

Mathematics in Year 2

By the end of year 2, children are expected to be able to do all of the following:

By the end of year 2, children should be able to count and know the number bonds to 20 fluently and have a clear understanding of place value. For example, being able to explain what the difference between 24 and 42 in terms of tens and ones is an important skill.

Number and Place Value

- count in 2s, 3s, 5s and 10s, forward and backward
- recognise place value in two-digit numbers (tens, ones)
- compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs
- read and write numbers to 100 in numbers and in words
- use place value and number facts to solve problems.

Measurements

- Use standard units to measure length (m and cm); mass (g and kg); temperature ($^{\circ}\text{C}$); capacity (litres/ml)
- compare and order lengths, mass, volume/capacity
- use $\pounds$ and p symbols for amounts of money
- Combine numbers of coins to make a given value, for example to make 62 pence
- solve simple problems in a practical context involving addition and subtraction of money of money, including giving change
- tell and write the time to the nearest five minutes on an analogue clock
- draw the hands on a clock face to show these times
- know the number of minutes in an hour and the number of hours in a day.

Graphs and Data

- Construct and understand simple graphs such as bar charts, tally charts and pictograms
- ask and answer simple questions by counting, sorting and comparing the data.

Calculations

- recall addition and subtraction facts (number bonds) to 20 fluently
- Add and subtract numbers mentally and using objects, including 2 two-digit numbers
- Show that adding numbers can be done in any order, but subtracting can-not
- Recognise that addition and subtraction are inverse operations
- Learn the multiplication and division facts for the 2x, 5x and 10x tables
- Recognise odd and even numbers
- Show that multiplying two numbers can be done in any order, but dividing cannot
- Solve problems using the $\times$ and $\div$ symbol

Fractions

- recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$, of a length, shape, set of objects or quantity
- Find the answer to simple fraction problems, such as finding $\frac{1}{2}$ of 6
- recognise the equivalence of simple fractions such as $\frac{1}{2}$ and $\frac{2}{4}$.

Shape

- Identify the number of sides and a line of symmetry on 2-d shapes
- identify the number of faces, edges and vertices on 3-d shapes
- use mathematical language to describe position and
- use direction, including rotations and turns

What do children need to be able to do, explain and understand to achieve the year 2 expectations?

To show that a child is able to....

- compare and order numbers from 0 up to 100
- use place value and number facts to solve problems
- use < > and = signs correctly

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

Use < > and = signs to make these number sentences correct.

3 tens 0 ones

2 tens ne ten 9 ones

4 tens 3 ones

3 tens and 2 ones ens 12 ones

Problem solving:

Steve says, 'My number has two tens and five ones.'

What is Steve's number?

Amy has two more tens than Steve. What is her number?

Sam says, 'My number has five tens.'

What numbers **can** it be?

What numbers **can't** it be?

Write all the 2-digit numbers greater than 40 using these digits.

2 4 6

How do you know you have them all? Prove it.

Supporting learning (number bonds)

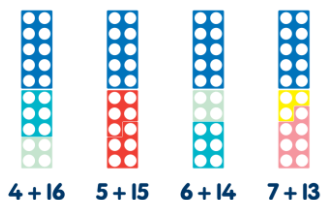


Parents can help by supporting counting skills and number bonds. Number bonds are a key maths skill for year 2 and beyond. Children in Y2 learn number bonds to 20; being able to quickly recall any two numbers up to 20, e.g. $6 + 14 = 20$

$20 - \underline{\quad} = 14$ (rather than having to count on/back to find the answer).

They should also know addition and subtraction facts for numbers within 20, e.g.

$$\begin{aligned} 6 + 13 &= 19 \\ 13 + 6 &= 19 \\ 19 - 6 &= 13 \\ 19 - 13 &= 6 \end{aligned}$$



Some key questions to support learning:

What do I **add** to 5 to make 20?

What is 20 **take away** 6?

What is 3 **less than** 20?

How many more than 16 is 20?

What is 15 **take away** 7?

How many more than 11 is 19?

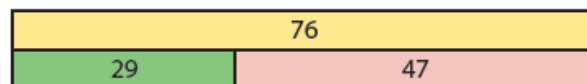
Supporting Learning (inverse operations)

Inverse operations are opposite operations.

Subtraction is the inverse of addition and

division is the inverse of multiplication.

The bar model can really help children explore these relationships:



e.g. $29 + 47 = 76$, $47 + 29 = 76$,
 $76 - 29 = 47$, $76 - 47 = 29$.

Children are expected to answer missing gap questions such as:

$29 + \square = 76$ or $76 - \square = 47$

Supporting learning (times tables)

Children need to know their 2, 5 and 10 times tables fluently by the end of year 2, including related division facts.



For example:

$3 \times 5 = 15$

$5 \times 3 = 15$

$15 \div 3 = 5$

$15 \div 5 = 3$

English in Year 2

By the end of year 2, children are expected to be able to do all of the following:

The year 2 curriculum intends that almost all children will secure the basic skills of decoding so that they can become fluent readers. Decoding is the ability to read words aloud by identifying the letter patterns and matching them to sounds. Once children are able to 'decode' the writing, they can then start to make sense of the words and sentences in context. Watch out for hard-to-decode words such as 'one' and 'the'. These just have to be learned by heart (our key word list is below or on our website). Children begin to meet extra challenges in terms of spelling and grammar during year 2.

Reading Skills

- Read words aloud confidently, without obvious blending or sounding out
- Learn letter patterns so that decoding becomes automatic and reading is fluent and by the end of Year 2
- Blend letter sounds, including alternative patterns, e.g. recognising 'ue' as the 'oo' sound
- Read aloud words which contain two or more syllables
- Recognise common suffixes, such as -ing and -less
- Read words which don't follow phonetic patterns such as 'one' and 'who'
- become familiar with a wide range of stories, fairy stories and traditional tales
- become familiar with a wide range of non-fiction books
- discuss the meanings of new words and discussing favourite words and phrases
- continue to build up a repertoire of poems learnt by heart
- check that what has been read makes sense, self-correcting inaccuracies
- discuss the sequence of events in books and make sensible predictions about what might happen next in a story
- explain and discuss their understanding of books and poems

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 Year 2 some focuses may include:

- Articulate and justify answers and opinions
- Give well-structured explanations and narratives, for example in talking activities

Writing Skills

- Spell many words correctly
- add suffixes to spell longer words, including -ment, -ness, -ful, -less, -ly
- write letters and digits of the correct size and in the right place; start to join letters
- use correct spacing between words
- write for a range of different purposes
- plan or say out loud the sentences that they are going to write about
- make simple changes/corrections to their writing
- use full stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes
- use expanded noun phrases to describe e.g. the blue butterfly
- use the present and past tenses correctly and consistently including the progressive form
- join sentences using words such as or, and, but, when, if, that or because
- know and use the following terminology: noun, noun phrase, statement, question, exclamation, command, compound, suffix, adjective, adverb, verb, tense (past, present) apostrophe, comma

Common Exception words for reading and spelling

These are words which children see and use frequently. Many of these words do not follow the phonetic patterns children will be learning so need to be learnt separately. Children will begin to learn these words in year R and continue learning to read and spell them throughout year 1 and 2.

What do children need to be able to do, explain and understand to achieve the year 2 expectations in grammar?

- know and use the following terminology: noun, noun phrase, statement, question, exclamation, command, compound, suffix, adjective, adverb, verb, tense (past, present) apostrophe, comma

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

What type of word is underlined in the sentence below?

Poppy held the baby rabbit gently in her arms.

Tick **one**.

an adjective

☐

an adverb

☐

a noun

☐

a verb

☐

What type of word is brave in the sentence below?

The brave mouse marched up to the lion.

Tick **one**.

an adverb

☐

an adjective

☐

a verb

☐

a noun

☐

Learning tip

Read as much as possible with your child – read to your child as well as listen to your child read. Discuss books and reading with your child, use audio books on car journeys (there are many available to hire for free from your local library). When learning key words, make the lists into games, invent silly sentences with them and have fun with language.



Can you identify 3 nouns in this sentence?

A whale has an enormous heart that can weigh as much as a small car.

What type of word is underlined below?
Poppy held the baby rabbit gently in her arms.

Tick **one**.

an adjective

☐

an adverb

☐

a noun

☐

a verb

☐