



RED HOUSE  
SCHOOL

# Year 4 Curriculum Booklet

AN EDUCATION  
**ENJOYED**

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## **INTRODUCTION FROM THE HEAD OF THE JUNIOR SCHOOL**

Our vibrant family atmosphere is a great strength at Red House Junior School and this is highly valued by children and parents. We enjoy challenging each other, working hard and having plenty of fun!

Children are happy and confident with a 'can-do' attitude. They feel comfortable to take risks and to learn from mistakes. Through hard work and determination to be the best that they can be, they see great success. Developing self-belief and resilience from an early age is paramount with benefits stretching far beyond their time at Red House.

At the Junior School we pride ourselves on focusing on the individual child. Teachers form strong bonds with the children in their class. By understanding and treating every child as an individual they discover their unique personalities, interests and abilities. Teaching can then be tailored to suit the needs of pupils.

A handwritten signature in black ink, appearing to read 'Simon Haywood', with a horizontal line underneath.

**Simon Haywood**

**(Head of the Junior School).**

## **ART AND DESIGN**

### **Overview**

Year 4 pupils will take part in a wide variety of tasks to offer a broad and balanced curriculum. In Art lessons, they will develop work inspired by several artists and movements. They will build on key skills of drawing and painting, reviewing and modifying work as they progress. In Design and Technology Lessons, they will work with a range of materials to design, create and evaluate final products that meet a specific brief.

### **Curriculum Content**

#### **Autumn Term**

In their 'Seaside' Art unit, children will learn how to use pen and colour, how to print, weave and make lanterns to create quality artwork that shows progression in skills. The children will also have the opportunity to explore the work of 'The Seaside' artists Alfred Wallis and Hokusai. In their Design and Technology lesson on bread, the pupils will learn about working with food. Children will gain an insight into the history of bread production, then investigate and evaluate existing bread products. They will create design criteria which will be referred to when designing, making and evaluating their own bread product. Children use a range of skills and techniques using simple kitchen tools and measuring equipment, they will learn how to knead dough correctly and the technique of proving bread.

#### **Spring Term**

In their 'bodies' themed Art unit, children will learn how to use pen, charcoal, felt tip, make maquettes, make paper clothes and sculpt Giacometti-inspired models. The children will also have the opportunity to explore the work of 'Bodies' artists Julian Opie, Alberto Giacometti and Henry Moore. In Design and Technology, children will enhance their knowledge and understanding of electrical systems. They will develop understanding about series and parallel circuits and different types switches. They will then be given the chance to apply their knowledge about electric circuits in a purposeful way by designing and making a battery-operated light which will be controlled by a homemade switch.

#### **Summer Term**

In Art, pupils will learn about how to use pencil, colour, mosaic design, puppet making and sculpture. The children will also have the opportunity to explore the work of a range of 'Insect' artists, in particular, Louise Bourgeois and Jennifer Angus. In Design and Technology, pupils will discover the exciting and diverse choice of food available around the world. They will learn where in the world a variety of ingredients flourish. Children will then have the chance to learn some basic and advanced cooking techniques and they will apply these skills when making some traditional dishes from different countries.

## **Assessment**

Formative assessment will be used throughout the year and pupils will be given points for development.

## **Differentiation and Support for MAGT Pupils**

Projects will offer extension tasks, giving more gifted pupils the opportunity to take their work to the next level. Differentiated tasks will also be set, allowing pupils of different abilities to achieve their potential.

# **COMPUTING**

## **Overview**

Computing is a practical, creative, and knowledge-rich subject. In Year 4, pupils will work with a variety of different software packages to develop their skills and apply them in different contexts. The importance of staying safe online is also emphasised throughout the year.

## **Curriculum Content**

### **Autumn Term**

In their work on Communication and Collaboration, the children will begin by gaining an understanding of the difference between online and offline communication. Then, they will explore online communication in detail, as well as looking at the positives and negatives of different online communication methods. Children will also learn all about emails. They will learn about: the features of email in detail; the process of how emails are sent; explore what email protocols are and then practise sending emails themselves. They will also learn how to send attachments in an email and understand what spam emails are, delving into the concept of phishing. Finally, children will explore how to collaborate online using a cloud storage service and the tools they offer for editing online documents, working collaboratively alongside others. Children will then learn about animation. They will learn the basic principles and techniques of simple animation. Beginning with the history of animation, children will research some of the early animation techniques used before the use of computers. They will then compare a range of animation software and incorporate the different techniques into their own animation.

### **Spring Term**

In their unit about coding with Scratch, children will learn what a quiz is and the features that make them exciting. They will then create their own multiplication quizzes on Scratch, using a variety of Scratch blocks. The children will have the opportunity to experiment with adding various effects to make their quizzes more visually appealing and interactive. The unit is completed by the children creating a competitive multiplication quiz, creating variables and using Sensing and Operators blocks. In their unit on using Logo children will

learn the structure of the coding language of Logo. They will input simple instructions and use 2Logo to create letter shapes. They will then learn how to build procedures in Logo.

### **Summer Term**

Children will develop their word processing skills. They will learn about formatting images and organising content into an effective layout. Children will then learn new skills and techniques and apply them to creating a range of different word documents. Following this, children will learn how to use spreadsheets. They will explore how numbers can be entered into cells in different formats and explore how to add formulae to a cell. They will then learn how to combine tools to make number games. Children will also use the line graphing tool to show data. Finally, they will explore modelling real-life situations.

### **Assessment**

At the end of each unit, teachers carry out a formative assessment of children's progress and attainment.

### **Differentiation and Support for MAGT Pupils**

Extension tasks are built into all units to provide challenge for children with a talent for Computing. Tasks and resources are adapted where children require additional support.

## **ENGLISH**

### **Overview**

In Year 4, English lessons focus on the key areas of reading comprehension, writing composition, spelling and grammar. We aim to develop children's love of reading by exposing them to a wide range of modern and classic texts and poetry, and English lessons are often based on a shared class novel. Throughout the year, exercises will be taught to improve the pupils' spelling ability and to encourage the use of accurate punctuation and grammar. Handwriting remains a key focus.

### **Curriculum Content**

#### **Autumn Term**

In their 'Space Explorer' unit, children will select applicants to be trained as astronauts for a mission to Mars and they will learn about Neil Armstrong. They will focus on effective use of pronouns and fronted adverbials and use these in their writing tasks: to write a diary entry and a biography. Children will then read 'Christophe's Story' and respond to questions that stretch their comprehension and questioning skills. They will use discussion, drama and role play to understand more about the characters. They will look at the author's use of language and her choice of memorable words and phrases. Children will write their own letters, applying their ability to write multi-clause sentences. Finally, children will write their own stories, drawing on their own personal experiences. Children will then complete a unit called 'Sounds Spooky'. They will listen to a spooky story podcast, asking questions and listening out for sound effects to develop their listening and comprehension skills. They will

focus on the use of language and the way it is used in conjunction with the narrator's voice and sound effects to create atmosphere and character. They will then plan and write their own spooky stories. In their study of poetry, children will enjoy a range of poems and discuss and explore their uses of figurative language. They will explore metaphor, simile and personification and then identify the features of free verse, haiku and performance poetry.

### **Spring Term**

Children will read *The Spiderwick Chronicles*. They will explore fantasy fiction, asking questions and developing understanding of inference. They will use drama to explore characters and suspense. They will then plan, edit and write a new episode of the fantasy story they have studied. Following this, the children will explore the big question: What is the world's most incredible sport? They will read about different sports, finding information and distinguishing between fact and opinion. They will then plan and write their own newspaper report. In their poetry unit, the children will enjoy listening and responding to a range of poetry, exploring and comparing the work of two poets. They will learn about poems such as kennings and raps, exploring the meaning and form of poems written in a Caribbean dialect. They will compose class and individual poems based on familiar fairy tales, editing and improving their work as part of the process.

### **Summer Term**

The children will read *The Iron Man*, asking and answering questions and making predictions. They will look at the author's use of powerful language to capture our imaginations, including similes. They will revise their knowledge of speech marks, composing a conversation, and focus on the character Hogarth's feelings to write diary entries in role. Finally, they will create their own imaginary creature, thinking of similes and powerful noun phrases to describe it, and write a story about what happens when it encounters humans. Linked to their History work, the children will explore the big question: Did the Shang Dynasty really exist? They will retrieve and collate information about China. They will then explore historical evidence and timelines, answering questions and considering what information is true and relevant. They will then plan and write a non-chronological report. Following this, the children will create an informative and interesting tour of their school. They will identify the key components of a tour, research interesting points of history related to the school and explore a range of presentation techniques, including face-to-face and virtual tours. They will create a short history leaflet about their school, and work as a team to create a comprehensive, interactive tour. In their poetry unit, children will plan, rehearse and perform a choral reading of a poem. They will learn about personification, simile and metaphor, including these in their poems. They will explore the patterns of rhyme and rhythm in shape and syllabic poems, reading cinquains and then creating their own.

### **Assessment**

Throughout the year, teachers will assess pupils' writing against a series of age-related criteria. Children will be given writing targets and next steps for learning. Writing is also moderated in teams within and across Key Stages.

## **Differentiation and Support for MAGT Pupils**

Pupils will be given extension tasks to further develop their writing and reading skills. Pupils who require additional support will be provided with this as required, which may include interventions such as Lexia or Toe By Toe. Some children may be provided with a laptop where appropriate.

## **FRENCH**

### **Overview**

In Year 4, we offer a relevant, broad, vibrant and ambitious French curriculum that will inspire and excite our pupils, using a wide variety of topics and themes. All pupils will be expected to achieve their full potential by encouraging high expectations and excellent standards in their foreign language learning to ensure that that pupils feel well-prepared to study French beyond Key Stage 2.

### **Curriculum Content**

#### **Autumn Term**

Children will continue to develop their phonic knowledge by consolidating their knowledge of key phonemes to facilitate accurate and authentic pronunciation as part of their language learning experience. Children will learn the names of different fruits and how to express their preferences. Children will learn how to talk about some of the familiar activities that they are able to do. They will be introduced to the negative form and will learn how to form complex sentences and use conjunctions.

#### **Spring Term**

Children will learn common vegetables in their plural form with their definite articles. They will learn basic transactional language. Children will learn how to present themselves both orally and in written form in French. Pupils will focus on asking questions as well as providing accurate replies. They will demonstrate a growing understanding of grammar to manipulate language and start to create sentences of their own using a range of personal details including name, age, where they live and nationality.

#### **Summer Term**

Pupils will develop the knowledge and skills to present both orally and in written form about what they have and do not have in their pencil cases and school bag in French. They will use previously learnt grammar with new vocabulary, demonstrating a growing ability to create independent responses. Pupils will be given the knowledge and skills necessary to perform a short role-play in a French tearoom.

### **Assessment**

Throughout the year, pupils' speaking, listening and writing skills will be assessed through informal tasks and quizzes to allow teachers to plan next steps for learning.



## **Differentiation and Support for MAGT Pupils**

More able pupils are guided towards tasks that encourage them to develop their grammar skills and deepen their linguistic knowledge. Higher-level questioning allows them to become more flexible, spontaneous and creative language learners.

## **GEOGRAPHY**

### **Overview**

Throughout Year 4, pupils will develop their geographical skills and knowledge. They will learn how to use maps and atlases and will also take part in practical fieldwork. Children will study different locations around the world and learn to compare them to their own locality.

### **Curriculum Content**

#### **Autumn Term**

Children will learn about the water cycle and explore the processes of evaporation and condensation through a range of practical activities. By considering water as a finite resource, they will be introduced to the ideas of conservation and consider some of the issues surrounding supplying clean drinking water to a growing global population.

#### **Spring Term**

Children will learn about the physical geography of Whitby, including its Jurassic cliffs and its proximity to the North Yorkshire Moors. They will use maps, atlases and digital maps to explore the town and find out about what the land is used for and what there is to do in Whitby. Throughout the unit, children will be encouraged to compare what they have learnt about Whitby with what they know about their own local area.

#### **Summer Term**

Children will take a closer look at the mysteries of tropical rainforests. They will study the layers of the forest and its animal inhabitants and learn about the unique climate found in the tropics. They will compare a British forest with the Amazon rainforest and begin to explore some of the conservation issues surrounding the destruction of rainforest habitats.

### **Assessment**

Formative assessment will be used throughout the year to assess pupils' progress against age-related expectations.

## **Differentiation and Support for MAGT Pupils**

Children identified as having a talent for Geography will be provided with extension activities to further develop their skills. Activities will be adapted where required to provide additional support.

## **HISTORY**

### **Overview**

In Year 4, children will continue to study time periods from History, including the Shang Dynasty and the Tudor period. They will consider the use of both primary and secondary sources when learning about events from history.

### **Curriculum Content**

#### **Autumn Term**

During the first half term, pupils will be finding out about Henry VIII and his six wives. Pupils will investigate why Henry VIII needed to marry six times and what happened with each of his marriages. Related to this topic, they will take part in practical workshops during a visit to Barley Hall in York.

#### **Spring Term**

Children will learn about the Ancient Shang dynasty. They will learn who the Ancient Shang people were and where and when they lived, using maps and atlases to locate Shang cities. They will also learn about the role of the king, the religious beliefs and rituals of the Shang people and how oracle bones were used in divination ceremonies. The children will also examine a range of Shang artefacts and draw conclusions about what they can teach us.

#### **Summer Term**

Pupils will study the ancient Maya civilisation. The children will learn who the ancient Maya people were and where and when they lived. They will use maps and atlases to locate Maya cities and identify countries in Mesoamerica. In addition to this, they will learn about the religious beliefs and rituals of the ancient Maya people and find out more about some of the many gods they worshipped. The children will also learn about the Maya number system and have the opportunity to read and write Maya numbers and solve number problems. They will learn about the Maya writing system and practise writing words using logograms and syllabograms in the hieroglyphic style of the ancient Maya people. The children will learn about the work of the explorers John Lloyd Stephens and Frederick Catherwood and have the opportunity to analyse historical pictures of the cities they discovered. They will also learn about the types of food eaten by the ancient Maya people, and they will find out about the significance of corn and chocolate.

### **Assessment**

At the end of each unit, teachers carry out a formative assessment of children's progress and attainment.

### **Differentiation and Support for MAGT Pupils**

Extension tasks are built into all units to provide challenge for children with a talent for History. Tasks and resources are adapted where children require additional support.

## MATHEMATICS

### Overview

In the Junior School, Mathematics lessons focus on two key aspects of mathematics: fluency and reasoning. Arithmetic skills are practised frequently and there is a focus on developing pupils' knowledge and application of number facts and the multiplication tables.

Mathematics lessons focus on developing a secure understanding of mathematical concepts using high-quality visual representations and concrete resources. Red House Junior School is part of the *NCETM Problem-Solving Schools Programme*, meaning that we aim to instil children with the confidence and skills to tackle problems in a range of contexts.

Differentiation is provided through adult support, use of resources, timely intervention and additional challenge as needed.

### Curriculum Content

#### Autumn Term

Children will study place value in 4-digit numbers, including how to represent and partition numbers to 10,000. They will also calculate 1, 10, 100 and 1000 more or less. They will move on to rounding to the nearest 10, 100 and 1000 and learn about Roman Numerals. In addition and subtraction, children will add and subtract 4-digit numbers using formal written methods, including in the context of multi-step problems. Children will learn how to count and compare areas. In their unit on multiplication, children will learn the 6-, 9-, 7-, 11- and 12- times tables and how to multiply three numbers.

#### Spring Term

Children will study multiplication and division, including factor pairs. They will learn how to multiply by 10 and 100 and move on to short multiplication and short division of numbers up to 3 digits. In their unit on length and perimeter, children will learn about kilometres and metres and the perimeter of rectangles, rectilinear shapes and polygons. Children will learn about fractions, including mixed numbers and improper fractions and how to convert from one to the other. They will study families of equivalent fractions and how to simplify fractions before moving on to adding and subtracting fractions and calculating fractions of an amount. In their unit on decimals, children will learn about tenths and hundredths as decimals and how to multiply and divide decimals by 10 and 100.

#### Summer Term

Children will continue their study of decimals by learning how to partition, compare and order decimals. They will also learn how to round to the nearest whole number and represent halves and quarters as decimal fractions. In their unit on money, children will compare, add and subtract different values of money. Children will progress on to learning about time, including converting between analogue and digital times. In their studies of shape, space and measure, pupils will learn about how to identify different angles and identify lines of symmetry. Children will then study statistics, including line graphs, before finally studying position and direction.

## **Assessment**

Regular low-stakes arithmetic quizzes are used throughout the year to identify next steps for learning. End-of-unit tests are used in Key stages 1 and 2 (Years 1-6) to check pupils' progress. Years 4, 5 and 6 children are given a termly Multiplication Tables Check. In addition, pupils in Key Stages 1 and 2 will be assessed in Arithmetic and Reasoning at the end of each term; these scores are recorded and shared with Key Stage Leads to identify any interventions that may be required.

## **Differentiation and Support for MAGT Pupils**

Differentiation is provided through adult support, use of resources, retrieval practice and timely intervention. MAGT pupils will be offered extension tasks to take their learning to the next level.

# **MUSIC**

## **Overview**

Pupils will study a range of musical styles and develop their ability to learn key words associated with Music. They will have opportunity to develop performance skills on multiple instruments, whilst underpinning essential music theory knowledge. They will listen to a range of music from different eras, as well as studying music from other cultures. They will use a range of musical software to develop composition skills, as well as incorporating singing in most lessons.

## **Curriculum Content**

### **Autumn Term**

During this term, pupils will be developing their knowledge of the orchestra and identifying instruments by sight and sound. They will have the opportunity to listen to a range of music, including Prokofiev's *Peter and the Wolf*. Through this, they will be learning about programme music and how music is made to tell a story through the use of timbres and techniques an instrument can play with. Their keyword knowledge will be underpinned whilst exploring through practical activities in performing and composing. They will enhance their singing ability by joining in with class songs.

### **Spring Term**

Pupils will further develop their knowledge of musical notation and note values. Through listening topics and activities, they will learn about higher pitched instruments from each orchestral family. Pieces of music will be used to encourage an imaginative response through short stories, poems or art.

## **Summer Term**

Pupils will learn how melody lines can be supported by sustained accompaniments. Their listening activities will focus on the sound of individual instruments and music depicting animals and birds. Note recognition is developed through regular keyboard playing. Pupils will learn songs in a variety of styles, some in preparation for end of term performances.

## **Assessment**

Throughout the year, teachers carry out formative assessments of children's progress and attainment.

## **Differentiation and Support for MAGT Pupils**

Tasks and resources are adapted where children require additional support and appropriate challenge will be provided for children with a talent for music.

# **PHSE & RSE**

## **Overview**

In PSHE lessons, pupils learn about themselves as growing and changing individuals with their own experiences and ideas, and as members of wider communities. They learn about the world and the communities within it. In Year 4, PSHE covers three main themes: Health and Wellbeing, Relationships, and Living in the Wider World.

## **Curriculum Content**

### **Autumn Term**

Children will explore the idea that we live in a diverse, multicultural and democratic society and that this is important and brings many benefits. Children will identify that they should be respectful of difference. Children will learn about British people, rules, the law, liberty and what living in a democracy means. They will also learn about the importance of being tolerant of differences within their society. Following this, children will explore the importance of having confidence in themselves. Children will also explore how to express their thoughts and feelings respectfully and how to be assertive when in uncomfortable situations. The children will also have an opportunity to explore the influence of the media in how we view ourselves and analyse the reality of these messages.

### **Spring Term**

In their unit on safety, children will consider what it means to take responsibility for their own safety. This will include the decisions they make and how they can stand up to peer pressure in a range of situations. They will learn about everyday risks, hazards and dangers and what to do in risky or dangerous situations. They will also learn about road, water and rail safety and dangerous substances: drugs (including medicines), cigarettes and alcohol.

Children will look at first aid, exploring how to deal with common injuries and what to do to respond to emergency situations. In their unit on money, children will be encouraged to think about where money comes from and how it can be used. Children will discuss how we spend money, why people might need to borrow money and the consequences of this. Children will begin to explore how we can prioritise what we spend money on and what choices we have, including environmental considerations of wider spending.

### **Summer Term**

Children will learn that it is important to understand and have digital wellbeing. Children will consider what we use the Internet for and the benefits and risks of online activities. Children will learn about screentime and getting a healthy balance between online and offline activities. They will learn about online relationships, including cyberbullying and online stranger danger. Privacy issues will be explored in terms of passwords, personal information and the sharing or forwarding of images and videos. Children will also learn about pressures and challenges that are often associated with social media. In the final term, children will learn about growing up. This topic builds on children's knowledge of the human body and how we grow and change, both physically and emotionally. Children will learn about their own and others' bodies and how male and female bodies play a part in human reproduction. They will also learn about different relationships and family structures. This ties in with the children's RSE lessons in the Summer Term.

### **Assessment**

Teachers carry out formative assessments throughout the academic year.

### **Differentiation and Support for MAGT Pupils**

Pupils are encouraged to stretch their thinking through extended questioning. They are also challenged to begin to form their own arguments and justify their opinions. Support is provided for children as required.

## **PHYSICAL EDUCATION AND GAMES**

### **Overview**

PE & Games provides a unique and vital contributor to a pupil's physical and development and well-being. It is highly regarded at Red House that PE & Games play a major role in helping pupils achieve their full potential.

The main focus of Games lessons in Year 5 is to improve basic skills required to play each game and to develop a solid understanding of rules and tactics in a competitive environment. The range of activities will change every half-term throughout the academic year.

### **Curriculum Content**

#### **Autumn Term**

The major team game this term will be football for both boys and girls, plus hockey for the girls, with an emphasis on developing basic skills and increasing the understanding of match play. They will also be taught how to play invasion games. In swimming, pupils will work on techniques, and their individual performances will be recorded and monitored. During PE lessons, pupils will be involved in smaller units of work involving health related fitness.

#### **Spring Term**

During this term, a range of sporting activities will be covered. In the major team games such as netball and hockey (for the girls) and football and rugby (for the boys), the emphasis will be on improving basic skills and increasing the understanding of match play. In swimming, pupils will develop their technique in all 3 basic strokes and their individual performances will be recorded and monitored. There will also be some preparation work for the swimming gala, which takes place towards the end of term.

#### **Summer Term**

During this term, a range of sporting activities will be covered. In games such as tennis, cricket (for the boys) and rounders (for the girls), the emphasis will be on improving basic skills and increasing the understanding of match play. In swimming, pupils will continue to develop their technique in all 3 basic strokes. In athletics, pupils will learn about a variety of individual events and their performances will be recorded and monitored. There will also be some preparation work for sports day which takes place this term.

### **Differentiation and Support for MAGT Pupils**

All pupils are encouraged to engage in the co-curricular sports clubs on offer and PE staff can also provide information to feed pupils into our local sports clubs. Where applicable, pupils can participate in District, County, Regional and National competitions. In addition to this, our more talented players will get the chance to play in competitions beyond their own age category with older year groups.

## **RELIGIOUS STUDIES**

### **Overview**

Religious Studies enables children to investigate and reflect on some of the most fundamental questions asked by people. At Red House School, we develop the children's knowledge and understanding of the major world faiths and other world views. We enable the pupils to develop a sound knowledge of not only Christianity, but also of other world religions.

### **Curriculum Content**

#### **Autumn Term**

In their work on Buddhism, children will learn about key aspects of the Buddhist faith. They will find out where Buddhism originated, about special places linked to Buddhism and about key festivals in Buddhist life. The children will also learn about symbols in Buddhism, the Buddhist holy book and the main beliefs held by Buddhists. Children will also learn about the lives of people of faith from different religions. They will identify key events in their lives, how their faith and beliefs have influenced them to overcome challenging circumstances, and how it has inspired their lives and work. They will compare these experiences throughout the unit.

#### **Spring Term**

In their unit on Christianity, children will learn about key aspects of the Christian faith. They will find out where Christianity originated, about special places linked to Christianity and about key festivals in Christian life. The children will also learn about symbols in Christianity, the Christian holy book and the main beliefs held by Christians. In their work on food and fasting, children will explore the role food plays within religions. They will discuss how food is used in everyday life, before looking at examples of its use within specific religions. Children will learn about food rules within Judaism, how abstaining from food can be a religious act with reference to the Christian festival of Lent and will consider how and why religious believers fast through looking at the Muslim festival of Ramadan. Children will then discuss how food is also used within religions for celebrations.

#### **Summer Term**

Children will learn about what a pilgrimage is for both secular and religious people. They will then focus on the six main world religions and identify the role of pilgrimage in that religion. This will include finding out about specific pilgrimages, such as the Hajj, when and where the pilgrimages take place, and what takes place during the pilgrimage. Children will then look at the Bible in Christianity, its origins, its role as a sacred religious text and how it is used by Christians around the world. Children will consider the authorship of the Bible, discussing the Christian belief that it is the Word of God whilst finding out about different writers of books in the Bible. They will discuss the different text types used in the Bible and explore a story in greater depth.



## **Assessment**

Teachers carry out formative assessments throughout the academic year.

## **Differentiation and Support for MAGT Pupils**

Pupils are encouraged to stretch their thinking through extended questioning. They are also challenged to begin to form their own arguments and justify their opinions. Support is provided for children as required.

# **SCIENCE**

## **Overview**

In Year 4, pupils will be taught to use practical scientific methods, processes and skills through the teaching of key knowledge. They will learn to ask relevant questions and use different types of scientific enquiries to answer them. They will set up simple practical enquiries, comparative and fair tests and make systematic and careful observation. They will gather, record, classify and present data in a variety of ways and report on the findings of their enquiries. They will also identify differences, similarities or changes related to simple scientific ideas and processes.

## **Curriculum Content**

### **Autumn Term**

In their 'states of matter unit' children will learn about the differences between solids, liquids and gases, classifying objects and identifying their properties. The children will work scientifically and collaboratively to investigate the weight of a gas. Furthermore, they will have chance to find the ideal temperature to melt chocolate. They will explore in-depth how water changes state, exploring melting, freezing, condensing as well as a particular focus on evaporation. Finally, they will learn about the stages of the water cycle, creating mini water worlds and an interactive water wheel to represent the different stages. When studying sound, children will learn about how vibrations cause sounds and how sounds travel, as well as how sounds can change pitch and loudness. The children will learn about how sounds are made, carrying out demonstrations of vibrations, and completing a sound survey of their school. They will work in groups to create a human model of the way particles pass sound vibrations on and write and star in their own documentary explaining how sound travels. The children will work in a hands-on way to explore pitch and will use their understanding of how high and low sounds are made to create their own set of pan pipes. They will have the opportunity to make a string telephone and will use this to investigate how sounds change over distance and through different materials. The children will work scientifically and collaboratively to investigate the best material for soundproofing, in the context of making a music studio quieter. Finally, they will demonstrate their learning from the whole unit by

designing and creating their own musical instrument that will play high, low, loud and quiet sounds.

### **Spring Term**

In their unit on animals including humans, children will expand on their learning about how animals, including humans, need to get nutrition from what they eat. They will explore the different organs of the digestive system in humans and the functions of teeth in both humans and animals. Children will learn about the different types of teeth and the importance of good dental hygiene. They will then learn about the parts and functions of individual organs of the human digestive system and carry out their own scientific demonstration of the process. Children will then learn more about herbivores, carnivores and omnivores in the context of teeth, digestion and food chains. They will extend their understanding of food chains to include more complex chains, using the terms 'consumers' and 'producers' and compare food chains in different habitats. In their unit about electricity, children will learn about common electrical appliances and how to construct simple series circuits. They will become familiar with the key words linked to the topic and how to apply them appropriately. Children will learn about cells, wires, bulbs and buzzers and about the different types of switches. They will be able to troubleshoot and identify whether or not a bulb will light in a simple series circuit and be able to identify a complete circuit. The children will also learn about conductors and insulators.

### **Summer Term**

In their unit on famous scientists, children will learn about famous scientists and inventors linked to the Year 4 Science curriculum. They will learn about the dangers posed to living things in Madagascar, and Gerald Durrell's conservation efforts on the island. The children will learn about Alexander Graham Bell and his invention of the telephone, as well as modern improvements on his invention by inventors like James West and Gerhard M. Sessler. Children will look at the early uses of solar energy in homes, invented and built by Maria Telkes and Eleanor Raymond, then build their own basic solar oven. The many inventions of Garrett Morgan will be looked at, followed by children building and evaluating their own traffic lights using basic electrical circuits. They will find out about the discovery of oxygen and carry out an experiment to investigate the effects of oxygen on burning objects. Furthermore, they will learn about Lord Kelvin, the man who determined the temperature of absolute zero. The children will explore the work of Thomas Edison and Lewis Latimer, carrying out an electricity hunt around school. In their unit on living things, children will explore a variety of ways to identify, sort, group and classify living things. They will learn how animals are split into 'vertebrates' and 'invertebrates' and begin to consider the differences between living things within these classifications. They will use and create classification keys to group, identify and name living things from the local habitat and beyond.

### **Assessment**

Teachers carry out formative assessments throughout the academic year. Summative assessments may be used at the end of each unit.

## **Differentiation and Support for MAGT Pupils**

Pupils are encouraged to stretch their thinking through extended questioning and practical investigations. They are also challenged to begin to form their own arguments and justify their opinions. Support is provided for children as required.

## **HOMEWORK**

In Year 4, children should read daily and they will also receive Maths and English homework, plus other subjects on occasion. Homework should take approximately 20 minutes to complete. Pupils are provided with a homework timetable at the start of Year 4.

### **The role of parents**

The school encourages parents, as far as possible, to:

- Provide a reasonably peaceful, suitable place in which pupils can do their homework.
- Give help and assistance, when necessary.
- Make it clear to their child that they value homework and support the school in explaining how it can help him/her make progress at school.
- Encourage their child and give praise when s/he has completed homework.
- Expect homework deadlines to be met by their child and check that they are.
- Communicate that the homework has been completed, in accordance with the homework timetable, by signing the pupil planner each day for pupils in Years 5, and to use the pupil planner to communicate any problems to the class teacher.

### **Homework facilities in school**

Pupils may stay for Session 6, which takes place during the school week, Monday-Friday from 4pm until 6pm. These sessions are supervised by a member of staff. If children finish their school day at the Senior School, they may attend Tea & Prep, which also takes place during the school week, Monday-Friday from 4pm until 6pm

Pupils may attend a weekly homework club, where a teacher will be available to support children with their homework.

## **FURTHER ADVICE AND HELP**

Help and advice are always available in school. Below is a guide to the best person to approach, depending on the nature of the enquiry. Telephone requests can be left with Mrs Mason at the school office, requesting teachers to call you back. Alternatively, an email message can be used to set out the enquiry and allow the teacher to come back to you directly with an answer – this is normally the best approach.

Staff email addresses are available on the Parent Portal. Messages for class teachers can also be written into the pupil planner.

**Year 4 Class Teacher** (Miss Rosie Farrell)

[rosie.farrell@redhouseschool.co.uk](mailto:rosie.farrell@redhouseschool.co.uk)

**KS2 Lead and Assistant Head of the Junior School** (Mrs Victoria Smith)

[vicky.smith@redhouseschool.co.uk](mailto:vicky.smith@redhouseschool.co.uk)

**SENCo** (Mr Ian Barnbrook-McKay)

For advice, diagnosis and support of specific learning difficulties, such as screening for dyslexia.

[ian.mckay@redhouseschool.co.uk](mailto:ian.mckay@redhouseschool.co.uk)

**Head of the Junior School** (Mr Simon Haywood)

[simon.haywood@redhouseschool.co.uk](mailto:simon.haywood@redhouseschool.co.uk)