

Year 1 Maths

National Curriculum Objectives Year 1

Pupils should be taught to:

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools].

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency.

Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Key Links

Year 1 – White Rose

Maths Guidance Year 1 (Gov.uk)

Mathematics Programmes of Study: Key Stage 1 and 2 (Gov.uk)

Topics		N.C Objectives	Small Steps	Key Vocabulary
Autumn 1 (within 10)	Number: Number and Place Value	Pupils should be taught to: <ul style="list-style-type: none"> count to and across 100 forwards and backwards, beginning with 0 or 1, or from any given number count. read and write numbers to 100 in numerals. count in multiples of twos, fives and tens given a number. identify one more and one less identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 20 in numerals and words. 	<ul style="list-style-type: none"> Sort/count/represent objects. count, read and write forwards/backwards from any number 0-10. count one more/less. compare groups/numbers. introduce <, > and = order numbers including using ordinal numbers. Introduce using number line. 	equal to more than less than (fewer) most least greatest smallest same different sort groups digit value
Autumn 2 (within 20)				
Spring 1 (within 50)				
Spring 2 (within 100)				

Maths Progression:

EYFS

- Begin to develop a sense of the number system by verbally counting forward to and beyond 20, pausing at each multiple of 10.
- Play games that involve moving along a numbered track, and understand that larger numbers are further along the track.
- Distribute items fairly, for example, put 3 marbles in each bag. Recognise when items are distributed unfairly.

Year 2:

- Count through the number system. Place value within 100. Compare and order numbers. Add and subtract within 100.
- Reason about the location of larger numbers within the linear number system. Compare and order numbers. Read scales. Begin to experience partitioning and combining numbers within 10. 1NF–1 Develop fluency in addition and subtraction facts within 10.
- Add and subtract across 10. All future additive calculation. Add within a column during columnar addition when the column sums to less than 10 (no regrouping). Subtract within a column during columnar subtraction when the minuend of the column is larger than the subtrahend (no exchanging).
- Recall the 2, 5 and 10 multiplication tables. Carry out repeated addition and multiplication of 2, 5, and 10, and divide by 2, 5 and 10. Identify multiples of 2, 5 and 10. Unitise in tens. Identify odd and even numbers.

Topics		N.C Objectives	Small Steps	Key Vocabulary
Autumn 1 (within 10)	Number: Addition and Subtraction	Pupils should be taught to: <ul style="list-style-type: none"> • read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs. • represent and use number bonds and related subtraction facts within 20. • add and subtract one-digit and two-digit numbers to 20, including zero. • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> • part-whole model. • additional symbol. • fact families. • number bonds within 10 with methods and comparisons • addition - adding together/more • finding part • subtraction symbol • subtraction - crossing out • subtraction - counting back • subtraction - breaking apart Subtraction - finding the difference comparing statements $a + b < c$, $a + b < c + d$ 	add plus subtract take away part whole first then now bar model equal to (=) fact families part-whole model number bond pattern digit more/greater less/smaller
Spring 1 (within 50)				

Maths Progression:

EYFS

- Understand the cardinal value of number words, for example understanding that 'four' relates to 4 objects. Subitise for up to 5 items. Automatically show a given number using fingers.
- Devise and record number stories, using pictures, numbers and symbols (such as arrows).

Year 2:

- Add and subtract within 10.
- Represent composition and decomposition of numbers using equations.

Topics		N.C Objectives	Small Steps	Key Vocabulary
Autumn 2 Shape	Geometry: Shape	Pupils should be taught to: <ul style="list-style-type: none"> recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> - 2-D shapes [for example, rectangles (including squares) circles and triangles] - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	<ul style="list-style-type: none"> recognise and name 3d shapes sort 3d shapes recognise and name 2d shapes sort 2d shapes patterns with 3d and 2d shapes 	Cube Cylinder Cuboid Pyramid 2d 3d Orientation Face Triangles Squares Rectangles Surface Circles
Summer 1 - Position and Direction	Geometry: Position and Direction	Pupils should be taught to: <ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns. 	<ul style="list-style-type: none"> describe turns describe position 	

Maths Progression:

EYFS:

- See, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base).
- Select, rotate and manipulate shapes for a particular purpose, for example: - rotating a cylinder so it can be used to build a tower - rotating a puzzle piece to fit in its place.

Year 2:

- Describe properties of shape. Categorise shapes. Identify similar shapes.
- Find the area or volume of a compound shape by decomposing into constituent shapes. Rotate, translate and reflect 2D shapes. Identify congruent shapes.

Topics		N.C Objectives	Small Steps	Key Vocabulary
Spring 2	Measurement: Length and Height	Pupils should be taught to: <ul style="list-style-type: none"> compare, describe and solve practical problems for: <ul style="list-style-type: none"> - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] measure and begin to record the following: <ul style="list-style-type: none"> - lengths and heights 	<ul style="list-style-type: none"> compare length/heights measure length 	long/short longer/shorter tall/short length height double/half measure

Maths Progression:

Year 2:

- choose and use appropriate standard units to estimate and **measure length/height in any direction (m/cm)**; mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, **using rulers**, scales, thermometers and measuring vessels
- compare and order lengths**, mass, volume/capacity and record the results using >, < and =

Topics		N.C Objectives	Small Steps	Key Vocabulary
Spring 2	Measurement: Weight and Volume	Pupils should be taught to: <ul style="list-style-type: none"> compare, describe and solve practical problems for: <ul style="list-style-type: none"> - mass/weight (for example, heavy/light, heavier than, lighter than). - capacity and volume (for example, full/empty, more than, less than, half, half full, quarter). measure and begin to record the following: <ul style="list-style-type: none"> - mass/weight - capacity and volume 	<ul style="list-style-type: none"> compare mass measure mass measure capacity compare capacity 	double/half mass weight light heavy heavier full/empty more than less than capacity volume

Maths Progression:

Year 2: (mass, capacity and temp)

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); **mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit**, using rulers, **scales, thermometers and measuring vessels**
- compare and order lengths, **mass, volume/capacity** and record the results using >, < and =

Topics		N.C Objectives	Small Steps	Key Vocabulary
Summer 1	Number: Multiplication and Division	Pupils should be taught to: ● solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	<ul style="list-style-type: none"> • Count in 2s • Count in 5s • Count in 10s • Make equal groups • Add equal groups • Make arrays • Make doubles • Make equal groups – grouping • Make equal groups – sharing 	Multiply Divide Equal Group Sharing array double counting

Maths Progression:

Year 2:

- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Topics		N.C Objectives	Small Steps	Key Vocabulary
Summer 1/2	Number: Fractions	Pupils should be taught to: <ul style="list-style-type: none"> recognise, find and name a half as one of two equal parts of an object, shape or quantity recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. 	<ul style="list-style-type: none"> Find a half Find a quarter 	half quarter fraction equal whole parts shape object quantity

Maths Progression:

Year 2:

- 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
- write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

Topics		N.C Objectives	Small Steps	Key Vocabulary
Summer 2	<p>Measurement: Money</p> <p>Measurement: Time</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise and know the value of different denominations of coins and notes compare, describe and solve practical problems for: time (for example, quicker, slower, earlier, later) measure and begin to record the following: time (hours, minutes, seconds) sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times 	<ul style="list-style-type: none"> recognise coins recognise notes count in coins before and after dates time to the hour time to the half hour writing time comparing time 	<p>pence coin pound note value</p> <p>before after next hours/minutes/seconds first today yesterday/tomorrow</p>

Maths Progression:

Year 2:

- compare and sequence intervals of time
- tell and write the time to five minutes, including quarter past/to the hour and 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.
- recognise and use symbols for pounds (£) and pence (p)
- combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

Key Texts

The Very Hungry Caterpillar by Eric Carle

One Is a Snail, Ten Is a Crab: A Counting by Feet Book by April Pulley Sayre, Jeffrey Sayre and Randy Cecil

The Doorbell Rang by Pat Hutchins

The Shopping Basket by John Burningham

Handa's Surprise by Eileen Browne

Ten Apples Up On Top by Dr. Seuss

Splash! by Ann Jonas

RECOMMENDATIONS - [MathsThroughStories.org](https://www.mathsthroughstories.org) - for specific topics