

New Curriculum Expectations for Maths by end of Year 1

By the end of Year 1, a child should be fluent with whole numbers and counting. A Year 1 child has a developing knowledge of addition and subtraction using concrete objects and pictorial representations. A Year 1 child should read and spell mathematical vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1.

A Year 1 child:

Number and place value

counts to and across 100, forwards and backwards, beginning with 0 or one, or from any given number

counts, reads and writes numbers to 100 in numerals; counts in multiples of twos, fives and tens

given a number, identifies one more and one less

Addition and subtraction

represents and uses number bonds and related subtraction facts within 20

Fractions (including decimals)

recognises, finds and names a half as one of two equal parts of an object, shape or quantity

Measurement

compares, describes and solves practical problems for:

- lengths and heights e.g. long/short, longer/shorter, tall/short, double/half;
- mass/weight e.g. heavy/light, heavier than, lighter than;
- capacity and volume e.g. full/empty, more than, less than, half, half full, quarter; and
- time e.g. quicker, slower, earlier, later.

Time

tells the time to the hour and half past the hour and draws the hands on a clock face to show these times

Properties of shape

recognises and names common 2-D and 3-D shapes, including:

- 2-D shapes e.g. rectangles (including squares), circles and triangles;
- 3-D shapes e.g. cuboids (including cubes), pyramids and spheres.

New Curriculum Expectations for Maths by end of Year 2

By the end of Year 2 a child should be mentally fluent with whole numbers, counting and place value. A Year 2 child should know the number bonds to 20 and be precise in using and understanding place value.

A Year 2 child:

Number and place value

counts in steps of two, three, and five from 0, and in tens from any number, forward and backward

compares and orders numbers from 0 up to 100

uses < > and = signs correctly

uses place value and number facts to solve problems

Addition and subtraction

solves problems with addition and subtraction by:

- using concrete objects and pictorial representations, including those involving numbers, quantities and measures; and
- applying an increasing knowledge of mental and written methods.

recalls and uses addition and subtraction facts to 20 and 100 (fluently up to 20)

Multiplication and division

recalls and uses multiplication and division facts for the two, five and ten multiplication tables, including recognising odd and even numbers

solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Fractions (including decimals)

recognises, finds, names and writes fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity

Measurement

solves simple problems in a practical context involving addition and subtraction of money of the same unit including giving change

Geometry: properties of shape

compares and sorts common 2-D and 3-D shapes and everyday objects

Geometry: position and direction

uses mathematical vocabulary to describe position, direction and movement including movement in a straight line, and distinguishes between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)

Statistics

asks and answers questions about totalling and comparing categorical data

New Curriculum Expectations for Maths by end of Year 3

By the end of Year 3, a child will be developing written and mental methods using the four operations, (addition, subtraction, multiplication and division) including number facts and the concept of place value, and performing calculations with whole numbers.

A Year 3 child:

Number and place value

counts from 0 in multiples of 4, 8, 50 and 100

can work out if a given number is greater or less than 10 or 100

recognises the place value of each digit in a three-digit number (hundreds, tens, and ones)

solves number problems and practical problems involving these ideas

Addition and subtraction

adds and subtracts numbers mentally including:

- a three-digit number and ones;
- a three-digit number and tens; and
- a three-digit number and hundreds.

Multiplication and division

recalls and uses multiplication and division facts for the multiplication tables:

- three
- four
- eight.

writes and calculates mathematical statements for multiplication and division using the multiplication tables that are known including multiplying two-digit numbers by one-digit numbers, using mental and progressing to formal written methods

Fractions (including decimals)

counts up and down in tenths; recognises that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

recognises, finds and writes fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

recognises and shows, using diagrams, equivalent fractions with small denominators

Measurement

measures, compares, adds and subtracts lengths (m/cm/mm); mass (kg/g);

volume/capacity (l/ml)

adds and subtracts amounts of money to give change, using both £ and p in practical contexts

tells and writes the time from an analogue clock and 12-hour and 24-hour clocks

identifies right angles, recognises that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identifies whether angles are greater than or less than a right angle

Statistics

interprets and presents data using bar charts, pictograms and tables

New Curriculum Expectations for Maths by end of Year 4

By the end of Year 4, a child should be fluent with whole numbers and the four operations (addition, subtraction, multiplication and division), including number facts and the concept of place value. A Year 4 child will be developing efficient written and mental methods and performing calculations accurately with increasingly large whole numbers.

A year 4 child:

Number and place value

counts in multiples of 6, 7, 9, 25 and 1,000

counts backwards through zero to include negative numbers

orders and compares numbers beyond 1,000

rounds any number to the nearest 10, 100 or 1,000

Addition and subtraction

solves addition and subtraction two-step problems in context, deciding which operations and methods to use and why

Multiplication and division

recalls multiplication and division facts for multiplication tables up to 12 x 12

Fractions (including decimals)

recognises and shows, using diagrams, families of common equivalent fractions

counts up and down in hundredths; recognises that hundredths arise when dividing an object by 100 and dividing tenths by 10

rounds decimals with one decimal place to the nearest whole number

solves simple measure and money problems involving fractions and decimals to two decimal places

Measurement

converts between different units of measure e.g. kilometre to metre; hour to minute

Geometry: properties of shapes

compares and classifies geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

identifies lines of symmetry in two dimensional shapes presented in different orientations

Geometry: position and direction

plots specified points and draws sides to complete a given polygon

Statistics

solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

New Curriculum Expectations for Maths by end of Year 5

By the end of Year 5, a child should be fluent in formal written methods for addition and subtraction. Using a developing knowledge of formal methods of multiplication and division, a Year 5 child should be able to solve problems including properties of numbers and arithmetic.

A Year 5 child:

Number and place value

reads, writes, orders and compares numbers to at least 1,000,000 and determines the value of each digit

interprets negative numbers in context, counts forwards and backwards with positive and negative whole numbers including through zero

Addition and subtraction

adds and subtracts whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction)

adds and subtracts mentally with increasingly large numbers (e.g. $12,462 - 2,300 = 10,162$)

Multiplication and division

identifies multiples and factors including finding all factor pairs of a number and common factors of two numbers

solves problems involving multiplication and division including using a knowledge of factors and multiples, squares and cubes

solves problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Fractions (including decimals)

compares and orders fractions whose denominators are all multiples of the same number

reads and writes decimal numbers as fractions e.g. $0.71 = 71/100$

reads, writes, orders and compares numbers with up to three decimal places

solves problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25

Measurement

converts between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)

measures and calculates the perimeter of composite rectilinear shapes in centimetres and metres
calculates and compares the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²)

Geometry: Properties of shape

draws given angles and measures them in degrees (°)

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

Statistics

completes, reads and interprets information in tables, including timetables

New Curriculum Expectations for Maths by end of Year 6

By the end of Year 6, a child should be fluent in formal written methods for all four operations (addition, subtraction, multiplication and division) including long multiplication and division and in working with fractions, decimals and percentages and ratios, and make connections between them. A Year 6 child should be able to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. A Year 6 child is beginning to use the language of algebra as a tool for solving a variety of problems.

A Year 6 child:

Place value

rounds any whole number to a required degree of accuracy
uses negative numbers in context and calculates intervals across zero

Calculation

multiplies multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication
divides numbers up to four digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
solves addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
uses estimation to check answers to calculations and determines, in the context of a problem, an appropriate degree of accuracy

Fractions

uses written division methods in cases where the answer has up to two decimal places
solves problems which require answers to be rounded to specified degrees of accuracy
recalls and uses equivalences between simple fractions, decimals and percentages, including in different contexts

Ratio and proportion

solves problems involving the calculation of percentages e.g. of measures and calculations such as 15 per cent of 360, and the use of percentages for comparison
solves problems involving unequal sharing and grouping using knowledge of fractions and multiples

Algebra

uses simple formulae

Measurement

uses, reads, writes and converts between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

Properties of shape

compares and classifies geometric shapes based on their properties and sizes and finds unknown angles in any triangles, quadrilaterals and regular polygons

Position and direction

draws and translates simple shapes on the coordinate plane and reflects them in the axes
Interprets pie charts and line graphs and uses these to solve problems

Statistics

calculates and interprets the mean as an average

New Curriculum Expectations for Reading by end of Year 1

By the end of Year 1, a child should be able to read all common graphemes and read unfamiliar words containing these graphemes, accurately and without undue hesitation by sounding them out in books that are matched closely to the level of word reading knowledge

A Year 1 child:

- reads many common words (e.g. shout, hand, stop, or dream) without needing to blend the sounds out loud first
- reads some common exception words (e.g. you, could, many or people) easily and automatically
- reads words with suffixes with support to build on the root words that can be read already
- retells some familiar stories that have been read and discussed with them or that they have acted out
- enjoys listening to and discussing stories, poems and non-fiction that cannot yet be read independently
- is becoming very familiar with key stories, fairy stories and traditional tales
- understands how written language can be structured e.g. how to build surprise in narratives and the characteristic features of non-fiction texts
- takes part in a discussion, considering the opinions of others, with support
- checks that the text makes sense to them as they read, correcting inaccurate reading
- discusses the significance of the title and events
- predicts what might happen on the basis of what has been read so far

New Curriculum Expectations for Reading by end of Year 2

By the end of Year 2, a child should be able to read books written at an age-appropriate interest level accurately and at a speed that is sufficient for a child to focus on understanding what is read rather than on decoding individual words

A Year 2 child:

- decodes most new words outside the spoken vocabulary, making a good approximation to the word's pronunciation
- reads suffixes by building on the root words that have already been learnt
- checks that the text makes sense to them as they read and correcting inaccurate reading
- answers a range of questions about what they have read
- identifies cause and effect in both narrative and non-fiction (e.g. what has prompted a character's behaviour in a story; why certain dates are commemorated annually)
- predicts what might happen on basis of what has been read so far
- discusses the sequence of events in books and how items of information are related
- justifies the views about what has been read with support
- listens to and discusses a wide range of stories, poems, plays and information books, including whole books
- enjoys listening to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which they can read independently
- is becoming increasingly familiar with a wider range of stories, fairy stories and traditional tales and can retell them
- has been introduced to non-fiction books that are structured in different ways
- takes part in a discussion, considering the opinions of others
- exercises choice in selecting books

New Curriculum Expectations for Reading by end of Year 3

By the end of Year 3 a child should be able to justify their views about books written at an age-appropriate interest level. A Year 3 child is able to read the book accurately and at a speed that is sufficient for them to focus on understanding what they read rather than on decoding individual words.

A Year 3 child:

- decodes most new words outside the spoken vocabulary
- reads longer words with support and tests out different pronunciations
- recognises themes in what they read, such as the triumph of good over evil or the use of magical devices in fairy stories and folk tales
- uses contents pages and indexes to locate information
- responds to guidance about the kinds of explanations and questions that are expected from them
- uses dictionaries to check the meaning of words they have read
- identifies themes and conventions in a wide range of books
- draws inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
- predicts what might happen from details stated and implied
- retrieves and records information from non-fiction texts
- listens attentively and discuss books and authors that they might not choose themselves
- listens to and discusses a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
- reads, rereads and rehearses a variety of texts

New Curriculum Expectations for Reading by end of Year 4

By the end of Year 4, a child should be able to read aloud a wider range of poetry and books written at an age-appropriate interest level with accuracy and at a reasonable speaking pace.

A Year 4 child:

- reads most words effortlessly and work out how to pronounce unfamiliar words with increasing automaticity
- prepares readings with appropriate intonation to show their understanding
- checks that the text makes sense to the individual, discussing their understanding and explaining the meaning of words in context
- summarises and presents a familiar story in their own words
- reads silently and then discuss what they have read
- has developed strategies to choose and read a wider range of books including authors that they may not have previously chosen , discusses language, including vocabulary, used in a variety of texts to support the understanding of the meaning and comprehension of those texts
- uses dictionaries to check the meaning of words that have been read
- draws inferences such as inferring characters' feelings, thoughts and motives from their actions and justifies inferences with evidence
- predicts what might happen from details stated and implied
- identifies main ideas drawn from more than one paragraph and summarises these
- in non-fiction knows what information to look for before beginning and is clear about the task
- uses contents pages and indexes to locate relevant information
- retrieves and records information from non-fiction texts
- listens to and discusses a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
- identifies themes in a wide range of books
- recognises the conventions of different types of writing such as the greeting in letters, a diary written in the first person or the use of presentational devices such as numbering and headings in instructions
- helps develop, agree on and evaluate rules for effective discussion

New Curriculum Expectations for Reading by end of Year 5

By the end of Year 5 a child's reading should demonstrate increasing fluency across all subjects.

A Year 5 child:

- reads books selected independently
- uses reading strategies to work out any unfamiliar word
- accurately reads individual words which might be key to the meaning of a sentence or paragraph thereby improving comprehension
- checks that the book makes sense to the reader, discussing the individual's understanding and exploring the meaning of words in context
- recognises themes in what is read, such as loss or heroism
- compares characters, settings, themes and other aspects of what is read
- understands the conventions of different types of writing such as the use of the first person in writing diaries and autobiographies
- understands some of the technical and other terms needed for discussing what is heard and read such as metaphor, simile, analogy, imagery, style and effect
- summarises the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
- retrieves, records and presents information from non-fiction texts
- when using non-fiction knows what information is needed to look for before beginning a task and knows how to use contents pages and indexes to locate information and applies these skills across the curriculum independently
- participates in discussions about books that are read to the child and those that can be read independently
- provides reasoned justifications for their views about a book
- is increasing familiar 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

New Curriculum Expectations for Reading by end of Year 6

By the end of Year 6, a child's reading should be fluent and effortless across all subjects.

A Year 6 child:

- reads independently, including books they may not choose to read
- checks that the book makes sense to the reader, discussing the individual's understanding and exploring the meaning of words in context
- focusses on all the letters in a word so they do not, for example, read 'invitation' for 'imitation' simply because they may be more familiar with the first word
- accurately reads individual words, which might be key to the meaning of a sentence or paragraph, to improve age appropriate comprehension
- summarises the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
- discusses the purpose(s) of the language that is read and understand why sentences are constructed as they are
- compares characters, considers different accounts of the same event and discusses viewpoints (both of authors and of fictional characters), within a text and across more than one text
- retrieves, records and presents information from non-fiction texts
- applies the skills of information retrieval e.g. in reading history, geography and science textbooks, and in contexts where they are genuinely motivated to find out information, such as reading information leaflets before a gallery or museum visit or reading a theatre programme or review
- participates in discussions about books that are read to the individual and those that can be read independently
- provides reasoned justifications for their views about a book
- reflects on feedback regarding the quality of their explanations and contributions to discussions
- understands the majority of terms needed for discussing what they hear and read such as metaphor, simile, analogy, imagery, style and effect
- .increases 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

New Curriculum Expectations for Writing by end of Year 1

By the end of Year 1 a child should be able to compose individual sentences orally and then write them down. A Year 1 child should be able to spell correctly many common words as well as name the letters of the alphabet in order.

A Year 1 child:

- demonstrates the skills and processes essential to writing by thinking aloud as they collect ideas, sequence the ideas, draft and re-read to check that the meaning is clear
- recognises sentence boundaries in spoken sentences
- writes sentences by sequencing sentences to form short narratives
- re-reads what has been written to check that it makes sense.
- writes simple dictated sentences that include words taught so far
- is able to form lower case letters correctly and confidently

Spelling, Grammar and Punctuation

A Year 1 child:

- spells some words in a phonically plausible way, even if sometimes incorrectly
- reads back words that they have spelt
- spells words containing each of the phonemes already taught
- has begun to use capital letters, full stops, question marks and exclamation marks to demarcate sentences

New Curriculum Expectations for Writing by end of Year 2

By the end of Year 2 a child's motor skills should be sufficiently advanced for them to write down ideas that they may be able to compose orally.

A Year 2 child:

- is developing positive attitudes towards, and stamina for, writing, by writing for different purposes
- considers what is going to be written before beginning by encapsulating what they want to say, sentence by sentence
- thinks aloud as they collect ideas, draft and re-read to check their meaning is clear;
- plays roles and improvise scenes in various settings to support their writing
- explains how different types of writing, including narratives, are structured and apply this to their own writing
- makes simple additions, revisions and corrections to writing by proof-reading to check for errors in spelling, grammar and punctuation
- writes capital letters and digits of the correct size, orientation and relationship to one another and to lower case letters

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Spelling, Punctuation and Grammar

A Year 2 child:

- constructs subordination (using when, if, that, because) and co-ordination (using or, and, but)
- uses the correct choice and consistent use of present tense and past tense throughout a written piece
- uses capital letters, full stops, question marks and exclamation marks to demarcate sentences
- uses commas to separate items in a list
- spell words in a phonically plausible way, even if sometimes incorrectly including words with more than one syllable
- uses the suffixes –er, –est in adjectives and –ly to turn adjectives into adverbs

New Curriculum Expectations for Writing by end of Year 3

By the end of Year 3 a child should be able to write down their ideas with a reasonable degree of accuracy and with good sentence punctuation.

A Year 3 child:

- is beginning to understand how writing can be different from speech
- is beginning to understand the skills and processes that are essential for writing: that is, thinking aloud to explore and collect ideas, drafting, and re-reading to check the meaning is clear
- writes for a range of real purposes and audiences as part of their work across the curriculum in a variety of genres
- in narratives, creates settings, characters and plot
- organises paragraphs around a theme
- uses headings and sub-headings to aid presentation
- proof-reads for spelling and punctuation errors
- monitors whether their own writing makes sense in the same way that they monitor their reading, checking at different levels
- is beginning to use joined handwriting throughout independent writing

Spelling, Punctuation and Grammar

A Year 3 child:

- spells common words correctly including exception words and other words that have been learnt
- spells words as accurately as possible using phonic knowledge and applying knowledge of other spelling patterns
- uses the forms 'a' or 'an' according to whether the next word begins with a consonant or a vowel e.g. a rock, an open box
- expresses time, place and cause using conjunctions
- uses speech marks to punctuate direct speech
- uses the present perfect form of verbs instead of the simple past e.g. 'He has gone out to play' in contrast to 'He went out to play'

New Curriculum Expectations for Writing by end of Year 4

By the end of Year 4 a child should be able to write down ideas quickly. The grammar and punctuation should be broadly accurate.

A Year 4 child:

- organises paragraphs around a theme
- creates settings, characters and plot in narratives
- writes for a range of real purposes and audiences as part of the work across the curriculum (These purposes and audiences should underpin decisions about the form the writing should take such as a narrative, an explanation or a description; and adopt, create and sustain a range of roles.)
- understands the skills and processes that are essential for writing in order to enhance the effectiveness of what is written: that is, thinking aloud to explore and collect ideas, drafting and re-reading to check the meaning is clear, including doing so as the writing develops
- proof-reads for spelling and punctuation errors
- uses joined-up handwriting throughout all independent writing

Spelling, Grammar and Punctuation

A Year 4 child:

- writes from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far
- spells most words taught so far accurately and be able to spell words that have not yet been taught by using what has been learnt about how spelling works in English
- starts sentences where appropriate with adverbs
- chooses an appropriate pronoun or noun within and across sentences to aid cohesion and avoid repetition
- uses speech marks and other punctuation to indicate direct speech
- places the apostrophe in words with regular plurals (e.g. girls', boys') and in words with irregular plurals (e.g. children's)
- understands the differences between standard English and non-standard English

New Curriculum Expectations for Writing by end of Year 5

By the end of Year 5 a child should use accurate grammar and punctuation and begin to apply this when considering both audience and purpose.

A Year 5 child:

- identifies the audience for, and purpose of, their writing
- selects the appropriate form and uses other similar writing as models for their own
- uses knowledge of language gained from stories, plays, poetry, non-fiction and textbooks to facilitate writing
- structures and organises a range of texts effectively for different purposes
- uses further organisational and presentational devices to structure text and to guide the reader (e.g. headings, bullet points, underlining)
- proof-reads for spelling and punctuation errors
- ensures the consistent and correct use of tense throughout a piece of writing
- describes effectively settings, characters and atmosphere
- selects a handwriting style appropriate to the task

Spelling, Punctuation and Grammar

A Year 5 child:

- converts nouns or adjectives into verbs using suffixes (e.g. -ate; -ise; -ify)
- indicates degrees of possibility using adverbs (e.g. perhaps, surely) or modal verbs (e.g. might, should, will, must)
- uses devices to build cohesion within a paragraph (e.g. then, after that, this, firstly)
- uses commas to clarify meaning or avoid ambiguity
- understands the differences between standard English and non-standard English and can apply what has been learnt, for example, in writing dialogue for characters

New Curriculum Expectations for Writing by end of Year 6

By the end of Year 6 a child should be able to reflect an understanding of the audience for, and the purpose of, a piece of writing by selecting appropriate vocabulary and grammar.

A Year 6 child:

- identifies the audience for, and purpose of, the writing
- selects the appropriate form and uses other similar writing as models for their own
- consciously controls the structure of sentences in writing and understand why sentences are constructed as they are
- uses further organisational and presentational devices to structure text and to guide the reader (e.g. headings, sub-headings, columns, bullet points, underlining, tables)
- generates ideas, draft, and re-read a piece of writing to check that the meaning is clear
- describes effectively settings, characters and atmosphere
- ensures the consistent and correct use of tense throughout a piece of writing
- proof-reads for spelling and punctuation errors
- adopts, creates and sustains a range of roles, responding appropriately to others in role (both verbally and non-verbally)
- creates an improvised, devised and scripted drama for a range of audiences as well as rehearses, refines, shares and responds thoughtfully to drama and theatre performances
- demonstrates a mastery of language through public speaking, performance and debate

Spelling, Grammar and Punctuation

A Year 6 child;

- uses dictionaries to check the spelling and meaning of words
- understands and applies the difference between vocabulary typical of informal speech and vocabulary appropriate for formal speech and writing (e.g. find out - discover; ask for - request; go in - enter)
- uses the passive voice to affect the presentation of information in a sentence (e.g. 'I broke the window in the greenhouse' versus 'The window in the greenhouse was broken (by me)')
- uses the colon to introduce a list