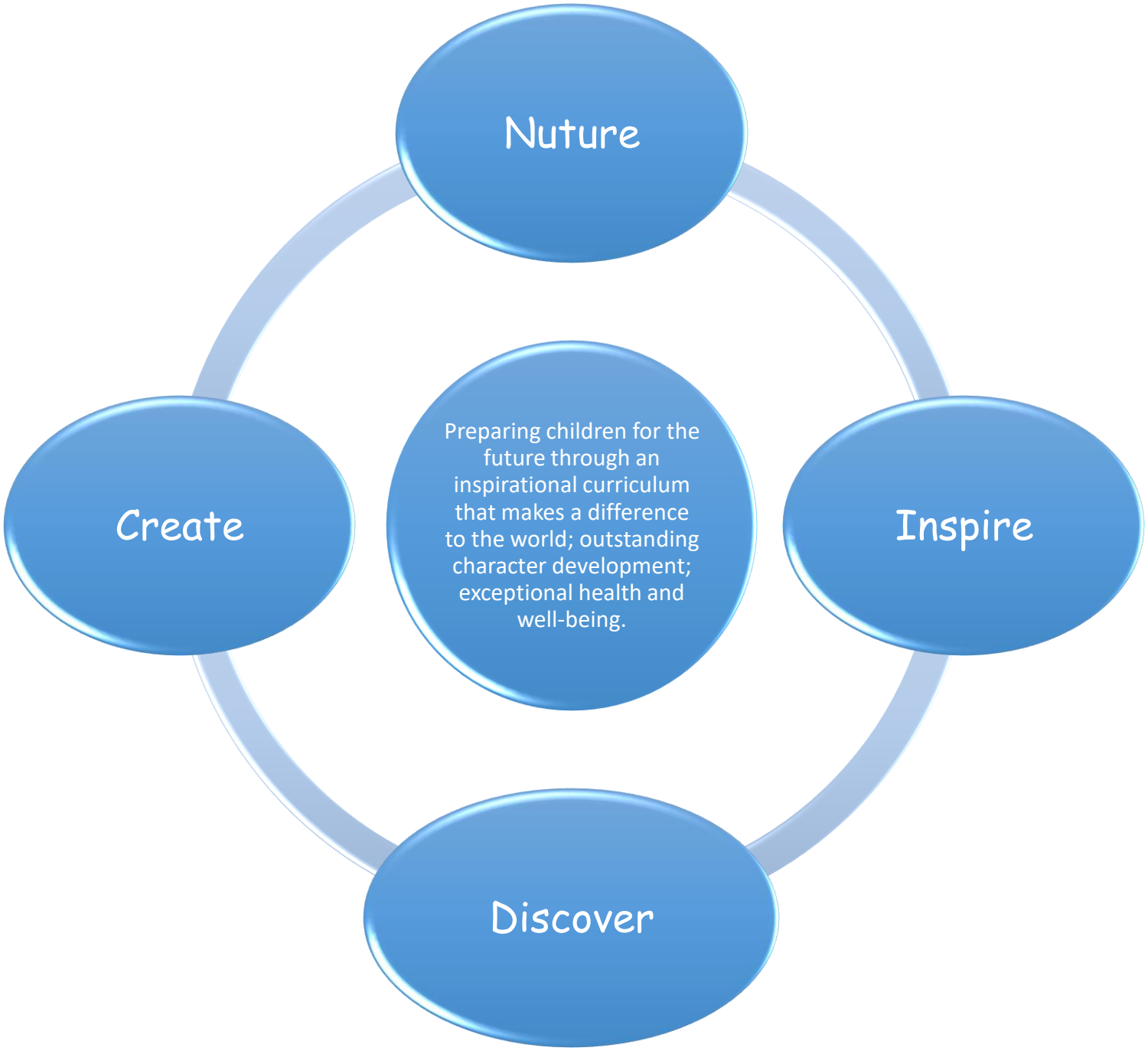
**Stathern Primary School**

'Nurture, Inspire, Discover, Create'

**Science Curriculum Vision and Skills**



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## Science Curriculum Vision and Skills

# Intent and Design – What are we trying to achieve?

## Vision

**•As a school we aim to:**

•Preparing children for the future through an inspirational curriculum that makes a difference to the world; outstanding character development; exceptional health and well-being.

**•In Science we aim to:**

•To develop the children`s curiosity for science and for them to discover how science impacts on their lives.

•To help develop their understanding of different areas of science that will help them to answer scientific questions about the world around them.

## Motto

- **Nurture** – We care for each other and celebrate our differences, achievements and contributions to the world. We support each other through challenges and difficulties, recognising that the mental health and well-being of both ourselves and those around us is one of the key factors in our happiness and success.
- **Inspire** – We inspire each other to greater heights through our communication, actions, support and achievements. We take inspiration from the people, places and events all around us. We recognise that whether a situation is good or bad, there is always learning and growth to be gained. These situations inspire us to make positive change a reality.
- **Discover** – We are excited to discover new knowledge, skills, people and places. We are open to alternative ideas beyond our own and enjoy exploring the thoughts, conversations and solutions that others bring to different situations and experiences.
- **Create** – We enjoy working together to create new and exciting solutions to make our world a better place. We believe we can make a difference no matter how large or small. Our school is a place where we can experiment and take risks in order that we might better ourselves and the world we live in.

## School Values

•We believe in…

- **Developing outstanding character** and attitudes to learning in preparation for future challenges in a changing world.
- **Promoting physical and mental health** in a happy caring environment that is supportive and encouraging.
- **Making a difference** to the world we live in through creating enterprising solutions to local and global issues.
- Developing social skills and an appreciation of **each person's unique strengths**, respecting and embracing different cultures, races and religions.
- Fostering a **deep sense of care and nurture** for the world we live in and the people around us.
- Creating a broad range of **inspiring experiences** that allows children to develop skills and find their place in the world.
- Working in **partnership with our school community and beyond to build brighter futures**.
- High expectations alongside a **culture of self-awareness, reflection and self-improvement**.

## Aims of our Science Curriculum

**•Our inspirational science curriculum will enable...**

•children here at Stathern, to develop scientific knowledge and conceptual understanding through specific scientific topics

•children to develop the 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

•children to become equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

## Learning Intentions

•At Stathern Primary School we incorporate the statutory objectives of the National Curriculum into our science curriculum. This includes different scientific programmes according to year groups including: plants, animals, electricity, evolution and inheritance. The different programmes are progressive, they review the children`s prior learning and then extend their knowledge and skills to develop a deeper understanding. The science areas are planned into different half-termly topics and the objective of these topics is to provide our pupils with a creative, enterprising and inspiring curriculum that develops an understanding of the world through cross-curricular links and to provide a purpose for learning.

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# Implementation and Organisation – How will we arrange our learning?

## School Focus

Reading | Challenge | Vocabulary and Communication | Progressive Skills | Transferable skills | Positive Mental Health and wellbeing

## Science Developmental Foci

- Assess and review the children`s prior learning
- Lessons are planned in the correct sequence to build and develop knowledge and skills
- Children use and understand the correct scientific vocabulary
- Progressive knowledge and skills are taught through the scientific enquiry objectives

  i.e research, changes, testing
- Science written work must reflect and reinforce the key skills in Reading, Writing and Maths. To show the understanding of science vocabulary
- Our Science curriculum enables children to understand the needs of the world around them, how science changes and develops the world.

## Contexts

**Exciting, topic-based learning supported by a rich and diverse array of text, activities and investigations.**

**Big Questions to be used to develop scientific thinking**

**Scientific Enquiry to understand the world of a scientist and to develop scientific skills**

Skills Progressions Explorify Primary Science Trust

| R | Y1/2 | Y3/4 | Y5/6 |
|---|---|---|---|
| Seasons | | | |
| Plants | | | |
| Animals including humans | | | |
| Materials including: Everyday material, rocks, states of matter, properties and changes in materials | | | |
| Living things and their habitats | | | |
| | | Electricity | |

British Science Week Stem Learning

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| | | | | |
|---|---|---|---|---|
| | | **Sound** | | |
| | | | **Light** | |
| | | | **Space and Earth** | |
| | | | **Evolution and Inheritance** | |

| **Seasons** | | | |
|---|---|---|---|
| YR | Y1/2 | Y3/4 | Y5/6 |
| ♣ observe the world around us and consider similarities and differences.<br>♣ To develop understanding of changes over time.<br>develop understanding of the change of season and weather.<br>♣ consider new life – plants and animals.<br>♣ develop understanding of what is needed to sustain life.<br>♣ develop and understand of growth decay and changes over time.<br>♣ identify life cycles and begin to explain what is happening and why. | ♣ observe changes across the four seasons<br>♣ observe and describe weather associated with the seasons and how day length varies.<br>♣to understand how climate change can impact on the weather around the world | | |
| **Scientific Enquiry**<br>**Pupils might work scientifically by:** Observing changes across the four seasons; Observe and describe weather associated with the seasons | **Scientific Enquiry**<br>Pupils might work scientifically by: **making tables and charts** about the weather; and making displays of what happens in the world around them, including day length, as the seasons change. | | |

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| Plants | | | |
|---|---|---|---|
| YR | Y1/2 | Y3/4 | Y5/6 |
| ♣identify what is needed to maintain life.<br>♣ develop an understanding of growth, decay and changes over time.<br>♣observe plants and begin to explain why some things occur and talk about changes.<br>♣ look closely at different plants and consider similarities, difference, patterns and change. | ♣ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees<br>♣ identify and describe the basic structure of a variety of common flowering plants, including trees.<br>♣ observe and describe how seeds and bulbs grow into mature plants<br>♣ find out and describe how plants need water, light and a suitable temperature to grow and stay healthy<br>♣the importance of trees for the planet and the reduction of global warming | ♣ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers<br>♣ 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<br>♣ investigate the way in which water is transported within plants<br>♣ explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.<br>♣ recognise that living things can be grouped in a variety of ways<br>♣ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment<br>♣ recognise that environments can change and that this can sometimes pose dangers to living things. | ♣ describe the life process of reproduction in some plants and animals.<br>♣ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals<br>♣ give reasons for classifying plants and animals based on specific characteristics. |

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# Science Curriculum Vision and Skills

| | | | |
|---|---|---|---|
| **Scientific Enquiry**<br>**Pupils might work scientifically by: observing how plants grow, compare plants and changes over time of plant growth; the can identify some plants** | **Scientific Enquiry**<br>Pupils might work scientifically by: **observing** closely, perhaps using magnifying glasses, and **comparing** and contrasting familiar plants; **describing** how they were able to **identify and group** them, and drawing diagrams showing the parts of different plants including trees. Pupils might **keep records** of how plants have **changed over time**, for example the leaves falling off trees and buds opening; and **compare and contrast** what they have found out about different plants. **observing and recording**, with some accuracy, the growth of a variety of plants as they **change over time** from a seed or bulb, or observing similar plants at different stages of growth; setting up a **comparative test** to show that plants need light and water to stay healthy. | **Scientific Enquiry**<br>Pupils might work scientifically by: **comparing the effect of different factors** on plant growth, for example, the amount of light, the amount of fertiliser; discovering how seeds are formed by **observing** the different stages of plant life cycles over a period of time; looking for patterns in the structure of fruits that relate to how the seeds are dispersed. They might **observe** how water is transported in plants<br>using and making simple guides or keys to **explore and identify** local plants and animals; making a guide to local living things; raising and **answering questions based on their observations** of animals and plants | **Scientific Enquiry**<br>Pupils might work scientifically by: **using classification systems and keys to identify** some animals and plants in the immediate environment. They could **research** unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the **classification** system. |

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| Materials | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| ♣ consider the properties of materials and begin to select a material for a specific purpose.<br>♣ develop the vocabulary to describe materials.<br>♣ consider what clothes are selected for a purpose and what materials they are made from. | ♣ distinguish between an object and the material from which it is made<br>♣ identify and name a variety of common everyday materials, including wood, plastic, glass, metal, water, and rock<br>♣ identify materials that can be recycled and how this helps the environment<br>♣to understand the impact of climate change on the planet and how different materials impact on this<br><br>♣ describe the simple physical properties of a variety of everyday materials<br>♣ compare and group together a variety of everyday materials on the basis of their simple physical properties.<br><br>♣ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, bri ck, rock, paper and cardboard for particular uses<br>♣ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | **Rocks**<br>♣ compare and group together different kinds of rocks on the basis of their appearance and simple physical properties<br>♣ describe in simple terms how fossils are formed when things that have lived are trapped within rock<br>♣ recognise that soils are made from rocks and organic matter<br>**<u>States of Matter</u>**<br>♣ compare and group materials together, according to whether they are solids, liquids or gases<br>♣ 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)<br>♣ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature | **Properties and Changing of Materials**<br>♣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<br>♣ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution<br>♣ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating<br>♣ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic<br>♣ demonstrate that dissolving, mixing and changes of state are reversible changes<br>♣ 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.<br>♣to understand how different materials impact on the planet and alternative materials that can be used (plastic pollution, air pollution) |

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|---|---|---|---|
| **Scientific Enquiry**<br>Pupils should group and classify materials, identify materials and their properties | **Scientific Enquiry**<br>Pupils might work scientifically by: **Explore**, name, discuss and **raise and answer questions** about everyday materials<br>**Perform simple tests to explore questions**, for example: 'What is the best material for an umbrella? Etc…<br>**Research** information about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam<br>**Compare** the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs**);**<br>**Observe closely, identify and classify** the uses of different materials, and **recording their observations**. | **Scientific Enquiry**<br>**Rocks**<br>Pupils might work scientifically by: **Observing** rocks, including those used in buildings and gravestones, and **exploring** how and **why they might have changed over time**; using a hand lens or microscope to help them to **identify and classify** rocks according to whether they have grains or crystals, and whether they have fossils in them<br>**research** and discuss the different kinds of living things whose fossils are found in sedimentary rock and explore how fossils are formed. Pupils could **explore** different soils and **identify similarities and differences** between them and investigate what happens when rocks are rubbed together or what changes occur when they are in water. They **can raise and answer questions** about the way soils are formed.<br>**States of Matter**<br>♣ compare and group materials together, according to whether they are solids, liquids or gases<br>♣ 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)<br>♣ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. | **Scientific Enquiry**<br>Pupils might work scientifically by: **Carrying out tests to answer questions**, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?' They might **compare** materials in order to make a switch in a circuit. They could **observe and compare the changes** that take place, for example, when burning different materials or baking bread or cakes. They might **research** and discuss how chemical changes have an impact on our lives, for example, cooking, and discuss the creative use of new materials such as polymers, super-sticky and super-thin materials. |

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| Animals including humans | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| ♣ understand what is needed to maintain life animals.<br>♣ identify and name common animals.<br>♣ begin to consider their category to classify.<br>♣ consider hibernation with direct link to seasons and weather.<br><br>♣ develop an understanding of life cycles and the impact of environment.<br>♣ consider a healthy diet and the effects of exercise on our bodies. | ♣ identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals ♣ identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)<br>♣ find out about and describe the basic needs of animals, including humans, for survival (water, food and air)<br>♣ notice that animals, including humans, have offspring which grow into adults<br><br>♣ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.<br>♣ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. | ♣ 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<br>♣ identify that humans and some other animals have skeletons and muscles for support, protection and movement.<br><br>♣ describe the simple functions of the basic parts of the digestive system in humans<br>♣ identify the different types of teeth in humans and their simple functions<br>♣ construct and interpret a variety of food chains, identifying producers, predators and prey. | ♣ describe the changes as humans develop to old age<br><br>♣ identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ♣ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function ♣ describe the ways in which nutrients and water are transported within animals, including humans. |

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| | | | |
|---|---|---|---|
| **Scientific Enquiry**<br>Using their observations to compare animals; **grouping** animals according to what they eat: **compare and look closely to identify similarities and differences.** | **Scientific Enquiry**<br>Pupils might work scientifically by: Usinging their observations to **compare and contrast** animals at first hand or through videos and photographs, describing how they **identify and group** them; **grouping** animals according to what they eat; and using their senses to compare different textures, sounds and smells.<br><br>**Observing**, through video or first-hand observation and measurement, how different animals, including humans, grow; **asking questions** about what things animals need for survival and what humans need to stay healthy; and **suggesting ways to find answers to their questions.** | **Scientific Enquiry**<br>Pupils might work scientifically by: **Identifying and grouping** animals with and without skeletons and **observing and comparing** their movement; exploring ideas about what would happen if humans did not have skeletons. They might **compare and contrast** the diets of different animals (including their pets) and decide ways of grouping them according to what they eat. They might **research** different food groups and how they keep us healthy and design meals based on what they find out.<br><br>**Comparing** the teeth of carnivores and herbivores, and suggesting reasons for differences; **finding out** what damages teeth and how to look after them. They might **draw and discuss their ideas** about the digestive system and compare them with models or images. | **Scientific Enquiry**<br>Pupils might work scientifically by: **Researching** the gestation periods of other animals and comparing them with humans; by **finding out and recording the length and mass** of a baby as it grows.<br><br>**Exploring the work of scientists and scientific research** about the relationship between diet, exercise, drugs, lifestyle and health. |

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| Living things and their habitats | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | Year 2:<br>♣ explore and compare the differences between things that are living, dead, and things that have never been alive<br>♣ 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<br>♣ identify and name a variety of plants and animals in their habitats, including microhabitats<br>♣ 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. | Year 4<br>♣ recognise that living things can be grouped in a variety of ways ♣ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment ♣ recognise that environments can change and that this can sometimes pose dangers to living things.<br>♣ look at rewilding and the impact on the animals environments and their purpose on the planet | ♣ describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird<br>♣ describe the life process of reproduction in some plants and animals.<br><br>♣ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals ♣ give reasons for classifying plants and animals based on specific characteristics.<br><br>♣impact of climate change on animal groups including habitats, reproduction and the possibility of extinction |
| | <u>Scientific Enquiry</u><br>**Sorting and classifying** things according to whether they are living, dead or were never alive, **recording their findings using charts**, **exploring questions** for example: 'Is a flame alive? Is a deciduous tree dead in winter?' **talk about ways of answering their questions. Construct** a simple food chain that includes humans (e.g. grass, cow, human) **describe the conditions** in different habitats and micro-habitats (under log, on stony path, under bushes) and find out how the conditions affect the number and type(s) of plants and animals that live there | <u>Scientific Enquiry</u><br>**Using and making simple guides or keys to explore and identify** local plants and animals; making a guide to local living things; **raising and answering questions based on their observations** of animals and what they have found out about other animals that they have **researched**. | <u>Scientific Enquiry</u><br>**Observing and comparing** the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforest, in the oceans, in desert areas and in prehistoric times), **asking pertinent questions and suggesting reasons for similarities and differences.** They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. They might **observe changes** in an animal over a period of time (for example, by hatching and rearing chicks), **comparing** how different animals reproduce and grow.<br>**Using classification systems and keys to identify** some animals and plants in the immediate environment. They could **research** unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the |

| | | | |
|---|---|---|---|
| | | | classification system. |

| **Light** | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | Year 3<br><br>♣ recognise that they need light in order to see things and that dark is the absence of light ♣ notice that light is reflected from surfaces ♣ recognise that light from the sun can be dangerous and that there are ways to protect their eyes ♣ recognise that shadows are formed when the light from a light source is blocked by an opaque object ♣ find patterns in the way that the size of shadows change. | Year 6<br>♣ recognise that light appears to travel in straight lines<br>♣ 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<br>♣ use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. |
| | | **Scientific Enquiry**<br><br>**looking for patterns** in what happens to shadows when the light source moves or the distance between the light source and the object changes. | **Scientific Enquiry**<br>deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to **explain how it works**. They might **investigate** the relationship between light sources, objects and shadows by using shadow puppets. They could extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters |

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| Forces | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | Year 3<br><br>♣ compare how things move on different surfaces<br>♣ notice that some forces need contact between two objects, but magnetic forces can act at a distance ♣ observe how magnets attract or repel each other and attract some materials and not others<br>♣ 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<br>♣ describe magnets as having two poles ♣ predict whether two magnets will attract or repel each other, depending on which poles are facing. | Year 5<br><br>♣ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object<br>♣ identify the effects of air resistance, water resistance and friction, that act between moving surfaces<br>♣ recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. |
| | | **Scientific Enquiry**<br><br>**Comparing how different things move and grouping them**; **raising questions and carrying out tests** to find out how far things move on different surfaces and **gathering and recording data to find answers their questions; exploring** the strengths of different magnets and **finding a fair way to compare them; sorting materials** into those that are magnetic and those that are not; **looking for patterns** in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another; i**dentifying** how these properties make magnets useful in everyday items and suggesting creative uses for different magnets. | **Scientific Enquiry**<br><br>**Exploring** falling paper cones or cup-cake cases, and designing and making a variety of parachutes and **carrying out fair tests** to determine which designs are the most effective. They might **explore** resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects |

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| Electricity | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | Year 4:<br><br>♣ identify common appliances that run on electricity<br>♣ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers<br>♣ 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<br>♣ recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit<br>♣ recognise some common conductors and insulators, and associate metals with being good conductors. | Year 6:<br><br>♣ associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit<br>♣ 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<br>♣ use recognised symbols when representing a simple circuit in a diagram. |
| | | **Scientific Enquiry**<br><br>**observing patterns** example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit. | **Scientific Enquiry**<br><br>Systematically **identifying** the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit. |

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| Sound | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | Year 4:<br><br>♣ identify how sounds are made, associating some of them with something vibrating<br>♣ recognise that vibrations from sounds travel through a medium to the ear<br>♣ find patterns between the pitch of a sound and features of the object that produced it<br>♣ find patterns between the volume of a sound and the strength of the vibrations that produced it<br>♣ recognise that sounds get fainter as the distance from the sound source increases.<br><br>**Scientific Enquiry**<br><br>**Finding patterns** in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They might make earmuffs from a variety of different materials to investigate which provides the best insulation against sound. They could make and play their own instruments by using what they have found out about pitch and volume. | |

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| Earth and Space | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | | Year 5:<br>♣ describe the movement of the Earth, and other planets, relative to the Sun in the solar system<br>♣ describe the movement of the Moon relative to the Earth<br>♣ describe the Sun, Earth and Moon as approximately spherical bodies<br>♣ use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.<br><br>**Scientific Enquiry**<br><br>**Comparing** the time of day at different places on the Earth through internet links and **direct communication; creating simple models** of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks. |

| Evolution and Inheritance | | | |
|---|---|---|---|
| **YR** | Y1/2 | Y3/4 | Y5/6 |
| | | | Year 6:<br>♣ recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago<br>♣ recognise that living things produce offspring of the same kind, but normally |

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| | | | offspring vary and are not identical to their parents<br>♣identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.<br>**Scientific Enquiry**<br>**Observing and raising questions** about local animals and how they are adapted to their environment; **comparing** how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on two feet rather than four, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers. |

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# Impact – How well are we achieving our aims?

## Impact seen in:

| | | |
|---|---|---|
| Teacher Assessment | Pupil Voice | Moderation |
| Work scrutiny | Parental surveys and feedback | Observations and Blinks |
| Data analysis | Progress of pupils across the curriculum | Staff Questionnaires |

## Our children will:

| | | |
|---|---|---|
| Making great progress and have high standards of achievement and attainment | Have a lifelong love of reading and learning and be able to communicate clearly | Be respectful of themselves and demonstrate excellent behaviour |
| Be confident, positive and independent learners with high aspirations | Have mental wellbeing and make healthy lifestyle choices | Participate in the community and have excellent attendance |

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| Work Sample Analysis: | What do our books show? |
| Lesson Observations: | How is the quality of teaching, learning and use of assessment in the lesson? How good is the questioning in the lesson? |
| Surveys: | What do parents and children say about this subject? |
| Interviews: | What do the children say about their learning in this subject?<br><br>What do the staff say about their learning in this subject? |
| Coaching and Mentoring: | Is there a need for coaching and mentoring in this subject? What support do colleagues need in this subject? |
| Training: | What training has taken place? What is the impact of any training given? |
| Leaning environment: | How does the learning environment support the learning in this subject area? |
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