

Mathematics in Year 4

By the end of year 4, children are expected to be able to do all of the following:

By the end of Year 4, children will be expected to know all of their times tables up to 12×12 by heart. This means not only recalling them in order but also being able to answer any times table question at random and also knowing the related division facts. In knowing that $6 \times 8 = 48$, children should also know the related facts that $8 \times 6 = 48$ and that $48 \div 6 = 8$ and $48 \div 8 = 6$.

Calculations

- add and subtract numbers up to 4 digits using formal written methods of column addition and subtraction
- estimate and use inverse operations to check answers to a calculation
- know multiplication and division facts for multiplication tables up to 12×12
- multiply and divide mentally, including multiplying together three numbers
- Use factor pairs to solve mental calculations, e.g. knowing that 9×7 is the same as $3 \times 3 \times 7$
- multiply 2-digit and 3-digit numbers by a 1-digit number using short multiplication
- solve calculation problems



Geometry

- compare and classify shapes, including quadrilaterals and triangles
- identify acute and obtuse angles
- compare and order angles up to two right angles by size
- identify lines of symmetry in 2-D shapes presented in different ways
- complete a simple symmetric figure given a specific line of symmetry.
- describe positions in the first quadrant using coordinates
- describe movements between positions
- plot specified points and draw sides to complete a given shape.

Number and Place Value

- count in multiples of 6, 7, 9, 25 & 1000
- find 1000 more or less than a number
- count backwards including negative numbers
- know the place value of each digit in a 4-digit number (1000s, 100s, 10s, 1s)
- order numbers beyond 1000
- round any number to the nearest 10, 100 or 1000
- solve place value problems
- read Roman numerals to 100 (I to C).

Fractions

- show families of common equivalent fractions
- count up and down in hundredths; know that 100ths arise when dividing an object by 100 and dividing tenths by 10.
- calculate quantities of fractions
- use fractions to divide quantities
- 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 $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- know the effect of dividing a one- or two-digit number by 10 and 100, giving the answer as ones, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers up to 2 decimal places
- solve simple measure and money problems involving fractions and decimals.

Maths in Year 4 continued.....

By the end of year 4, children are expected to be able to do all of the following:

Measurements

- Convert between different units of measure (e.g. km to m; hour to minute)
- Calculate the perimeter of shapes made of squares and rectangles in m and cm
- find the area of rectangular shapes by counting squares
- Solve problems that involve converting amounts of time, including money, minutes, hours, days, weeks and months

Statistics

- interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

What do children have to be able to do, explain and understand to achieve the expectations in year 4?

To show that children are able to....

- know multiplication and division facts for tables up to 12×12
- multiply and divide mentally, including multiplying together three numbers
- Use factor pairs to solve mental calculations, e.g. knowing that 9×7 is the same as $3 \times 3 \times 7$
- multiply 2-digit and 3-digit numbers by a 1-digit number using short multiplication
- solve calculation problems

...they would need to be able to tackle questions such as the examples given opposite and below

$$\boxed{7} \boxed{} \boxed{1} + \boxed{} \boxed{3} \boxed{} = 999$$

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Three children calculated 7×6 in different ways.
Identify each strategy and complete the calculations.

Annie

$$7 \times 6 = 7 \times 5 + \boxed{} \\ = \boxed{}$$

Bertie

$$7 \times 6 = 7 \times 7 - \boxed{} \\ = \boxed{}$$

Cara used the commutative law

$$7 \times 6 = \boxed{} \times \boxed{} \\ = \boxed{}$$

Now find the answer to 6×9 in three different ways.

Place one of these symbols in the circle to make the number sentences correct ($>$, $<$ or $=$). Explain your reasoning.

$$7 \times 50 \quad \boxed{} \quad 50 \times 7$$

$$7 \times 50 \quad \boxed{} \quad 70 \times 5$$

$$400 \times 3 \quad \boxed{} \quad 6 \times 300$$

Supporting learning

Why are tables so important?

Children need to know their tables and corresponding division facts so that they can tackle the increasingly difficult expectations of upper key stage two and apply their knowledge to more complex calculations. For example, using their knowledge that $63 \div 9 = 7$, children are expected to work out:

$$126 \div 9 = \quad 630 \div 7 = \quad 252 \div 7 =$$



Children need to know **ALL** their tables up to 12×12 by the end of **year 4**, including related division facts!

English in Year 4

By the end of year 4, children are expected to be able to do all of the following:

In lower Key Stage 2 (years 3 and 4), your child will build on their work to become more independent in both their reading and their writing. Most children will be confident at decoding most words – or will have extra support to help them to do so – and so now they will be able to use their reading to support their learning about other subjects. They will begin to meet a wider range of writing contexts, including both fiction and non-fiction styles and genres.

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 3 and 4, some focuses may include:

- use discussion and conversation to explore and speculate about new ideas
- begin to recognise the need to use Standard English in some contexts
- participation in performances, plays and debates
- explain thinking and feeling in well - structured statements and responses

Grammar Help

Grammatical terminology used in schools may not be familiar to all our families. Here are some useful reminders of some of the terms used:

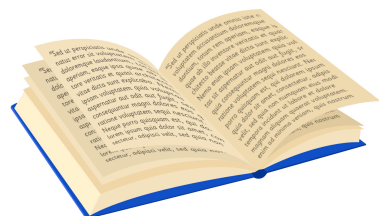
present perfect tense: a tense formed using 'have' and a participle, to indicate that an action has been completed at an unspecified time, e.g. The girl has eaten her ice-cream

fronted adverbial: a word or phrase which describes the time, place or manner of an action and is placed at the start of the sentence, e.g. "Before breakfast,..." or "Carrying a heavy bag,..."

direct speech: words quoted directly using inverted commas, as opposed to being reported in a sentence.

Reading Skills

- extend skills of decoding to tackle more complex words, including those with unusual spelling patterns
- listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
- recognise some different forms of poetry preparing poems and play scripts to read aloud and to perform
- use dictionaries to find the meanings of words
- become familiar with a range of traditional and fairy tales, including telling some orally
- identifying themes and conventions in a wide range of books
- discuss words and phrases which have been chosen to interest the reader
- ask questions about what they have read
- drawing inferences such as characters' feelings, thoughts and motives from their actions; justifying with evidence
- make predictions about what might happen next in a story
- summarise ideas from several paragraphs of writing
- identify how language, structure, and presentation contribute to meaning
- find and record information from non-fiction texts
- take part in discussions about reading and books
- Check reading makes sense, and self-correct reading where necessary



English in Year 4 continued.....

By the end of year 4, children are expected to be able to do all of the following:

Writing Skills

- Write with joined handwriting, making appropriate join choices
- spell words that include prefixes and suffixes, such as anticlockwise and further homophones
- spell some commonly misspelt words correctly, taken from the Y3/4 list
- use a dictionary to check spellings
- use possessive apostrophes correctly in regular and irregular plurals, such as boys' and children's
- use examples of writing to help them structure their own similar texts
- plan out sentences orally to select adventurous, varied and rich vocabulary and an increasing range of sentence structures
- use paragraphs to organise ideas
- use description and detail to develop characters, setting and plot in story writing
- write interesting narratives in stories
- in non-fiction writing, use features such as sub-headings and bullet points
- evaluate and edit work to make improvements, including editing for spelling errors
- read other's writing and suggest possible improvements
- read aloud work that they've written using appropriate intonation to be clearly understood
- extend sentences using a wider range of conjunctions, including subordinating conjunctions
- use the present perfect verb tense
- use nouns and pronouns with care to avoid repetition

Supporting learning

To add information to a sentence, children might use

- conjunctions ("Although it was still early..."),
- adverbs ("Early that morning...") or
- prepositions ("At about six-thirty that morning...").

Often these techniques allow children to write more complex sentences.

Supporting learning

Children are expected to be able to demonstrate their ability to understand various grammatical features, e.g.

- Identify the inverted commas in this sentence – "Katie!" yelled Mum, holding tight onto my sister's hand, "get back here now!"
- Identify the determiners in this sentence – 'Every year we have a summer picnic on the school field.'
- Identify each fronted adverbial in this extract – 'After being visited by her godmother, Cinderella finally went to the school disco. Even though the music was loud, she heard the bell go at home time'.



Supporting learning

Children begin to identify how authors choose words for effect, for example by selecting 'wailed' instead of 'cried', or 'enraged' rather than 'cross'. They may begin to make such choices in their own writing, too. Children can be supported to do this by reading widely, being read to and using a thesaurus to explore word choices.

Spelling list for year 3 and 4

accident(ally)	interest
actual(ly)	island
address	knowledge
answer	learn
appear	length
arrive	library
believe	material
bicycle	medicine
breath	mention
breathe	minute
build	natural
busy/business	naughty
calendar	notice
caught	occasion(ally)
centre	often
century	opposite
certain	ordinary
circle	particular
complete	peculiar
consider	perhaps
continue	popular
decide	position
describe	possess(ion)
different	possible
difficult	potatoes
disappear	pressure
early	probably
earth	promise
eight/eighth	purpose
enough	quarter
exercise	question
experience	recent
experiment	regular
extreme	reign
famous	remember
favourite	sentence
February	separate
forward(s)	special
fruit	straight
grammar	strange
group	strength
guard	suppose
guide	surprise
heard	therefore
heart	though/although
height	thought
history	through
imagine	various
increase	weight
important	woman/women

Spelling lists - guidance

As well as lists of words which contain the taught spelling patterns for each year group, children are expected to be able to spell the list of words below by the end of year 4. The lists are a mixture of words pupils frequently use in their writing and those which they often misspell.

Guidance on the statutory spelling patterns for each year group are available as separate documents