

Strand	Autumn	Spring	Summer
Number and Place Value	<ul> <li>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</li> <li>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>read and write numbers up to 1000 in numerals and in words</li> <li>compare and order numbers up to 1000</li> <li>Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100.</li> <li>They use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, 146 = 100 + 40 and 6, 146 = 130 + 16).</li> </ul>	<ul> <li>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.</li> <li>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>compare and order numbers up to 1000.</li> <li>read and write numbers up to 1000 in numerals and in words</li> <li>round any number to the nearest 100.</li> <li>read Roman numerals to 12, and recognise the numerals for 50 and 100.</li> <li>identify, represent and estimate numbers up to one decimal place.</li> <li>use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, 146 = 100 + 40 and 6, 146 = 130 + 16).</li> <li>Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100.</li> </ul>	<ul> <li>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.</li> <li>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>compare and order numbers up to 1000.</li> <li>read and write numbers up to 1000 in numerals and in words</li> <li>round any number to the nearest 100.</li> <li>Pupils now use multiples of 2, 3, 4, 5, 8, 10 50 and 100.</li> <li>use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, 146 = 100 + 40 and 6, 146 = 130 + 16).</li> </ul>
Addition and Subtraction	<ul> <li>estimate the answer to a calculation and use inverse operations to check answers</li> <li>e.g. using rounding</li> <li>add and subtract numbers mentally, including:</li> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul>	<ul> <li>add and subtract numbers with up to three digits, using formal written methods including expanded method of columnar addition and subtraction - where appropriate - ie. Only use when a mental method or jotting is not more efficient.</li> <li>add and subtract numbers with up to three digits, using formal written methods</li> </ul>	<ul> <li>add and subtract numbers with up to thre digits, using formal written methods including expanded method of columnar addition and subtraction - where appropriate - ie. Only use when a mental method or jotting is not more efficient.</li> <li>add and subtract numbers with up to thre digits, using formal written methods</li> </ul>



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Multiplication and Division	<ul> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>Counting in 6s, 7s, 9s, 11s, 12s</li> <li>Connect 2, 4 and 8x through doubling</li> <li>write estimate and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</li> <li>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency.</li> </ul>	<ul> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</li> <li>write estimate and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</li> <li>doubling facts of multiples of 10 up to double 100</li> <li>Counting in 6s, 7s, 9s, 11s, 12s</li> <li>Connect 2, 4 and 8x through doubling</li> <li>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency.</li> </ul>	<ul> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</li> <li>write estimate and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</li> <li>Counting in 6s, 7s, 9s, 11s, 12s.</li> <li>Connect 2, 4 and 8x through doubling.</li> <li>Understand remainders in the context of division.</li> <li>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</li> </ul>

## Pentagon Partnership Year 3 Overview



			<ul> <li>Understand scaling a number by a scale factor of 3 as making the number (or measurement) 3 times larger</li> <li>Link scaling to the understanding of multiplication e.g. 6+6+6 = 6×3</li> <li>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency.</li> </ul>
Fractions	<ul> <li>Find unit fractions of amounts. E.g <sup>1</sup>/<sub>2</sub>, 1/3, <sup>1</sup>/<sub>4</sub> of 12kg.</li> <li>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>Continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity.</li> </ul>	<ul> <li>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>recognise and use fractions as numbers: unit fractions and non-unit fractions (understand what they are) with small denominators</li> <li>compare and order unit fractions, and fractions with the same denominators</li> <li>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> </ul>	<ul> <li>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>recognise and use fractions as numbers: unit fractions and non-unit fractions (understand what they are) with small denominators</li> <li>compare and order unit fractions, and fractions with the same denominators.</li> <li>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>Counting in 1/5 1/10, 1/100</li> <li>add and subtract fractions with the same denominator within one whole [for example, <sup>5</sup>/<sub>7</sub> + <sup>1</sup>/<sub>7</sub> = <sup>6</sup>/<sub>7</sub>]</li> <li>read, write, order and compare numbers up to one decimal place (money link).</li> <li>Complements of 1 to 1dp (2dp with money).</li> <li>Link to division. E.g. 15 divided by 3 is 15/3</li> <li>Decimals - link to money i.e. tenths / hundredths.</li> </ul>



			<ul> <li>solve problems that involve all of the above. and simple measures (cm-m, kg/g, l, ml and money (see y4).</li> </ul>
Ratio and Proportio n	<ul> <li>Recognise more complex regular (and simple irregular) patterns e.g. 2 red, 3 green and 4 blue and comment on them. RRGGGBBBB</li> <li>Next one RGGRGRGGRG 3 green 2 red.</li> </ul>		<ul> <li>Solve problems involving similar shapes where the scale factor is known.</li> </ul>
Measurement	<ul> <li>measure, using appropriate tools and units-progressing to using a wider range of measures, including mixed units</li> <li>compare and find simple equivalents e.g. 5m = 500cm, compare, add and subtract: lengths (m/cm/mm)</li> <li>measure the perimeter of simple 2-D shapes</li> <li>know the number of seconds in a minute and the number of days in each month, year and leap year.</li> <li>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (am &amp; pm)</li> <li>add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> </ul>	<ul> <li>measure, using appropriate tools and units-progressing to using a wider range of measures, including mixed units e.g. 1kg and 200g).</li> <li>compare and find simple equivalents e.g. compare, add and subtract mass (kg/g)</li> <li>The comparison of measures includes simple scaling by integers (e.g. a given quantity or measure is twice as long or 5 times as high) and this connects to multiplication.</li> <li>estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.</li> <li>add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> </ul>	<ul> <li>measure, using appropriate tools and units-progressing to using a wider range of measures, including mixed units</li> <li>compare and find simple equivalents e.g. compare, add and subtract: volume/capacity (I/mI).</li> <li>add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> <li>compare durations of events [for example to calculate the time taken by particular events or tasks].</li> </ul>
Geometry (Properties of Shape)	<ul> <li>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>recognise angles as a property of shape or a description of a turn.</li> </ul>	<ul> <li>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.</li> </ul>	<ul> <li>identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> <li>Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts.</li> </ul>



		<ul> <li>Pupils' knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygons and polyhedra.</li> </ul>	
Geometry (Position and Direction)			
Statistics	<ul> <li>interpret and present data using bar charts, pictograms and tables</li> </ul>	<ul> <li>solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.</li> </ul>	<ul> <li>Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy.</li> <li>They continue to interpret data presented in many contexts.</li> </ul>
Algebra	<ul> <li>Counting in constant steps, related to repeated addition and times tables</li> </ul>	<ul> <li>Counting in constant steps, related to repeated addition and times tables.</li> <li>Generate simple formulae with e.g. simple shapes and 'Taktiles'.</li> </ul>	<ul> <li>Two step function machines.</li> <li>Build linear sequences practically with straws and cubes.</li> <li>Growing linear patterns.</li> <li>Extend balance puzzles with e.g. shapes as numbers, more than one variable.</li> <li>Concept of algebraic notation e.g. practical missing number envelopes.</li> </ul>