



Year 4



**Maths**

**Number: Number & Place Value**

- Count in multiples of 6, 7, 9, 25 and 1000
- Find 1000 more or less than a given number
- Count backwards through zero to include negative numbers
- Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- Order and compare numbers beyond 1000
- Identify, represent and estimate numbers using different representations
- Round any number to the nearest 10, 100 or 1000
- Solve number and practical problems that involve all of the above and with increasingly large positive numbers
- Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.



**Number: Addition & subtraction**

- add and subtract numbers with up to 4 digits using the formal



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written methods of columnar addition and subtraction where appropriate

- estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

### **Number: Multiplication & Division**

- Recall multiplication and division facts for multiplication tables up to  $12 \times 12$ .
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- Recognise and use factor pairs and commutativity in mental calculations
- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as  $n$  objects are connected to  $m$  objects.

### **Number: Fractions**

- Recognise and show, using diagrams, families of common equivalent fractions
- Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
- Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- Add and subtract fractions with the same denominator
- Recognise and write decimal equivalents of any number of tenths or hundredths
- Recognise and write decimal equivalents to  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$
- Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- Round decimals with one decimal place to the nearest whole



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number

- Compare numbers with the same number of decimal places up to two decimal places
- Solve simple measure and money problems involving fractions and decimals to two decimal places.

### Measurement

- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
- Find the area of rectilinear shapes by counting squares
- Estimate, compare and calculate different measures, including money in pounds and pence



### Geometry: Property of shapes

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- Identify acute and obtuse angles and compare and order angles up to two right angles by size
- Identify lines of symmetry in 2-D shapes presented in different orientations
- Complete a simple symmetric figure with respect to a specific line of symmetry.

### Geometry: Position and Direction

- Describe positions on a 2-D grid as coordinates in the first quadrant
- Describe movements between positions as translations of a given unit to the left/right and up/down
- Plot specified points and draw sides to complete a given polygon.



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	<p><b><u>Statistics</u></b></p> <ul style="list-style-type: none"><li>• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</li><li>• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</li></ul>
<b>Literacy</b>	<p><b><u>Reading: Word Reading</u></b></p> <ul style="list-style-type: none"><li>• Apply their growing knowledge of root words, prefixes and suffixes, both to read aloud and to understand the meaning of new words they meet</li><li>• Read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.</li></ul> <p><b><u>Reading: Comprehension</u></b></p> <ul style="list-style-type: none"><li>• Develop positive attitudes to reading and understanding of what they read by:</li><li>• Listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks</li><li>• Reading books that are structured in different ways and reading for a range of purposes</li><li>• Using dictionaries to check the meaning of words that they have read</li><li>• Increasing their familiarity with a wide range of books, including fairy stories, myths and legends, and retelling some of these orally</li><li>• Identifying themes and conventions in a wide range of books</li><li>• Preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action</li><li>• Discussing words and phrases that capture the reader's interest and imagination</li><li>• Recognising some different forms of poetry [for example, free verse, narrative poetry]</li><li>• Understand what they read, in books they can read</li></ul>



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independently, by:

- Checking that the text makes sense to them, discussing their understanding and explaining the meaning of words in context
- Asking questions to improve their understanding of a text
- Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
- Predicting what might happen from details stated and implied
- Identifying main ideas drawn from more than one paragraph and summarising these
- Identifying how language, structure, and presentation contribute to meaning
- Retrieve and record information from non-fiction
- Participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what others say.

### **Writing: Transcription**

#### **Spelling**

- Use further prefixes and suffixes and understand how to add them
- Spell further homophones
- Spell words that are often misspelt
- Place the possessive apostrophe accurately in words with regular plurals [for example, girls', boys'] and in words with irregular plurals [for example, children's]
- Use the first two or three letters of a word to check its spelling in a dictionary
- Write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.

#### **Handwriting**

- Use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left unjoined
- Increase the legibility, consistency and quality of their handwriting [for example, by ensuring that the downstrokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch].



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### Writing: Composition

- Plan their writing by:
- Discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar
- Discussing and recording ideas
- Draft and write by:
- Composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures
- Organising paragraphs around a theme
- In narratives, creating settings, characters and plot
- In non-narrative material, using simple organisational devices [for example, headings and sub-headings]
- Evaluate and edit by:
- Assessing the effectiveness of their own and others' writing and suggesting improvements
- Proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences
- Proof-read for spelling and punctuation errors
- Read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear.



### Writing: Vocabulary, Grammar and punctuation

- Develop their understanding of the concepts set out in English Appendix 2 by:
- Extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although
- Using the present perfect form of verbs in contrast to the past tense
- Choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition
- Using conjunctions, adverbs and prepositions to express time





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and cause

- Using fronted adverbials
- Learning the grammar for years 3 and 4 in English Appendix 2
- Indicate grammatical and other features by:
- Using commas after fronted adverbials
- Indicating possession by using the possessive apostrophe with plural nouns
- Using and punctuating direct speech
- Use and understand the grammatical terminology accurately and appropriately when discussing their writing and reading.

### Poetry

- Syllabic Poems
- Image Poems
- Poems to Perform
- Narrative Poems
- Non-Sense Poetry
- Odes and insults

### Non-Fiction

- Instructions and Explanations
- Information texts
- Recounts
- Non-chronological Reports
- Persuasive Writing
- Chronological Reports



### Fiction

- Fables
- Stories in familiar settings
- Fantasy
- Myths and legends
- Stories with Humour
- Stories from other Cultures



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<b>History</b>	<p><b><u>The Rise of the Roman Empire and its impact on Britain</u></b></p> <ul style="list-style-type: none"><li>• The Roman Empire by AD 42 and the power of its Army</li><li>• Julius Caesar's attempted invasion in 55-54 BC</li><li>• British resistance, e.g. Boudicca</li><li>• Romanisation of Britain and the impact of technology, culture and beliefs</li></ul> <p><b><u>The achievements of the earliest civilisations: Ancient Egyptians</u></b></p> <ul style="list-style-type: none"><li>• The Nature of Ancient civilisations</li><li>• Egyptologists</li><li>• Pharaohs &amp; Pyramids</li><li>• Egyptian artefacts</li></ul> 
<b>Geography</b>	<ul style="list-style-type: none"><li>• Locate the world's countries, using maps to focus on <b>Europe</b> - concentrating on their environmental regions, key physical and human characteristics, countries and major cities</li><li>• Understand geographical similarities and differences through the study of human and physical geography of Cornwall and The Costa del Sol</li><li>• The Water Cycle</li></ul> 
<b>Science</b>	<p><b><u>Living Things and their Habitats</u></b></p> <ul style="list-style-type: none"><li>• Recognise that living things can be grouped in a variety of ways</li><li>• Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li><li>• Recognise that environments can change and that this can sometimes pose dangers to living things.</li></ul>





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### Animals including humans

- Describe the simple functions of the basic parts of the digestive system in humans
- Identify the different types of teeth in humans and their simple functions
- Construct and interpret a variety of food chains, identifying producers, predators and prey.

### States of Matter

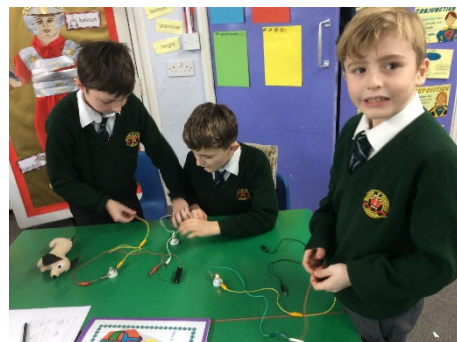
- Compare and group materials together, according to whether they are solids, liquids or gases
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius ( $^{\circ}\text{C}$ )
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

### Sound

- Identify how sounds are made, associating some of them with something vibrating
- Recognise that vibrations from sounds travel through a medium to the ear
- Find patterns between the pitch of a sound and features of the object that produced it
- Find patterns between the volume of a sound and the strength of the vibrations that produced it
- Recognise that sounds get fainter as the distance from the sound source increases.

### Electricity


- Identify common appliances that run on electricity
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers





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	<ul style="list-style-type: none"><li>• Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery</li><li>• Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li><li>• Recognise some common conductors and insulators, and associate metals with being good conductors.</li></ul>
RE	<p><b><u>Creation</u></b></p> <ul style="list-style-type: none"><li>• What do Christians learn from the Creation story?</li><li>• Place the concepts of God and Creation on a timeline of the Bible's 'Big Story'.</li><li>• Make clear links between Genesis 1 and what Christians believe about God and Creation.</li><li>• Describe what Christians do because they believe God is Creator.</li><li>• Ask questions and suggest answers about what might be important in the creation story for Christians living today, and for people who are not Christians.</li></ul>  <p><b><u>Gospel</u></b></p> <ul style="list-style-type: none"><li>• What kind of world did Jesus want?</li><li>• Identify this as part of a 'Gospel', which tells the story of the life and teaching of Jesus.</li><li>• Make clear links between the calling of the first disciples and how Christians today try to follow Jesus and be 'fishers of people'.</li><li>• Offer suggestions about what Jesus' actions towards the leper might mean for a Christian.</li><li>• Make simple links between Bible texts and the concept of 'Gospel' (good news).</li><li>• Give examples of how Christians try to show love to all, including how members of the clergy follow Jesus' teaching.</li><li>• Make links between the Bible stories studied and the importance of love, and life in the world today, expressing some</li></ul>



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ideas of their own clearly.

### How did the people of Cornwall learn about Jesus?

- Key figures in the history of the Church especially with reference to Christianity coming to and developing in Britain.
- Cornwall as a place of Christianity
- How Christianity came to Cornwall
- The Celtic Church and Celtic Christian spirituality
- The development of local celebrations which look beyond the origins of Christianity in Cornwall

### Salvation

- Why do Christians call the day that Jesus died *Good Friday*?
- Order Creation and Fall, Incarnation, Gospel and Salvation within a timeline of the Bible's 'big story'.
- Offer suggestions for what the texts about the entry into Jerusalem, and the death and resurrection of Jesus might mean.
- Give examples of what the texts studied mean to some Christians.
- Make simple links between the Gospel texts and how Christians mark the Easter events in their church communities.
- Describe how Christians show their beliefs about Palm Sunday, Good Friday and Easter Sunday in worship.
- Make links between some of the stories and teachings in the Bible and life in the world today, expressing some ideas of their own clearly.

### Introduction to Judaism

#### God

Jewish belief about God

God is One, good

God is creator

God cares for all people

Belief exemplified through: The Shema, mezuzah, tefillin, tzizit, the first of 5 commandments, prayer, psalms and songs, stories, wearing of kippah and tallit.



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	<p>Festivals and celebrations Pesach, Shavuot and Sukkot. Worship and the community The synagogue: the community centre; place of prayer and study; its main features and components; historical developments, the role of the Rabbi.</p> <p><b><u>Why is the Torah so important to the Jews?</u></b></p> <p>The Torah The Tenakh Torah, Nevi'im and Ketuvim God giving the Torah at mount Sinai and how different traditions understand the origins and nature of the Torah Stories The Creation The Patriarchs Moses Study of the Torah Reading of the weekly portion The annual cycle of readings Regular Torah study Simchat Torah Respect and honour for the torah and God's name The People &amp; The Land Family Life Shabbat</p>
<b>ICT</b>	<p><b><u>Software developer and using scratch</u></b></p> <ul style="list-style-type: none"><li>• Develop an educational computer game using selection and repetition</li><li>• Start to debug computer programs</li></ul> <p><b><u>Toy Designers</u></b></p> <ul style="list-style-type: none"><li>• Understand different forms of input and output [such as sensors, switches, motors, lights and speakers]</li></ul> <p><b><u>Musicians on Ipad applications</u></b></p> <ul style="list-style-type: none"><li>• Using one or more programs to edit music</li><li>• Create and develop a musical composition</li></ul> <p><b><u>HTML editors &amp; Internet safety</u></b></p>





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- Use hyperlinks to connect ideas and sources
- Understand some of the risks in using the web
- Understand the conventions for collaborative online work
- Be aware of their responsibilities when editing other peoples work
- Become familiar with Wikipedia, including potential problems associated with its use
- Practice research skills
- Write for a target audience using a wiki tool
- Develop collaboration skills
- Develop proofreading skills

### **Meteorologists**

- Use computer-based data logging to record some weather data
- Analyse data, explore inconsistencies in data and make predictions
- Practice using presentation software and, optionally, video on the Ipads

### **PE**

- Use running, jumping, throwing and catching in isolation and in combination
- Play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey,



netball, rounders and tennis], and apply basic principles suitable for attacking and defending

- Develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]
- Perform dances using a range of movement patterns
- Take part in outdoor and adventurous activity challenges both individually and within a team
- Compare their performances

with previous ones and demonstrate improvement to achieve their personal best.





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	<p><b><u>Swimming and Water safety</u></b></p> <ul style="list-style-type: none"><li>• Swim competently, confidently and proficiently over a distance of at least 25 metres</li><li>• Use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]</li><li>• Perform safe self-rescue in different water-based situations.</li></ul>
DT	<p><b><u>Design</u></b></p> <ul style="list-style-type: none"><li>• Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</li><li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li></ul> <p><b><u>Make</u></b></p> <ul style="list-style-type: none"><li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li><li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li></ul> <p><b><u>Evaluate</u></b></p> <ul style="list-style-type: none"><li>• Investigate and analyse a range of existing products, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li><li>• Understand how key events and individuals in design and technology have helped shape the world.</li></ul> <p><b><u>Technical Knowledge</u></b></p> <ul style="list-style-type: none"><li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li><li>• Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</li><li>• Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</li></ul>





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	<ul style="list-style-type: none"><li>• Apply their understanding of computing to program, monitor and control their products.</li></ul> <p><b><u>Cooking and Nutrition</u></b></p> <ul style="list-style-type: none"><li>• Understand and apply the principles of a healthy and varied diet.</li><li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li><li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li></ul>
<b>Art</b>	<ul style="list-style-type: none"><li>• To create sketch books to record their observations and use them to review and revisit ideas.</li></ul>  <ul style="list-style-type: none"><li>• To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay].</li><li>• Learn about great artists, architects and designers in history.</li></ul>
<b>Music</b>	 <ul style="list-style-type: none"><li>• Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression.</li><li>• Improvise and compose music for a range of purposes using the inter-related dimensions of music.</li><li>• Listen with attention to detail and recall sounds with increasing aural memory.</li><li>• Use and understand staff and other musical notations.</li><li>• Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians.</li><li>• Develop and understanding of the history of music.</li></ul>
<b>Spanish</b>	<ul style="list-style-type: none"><li>• Extending their Spanish knowledge by learning about parts of the body, family, animals and pets.</li><li>• Studying the geography of Spain and exploring where different Spanish cities are located.</li><li>• Comparing British and Spanish cultures.</li></ul>



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|  | <ul style="list-style-type: none"><li>• Practising key phrases for Spanish conversations.</li><li>• Listening to Spanish through music and stories.</li></ul> |
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