



Year 2 Mathematics Yearly Overview

(Some terms may be longer; some units may vary in length of time due to AFL)

Mental Oral Starters (based on AFL)				
<ul style="list-style-type: none"> partition a two-digit number into tens and ones to demonstrate an understanding of place value, though they may use structured resources to support them add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus (e.g. $23 + 5$; $46 + 20$; $16 - 5$; $88 - 30$) recall at least four of the six 2 number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$) count in twos, fives and tens from 0 and use this to solve problems read and write numerals up to 100 Children to reason verbally daily. 				
Autumn 1	Prior Learning	Prior Learning	Prior Learning	Prior Learning
	Baseline Assessment – AFL <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 in multiples of twos, fives and tens Read and write numbers to 100 in numeral Read and write numbers from 1 to 20 in numerals and words Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 	<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 	<ul style="list-style-type: none"> Recall and use doubles of all numbers to 10 and corresponding halves 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"> <u>Understand that a fraction can describe part of a whole</u> Understand that a unit fraction represents one equal part of a whole <u>Recognise, find and name a half as one of two equal parts of an object shape or quantity</u> (including measure) Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)
	Number Place Value	Addition & Subtraction	Multiplication & Division	Fraction
	<ul style="list-style-type: none"> Read and write numbers to at least 100 in numerals and in words <u>Recognise the place value of each digit in a two-digit number (tens, ones)</u> <u>Identify, represent and estimate numbers using different representations, including the number line</u> <u>Compare and order numbers from 0 up to 100; use <, > and = signs</u> Partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus Measures Height & Length <ul style="list-style-type: none"> Choose and use appropriate standard units to estimate and measure length/height in any direction 	<ul style="list-style-type: none"> Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recall and use addition and subtraction facts to 20 fluently Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7 + 3 = 10$, then $17 + 3 = 20$; if $7 - 3 = 4$, then $17 - 3 = 14$; leading to if $14 + 3 = 17$, then $3 + 14 = 17$, $17 - 14 = 3$ and $17 - 3 = 14$) 	<ul style="list-style-type: none"> <u>Understand multiplication as repeated addition</u> Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot <u>Understand division as sharing and grouping and that a division calculation can have a remainder</u> 	<ul style="list-style-type: none"> Understand and use the terms numerator and denominator <u>Understand that a fraction can describe part of a set</u> <u>Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be</u> WR Small Steps: 12 NCETM Spine: Key Stage 1 Fractions

	<p>(m/cm) to the nearest appropriate unit using rulers.</p> <ul style="list-style-type: none"> • Compare and order lengths and record the results using $>$, $<$ and $=$. <p>WR Small Steps: 7 WRM Small Steps: 10 NCETM Spine: 1.9 (revisit Year 1 PV to 100) 2.1 (count in 2s, 5s, 10s)</p>			
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NCETM: <https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development> (Spine 1: Number, Add & Subtract, Spine 2: Multiplication and Division, Spine 3: Fractions)

White Rose Small Steps: <https://whiterosemaths.com/primary-sols/>

Statements in red reference the Teacher Assessment Framework for KS1 **bold statements are Greater Depth**. Link [here](#) to the exemplifications

Mental/Oral Starters (based on AFL)

- Place Value
- Addition/Subtraction
- Multiplication and Division
- Measures/Length.

Autumn 2

Prior Learning
Read and write numbers up to at least and beyond 100 in numerals and in words
(Recap)

Prior Learning

- Measure and begin to record:
 - lengths and heights, using non-standard and then manageable standard measures(m/cm)
 Compare, describe and solve practical problems for:
 - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)
- Addition/subtraction
- Place value
- Measure and begin to record:
 - mass/weights, using non-standard and then manageable standard units (kg/g)
 - capacity and volume using non-standard and then manageable standard units (litres/ml)
- Compare, describe and solve practical problems for:
 - 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

Prior Learning

- Measure and begin to record time (hours, minutes, seconds) *within children's range of counting competence.*
- Compare, describe and solve practical problems for:
 - time (for example, quicker, slower, earlier, later)
- Tell the time to the hour and half past the hour and draw the hand on a clock face to show these times.
- Recognise and use language relating to dates, including days of the week, months and years.
- Sequence events in chronological order using language (for example, before, after, next, first, today, yesterday, tomorrow, morning afternoon, 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

WR Small Steps: 6

Prior Learning

- Describe movement, including whole, half, quarter, and three-quarter turns
- *Recognise and create repeating patterns with objects and shapes*
- Describe position and direction

WR Small Steps: 3

Prior Learning

- Recognise and name 2-D shapes, including rectangles (including squares), circles and triangles
- Recognise and name common 3-D shapes, including cuboids (cubes), pyramids and spheres.

	<p>Place Value</p> <ul style="list-style-type: none"> • <u>Find 1 or 10 more or less than a given number</u> • Round numbers to at least 100 to the nearest 10 • <u>Partition numbers in different ways (e.g. $23 = 20 + 3$ and $23 = 10 + 13$)</u> <p>WR small steps 8+</p>	<p>Measurement: in Mass</p> <ul style="list-style-type: none"> • Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales. • Compare and order mass and record the results using $>$, $<$ and $=$. <p>Measurement: in Volume/capacity</p> <ul style="list-style-type: none"> • Choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) to the nearest appropriate unit using measuring vessels. • Compare and order volume/capacity and record the results using $>$, $<$ and $=$ <p>Read scales* in divisions of ones, twos, fives and tens</p> <p>Read scales* where not all numbers on the scale are given and estimate points in between</p>	<p>Time</p> <ul style="list-style-type: none"> • <u>Tell and write the time to five minutes, including quarter past/to the hour</u> and draw the hands on a clock face to show these times • <u>Know the number of minutes in an hour and the number of hours in a day</u> • Read time on a clock to the nearest 15 minutes 	<p>Geometry: properties of 2D and 3D Shapes</p> <ul style="list-style-type: none"> • <u>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</u> • <u>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</u> • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • Name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres) • Name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry. • Describe similarities and differences of 2-D and 3-D shape, using their properties (e.g. that two different 2-D shapes both have only one line of symmetry; that a cube and cuboid have the same number of edges, faces and vertices, but different dimensions). <p>WR Small Steps: 12</p>	<p>Statistics: (Compare and sort shapes)</p> <ul style="list-style-type: none"> • Compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects. • Order/arrange combinations of mathematical objects in patterns/sequence s
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White Rose Small Steps: <https://whiterosemaths.com/primary-sols/>

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Mental/Oral Starters (based on AFL)

Place value * Mass * Volume * 2D & 3D shapes *Statistics

Spring 1	<p>Prior Learning</p> <ul style="list-style-type: none"> Add and subtract one-digit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations) 	<p>Prior Learning</p> <ul style="list-style-type: none"> Recognise and know the value of different denominations of coins and notes <p>NCETM Spine: revisit 2.1 (TP 4-6)</p>	<p>Prior Learning</p> <ul style="list-style-type: none"> Recall and use doubles of all numbers to 10 and corresponding halves 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 	<p>Prior Learning</p> <ul style="list-style-type: none"> <u>Recognise, find and name a half as one of two equal parts of an object shape or quantity</u> (including measure) <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)</p>
	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> <u>Add and subtract numbers using concrete objects, pictorial representations, including:</u> <u>- a two-digit number and ones</u> <u>- a two-digit number and tens</u> <ul style="list-style-type: none"> add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. 48 + 35; 72 – 17) <p>1.14 (add and sub tens, 10 more less) 1.13 (covers most small steps) 1.14, 1.15 1.16 (subtraction 2 digit 2 digit, bonds 10s and 1s) 1.11 (three addends) 2.1 (TP 2 bonds to 100 from Y3)</p>	<p>Money</p> <ul style="list-style-type: none"> Recognise and use symbols for pounds (£) and pence (p) Combine amounts to make a particular value Identify combinations which can be bought for a specific amount of money e.g. what two or more items can I buy for exactly 70p? Use different coins to make the same amount Know the value of different coins 	<p>Multiplication & Division</p> <ul style="list-style-type: none"> <u>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables</u>, including recognising odd and even numbers recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts. 	<ul style="list-style-type: none"> <u>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</u>

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Mental/Oral Starters (based on AFL)

Spring 2	Prior Learning	Prior Learning	Prior Learning
	<ul style="list-style-type: none"> Sort objects, numbers and shapes to a given criterion and their own Present and interpret data in block diagrams using practical equipment Ask and answer simple questions by counting the number of objects in each category Ask and answer questions by comparing categorical data 	<ul style="list-style-type: none"> Describe movement, including whole, half, quarter and three-quarter turns Recognise and create repeating patterns with objects and shapes Describe position and direction 	<ul style="list-style-type: none"> Measure and begin to record time (hours, minutes, seconds) <i>within children's range of counting competence.</i> Compare, describe and solve practical problems for: - time (for example, quicker, slower, earlier, later) Tell the time to the hour and half past the hour and draw the hand on a clock face to show these times. Recognise and use language relating to dates, including days of the week, months and years. Sequence events in chronological order using language (for example, before, after, next, first, today, yesterday, tomorrow, morning afternoon, 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
Statistics	Geometry –position and direction	Time	
<ul style="list-style-type: none"> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <p>WR Small Steps: 6 NCETM Spine: some ideas in 1.12 but this is mainly a focus on difference</p>	<ul style="list-style-type: none"> Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) 	<ul style="list-style-type: none"> 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 Read time on a clock to the nearest 15 minutes <p style="text-align: center; font-weight: bold;">Problem Solving: Time</p> <ul style="list-style-type: none"> Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes) Compare and sequence intervals of time Solve simple problems in a practical context. Read time on a clock to the nearest 5 minutes <p>WR Small Steps: 6</p>	

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Mental/Oral Starters (based on AFL)

- Position and Direction * Time * Statistics * Addition * Subtraction

	Prior Learning	Prior Learning	Prior Learning	Prior Learning	Prior Learning
Summer 1	•	•			
	Place Value: <ul style="list-style-type: none"> • Understand the connection between the 10 multiplication table and place value • Describe and extend simple sequences involving counting on or back in different steps • Use place value and number facts to solve problems 	Addition & Subtraction <ul style="list-style-type: none"> • <u>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</u> • <u>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - two two-digit numbers - adding three one-digit numbers</u> 	Statistics (focus) including subtraction (finding the difference) <ul style="list-style-type: none"> • Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. • Ask and answer questions about totalling and comparing categorical data. • Understand subtraction as take away and difference (how many more, how many less/fewer) 	Multiplication & Division <ul style="list-style-type: none"> • <u>Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)</u> • <u>Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)</u> 	Fractions <ul style="list-style-type: none"> • Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ • Count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$ • Identify $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{4}$ of a number or shape, and know that all parts must be equal parts of the whole

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Mental/Oral Starters (based on AFL)

- Place Value, * Fractions * Multiplication & Division * 2D & 3D shapes * Addition & S

Summer 2	Prior Learning	Prior Learning	Prior Learning	Prior Learning	Prior Learning
	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> • <u>Solve problems with addition and subtraction including with missing numbers: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures</u> - applying their increasing knowledge of mental and written methods • <i>Understand subtraction as take away and difference (how many more, how many less/fewer)</i> 	<p>Money</p> <ul style="list-style-type: none"> • <u>Find different combinations of coins that equal the same amounts of money</u> • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 	<p>Addition & Subtraction Mental Strategies</p> <ul style="list-style-type: none"> • <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting)</i> • <i>Select a mental strategy appropriate for the numbers involved in the calculation</i> • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<p>Measures</p> <ul style="list-style-type: none"> • Choose and use appropriate standard units to estimate and measure temperature to the nearest degree (°C) using thermometers. • Read scales* in divisions of ones, twos, fives and tens • Read scales* where not all numbers on the scale are given and estimate points in between 	<p>Multiplication & Division</p> <ul style="list-style-type: none"> • <u>Calculate mathematical statements for multiplication using repeated addition and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</u> • <u>Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</u>

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