

# *Science*

Progression of knowledge and skills

EYFS – Pre-School		EYFS - Reception
<p><u>Personal Social and Emotional Development</u> Make healthy choices about food, drink, activity and toothbrushing.</p> <p><u>Understanding the World</u> Begin to make sense of their own life-story and family’s history Understand the key features of the life cycle of a plant and an animal.</p>		<p><u>Personal, Social and Emotional Development</u> Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, healthy eating, toothbrushing.</p>
Year 1		National curriculum
<p>Step 1 Name and identify parts of the human body Step 2 Draw and label parts of the human body Step 3 Sight Step 4 Sound Step 5 Taste Step 6 Touch Step 7 Smell</p>	<p>Step 1 Mammals Step 2 Birds Step 3 Fish Step 4 Amphibians Step 5 Reptiles Step 6 Compare and group animals Step 7 Carnivores Step 8 Herbivores Step 9 Omnivores</p>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>• Identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>• Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> <li>• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>
Year 2		National curriculum
<p><u>Autumn 1 - Animals</u> Step 1 Mammals Step 2 Birds Step 3 Fish Step 4 Amphibians Step 5 Reptiles Step 6 Humans</p> <p><u>Autumn 2 – Humans</u> Step 1 Exercise Step 2 Food Step 3 Hygiene Step 4 Teeth</p>	<p><u>Summer 2 – Growing Up</u> Step 1 Mother and offspring Step 2 Life cycle of humans Step 3 Life cycles of different mammals Step 4 Life cycle of amphibians Step 5 Life cycle of a butterfly Step 6 Are there patterns between the life cycles of different animals?</p> <p><u>Summer 4 – Growing Up (2)</u> Step 1 Butterfly diary</p>	<ul style="list-style-type: none"> <li>• Notice that animals, including humans, have offspring which grow into adults</li> <li>• Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>• Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>

Year 3 (Cycle B)	National curriculum
<p><u>Autumn 1 - Skeletons</u>                      Step 1 Name and identify bones in the human body                      Step 2 Functions of the skeleton                      Step 3 Name and identify bones in a range of animals                      Step 4 Animals with and without a spine                      Step 5 Are all skeletons the same?</p> <p><u>Autumn 2 – Movement</u>                      Step 1 Joints                      Step 2 How we move</p> <p><u>Autumn 3 – Nutrition and diet</u>                      Step 1 Food groups                      Step 2 Understand the five food groups                      Step 3 Balanced diets                      Step 4 Compare diets                      Step 5 Animal diets</p>	<ul style="list-style-type: none"> <li>• 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</li>   <li>• Identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>
Year 4 (Cycle A)	National curriculum
<p><u>Summer 4- Digestive System</u>                      Step 1 Teeth - carnivores, herbivores and omnivores                      Step 2 Human teeth                      Step 3 Layers of the teeth                      Step 4 Plan - tooth decay experiment                      Step 5 The digestive system                      Step 6 The digestive system - model                      Step 7 Findings - tooth decay experiment</p> <p><u>Summer 5 – Food Chains</u>                      Step 1 What is a food chain?                      Step 2 Interpret food chains                      Step 3 Draw food chains                      Step 4 What would happen if?</p>	<ul style="list-style-type: none"> <li>• Describe the simple functions of the basic parts of the digestive system in humans</li>   <li>• Identify the different types of teeth in humans and their simple functions</li>   <li>• Construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>

Year 5	National curriculum
<p><u>Spring 2 - Animals Including Humans</u>                      Step 1 The human life cycle                      Step 2 Babies and children                      Step 3 Adolescence and puberty                      Step 4 Adults and the elderly                      Step 5 Gestation periods of mammals                      Step 6 Gestation periods and lifespan</p>	<ul style="list-style-type: none"> <li>• Describe the changes as humans develop to old age</li> </ul>
Year 6	National curriculum
<p><u>Spring 3 - The Circulatory System</u>                      Step 1 The circulatory system                      Step 2 Blood                      Step 3 The heart                      Step 4 Blood flow in the heart                      Step 5 Oxygenated and deoxygenated blood                      Step 6 Dissection of the heart</p> <p><u>Spring 4 - Diet, Drugs and Lifestyle</u>                      Step 1 Diet                      Step 2 Drugs                      Step 3 Cigarettes                      Step 4 Plan - heart rate experiment                      Step 5 Investigate - heart rate experiment                      Step 6 Evaluate - heart rate experiment</p>	<ul style="list-style-type: none"> <li>• Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> <li>• Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>• Describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>

**EYFS – Two to Four-Year-Olds**

**EYFS - Reception**

Understanding the World

Begin to understand the need to respect and care for the natural environment and all living things.

Understanding the World

Explore the natural world around them  
Recognise some environments that are different to the one in which they live.

**Year 1**

**National curriculum**

Not Studied

**Year 2**

**National curriculum**

Spring 2 – Living Things and their Habitats

- Step 1 Habitats in my local area
- Step 2 Polar habitats
- Step 3 Desert habitats
- Step 4 Ocean habitats
- Step 5 Woodland habitats
- Step 6 Microhabitats
- Step 7 Habitats and diet
- Step 8 Food chains

- Explore and compare the differences between things that are living, dead, and things that have never been alive
- 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
- Identify and name a variety of plants and animals in their habitats, including microhabitats
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food

<b>Year 3 (Cycle B)</b>		<b>National curriculum</b>
Not Studied		
<b>Year 4 (Cycle A)</b>		<b>National curriculum</b>
<p><u>Autumn 1 – Group and Classify Animals</u>                  Step 1 Group animals                  Step 2 Vertebrates and invertebrates                  Step 3 Classification keys (animals)                  Step 4 Group plants                  Step 5 Classification keys (plants)</p> <p><u>Autumn 2 – Data Collection A</u>                  Step 1 Data collection A                  Step 2 Analyse data</p> <p><u>Spring 2 – Data Collection B</u>                  Step 1 Data collection B                  Step 2 Analyse data</p> <p><u>Summer 1 – Data Collection C</u>                  Step 1 Data collection C                  Step 2 Analyse data                  Step 3 Make conclusions</p>	<p><u>Summer 2 – Habitats</u>                  Step 1 Living things and their habitats                  Step 2 Classification keys (animals)                  Step 3 Classification keys (plants)                  Step 4 Human impact on habitats</p>	<ul style="list-style-type: none"> <li>• Recognise that living things can be grouped in a variety of ways</li> <li>• Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> <li>• Recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul>

Year 5	National curriculum
<p><u>Spring 3 – Life Cycles</u>                      Step 1 Life cycles of mammals                      Step 2 Life cycles of amphibians (frogs)                      Step 3 Life cycles of insects                      Step 4 Life cycles of birds</p> <p><u>Summer 1 – Reproduction A</u>                      Step 1 Sexual reproduction in animals                      Step 2 Reproductive parts in plants                      Step 3 Pollination                      Step 4 Asexual reproduction                      Step 5 Plan - cloning plants                      Step 6 Plant - cloning plants</p> <p><u>Summer 4 – Reproduction B</u>                      Step 1 Clone plants                      Step 2 Findings - clone plants</p>	<ul style="list-style-type: none"> <li>• Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>• Describe the life process of reproduction in some plants and animals</li> </ul>
Year 6	National curriculum
<p><u>Autumn 1 – Living Things and their Habitats</u>                      Step 1 Conditions for life                      Step 2 Group organisms                      Step 3 Classify animals                      Step 4 Classify plants                      Step 5 Microorganisms                      Step 6 Classify microorganisms                      Step 7 Carl Linnaeus</p>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Give reasons for classifying plants and animals based on specific characteristics</li> </ul>

<b>EYFS – Two to Four-Year-Olds</b>	<b>EYFS - Reception</b>
<p><u>Understanding the World</u>                  Plant seeds and care for growing plants                  Understand the key features of the life cycle of a plant and an animal.</p>	<p><u>Understanding the World</u>                  Explore the natural world around them.</p>

<b>Year 1</b>		<b>National curriculum</b>
<p><u>Spring 1 – Planting A</u>                  Step 1 Plant – winter</p> <p><u>Spring 5 – Planting B</u>                  Step 1 Observe changes                  Step 2 Plant – spring</p>	<p><u>Summer 1 - Plants</u>                  Step 1 Plant parts                  Step 2 Tree parts                  Step 3 Wild and garden plants                  Step 4 Plants in my local area                  Step 5 Deciduous trees                  Step 6 Evergreen trees                  Step 7 Trees in my local area</p> <p><u>Summer 2 – Planting C</u>                  Step 1 Observe changes                  Step 2 Plant - summer</p>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>• Identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>
<b>Year 2</b>		<b>National curriculum</b>
<p><u>Spring 1 – Plants (Light and Dark)</u>                  Step 1 Explore plants                  Step 2 Plant parts                  Step 3 What do plants need to grow?                  Step 4 Plan - light and dark                  Step 5 Investigate - light and dark</p> <p><u>Spring 3 – Plants (Light and Dark)</u>                  Step 1 Findings - light and dark</p>	<p><u>Summer 1 – Plants (Bulbs and Seeds)</u>                  Step 1 Bulb or seed?                  Step 2 What do plants need to grow?                  Step 3 Plan - bulbs and seeds                  Step 4 Plant - bulbs and seeds</p> <p><u>Summer 3 – Plants (Bulbs and Seeds)</u>                  Step 1 Findings - bulbs and seed</p>	<ul style="list-style-type: none"> <li>• Observe and describe how seeds and bulbs grow into mature plants</li> <li>• Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>

Year 3 (Cycle B)	National curriculum
<p><u>Summer 1 – Plants A</u>                      Step 1 Parts of a plant and their functions                      Step 2 Plant dissection                      Step 3 Plan - plant growth                      Step 4 Plant - plant growth                      Step 5 The stem and water transportation                      Step 6 Looking at seeds                      Step 7 Reproductive parts in plants                      Step 8 Pollination                      Step 9 Seed dispersal</p> <p><u>Summer 4 – Plants B</u>                      Step 1 Findings - Plant growth</p>	<ul style="list-style-type: none"> <li>• Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li>   <li>• 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</li>   <li>• Investigate the way in which water is transported within plants</li>   <li>• Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul>
Year 4 (Cycle A)	National curriculum
<p>Not Studied</p>	

**EYFS – Two to Four-Year-Olds**

**EYFS - Reception**

Understanding the world

Use all their senses in hands-on exploration of natural materials.  
Explore collections of materials with similar and/or different properties.  
Talk about the differences between materials and changes they notice.  
Explore natural materials indoors and outside.

Understanding the World

Explore the natural world around them

**Year 1**

**National curriculum**

Autumn 3 - Materials

- Step 1 Explore materials - wood, plastic, glass and metal
- Step 2 Explore materials - rock
- Step 3 Objects and materials
- Step 4 Melt and freeze
- Step 5 Float or sink?
- Step 6 Does it absorb water?
- Step 7 Investigate materials

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties

**Year 2**

**National curriculum**

Autumn 3 – Materials

- Step 1 Explore materials
- Step 2 Wood, paper and cardboard
- Step 3 Brick and rock
- Step 4 Glass and plastic
- Step 5 Metal
- Step 6 Fabrics
- Step 7 Same object, different material
- Step 8 Test materials - bend, squash, twist and stretch
- Step 9 Plan - waterproof experiment
- Step 10 Investigate - waterproof experiment

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Year 5	National curriculum
<p><u>Spring 1 – Properties of Materials</u>                      Step 1 Test materials - magnetic, transparency and hardness                      Step 2 Test materials - electrical conductivity                      Step 3 Plan - insulating heat experiment                      Step 4 Investigate - insulating heat experiment                      Step 5 Evaluate - insulating heat experiment                      Step 6 Uses of everyday materials - plastic, wood and metal</p> <p><u>Summer 2 – Reversible and Irreversible Changes</u>                      Step 1 Dissolving                      Step 2 Separate materials - filtering and sieving                      Step 3 Solutions and evaporating                      Step 4 Reversible changes                      Step 5 Irreversible changes - burning                      Step 6 Irreversible changes - acid</p>	<ul style="list-style-type: none"> <li>• Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> <li>• Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>• Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>• Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>• Demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>• Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li> </ul>
Year 6	National curriculum
<p>Not Studied</p>	

Year 3 (Cycle B)	National curriculum
<p><u>Autumn 5 - Rocks</u>                      Step 1 Identify rocks                      Step 2 Group rocks                      Step 3 Test rocks                      Step 4 Local rock survey</p> <p><u>Spring 1 - Fossils</u>                      Step 1 Explore fossils                      Step 2 Fossil formation</p> <p><u>Spring 2 - Soils</u>                      Step 1 Explore soil                      Step 2 The importance of soil                      Step 3 Plan - soil experiment                      Step 4 Investigate - soil experiment                      Step 5 Evaluate - soil experiment</p>	<ul style="list-style-type: none"> <li>• Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>• Describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>• Recognise that soils are made from rocks and organic matter</li> </ul>
Year 4 (Cycle A)	National curriculum
<p>Not Studied</p>	

<p align="center"><b>EYFS – Two to Four-Year-Olds</b></p>	<p align="center"><b>EYFS - Reception</b></p>
<p><u>Understanding the world</u>                  Use all their senses in hands-on exploration of natural materials.                  Explore collections of materials with similar and/or different properties.                  Talk about the differences between materials and changes they notice.</p>	<p><u>Understanding the World</u>                  Explore the natural world around them</p>
<p align="center"><b>Year 3 (Cycle B)</b></p>	<p align="center"><b>National curriculum</b></p>
<p><u>Not Studied</u></p>	
<p align="center"><b>Year 4 (Cycle A)</b></p>	<p align="center"><b>National curriculum</b></p>
<p><u>Autumn 3 – States of Matter</u>                  Step 1 Explore solids, liquids and gases                  Step 2 Think differently - solids, liquids and gases                  Step 3 Change states                  Step 4 Use equipment                  Step 5 Plan - measure temperature changes                  Step 6 Investigate - measure temperature changes                  Step 7 The water cycle                  Step 8 Plan - evaporation experiment                  Step 9 Investigate - evaporation experiment                  Step 10 Evaluate - evaporation experiment</p>	<ul style="list-style-type: none"> <li>• Compare and group materials together, according to whether they are solids, liquids or gases</li> <li>• 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 (°C)</li> <li>• Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>

Year 4 (Cycle A)	National curriculum
<p><u>Spring 3 - Electricity</u>                      Step 1 Common appliances that use electricity                      Step 2 Build and draw series circuits                      Step 3 What has gone wrong?                      Step 4 Conductors and insulators                      Step 5 Conductivity within a circuit</p>	<ul style="list-style-type: none"> <li>• Identify common appliances that run on electricity</li> <li>• Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>• 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</li> <li>• Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>• Recognise some common conductors and insulators, and associate metals with being good conductors</li> </ul>
Year 6	National curriculum
<p><u>Autumn 2 - Electricity</u>                      Step 1 Construct and draw series circuits using symbols                      Step 2 Complete and incomplete circuits                      Step 3 Variations within circuits                      Step 4 Plan - voltage experiment                      Step 5 Investigate - voltage experiment                      Step 6 Evaluate - voltage experiment</p>	<ul style="list-style-type: none"> <li>• Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>• 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</li> <li>• Use recognised symbols when representing a simple circuit in a diagram</li> </ul>

<b>Year 5</b>	<b>National curriculum</b>
<p><u>Autumn 2 – Space</u>                      Step 1 The solar system                      Step 2 The planets                      Step 3 Modelling                      Step 4 Motion of the Earth and planets                      Step 5 The solar system - ideas over time                      Step 6 Planet Earth                      Step 7 Night and day                      Step 8 The Moon</p>	<ul style="list-style-type: none"> <li>• Describe the movement of the Earth and other planets relative to the sun in the solar system</li> <li>• Describe the movement of the moon relative to the Earth</li> <li>• Describe the sun, Earth and moon as approximately spherical bodies</li> <li>• Use the idea of the Earth’s rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul>
<b>Year 6</b>	<b>National curriculum</b>
<p>Not Studied</p>	

EYFS – Two to Four-Year-Olds	EYFS - Reception
<p><u>Understanding the world</u> Explore and respond to different natural phenomena in their setting</p>	<p><u>Understanding the World</u> Explore the natural world around them Understand the effect of changing seasons on the natural world around them. Describe what they see, hear and feel while they are outside.</p>

Year 1	National curriculum
<p><u>Autumn 2 – Seasonal Changes Autumn</u> Step 1 Changes in autumn Step 2 Collect and record data</p> <p><u>Autumn 4 – Seasonal Changes Winter</u> Step 1 Changes in winter Step 2 Gather and record data</p> <p><u>Spring 4 – Seasonal Changes Spring</u> Step 1 Changes in spring Step 2 Collect and record data</p> <p><u>Summer 4 – Seasonal Changes Summer</u> Step 1 Changes in summer Step 2 Collect and record data Step 3 What are the main changes in each season?</p>	<ul style="list-style-type: none"> <li>• Observe changes across the 4 seasons</li> <li>• Observe and describe weather associated with the seasons and how day length varies</li> </ul>
Year 2	National curriculum
<p>Not Studied</p>	

Year 3	National curriculum
Not Studied	
Year 4	National curriculum
<p><u>Spring 1 – Sound</u>                      Step 1 Vibrations                      Step 2 The ear                      Step 3 Investigate sounds                      Step 4 Explore volume                      Step 5 Explore pitch                      Step 6 Plan - volume experiment                      Step 7 Investigate - volume experiment                      Step 8 Evaluate - volume experiment</p>	<ul style="list-style-type: none"> <li>• Identify how sounds are made, associating some of them with something vibrating</li> <li>• Recognise that vibrations from sounds travel through a medium to the ear</li> <li>• Find patterns between the pitch of a sound and features of the object that produced it</li> <li>• Find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>• Recognise that sounds get fainter as the distance from the sound source increases</li> </ul>

Year 3	National curriculum
<p><u>Spring 3 - Light</u>                      Step 1 Light sources                      Step 2 The Sun                      Step 3 How we see                      Step 4 Shadows                      Step 5 Opaque, translucent or transparent?                      Step 6 Plan - shadow experiment                      Step 7 Investigate - shadow experiment                      Step 8 Evaluate - shadow experiment</p>	<ul style="list-style-type: none"> <li>• Recognise that they need light in order to see things and that dark is the absence of light</li> <li>• Notice that light is reflected from surfaces</li> <li>• Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>• Recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>• Find patterns in the way that the size of shadows change</li> </ul>
Year 6	National curriculum
<p><u>Spring 1 - Light</u>                      Step 1 How we see                      Step 2 Light and straight lines                      Step 3 Shadow formation                      Step 4 Plan - shadow experiment                      Step 5 Investigate - shadow experiment                      Step 6 Evaluate - shadow experiment                      Step 7 Refraction                      Step 8 Explore light</p>	<ul style="list-style-type: none"> <li>• Recognise that light travels in straight lines</li> <li>• 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</li> <li>• 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</li> <li>• Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>

Year 3	National curriculum
<p><u>Summer 2 – Forces</u>                      Step 1 Explore forces                      Step 2 Friction                      Step 3 Plan - friction experiment                      Step 4 Investigate - friction experiment</p> <p><u>Summer 3 – Magnets</u>                      Step 1 Magnets                      Step 2 Magnetic and non-magnetic materials                      Step 3 Investigate metals                      Step 4 North and South Poles - attract and repel</p>	<ul style="list-style-type: none"> <li>• Compare how things move on different surfaces</li> <li>• Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</li> <li>• Observe how magnets attract or repel each other and attract some materials and not others</li> <li>• 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</li> <li>• Describe magnets as having 2 poles</li> <li>• Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</li> </ul>
Year 5	National curriculum
<p><u>Autumn 1 – Forces</u>                      Step 1 Friction                      Step 2 Air resistance                      Step 3 Plan - parachute experiment                      Step 4 Investigate - parachute experiment                      Step 5 Evaluate - parachute experiment                      Step 6 Plan - water resistance                      Step 7 Investigate - water resistance                      Step 8 Explore gravity                      Step 9 Use small forces for greater effects</p>	<ul style="list-style-type: none"> <li>• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>• Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>• Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</li> </ul>

Year 6	National curriculum
<p><u>Summer 1 - Variation</u>                      Step 1 Variation                      Step 2 Inheritance and characteristics</p> <p><u>Summer 2 - Adaptations</u>                      Step 1 Animal adaptations                      Step 2 Plant adaptations                      Step 3 Evolution                      Step 4 Charles Darwin                      Step 5 Natural selection                      Step 6 Darwin's finches</p> <p><u>Summer 3 - Fossils</u>                      Step 1 Fossil formation                      Step 2 Explore fossils                      Step 3 Mary Anning</p>	<ul style="list-style-type: none"> <li>• Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>• Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>• Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>

### Asking Questions

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Understand 'why' questions,</li> <li>Make comments about what they have heard and ask questions to clarify their understanding.</li> </ul>	<ul style="list-style-type: none"> <li>Ask simple questions.</li> </ul>	<ul style="list-style-type: none"> <li><b>Ask simple questions and recognise that they can be answered in different ways.</b></li> </ul>	<ul style="list-style-type: none"> <li>Ask questions and understand there are different enquiry types they could use to answer them.</li> </ul>	<ul style="list-style-type: none"> <li><b>Ask relevant questions and use different types of scientific enquiry to answer them.</b></li> </ul>	<ul style="list-style-type: none"> <li>Ask scientific questions and begin to understand which questions would be best suited to each enquiry type.</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant scientific questions and choose which enquiry type would be best suited to answer them.</li> </ul>

### Planning

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Choose the right resources to carry out their own plan.</li> </ul>	<ul style="list-style-type: none"> <li>Verbally state what they are going to investigate.</li> </ul>	<ul style="list-style-type: none"> <li>Make simple predictions based on a question.</li> <li>Identify what they will change and keep the same.</li> </ul>	<ul style="list-style-type: none"> <li>Make relevant predictions.</li> <li>Identify what they will change, observe and keep the same.</li> <li>With support, set up simple practical enquiries.</li> </ul>	<ul style="list-style-type: none"> <li>Make predictions based on simple scientific knowledge.</li> <li>Identify what they will change, observe or measure and keep the same.</li> <li><b>Set up simple practical enquiries, comparative and fair tests.</b></li> </ul>	<ul style="list-style-type: none"> <li>Make predictions based on scientific knowledge.</li> <li>With support, plan different types of scientific enquiry. Where appropriate, identify the dependent, independent and controlled variables.</li> </ul>	<ul style="list-style-type: none"> <li>Make predictions based on scientific knowledge.</li> <li><b>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</b></li> </ul>

### Making Observations

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>• Talk about what they see, using a wide vocabulary.</li> <li>• Use new vocabulary in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>• Observe closely.</li> </ul>	<ul style="list-style-type: none"> <li>• Observe closely, using simple equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to use scientific equipment to make observations.</li> </ul>	<ul style="list-style-type: none"> <li>• Make systematic and careful observations.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of scientific equipment to make systematic and careful observations.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of scientific equipment to make systematic and careful observations with increased complexity.</li> </ul>

### Taking Measurements

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>• Use one-handed equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out simple tests using non-standard measurements when appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Perform simple tests</b> using standard units when appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out tests and simple experiments and take measurements using standard units.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Take accurate measurements using a range of scientific equipment. Start to take repeat readings when appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</b></li> </ul>

### Gathering, Recording and Classifying Data

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record simple data.</li> <li>Sort objects and living things into groups based on simple properties.</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record data to help in answering questions.</li> <li>Identifying and classifying.</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record data in different ways to help answer questions.</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables.</li> </ul>	<ul style="list-style-type: none"> <li>Gather, record and classify data in a variety of ways to help in answering questions.</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</li> </ul>	<ul style="list-style-type: none"> <li>Gather, record and classify data with increasing complexity to help in answering questions.</li> <li>Record data using scientific diagrams and labels, classification keys, tables, bar and line graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> </ul>

**Presenting Findings**

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Describe events in some detail.</li> </ul>	<ul style="list-style-type: none"> <li>Explain what they found out to an adult or a partner.</li> </ul>	<ul style="list-style-type: none"> <li>Talk about what they have found out and how they found it out. (non-statutory)</li> </ul>	<ul style="list-style-type: none"> <li>Report on findings from enquiries, including oral and written explanations.</li> </ul>	<ul style="list-style-type: none"> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> </ul>	<ul style="list-style-type: none"> <li>Report and present findings from enquiries, including conclusions.</li> <li>Begin to identify causal relationships in oral and written forms such as displays and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul>

### Answering Questions and Concluding

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Understand a question or instruction that has two parts.</li> <li>Understand 'Why' questions.</li> <li>Articulate their ideas and thoughts in well-formed sentences.</li> </ul>	<ul style="list-style-type: none"> <li>Answer simple questions.</li> </ul>	<ul style="list-style-type: none"> <li>Use their observations and ideas to suggest answers to questions.</li> </ul>	<ul style="list-style-type: none"> <li>Make simple conclusions.</li> <li>Use results, findings or observations to answer questions.</li> </ul>	<ul style="list-style-type: none"> <li>Use straightforward scientific evidence to answer questions or to support their findings.</li> <li>Use results to draw simple conclusions.</li> <li>Begin to identify differences, similarities or changes related to simple ideas or processes.</li> </ul>	<ul style="list-style-type: none"> <li>Use scientific evidence to answer questions.</li> <li>Make conclusions based on scientific evidence and from their own testing and findings.</li> <li>Identify differences, similarities or changes related to simple ideas or processes.</li> </ul>	<ul style="list-style-type: none"> <li>Use scientific evidence to answer questions.</li> <li>Make conclusions based on scientific evidence and from their own testing and findings.</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>

### Evaluating

Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>Suggest questions for further investigation.</li> </ul>	<ul style="list-style-type: none"> <li>Begin to make predictions for new values, suggest improvements and raise further questions.</li> </ul>	<ul style="list-style-type: none"> <li>Make predictions for new values, suggest improvements and raise further questions.</li> </ul>	<ul style="list-style-type: none"> <li>Use test results to make predictions to set up further comparative and fair tests.</li> <li>Suggest investigation improvements including accuracy of results.</li> <li>Provide some simple examples of how to extend the investigation.</li> </ul>