Words I Know				
classification	classification keys	environment	habitat	human impact
positive	negative	migrate	hibernate	environment
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
Describe the simple functions of the basic parts of the digestive system in humans.	
Identify the different types of teeth in humans and their simple functions	
Construct and interpret a variety of food chains, identifying producers, predators and prey.	

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
digestive system	digestion	mouth	teeth	saliva
oesophagus	stomach	small intestine	large intestine	nutrients
rectum	anus	teeth	incisor	canine
molar	premolars	herbivore	carnivore	omnivore
producer	predator	prey	food chain	
I don't know it. I know what it means. I can use it in a sentence.				

Year 5



Our unit learning objectives	Pupil Self-reflection
Compare and group together everyday materials based on their properties, including hardness, solubility, transparency, conductivity and response to magnets.	
Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.	
Use knowledge of solid, liquid and gas to decide how mixtures might be separated including through filtering, sieving and evaporation.	
Give reasons based on evidence from comparative tests for the particular uses of everyday materials including metals, wood and plastic.	
Demonstrate that dissolving, mixing and changes of state are reversible changes.	
Explain that some changes result in the formation of new materials and this kind of change is not usually reversible including changes associated with burning and the action of acid on bicarbonate of soda.	

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Vocabulary

Vocabulary Words I Know				
thermal	electrical	insulator	conductor	change of state
mixture	dissolve	solution	soluble	insoluble
filter	sieve	reversible change	irreversible change	burning
solid	liquid	gas	distilling	materials



Our unit learning objectives	Pupil Self-reflection
I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	☐ ☐ ☐
I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces	☐ ☐ ☐
I can recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect	☐ ☐ ☐
I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	☐ ☐ ☐

Our Scientific Enquiry Skills

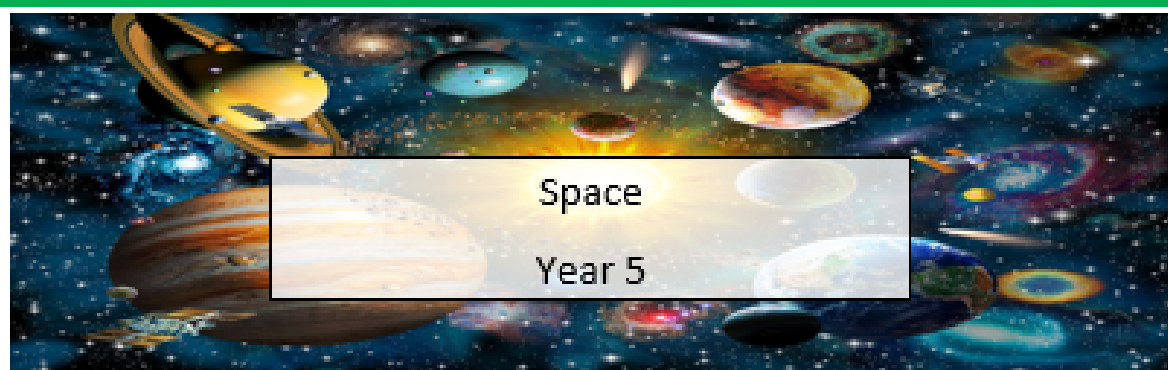
 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
force	gravity	earth	air resistance	water resistance
friction	mechanisms	simple machines	levers	pulleys
gears	balance	drag forces	mass	springs
force meter	Newton meter (N)	floats		
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
Describe the movement of the Earth and other planets relative to the sun in the solar system.	
Describe the movement of the moon relative to the Earth.	
Describe the Sun, Earth and Moon as approximate spherical bodies.	
Use Earth rotation to explain day and night due to the apparent movement of the sun across the sky.	

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying
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Our Working Scientifically Skills

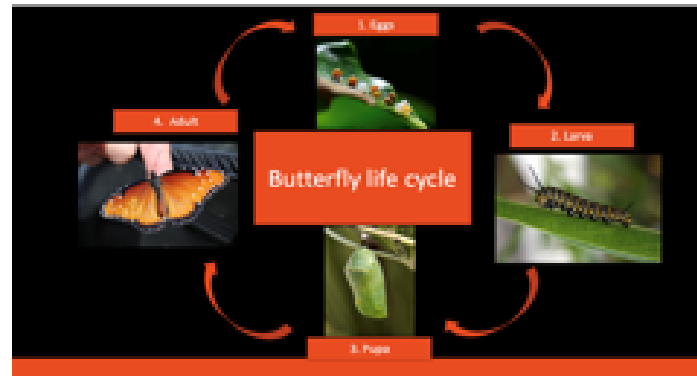
Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Vocabulary

<u>Vocabulary Words I Know</u>				
earth	sun	moon	spherical	solar system
rotates	star	orbit	planets	galaxy
celestial body	hemisphere	lunar calendar	revolve	sundial
I don't know it. I know what it means. I can use it in a sentence.				

Living things and their habitats

Year 5



Our unit learning objectives	Pupil Self-reflection
Describe the differences in life cycles of a mammal, an amphibian, an insect and a bird	
Describe the life process of reproduction in some plants and animals	

Our Scientific Enquiry Skills

 Comparative/Fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
life cycle	reproduce	sexual	asexual	sperm
fertilises	egg	live young	metamorphosis	plantlets
runners	bulbs	cuttings	gestation	
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
Describe the changes as humans develop from birth to old age.	

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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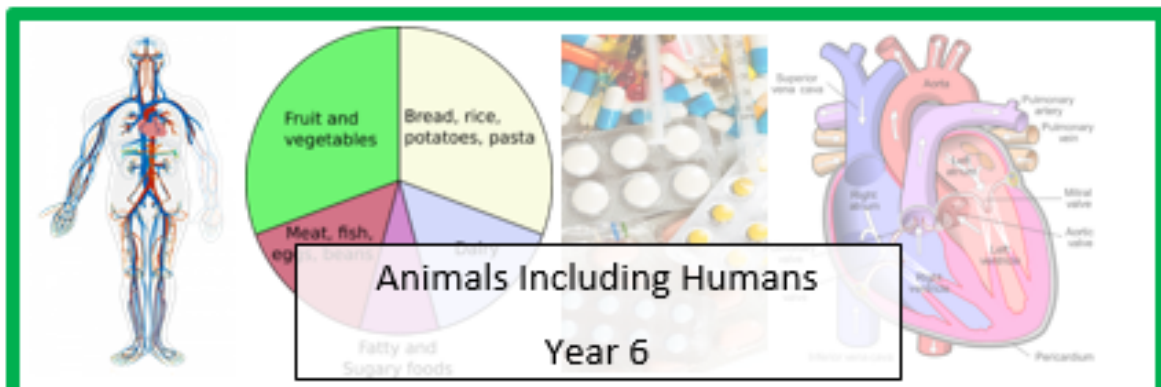
Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
adolescent	adult	asexual reproduction	sexual reproduction	fertilisation
death	teenager	elderly	toddler	Reproduction
foetus	growth	puberty	Menstrual cycle	gestation
I don't know it. I know what it means. I can use it in a sentence.				

Year 6



Animals Including Humans

Year 6

Our unit learning objectives	Pupil Self-reflection
I can identify the main parts of the human circulatory system and describe the function of the heart, blood vessels and blood.	☐ ☐ ☐
I can describe the ways in which nutrients and water are transported within animals including humans.	☐ ☐ ☐
I can recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	☐ ☐ ☐

Our Scientific Enquiry Skills

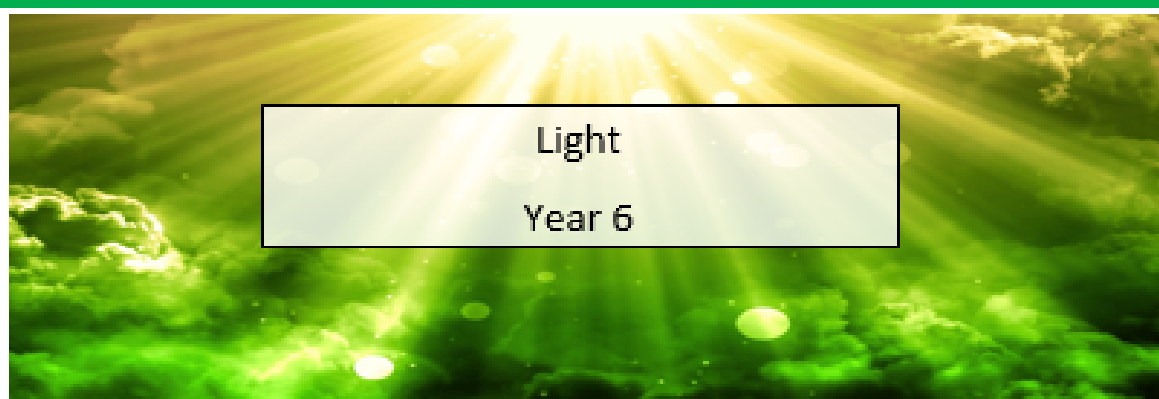
Comparative/fair testing	Research	Observation over time	Pattern seeking	Identifying and classifying

Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating

Unit Vocabulary

Vocabulary Words I Know				
heart	pulse	rate	pumps	blood
blood vessels	transported	lungs	oxygen	carbon dioxide
nutrients	water	muscles	cycle	circulatory system
diet	exercise	lifestyle		
I don't know it. I know what it means. I can use it in a sentence.				



Our unit learning objectives	Pupil Self-reflection
Recognises 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	

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeing	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
light	light source	dark	absence of light	transparent
translucent	opaque	shiny	matt	surface
shadow	reflect	mirror	sunlight	dangerous
straight lines	light rays	refraction	medium	density



I don't know it.



I know what it means.



I can use it in a sentence.

Electricity

Year 6



Our unit learning objectives	Pupil Self-reflection
To 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.	
To associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.	
To use recognised symbols when representing a simple circuit in a diagram.	

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

Vocabulary Words I Know

circuit	complete circuit	circuit diagram	circuit symbol	cell
battery	bulb	buzzer	motor	switch
voltage	fuse	terminal		



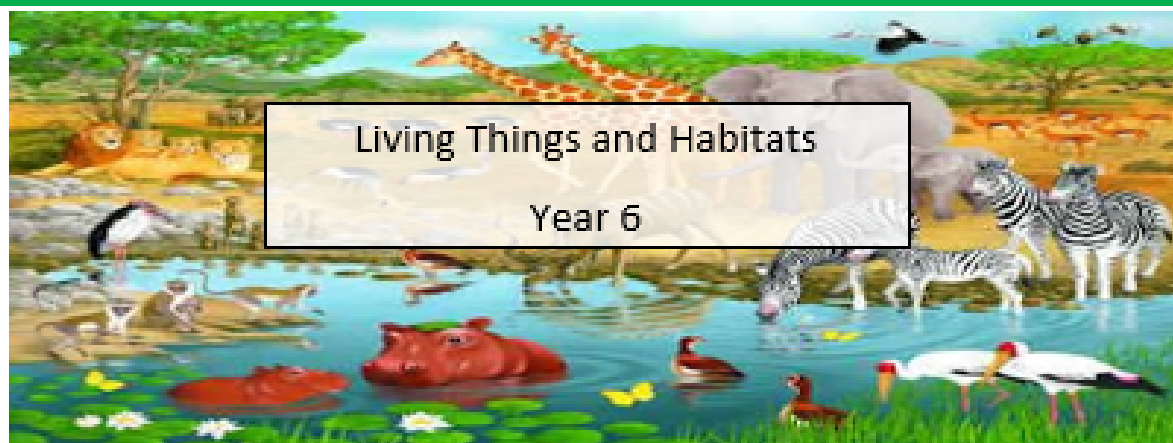
I don't know it.



I know what it means.



I can use it in a sentence.



Our unit learning objectives	Pupil Self-reflection
Describes 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.	  
Give reasons for classifying plants and animals based on specific characteristics.	  

Our Scientific Enquiry Skills

 Comparative/fair testing	 Research	 Observation over time	 Pattern seeking	 Identifying and classifying
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Our Working Scientifically Skills

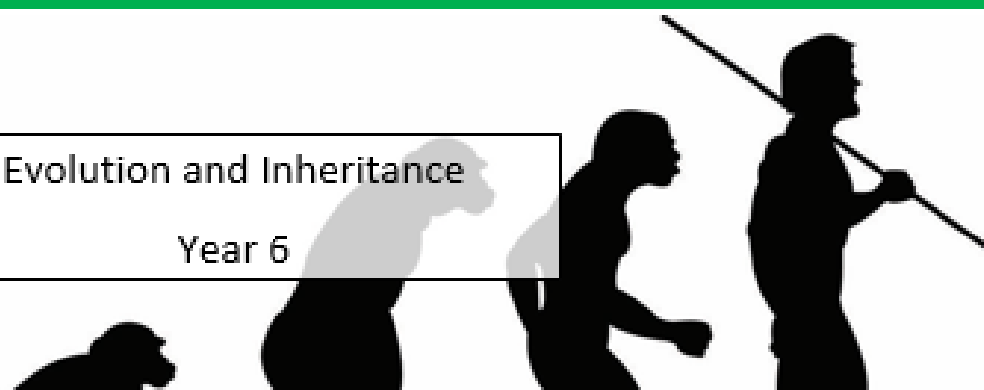
 Questioning	 Prediction	 Setting up tests	 Observation and measurement	 Recording	 Interpreting results	 Evaluating
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Unit Vocabulary

<u>Vocabulary Words I Know</u>				
Organism	bacteria	amphibians	reptiles	birds
microorganism	virus	insects	arachnid	Vertebrate
fungus	fish	non-flowering	mollusc	Invertebrate
Carl Linnaeus	Edward Jenner	Alexander Fleming	Environment	Classification Key.
 I don't know it.  I know what it means.  I can use it in a sentence.				

Evolution and Inheritance

Year 6



Our unit learning objectives	Pupil Self-reflection
To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	
To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents	
To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	

Our Scientific Enquiry Skills

Comparative/fair testing	Research	Observation over time	Pattern seeing	Identifying and classifying
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Our Working Scientifically Skills

Questioning	Prediction	Setting up tests	Observation and measurement	Recording	Interpreting results	Evaluating
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Unit Vocabulary

Vocabulary Words I Know				
offspring	sexual reproduction	variance	characteristics	suited
adapted	environment	inherited	species	fossils
survival	evolution	genetics	living thing	
I don't know it. I know what it means. I can use it in a sentence.				

