



Maths

Curriculum Map



PORTWAY INFANT SCHOOL

Maths INTENT

At Portway Infant School, we aim to deliver a Mathematics Mastery curriculum which enables our children to achieve age-related expected standard for their year group. We aim for all children to make progress including our children with SEND through scaffolded learning that supports and challenges all children. We support pupils to develop their mathematical skills and understanding required for later life that develops a **cultural capital** for their future, whilst fostering **creativity**, enthusiasm and fascination for maths. We aim for our children to become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems and **vocabulary** over time, so that pupils develop conceptual understanding and the ability to recall, apply knowledge rapidly and accurately and **read** and solve mathematical problems. We support our pupils to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. We encourage and support our pupils to solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. We aim for our pupils to become inquisitive, **curious** and resilient learners.

EYFS Reception – Shape space and measure

Department for Education Statutory Guidance Development Matters (Non Statutory) Reception Year Early Learning Goals (Statutory) End of Reception	How?	When?	Vocabulary
Select, rotate and manipulate shapes in order to develop special reasoning skills.	Through continuous provision with 2D and 3D shapes and construction toys, baskets of objects and resources to explore and make patterns with. Continuous provision craft materials and explore and create shapes, patterns and pictures. Taught sessions	Autumn 2	Triangle, rectangle, square, circle, rotate, turn, choose, sides, corners
Compose and decompose shapes so that the children recognise a shape can have other shapes within it, just as numbers can.		Spring 1	
Continue, copy and create repeating patterns.		Spring 2	Pattern, repeat, select
Compare length, weight and capacity.			

	with the teacher selecting and manipulating shapes, creating patterns. Water tray resources allowing children independent access in the provision with taught sessions later in the year once vocabulary has increased	Summer 1	Length, longer, shorter, longest, shortest. Weight, weigh, heavier, lighter, heaviest, lightest, compare, scales. Full, empty, half full, half empty, nearly full, container, holds, capacity.
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EYFS Reception – Number and Numerical Patterns

Department for Education Statutory Guidance Development Matters (Non Statutory) Reception Year Early Learning Goals (Statutory) End of Reception	How?	When?	Vocabulary
Reception Count objects, actions and sounds Subitise Subitise (recognise quantities without counting) up to 5. Link the number symbol (numeral) with it's cardinal value.	Mastering number program – focus: counting, cardinality and ordinality Mastering number program – focus: subitising Ongoing throughout the mastering number scheme.	Week 2, 6, 10, 12, 16, 21 Week 1, 4, 11, 19, 22	Count, stopping number, order, one to one, altogether Subitise, 'don't count see the amount', arrangement, diagonal, straight, describe, collection, group Number, numeral, amount, match

Count beyond 10 Verbally count beyond 20, recognising the pattern of the counting system.	Resources in the continuous provision		
Compare numbers Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Ongoing throughout the mastering number scheme. Resources in the continuous provision		Order, teen numbers, digits, pattern,
Understanding the 'one more/one less' relationship between consecutive numbers.	Mastering number program – focus: comparison	Week 5, 7, 15, 17	Compare, more than, fewer than, because, equal, amount, objects
Explore the composition of numbers to 10. Have a deep understanding of number to 10, including the composition of each number.	Ongoing throughout the mastering number scheme		One more, one less, fewer, compare, equal
Automatically recall number bonds for numbers 0-5 and some to 10. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Mastering number program term 1 &2 – focus: composition	Week 3, 8, 9, 13, 14, 18, 20, 23, 24, 25, 26	Make, collection, group, sort, objects, represent, '..and a bit',
	Ongoing throughout the mastering number scheme		Double, '..and...make..', equal, same
			Odd, even, share, split, group, double

Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.		Ongoing throughout the mastering number scheme		
Year 1 Maths				
Department for Education Statutory Guidance		How?	When?	Vocabulary
Number and place value	- 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.	NCETM program of study - Unit 1,2,3,5 place value.	Autumn 1&2	Twenty-one, twenty-two...one hundred Forwards, backwards Equal to Most, least, many Odd, even Ones, tens Eleventh... twentieth One-digit, two-digit
Addition and Subtraction	- 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.	NCETM program of study – Unit 2,5,6 Addition and subtraction	Autumn 2, Spring 1 and 2	Addition Count on Near double Half, halve Subtraction Equals, Is the same as Number bonds

	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = __ - 9$.			Switcher Fact family Ten more/ ten less
Number – multiplication and division	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.	Not in NCETM	Summer 2	Multiplication, multiply Division, dividing Grouping Array Repeated addition
Number – Fractions	- Recognise, find and name 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.	Not in NCETM – PowerPoints created and use of practical resources to support learning.	Summer 2	Fraction Equal part, grouping, sharing Half Quarter whole

Measurement	• Compare, describe and solve practical problems for: -lengths and heights (for example, long/ short, longer/ shorter, tall/short, double/ half) -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) -time (for example quicker, slower, earlier, later) - throughout • Measure and begin to record the following: -lengths and heights -mass/weight -capacity and volume -time (hours, minutes, seconds) • Recognise and know the value of different denominations of coins and notes. • 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. •	Not in NCETM – PowerPoints created and use of practical resources to support learning. Not in NCETM – PowerPoints created and use of practical resources to support learning.	Summer 2	Longest, tallest, smallest, shortest Heaviest lightest Capacity Volume Quarter full Days of the week, Monday, Tuesday ... Months of the year Seasons Month, year Earlier, later Midnight Hour, o'clock Half past Clock face Hours, minutes Hour hand, minute hand Total Note
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				Penny, pence, pound Value
Geometry – properties of shape	Recognise and name common 2D and 3D shapes, including: -2D shapes (for example, rectangles (including squares), circles and triangles). -3D shapes (for example, cuboids (including cubes), pyramids and spheres).	NCETM program of study - Unit 4	Spring 1	Symmetry, symmetrical Cuboid, cylinder Property vertex, vertices
Geometry – position and direction	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	NCETM program of study - Unit 4	Spring 1	Underneath Between Beside Whole turn, half turn, quarter turn, three-quarter turn Left, right

Year 2 Maths

Year 2 Maths				
Department for Education Statutory Guidance		How?	When?	Vocabulary
Number and place value	- Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. - Recognise the place value of each digit in a two-digit number (tens, ones) - Identify, represent and estimate numbers using different representations, including the number line. - Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs - Read and write numbers to at least 100 in numerals and words. - Use place value and number facts to solve problems.	NCETM program of study - Unit 1 place value.	Autumn 1	Compare > greater than < less than One-, two-digit number Place value Represents Partition

Addition and subtraction	• Solve problems with addition and subtraction: -using concrete objects and pictorial representations, including those involving numbers, quantities and measures -applying their increasing knowledge of mental and written methods. • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: -a two-digit number and ones -a two-digit number and tens -two two-digit numbers Adding three one-digit numbers • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	NCETM program of study - Unit 2	Autumn 1	Bridge 10 Inverse operation
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Number – Multiplication and Division	- 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 (x), division (÷) 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.	NCETM program of study - Unit 5 Multiplication NCETM program of study - Unit 6 division NCETM program of study - Unit 13	Autumn 2/Spring 1 Spring 1 Summer 2	Times Multiple Divide, divided by Multiplication fact, division fact Equal groups of Row, column
Number – 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. - Write simple fractions for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	NCETM program of study - Unit 10 Fractions	Summer 1	Equivalent fraction Two quarters, three quarters, four quarters One third, two thirds One half, two halves

Measurement	• 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 results using >, < and =. • 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. • 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. •	NCETM program of study - Unit 11, 12, 14 Measurement	Summer 1 Summer 2	Tape measure Further Ruler Metre stick Centimetre, metre Kilogram Gram Litre, millilitre Temperature Degree Quarter to, quarter past 5, 10, 15... minutes past/ to seconds fortnight change
Geometry - properties of Shape	• Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. • Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Identify 2D shapes on the surface of 3D shapes, (for example, a circle on a cylinder and a triangle on a pyramid) • Compare and sort common 2D and 3D shapes and everyday objects. •	NCETM program of study - Unit 7 Shape	Spring 2	Surface Line of symmetry Rectangular, circular, triangular Pentagon, hexagon, octagon Prism

Geometry - Position and direction	Geometry – Position and Direction • Order and arrange combinations of mathematical objects in patterns and sequences. • 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)	NCETM program of study - Unit 12	Summer 1	Route Clockwise, anticlockwise Opposite Direction
Statistics	• 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. • Ask and answer questions about totalling and comparing categorical data.	Taught cross curricular with Science to make learning purposeful.	summer term	Tally Graph, block graph, pictogram Compare Represent Label, title Most/least popular/common Sort Table