

YEAR 6

Maths

By the end of Year 6, children are expected to be confident with the use of all four standard methods for written calculations, and to have secured their knowledge of the key number facts for the four operations. Their work will focus more on fractions, ratio, proportion and the introduction of algebra.

Number and Place Value

- Work with numbers to up ten million (10,000,000) including negative numbers
- Round any number to any required number of digits or magnitude

Calculations

- Use the standard method of long multiplication for calculations of four-digit numbers by two-digit numbers
- Use the standard method of long division for calculations of four-digit numbers by two-digit numbers
- Identify common factors, common multiples and prime numbers
- Carry out complex calculations according to the mathematical order of operations
- Solve complex problems using all four operations

The mathematical order of operations requires that where calculations are written out in long statements, first calculations in brackets are completed, then any multiplication or division calculations, and finally any addition or subtraction. So, for example, the calculation $4 + 3 \times (6 + 1)$ has a solution of 25, not 43 or 49.

Fractions and Decimals

- Use common factors to simplify fractions, or to add fractions with different denominators
- Place any group of fractions into size order
- Multiply pairs of fractions together $\frac{1}{3} \div 2 = \frac{1}{6}$
- Use division to calculate the decimal equivalent of a fraction
- Know and use common equivalences between fractions, decimals and percentages, such as $\frac{1}{2} = 0.5 = 50\%$

Ratio and Proportion

- Find percentages of quantities, such as 15% of £360
- Use ratio to explain relationships and solve problems

Ratio is represented using the colon symbol. For example, if £100 is shared in a ratio of 1:3 between two people, then the first person receives £25 (one part), with the other receiving £75 (three parts).

Algebra

- Use simple formulae
- Describe sequences of numbers where the increase between values is the same each time
- Solve missing number problems using algebra
- Find possible solutions to problems with two variables, such as, $a + b = 10$

Measurements

- Convert between any metric units and smaller or larger units of the same measure
- Convert between miles and kilometres
- Use a given formula to find the area of a triangle or parallelogram

Shape and Position

- Draw 2-d shapes using given sizes and angles
- Use knowledge of 2-d shapes to find missing angles in triangles, quadrilaterals and other regular shapes
- Name and label the radius, diameter and circumference of a circle
- Find missing angles in problems where lines meet at a point or on a straight line
- Use a standard grid of coordinates including negative values

Graphs and Data

- Construct and understand pie charts and line graphs
- Calculate the mean average of a set of data

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Mean average is calculated by adding up all the values and dividing by the number of items. For example, the mean average of 3, 5, 8, 9 and 10 is 7 ($3 + 5 + 8 + 9 + 10 = 35$, then then $35 \div 5 = 7$)

Parent Tip

Playing traditional games, such as battleships or even draughts and chess, is great for exploring coordinates and movements across the coordinate grid

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English in Years 5 and 6

In upper Key Stage 2 your child will increasingly meet a wider range of texts and types of writing, and will be encouraged to use their skills in a broader range of contexts.

Speaking and Listening

The Spoken Language objectives are set out for the whole of primary school, and teachers will cover many of them every year as children's spoken language skills develop. In Years 5 and 6, some focuses may include:

- Speak clearly in a range of contexts, using Standard English where appropriate
- Monitor the reactions of listeners and react accordingly
- Consider different viewpoints, listening to others and responding with relevant views
- Use appropriate language, tone and vocabulary for different purposes

Reading Skills

- Read a wide range of fiction, non-fiction, poetry, plays and reference books
- Learn a range of poetry by heart
- Perform plays and poems using tone, volume and intonation to convey meaning
- Use knowledge of spelling patterns and related words to read aloud and understand new words
- Make comparisons between different books, or parts of the same book
- Read a range of modern fiction, classic fiction and books from other cultures and traditions
- Identify and discuss themes and conventions across a wide range of writing
- Discuss understanding of texts, including exploring the meaning of words in context
- Ask questions to improve understanding of texts
- Summarise ideas drawn from more than one paragraph, identifying key details
- Predict future events from details either written in a text or by 'reading between the lines'
- Identify how language, structure and presentation contribute to meaning
- Discuss how authors use language, including figurative language, to affect the reader
- Make book recommendations, giving reasons for choices

- Participate in discussions about books, building on and challenging ideas
- Explain and discuss understanding of reading
- Participate in formal presentations and debates about reading
- Provide reasoned justifications for views

Figurative language includes metaphorical phrases such as 'raining cats and dogs' or 'an iron fist', as well as using language to convey meaning, for example by describing the Sun as 'gazing down' upon a scene.

Writing Skills

Themes & Conventions

As children's experience of a range of texts broadens, they may begin to notice conventions, such as the use of first person for diary-writing, or themes such as heroism or quests.

- Write with increasing speed, maintaining legibility and style
- Spell some words with silent letters, such as knight and solemn
- Recognise and use spellings for homophones and other often-confused words from the Y5/6 list
- Use a dictionary to check spelling and meaning
- Identify the audience and purpose before writing, and adapt accordingly
- Select appropriate grammar and vocabulary to change or enhance meaning
- Develop setting, atmosphere and character, including through dialogue
- Write a summary of longer passages of writing
- Use a range of cohesive devices
- Use advanced organisational and presentational devices, such as bullet points
- Use the correct tense consistently throughout a piece of writing
- Ensure correct subject and verb agreement
- Perform compositions using appropriate intonation, volume and movement
- Use a thesaurus
- Use expanded noun phrases to convey complicated information concisely
- Use modal verbs or adverbs to indicate degrees of possibility
- Use relative clauses

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- Recognise vocabulary and structures that are appropriate for formal use
- Use passive verbs to affect the presentation of information
- Use the perfect form of verbs to mark relationships of time and cause
- Recognise the difference in informal and formal language Use grammatical connections and adverbials for cohesion Use ellipses, commas, brackets and dashes in writing
- Use hyphens to avoid ambiguity
- Use semi-colons, colons and dashes between independent clauses
- Use a colon to introduce a list
- Punctuate bullet points consistently

As children get older, they will increasingly take responsibility for their own work and homework tasks. That's not to say that parents can't help though. Encourage your child to work independently on their homework, but also take the opportunity to discuss it with them and to have them explain their understanding to you

Cohesive devices are words or phrases used to link different parts of writing together. These may be pronouns such as 'he' or 'it' to avoid repeating a name, or phrases such as 'After that...' or 'Meanwhile' to guide the reader through the text

Grammar Help

For many parents, the grammatical terminology used in schools may not be familiar. Here are some useful reminders of some of the terms used:

- Noun phrase: a group of words which takes the place of a single noun. Example: The big brown dog with the fluffy ears.
- Modal verb: a verb that indicates possibility. These are often used alongside other verbs. Example: will, may, should, can.
- Relative clause: a clause which adds extra information or detail. Example: The boy who was holding the golden ticket won the prize.
- Passive verb: a form of verb that implies an action being done to, rather than by, the subject. Example: The boy was bitten by the dog.
- Perfect form: a form of verb that implies that an action is completed. Example: The boy has walked home.