Holy Trinity C of E Primary, Rothwell

Love, Believe, Achieve

Holy Trinity C of E Primary, Rothwell

# Science Curriculum

Autumn 2025

A member of ABBEY MULTI ACADEMY TRUST

In partnership to **Educate, Nurture & Empower**

# Our Science Curriculum

## Our Rationale

At Holy Trinity, we foster a joy of learning through the teaching of an inspiring, enquiry-based curriculum, that encourages creativity and curiosity, and which meets the needs of our children and their community.

We know that children learn and achieve through the development of a variety of skills, knowledge and understanding which promotes a love of learning. Together through love, we support our children to believe in themselves and others, see themselves as lifelong learners and contribute to the wider world as responsible citizens.

## The National Curriculum: Purpose of Study for Science

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry, and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes, and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

## The National Curriculum: Aims

The national curriculum for science aims to ensure that all pupils:

- 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

## Our Intent

Science has a crucial role in society today, and helps our children gain a sense of how science has changed lives and is vital to our society and the world's future prosperity.

At Holy Trinity, our science curriculum is designed to foster a deep curiosity and appreciation for the natural world, equipping pupils with the knowledge and skills to think scientifically, question and investigate. Through engaging and purposeful learning experiences, we aim to develop their understanding of key scientific concepts, enhance their scientific vocabulary, and nurture their ability to apply scientific methods to real-life scenarios. Our ultimate goal is to inspire a lifelong love of how it provides the foundations for understanding of the world, and to encourage our pupils to consider future careers in scientific fields.

## Our Implementation

At Holy Trinity, our teaching of science is designed and planned in a way to actively engage all learners in practical investigations, stimulating their curiosity and fostering an enjoyment of scientific exploration. We achieve this by making use of various resources, including use of ICT, scientific equipment and visits, to enrich pupils' learning and making science relevant to their daily lives by making links with real-world applications and encouraging our children to see how science can provide jobs and careers for their futures.

Our science curriculum is carefully planned and sequenced to ensure progressive building of knowledge and skills from foundation stage to the end of key stage two. Units of work and lessons are structured to give our children the opportunity to recap previous learning and so that new knowledge build upon prior learning ensuring that learning is built on gradually and cumulatively.

Our science curriculum caters to the diverse needs of all pupils, including those with SEND, EAL and disadvantaged children. Teachers effectively plan and deliver lessons that are differentiated through varied tasks, resources and support, enabling every child to access the curriculum and make progress. Using ongoing assessment and monitoring of pupils' learning, gaps in understanding can be addressed using timely interventions and personalised support.

At Holy Trinity we ensure a focus on teaching of both:

- substantive knowledge
- disciplinary knowledge (the skills needed)

Substantive knowledge is taught alongside disciplinary knowledge is sequenced and taught in topics that progress across the age phases. We have selected the White Rose Science as the basis for our curriculum to provides regular opportunities for our children to be 'working scientifically' and also enables our children to see possible careers in science.

Teachers use systematic teaching approaches, where learning is scaffolded using carefully sequenced explanations, models, analogies and other representations to help pupils to acquire, organise and remember scientific knowledge.
Teaching takes account of the limited working-memory capacity of their pupils when planning lessons. Systematic approaches, alongside carefully selected texts, are used to teach the most important vocabulary in science.
Learning takes place both inside and outside the classroom.

We have considered the development of disciplinary knowledge and the working scientifically skills needed under the following three areas and our children will build on these progressively:

- asking questions, making predictions and setting up tests
- observing, measuring and recording data
- interpreting, communicating and evaluating results

Our children are exposed to a range of practical activities which enable them to explore, investigate and analyse supporting them to think 'like scientists' asking question such as:

- What will happen?
- What does this tell me?
- Is this an accurate result?
- What could I improve next time?
- How will I find out?

We know the importance of our children revisiting prior learning to enable them to build a scheme of knowledge and so knowing more and remembering more. It is for this reason that we build into our lessons deliberate retrieval practice requiring our children to recall substantive knowledge from learning. We use a range of low stakes quizzes and mind maps to support with this which focus – in particular – on our 'finger facts.'

A wide range of teaching strategies are used in the planning and delivery of the curriculum including whole class group or individual work. This includes opportunities for speaking and listening also. Through our whole school approach to oracy, we intentionally plan opportunities in history for our children to develop and practice their:

- Exploratory talk (students share their ideas even if only partially formed or not yet fully articulated)
- Presentational talk (practised and performed to an audience)

This is complements the approach of White Rose Science which we use to support the deliver of science and Holy Trinity as opportunities for discussion are promoted and we use our approach to exploratory talk to support with this.

We provide opportunities in science as in other subjects for all our children to answer "challenge" questions – which we refer to as "digging deeper" – are shown in children's books in a dashed box. To provide challenge for our children exceeding age related expectations we use a range of strategies including:

- strategic questioning with children focusing on showing an understanding of higher order of questioning which in key stage one may be more collaborative with an adult facilitating the challenge through discussion.
- considering learning roles with pupils encouraged to argue from an alternative perspective, not necessarily a perspective they agree with.
- build on interests to extend with pupils being provided with suitable materials and encouraged to increase their knowledge and skills through further reading suggested by the teacher, independent research and presenting findings in an analytical and evaluative way.
- leadership opportunities such as becoming a science ambassador during science week
- access to national competitions and resources – for example – through STEM and parents/carers and children are signposted to opportunities for extension beyond the classroom.

Pupils begin their formal science education in the early years foundation stage (EYFS). This involves learning foundational knowledge primarily through the 'understanding the world: the natural world' area of learning. This provides a number of rich contexts for pupils to learn a wide range of vocabulary. These words form the beginnings of scientific concepts that will be built on in year one and beyond. Because pupils develop their scientific and non-scientific vocabulary during this time, the EYFS should not just be considered as preparation for learning further science in year one. (Ofsted, Research review series: science April 2021) In key stage one and two. Reflective of our whole school approach to oracy, we have identified key vocabulary which is tracked throughout each year group to ensure progression. The key vocabulary is explicitly taught through the unit and displayed on working walls or equivalent.

## Our Impact

The teaching of science at Holy Trinity will result in an enjoyable, engaging and high-quality science education that equips children with the fundamental knowledge to understand the world, which they can carry with them once they complete their primary education. The main approach for evaluating the impact of the science curriculum will be formative assessment as it allows for misconceptions and gaps to be addressed immediately, rather than building on insecure scientific foundations. Additionally, the impact of learning will also be measured and assessed through interviews, deep dives, assessing core scientific substantive knowledge (finger facts) and making links to prior learning.

### *Early Years*

In the Early Years, all children will be encouraged and supported to achieve their full potential by providing a broad and balanced curriculum. Given that in Early Years, children learn through play and investigation to fulfil the 'Understanding the World' strand of the Early Years Framework, they will be encouraged to develop and use the characteristics of effective learning to allow them to develop their problem-solving skills in line with their critical and creative thinking. Resourcing our science curriculum through the White Rose Science scheme will support children to access, and staff to deliver the high-quality content and embed simple, yet key foundational concepts for children to carry with them and build upon throughout their primary education here at Holy Trinity.

### *Key Stage 1*

In key stage one, our curriculum resourced through White Rose Science will ensure that children will continue to develop and build on the foundational knowledge set in the EYFS. In a fun, engaging and exciting way, children will look at working to build substantive and conceptual knowledge, whilst learning and starting to understand the importance of working scientifically. By the end of ley stage one, children will have a basic, recorded understanding of Animals Including Humans, Materials and their properties, Plants, Seasonal Change and Habitats. They will be able to record in a simple way that is easily understood (tables and diagrams), interpreted and seen by others. By working scientifically, children will be able to ask and answer simple questions, use simple equipment, perform simple tests, identify, classify, and gather and record data to help answer questions.

*Key stage 2*

As children progress into key stage two,  our curriculum continues to be resourced through White Rose Science and will that prior knowledge is built upon, and new knowledge builds upon the strong foundations set in Early Years and key stage one. In key stage two, science should be taught in an engaging and enjoyable way so that children develop a love of science and appreciation of the world around them. This should give the children the acquisition of skills, knowledge, and conceptual understanding to feel empowered to pursue science and STEM subjects as potential career opportunities.

# Overview, Long Term Plan, Content and progression

EYFS – Reception – Understanding the World

## Statutory framework for EYFS 2021 Understanding the World

| EYFS | Reception | Senses | Weather and seasons | Forces and machines | Plants / insects and invertebrates | Health and safety / our bodies | Animals / food |
|---|---|---|---|---|---|---|---|

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them –from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

## ELG: The World

Children at the expected level of development will:

- explore the natural world around them, making observations and drawing pictures of animals and plants;
- 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;
- understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

# Reception

**Me and my small world**
Maths: Match, sort and compare
VIEW

**What's in my basket?**
Maths: Talk about measure and pattern
VIEW

**Senses**
Maths: It's me 1, 2, 3
VIEW

**Let's go outside**
Maths: Circles and triangles
VIEW

**What's changed?**
Maths: 1, 2, 3, 4, 5
VIEW

**Night and day**
Maths: Shapes with 4 side
VIEW

**Changes in Winter**
Maths: Alive in 5
VIEW

**Let it flow**
Maths: Mass and capacity
VIEW

**From desert to jungle**
Maths: Growing 6, 7, 8
VIEW

**Watch it grow**
Maths: Length, height and time
VIEW

**Animal detectives**
Maths: Building 9 and 10
VIEW

**Pushes and pulls**
Maths: Explore 3-D shapes
VIEW

**From city to sea**
Maths: To 20 and beyond
VIEW

**Look all around**
Maths: How many now?
VIEW

**Test it out!**
Maths: Manipulate, compose and decompose
VIEW

**Happy and healthy**
Maths: Sharing and grouping
VIEW

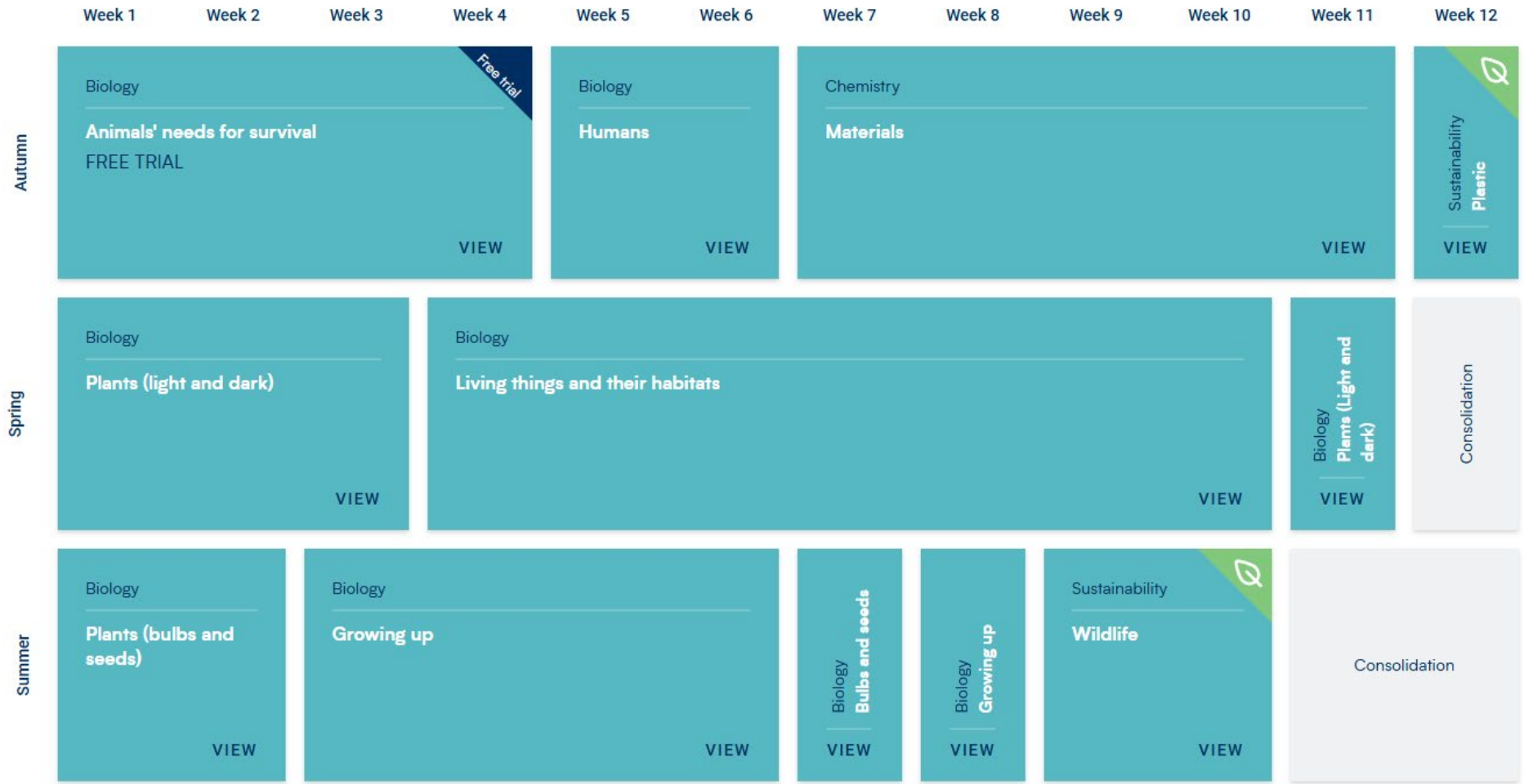
**Our wonderful world**
Maths: Visualise, build and map
VIEW

**We're going on an animal hunt**
Maths: Make connections
VIEW

# Year 1


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Biology
The human body
FREE TRIAL
Free trial
VIEW
Biology
Seasonal changes
VIEW
Chemistry
Materials
VIEW
Biology
Seasonal changes
VIEW
Spring
Biology
Planting A
VIEW
Biology
Animals
VIEW
Sustainability
Caring for the planet
VIEW
Biology
Seasonal changes
VIEW
Biology
Planting B
VIEW
Consolidation
Summer
Biology
Plants
VIEW
Biology
Planting C
VIEW
Sustainability
Growing and cooking
VIEW
Biology
Seasonal changes
VIEW
Consolidation

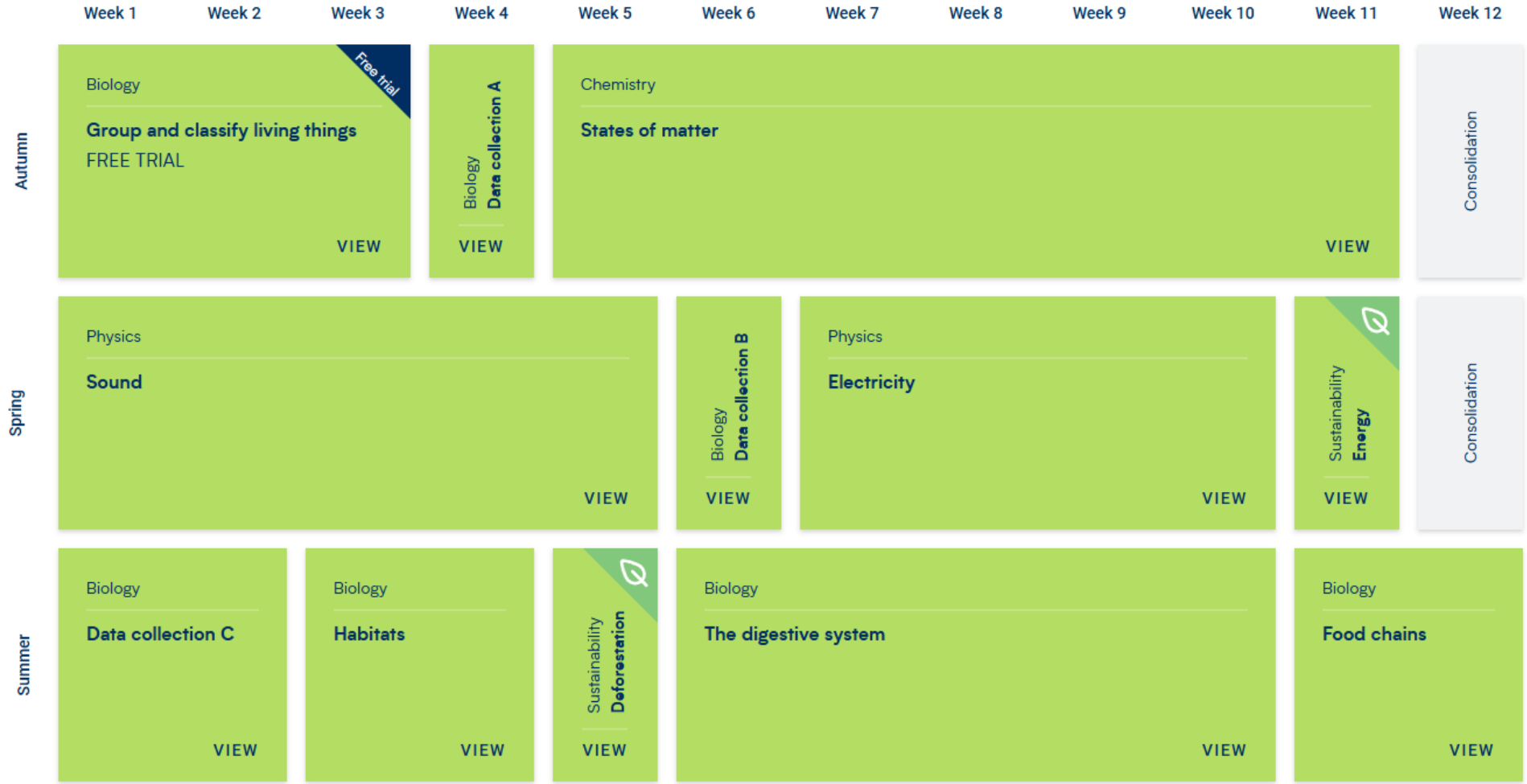
# Year 2


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Biology
Animals' needs for survival
FREE TRIAL
Free trial
VIEW
Biology
Humans
VIEW
Chemistry
Materials
VIEW
Sustainability
Plastic
VIEW
Spring
Biology
Plants (light and dark)
VIEW
Biology
Living things and their habitats
VIEW
Biology
Plants (Light and dark)
VIEW
Consolidation
Summer
Biology
Plants (bulbs and seeds)
VIEW
Biology
Growing up
VIEW
Biology
Bulbs and seeds
VIEW
Biology
Growing up
VIEW
Sustainability
Wildlife
VIEW
Consolidation

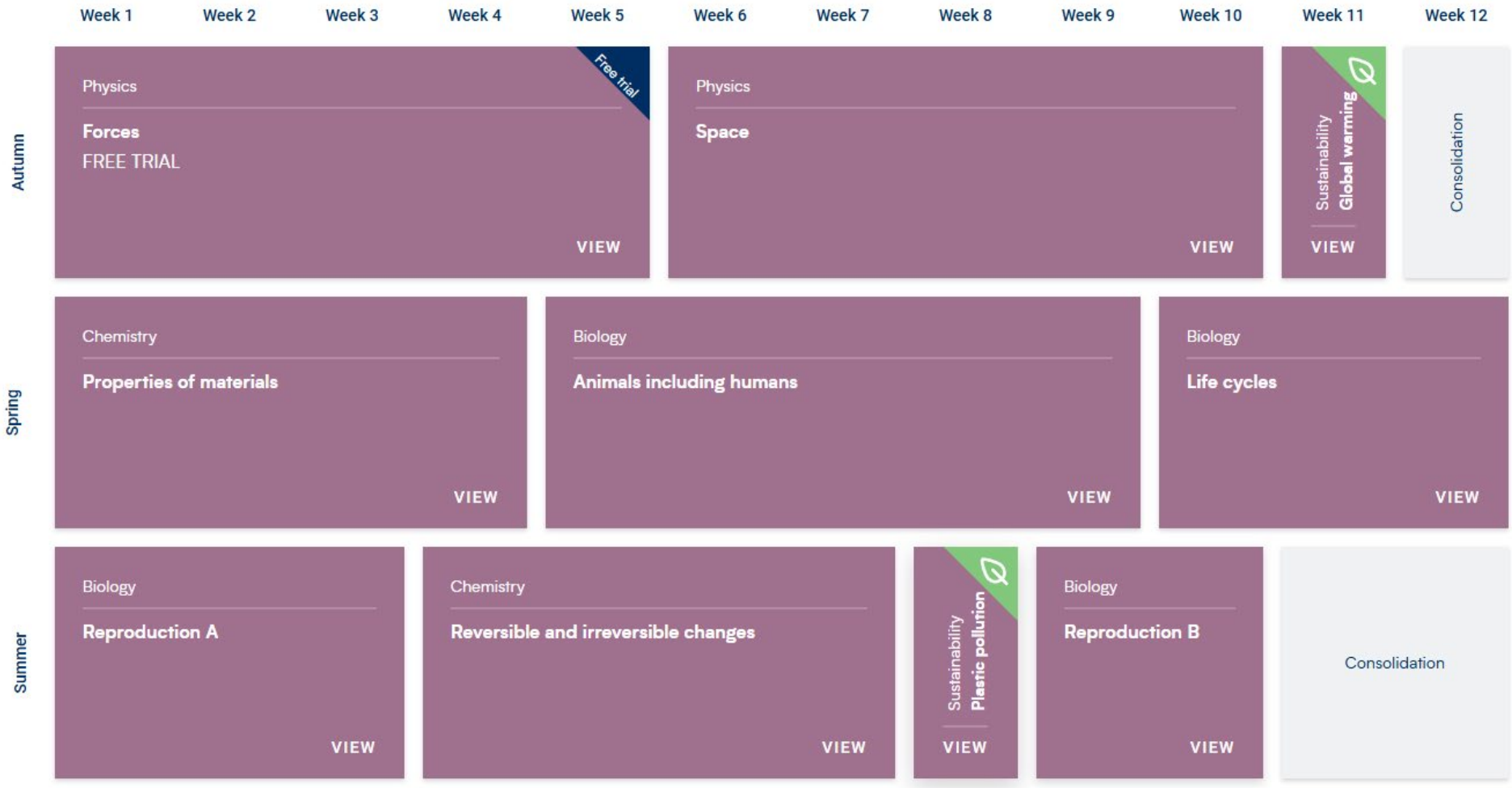
# Year 3


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Biology
Skeletons
FREE TRIAL
Free trial
VIEW
Biology
Movement
VIEW
Biology
Nutrition and diet
VIEW
Sustainability
Food waste
VIEW
Chemistry
Rocks
VIEW
Consolidation
Spring
Chemistry
Fossils
VIEW
Chemistry
Soils
VIEW
Physics
Light
VIEW
Consolidation
Summer
Biology
Plants A
VIEW
Physics
Forces
VIEW
Physics
Magnets
VIEW
Biology
Plants B
VIEW
Sustainability
Biodiversity
VIEW

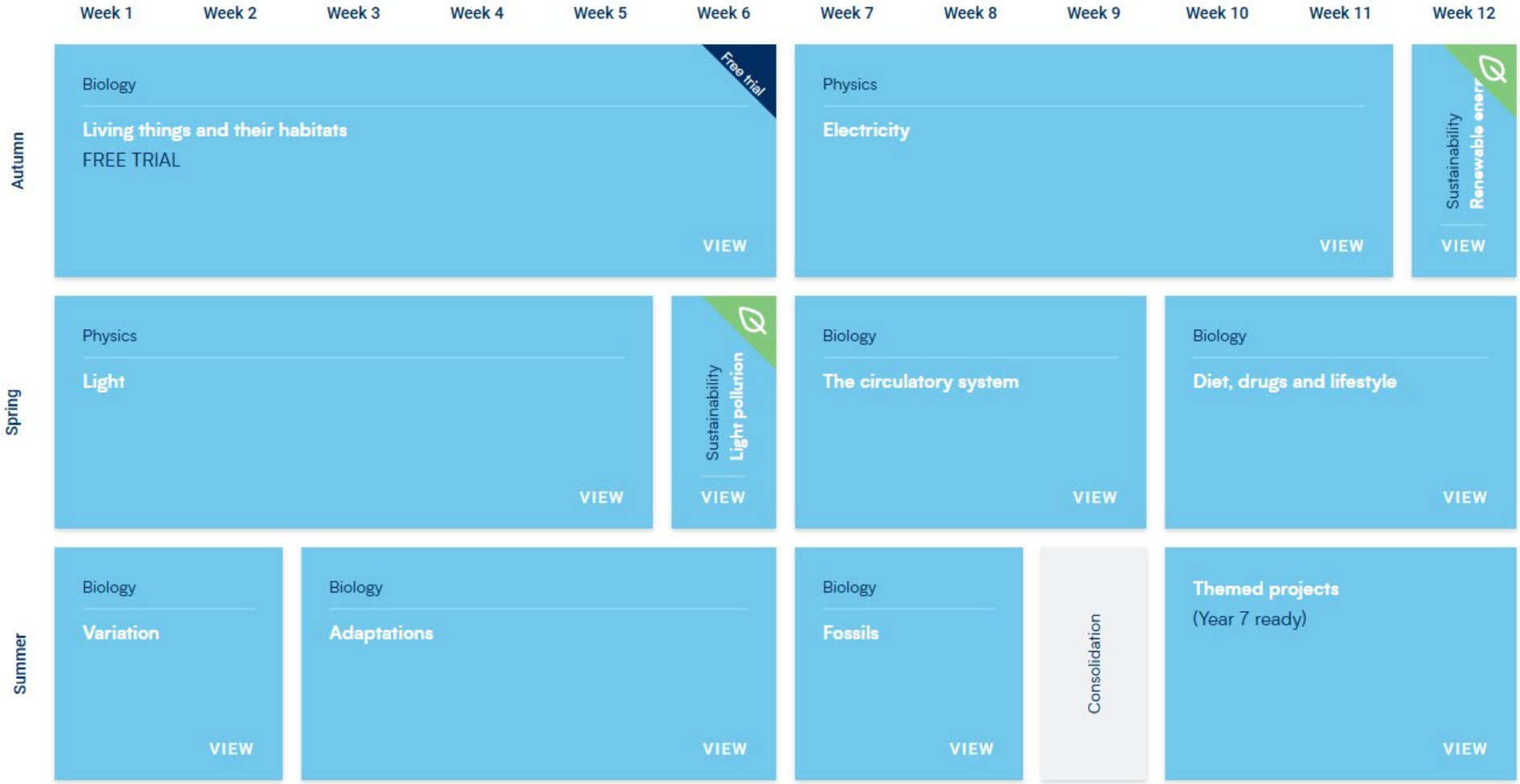
# Year 4


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Biology
Group and classify living things
FREE TRIAL
Free trial
VIEW
Biology
Data collection A
VIEW
Chemistry
States of matter
VIEW
Consolidation
Spring
Physics
Sound
VIEW
Biology
Data collection B
VIEW
Physics
Electricity
VIEW
Sustainability
Energy
VIEW
Consolidation
Summer
Biology
Data collection C
VIEW
Biology
Habitats
VIEW
Sustainability
Deforestation
VIEW
Biology
The digestive system
VIEW
Biology
Food chains
VIEW

# Year 5


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Physics
Forces
FREE TRIAL
Free trial
VIEW
Physics
Space
VIEW
Sustainability
Global warming
VIEW
Consolidation
Spring
Chemistry
Properties of materials
VIEW
Biology
Animals including humans
VIEW
Biology
Life cycles
VIEW
Summer
Biology
Reproduction A
VIEW
Chemistry
Reversible and irreversible changes
VIEW
Sustainability
Plastic pollution
VIEW
Biology
Reproduction B
VIEW
Consolidation

# Year 6


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Autumn
Biology
Living things and their habitats
FREE TRIAL
Free trial
VIEW
Physics
Electricity
VIEW
Sustainability
Renewable energy
VIEW
Spring
Physics
Light
VIEW
Sustainability
Light pollution
VIEW
Biology
The circulatory system
VIEW
Biology
Diet, drugs and lifestyle
VIEW
Summer
Biology
Variation
VIEW
Biology
Adaptations
VIEW
Biology
Fossils
VIEW
Consolidation
Themed projects
(Year 7 ready)
VIEW

## Key Stage 1

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

| Curriculum content statutory requirements for year 1 | Curriculum content statutory requirements for year 2 |
|---|---|
| **Plants**<br><br>Pupils should be taught to:<br>• 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. | **Living things and their habitats**<br><br>Pupils should be taught to:<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. |
| **Animals, including humans**<br><br>Pupils should be taught to:<br>• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals<br>• identify and name a variety of common animals that are carnivores, herbivores and Omnivores<br>• describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)<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. | **Plants**<br><br>Pupils should be taught to:<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. |

| Curriculum content statutory requirements for year 1 | Curriculum content statutory requirements for year 2 |
|---|---|
| **Everyday materials**<br><br>Pupils should be taught to:<br>• distinguish between an object and the material from which it is made<br>• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock<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. | **Animals, including humans**<br><br>Pupils should be taught to:<br>• notice that animals, including humans, have offspring which grow into adults<br>• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)<br>• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. |
| **Seasonal changes**<br><br>Pupils should be taught to:<br>• observe changes across the four seasons<br>• observe and describe weather associated with the seasons and how day length varies | **Uses of everyday materials**<br><br>Pupils should be taught to:<br>• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, 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. |

## Lower Key Stage 2

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings

| Curriculum content statutory requirements year 3 | Curriculum content statutory requirements year 4 |
|---|---|
| **Plants**<br><br>Pupils should be taught to:<br>• 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. | **Living things and their habitats**<br><br>Pupils should be taught to:<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. |
| **Animals, including humans**<br><br>Pupils should be taught to:<br>• 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. | **Animals, including humans**<br><br>Pupils should be taught to:<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. |
| **Rocks**<br><br>Pupils should be taught to:<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. | **States of matter**<br><br>Pupils should be taught to:<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. |
| **Light**<br><br>Pupils should be taught to:<br>• recognise that they need light in order to see things and that dark is the absence of light<br>• notice that light is reflected from surfaces<br>• recognise that light from the sun can be dangerous and that there are ways to protect their eyes<br>• recognise that shadows are formed when the light from a light source is blocked by an opaque object<br>• find patterns in the way that the size of shadows change. | **Sound**<br><br>Pupils should be taught to:<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. |

| Curriculum content statutory requirements year 3 | Curriculum content statutory requirements year 4 |
|---|---|
| **Forces and magnets**<br><br>Pupils should be taught to:<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<br>• 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<br>• predict whether two magnets will attract or repel each other, depending on which poles are facing. | **Electricity**<br><br>Pupils should be taught to:<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. |

## Upper Key Stage 2

Years 5 and 6 Statutory requirements During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

| Curriculum content statutory requirements year 5 | Curriculum content statutory requirements year 6 |
|---|---|
| **Living things and their habitats**<br><br>Pupils should be taught to:<br>• 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. | **Living things and their habitats**<br><br>Pupils should be taught to:<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. |
| **Animals, including humans**<br><br>Pupils should be taught to:<br>• describe the changes as humans develop to old age. | **Animals, including humans**<br><br>Pupils should be taught to:<br>• identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood<br>• recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function<br>• describe the ways in which nutrients and water are transported within animals, including humans.. |
| Properties and changes of materials<br><br>Pupils should be taught to:<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<br>• of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. | Evolution and inheritance<br><br>Pupils should be taught to:<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 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. |

| Curriculum content statutory requirements year 5 | Curriculum content statutory requirements year 6 |
|---|---|
| Earth and space<br><br>Pupils should be taught to:<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 | Light<br><br>Pupils should be taught to:<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<br>• because they give out or reflect light into the eye<br>• 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. |
| Forces<br><br>Pupils should be taught to:<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. | Electricity<br><br>Pupils should be taught to:<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<br>• 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. |

**Other documents which support our curriculum intent and implementation:**

- **curriculum progression documents (White Rose Science)**
- **vocabulary progression document**
- **scientific enquiry mapping**
- **working scientifically mapping**
- **skills mapping**
- **assessment trackers**
- **oracy framework**
- **science linked text overview**
- **Trust Teaching and Learning model**