

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 3**

Statutory Curriculum Objectives	Can I objectives	Go Explore	Ancient Egypt	Moorland Life
PLANTS: Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading knowledge and spelling knowledge.	Can I use, spell and understand scientific vocabulary? Roots, stem/trunk, leaves, flowers, air, water, light, nutrients, soil, life cycle, pollination, seed formation, seed dispersal		✓	✓
PLANTS: identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers W/S Asking relevant questions and using different types of scientific enquiries to answer them	Can I identify and name different parts of flowering plants? Can I describe the functions of different parts of flowering plants? Can I ask questions about and investigate the roles of parts of the plant? (remove roots, Strip leaves, look at fruit containing seeds) *Can I begin to understand that plants can make their own food?- Small discussion only*		✓	✓
PLANTS: explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant W/S: Setting up simple practical enquiries, comparative and fair tests W/S: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Can I investigate what different plants need to live? (e.g. 4 Cacti and 4 spider plants, 1 of each plant as a control, the rest given different set amounts of water and observed over 2 weeks) Can I report my findings?		✓	✓
PLANTS: investigate the way in which water is transported within plants	Can I investigate the way in which water is transported within plants?		✓	✓

W/S: Setting up simple practical enquiries, comparative and fair tests W/S: Record findings using a labelled diagram	(e.g. white carnations placed in food dye- over time this will travel up the stem)			
PLANTS: Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	Can I explore the part that flowers play in the life cycle of flowering plants?			✓
PLANTS: Uses and implications of science today and for the future	Can I learn about how scientists improve food production through sustainably providing plants with the optimum conditions they need? (hydroponic, aeroponic or aquaponic vertical farming)			✓
EXPERIENCES-PLANTS: Pupils should work with plants to investigate different factors for life, growth and reproduction. They should work scientifically, using their own ideas to design scientific enquiries to answer their own questions whilst also recognising that secondary sources can also provide valuable answers to questions too.				
ANIMALS, (Inc. HUMANS): Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading knowledge and spelling knowledge.	Can I use, spell and understand scientific vocabulary? Skeleton, muscles, nutrition, support, protection, movement, ribs, spine, skull.		✓	
ANIMALS, (Inc. HUMANS): Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get their nutrition from what they eat W/S: Using straightforward scientific evidence to answer questions or to support their findings.	Can I identify that animals, including humans, need the right type of nutrition? Can I learn what makes a balanced diet? Can I design a balanced meal? Can I identify that animals, including humans, get their nutrition from what they eat?		✓	
ANIMALS, (Inc. HUMANS): Identify that humans and some other animals have skeletons and muscles for support, protection and movement. W/S: Identifying differences, similarities or changes related to simple scientific ideas and processes	Can I identify that humans and some other animals have skeletons and that they differ from one another? Can I label a skeleton? Can I describe the different functions of the skeleton? E.g. for support, protection and movement		✓	

Commented [NT1]:

ANIMALS, (Inc. HUMANS): Uses and implications of science today and for the future	Can I learn about how scientists use bones to learn about the past?			
EXPERIENCES-ANIMALS, (Inc. HUMANS): Where possible, pupils should see different sources of information about bones (X-ray, bones and skeletons, feel bones in their own body, non-fiction texts). They should learn about what makes a balanced diet and take part in planning balanced meals (using familiar foods where possible).				
ROCKS: Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading knowledge and spelling knowledge.	Can I use, spell and understand scientific vocabulary? Fossil, sedimentary, igneous, metamorphic, Properties- hard, soft, durable, shiny, dull, crystal, rough, smooth, absorbent, Names- chalk, diamond, sandstone, granite, limestone, basalt, slate, pumice.			
ROCKS: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties W/S: Identifying differences, similarities or changes related to simple scientific ideas and processes	Can I compare and group rocks? (on the basis of their appearance and simple physical properties) Can I begin to understand the scientific process that causes rocks to change? Can I investigate which rocks and soils are found in my local environment? Can I begin to understand that some rocks are present naturally and that some have been added to the environment by humans?			
ROCKS: Describe in simple terms how fossils are formed when things that have lived are trapped within rock W/S: Identifying differences, similarities or changes related to simple scientific ideas and processes	Can I describe how fossils are formed? (when things that have lived are trapped within rock)			
ROCKS: Recognise that soils are made from rocks and organic matter.	Can I recognise that soils are made from rocks and organic matter?			
ROCKS: Uses and implications of science today and for the future	Can I find out about how scientists use different rocks and minerals in many things? (Technology, make up, car manufacture, construction)?			

	Can I learn about why it is important to reuse, repurpose and recycle things containing rare minerals?			
EXPERIENCES- ROCKS: Pupils should look closely at rocks and soils from their local environment, with some discussion about those which occur naturally and those which are have been added the environment. They should consider how they have changed over time. They should observe and investigate the properties of a range of rocks by conducting simple tests e.g. Rubbing with sandpaper to test durability. Pupils should use hand lenses to look closely at rocks and soil.				
FORCES & MAGNETS: Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading knowledge and spelling knowledge.	Can I use, spell and understand scientific vocabulary? Attract, repel, magnetic force, materials, everyday use, friction, gravity, magnet			
FORCES & MAGNETS: Compare how things move on different surfaces W/S Setting up simple practical enquiries, comparative and fair tests W/S Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers W/S Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions W/S Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables W/S: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Can I name and understand the key forces- gravity, magnetic, friction, air resistance, applied force? Can I compare how things move on different surfaces? Can I set up a fair test to measure how things move when on a range of surfaces? (e.g. car rolling down a ramp- ramp cover to change e.g. carpet, Clingfilm, bubble wrap, corrugated card) Can I take accurate measurements? Can I record information in a systematic way? Can I record my findings and share my answer?			
FORCES & MAGNETS: Notice that some forces need contact between two objects, but magnetic forces can act at a distance	Can I notice that some forces need contact between two objects, but magnetic forces can act at a distance? *discussion*			
FORCES & MAGNETS: Observe how magnets attract or repel each other and attract some materials and not others	Can I observe how magnets attract or repel each other? Can I observe which materials are magnetic?			

FORCES & MAGNETS: 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	Can I compare and group materials according to their magnetic properties? Can I identify some magnetic materials?	✓		
FORCES & MAGNETS: Describe magnets as having two poles	Can I describe magnets as having two poles?	✓		
FORCES & MAGNETS: Predict whether two magnets will attract or repel each other, depending on which poles are facing.	Can I predict whether two magnets will attract or repel each other?	✓		
FORCES & MAGNETS: Uses and implications of science today and for the future	Can I learn about how scientists have used magnets in everyday objects? Can I suggest how magnets could be used to improve/create something?	✓		
EXPERIENCES- FORCES & MAGNETS: Pupils should observe the magnetic forces acting without direct contact (unlike most other forces) and explore the behaviour of everyday uses of magnets. Pupils should work scientifically to raise questions and conduct tests to find out how far things move on different surfaces, gathering data to find answers to their questions. Pupils will use mathematical skills to measure accurately.				
LIGHT: Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge	Can I read, spell and understand scientific vocabulary? translucent, transparent, opaque, reflect, shadow	✓		
LIGHT: Recognise that they need light in order to see things and that dark is the absence of light W/S: Asking relevant questions and using different types of scientific enquiries to answer them	Can I recognise that light is needed in order to see things? Can I recognise that dark is the absence of light?	✓		
LIGHT: Notice that light is reflected from surfaces	Can I notice that light is reflected from surfaces?	✓		
LIGHT W/S: Asking relevant questions and using different types of scientific enquiries to answer them	Can I explore what happens when light is reflected off a mirror and other reflective surfaces?	✓		
LIGHT: Find patterns in the way that the size of shadows change.	Can I find patterns in the way that size of shadows change?	✓		

<p>W/S: Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>W/S: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>				
<p>LIGHT: Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p>	<p>Can I recognise that light from the sun can be dangerous and that there are ways to protect my eyes?</p>			
<p>LIGHT: Recognise that shadows are formed when the light from a light source is blocked by a solid object</p>	<p>Can I recognise that shadows are formed when the light from a light source is blocked by a solid object?</p>			
<p>LIGHT: Uses and implications of science today and for the future</p>	<p>Can I learn about fibre optics and the impact this has had on the transmission of data, images and voice?</p>			
<p>EXPERIENCES-LIGHT: Pupils should investigate light to explore how it reflects, changes and causes shadows. Pupils should work scientifically to look for patterns in shadows when the light source moves or the distance between the light sources and object changes</p>				
<p>Non- Statutory Curriculum Objectives</p>		<p>Go Explore</p>	<p>Ancient Egypt</p>	<p>Moorland Life</p>
<p>ANIMALS, (Inc. HUMANS): (Revision of Year 2 content in the context of River and Moorland habitats) Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>W/S: Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Can I identify that most living things live in habitats to which they are suited?</p> <p>Can I give reasons why a habitat is suitable?</p> <p>Can I use simple scientific evidence (from secondary sources) to answer questions about how living things are adapted to suit their environment?</p>			

ANIMALS, (Inc. HUMANS): (Revision of Year 2 content in the context of River and Moorland habitats) identify and name a variety of plants and animals in their habitats, including micro-habitats	Can I identify and name plants and animals in their habitats, including micro-habitats?			✓
<i>Working Scientifically- Planned Investigations</i>		<i>Go Explore</i>	<i>Ancient Egypt</i>	<i>Moorland Life</i>
<i>W/S: Asking relevant questions and using different types of scientific enquiries to answer them</i>		✓	✓	✓
<i>W/S: Setting up simple practical enquiries, comparative and fair tests</i>		✓	✓	✓
<i>W/S: Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</i>		✓		
<i>W/S: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</i>		✓		
<i>W/S: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</i>		✓	✓	✓
<i>W/S: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</i>		✓		
<i>W/S: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</i>		✓		
<i>W/S: Identifying differences, similarities or changes related to simple scientific ideas and processes</i>			✓	✓
<i>W/S: Using straightforward scientific evidence to answer questions or to support their findings.</i>			✓	✓