

Maths	English - Reading	English - Writing	Science
<p>Number & Place Value</p> <p>read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 solve number problems and practical problems that involve all of the above read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.</p> <p>Addition & Subtraction</p> <p>add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p> <p>add and subtract numbers mentally with increasingly large numbers</p> <p>use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Multiplication & Division</p> <p>identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</p> <p>know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</p> <p>establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</p> <p>multiply and divide numbers mentally drawing upon known facts</p>	<p>Word Reading</p> <p>apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet.</p> <p>Comprehension</p> <p>maintain positive attitudes to reading and an understanding of what they read by:</p> <ol style="list-style-type: none"> i. continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks ii. reading books that are structured in different ways and reading for a range of purposes iii. increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions iv. recommending books that they have read to their peers, giving reasons for their choices v. identifying and discussing themes and conventions in and across a wide range of writing vi. making comparisons within and across books vii. learning a wider range of poetry by heart viii. preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience <p>understand what they read by</p> <ol style="list-style-type: none"> i. checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context ii. asking questions to improve their understanding iii. drawing inferences such as inferring characters' feelings, thoughts and motives 	<p>Spelling</p> <p>use further prefixes and suffixes and understand the guidance for adding them</p> <p>spell some words with 'silent' letters</p> <p>continue to distinguish between homophones and other words which are often confused</p> <p>use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in Appendix 1</p> <p>use dictionaries to check the spelling and meaning of words</p> <p>use the first 3 or 4 letters of a word to check spelling, meaning or both of these in a dictionary</p> <p>use a thesaurus</p> <p>Handwriting and Presentation</p> <p>Pupils should be taught to write legibly, fluently and with increasing speed by:</p> <p>choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters</p> <p>choosing the writing implement that is best suited for a task</p> <p>Composition</p> <p>Plan their writing by:</p> <ol style="list-style-type: none"> i. identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own ii. noting and developing initial ideas, drawing on reading and research where necessary iii. in writing narratives, considering how authors have developed characters and settings in 	<p>Working Scientifically</p> <p>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:</p> <p>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>taking measurements, using a range of scientific equipment, with increasing accuracy and precision</p> <p>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs</p> <p>using test results to make predictions to set up further comparative and fair tests</p> <p>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations</p> <p>identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Living Things and their habitats</p> <p>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>describe the life process of reproduction in some plants and animals.</p> <p>Animals, including humans</p> <p>describe the changes as humans develop to old age.</p> <p>Properties and Changes of Materials</p> <p>compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and</p>

<p>divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> <p>multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000</p> <p>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</p> <p>solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes</p> <p>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</p> <p>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</p> <p>Fractions (decimals & percentages)</p> <p>compare and order fractions whose denominators are all multiples of the same number</p> <p>identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</p> <p>recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number</p> <p>add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p> <p>read and write decimal numbers as fractions</p>	<p>from their actions, and justifying inferences with evidence</p> <p>iv. predicting what might happen from details stated and implied</p> <p>v. summarising the main ideas drawn from more than 1 paragraph, identifying key details that support the main ideas</p> <p>vi. identifying how language, structure and presentation contribute to meaning</p> <p>discuss and evaluate how authors use language, including figurative language, considering the impact on the reader</p> <p>distinguish between statements of fact and opinion</p> <p>retrieve, record and present information from non-fiction</p> <p>participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously</p> <p>explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary</p> <p>provide reasoned justifications for their views.</p>	<p>what pupils have read, listened to or seen performed</p> <p>Draft and write by:</p> <p>i. selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning</p> <p>ii. in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action</p> <p>iii. précisising longer passages</p> <p>iv. using a wide range of devices to build cohesion within and across paragraphs</p> <p>v. using further organisational and presentational devices to structure text and to guide the reader</p> <p>Evaluate and edit by:</p> <p>i. assessing the effectiveness of their own and others' writing</p> <p>ii. proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning</p> <p>iii. ensuring the consistent and correct use of tense throughout a piece of writing</p> <p>iv. ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register</p> <p>proofread for spelling and punctuation errors</p> <p>perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear.</p> <p>Vocabulary, grammar & punctuation</p> <p>develop their understanding of the concepts set out in Appendix 2 by:</p>	<p>thermal), and response to magnets</p> <p>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p> <p>Earth and Space</p> <p>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>describe the movement of the Moon relative to the Earth</p> <p>describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.</p> <p>Forces</p> <p>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p>
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<p>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>round decimals with 2 decimal places to the nearest whole number and to 1 decimal place</p> <p>read, write, order and compare numbers with up to 3 decimal places</p> <p>solve problems involving number up to 3 decimal places</p> <p>recognise the per cent symbol (%) and understand that per cent relates to “number of parts per 100”, and write percentages as a fraction with denominator 100, and as a decimal fraction</p> <p>solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.</p> <p>Measurement convert between different units of metric measure</p> <p>understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</p> <p>measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</p> <p>calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes</p> <p>estimate volume and capacity</p> <p>solve problems involving converting between units of time</p> <p>use all four operations to solve problems involving measure using decimal notation including scaling.</p>		<ol style="list-style-type: none"> i. recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms ii. using passive verbs to affect the presentation of information in a sentence iii. using the perfect form of verbs to mark relationships of time and cause iv. using expanded noun phrases to convey complicated information concisely v. using modal verbs or adverbs to indicate degrees of possibility vi. using relative clauses beginning with who, which, where, when, whose, that or with an implied (ie omitted) relative pronoun vii. learning the grammar for years 5 and 6 in Appendix 2 <p>indicate grammatical and other features by:</p> <ol style="list-style-type: none"> i. using commas to clarify meaning or avoid ambiguity in writing ii. using hyphens to avoid ambiguity iii. using brackets, dashes or commas to indicate parenthesis iv. using semicolons, colons or dashes to mark boundaries between independent clauses v. using a colon to introduce a list vi. punctuating bullet points consistently <p>use and understand the grammatical terminology in Appendix 2 accurately and appropriately in discussing their writing and reading.</p>	
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Properties of Shape

identify 3-D shapes, including cubes and other cuboids, from 2-D representations

know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

draw given angles, and measure them in degrees ($^{\circ}$)

identify:

- angles at a point and 1 whole turn (total 360°)
- angles at a point on a straight line and half a turn (total 180°)
- other multiples of 90°

use the properties of rectangles to deduce related facts and find missing lengths and angles

distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Position & Direction

identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Statistics

solve comparison, sum and difference problems using information presented in a line graph

complete, read and interpret information in tables, including timetables.