

educationGateshead Core Curriculum for Primary Mathematics Progression Grid Year 1

Year 1 Autumn	Year 1 Spring	Year 1 Summer
<p>Understanding and investigating with numbers 3 weeks</p>	<p>Understanding and investigating with numbers 3 weeks</p>	<p>Understanding and investigating with numbers 3 weeks</p>
<p>Place value, ordering and rounding</p>	<p>Place value, ordering and rounding</p>	<p>Place value, ordering and rounding</p>
<ul style="list-style-type: none"> • Begin to count up to 100, forwards and backwards, beginning with 0 or 1, or from any given number. • Practise counting as reciting numbers and enumerating objects and to identify order (1st, 2nd, 3rd...). • Read and write numbers from 1 to 20 in numerals and words. • Count, read and write numbers to 100 in numerals. • Identify and represent numbers using objects. • Given a number <i>within range pupils are working on</i>, identify one more and one less, relating this to adding and subtracting one. • Use the language of: equal to, more than, less than (fewer), most, least to compare and order numbers and quantities. • Begin to recognise place value in numbers up to 20 by reading, writing, counting and comparing numbers, supported by objects and pictorial representations e.g. <i>knowing that adding a one digit number to ten makes a teen number and subtracting units from a teen number leaves ten.</i> • <i>Solve problems involving counting objects.</i> 	<ul style="list-style-type: none"> • Count up to 100, forwards and backwards, beginning with 0 or 1, or from any given number. • Practise counting as reciting numbers and enumerating objects and to identify order (1st, 2nd, 3rd...). • Read and write numbers from 1 to 20 in numerals and words. • Count, read and write numbers to 100 in numerals. • Identify and represent numbers using objects and pictorial representations including the number line. • Given a number, identify one more and one less. • Given a number <i>within range pupils are working on</i>, identify one more and one less, relating this to adding and subtracting one. • Use the language of: equal to, more than, less than (fewer), most, least to compare and order numbers and quantities. • Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations e.g. <i>Knowing that adding a one digit number to ten makes a teen number and subtracting units from a teen number leaves ten</i> • <i>Solve problems involving counting objects</i> 	<ul style="list-style-type: none"> • Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. • Practise counting as reciting numbers and enumerating objects and to identify order (1st, 2nd, 3rd...). • Read and write numbers from 1 to 20 in numerals and words. • Count, read and write numbers to 100 in numerals. • Identify and represent numbers using objects and pictorial representations including the number line. • Given a number, identify one more and one less. • Given a number <i>within range pupils are working on</i>, identify one more and one less, relating this to adding and subtracting one. • Use the language of: equal to, more than, less than (fewer), most, least to compare and order numbers and quantities. • Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations e.g. <i>Knowing that adding a one digit number to ten makes a teen number and subtracting units from a teen number leaves ten</i> • <i>Solve problems involving counting objects</i>

Properties of numbers and number sequences	Properties of numbers and number sequences	Properties of numbers and number sequences
<ul style="list-style-type: none"> • Count in multiples of two to develop recognition of patterns e.g. odd and even. • Recognize and create repeating patterns with objects and with shapes. • <i>Describe simple patterns and relationships involving numbers; decide if examples satisfy a given condition.</i> 	<ul style="list-style-type: none"> • Count in multiples of two and five to develop recognition of patterns. • Recognise and create repeating patterns with objects and with shapes. • <i>Describe simple patterns and relationships involving numbers; decide if examples satisfy a given condition</i> 	<ul style="list-style-type: none"> • Count in multiples of twos, fives and tens from different multiples to develop recognition of patterns. • Recognise and create repeating patterns with objects and with shapes. • <i>Describe simple patterns and relationships involving numbers; decide if examples satisfy a given condition</i>
Fractions	Fractions	Fractions
	<ul style="list-style-type: none"> • <i>Experience</i> half and quarter as ‘fractions of’ discrete (e.g. <i>countables</i>) and continuous (e.g. <i>liquid</i>) quantities by solving problems using shapes, objects and quantities. For example, recognise and find half a length, quantity, set of objects or shape. • Connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole. • Recognize, find and name a half as one of two equal parts of an object, shape or quantity 	<ul style="list-style-type: none"> • <i>Experience</i> half and quarter as ‘fractions of’ discrete (e.g. <i>countables</i>) and continuous (e.g. <i>liquid</i>) quantities by solving problems using shapes, objects and quantities. For example, recognise and find half a length, quantity, set of objects or shape. • Connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole. • Recognize, find and name a half as one of two equal parts of an object, shape or quantity • Recognize, find and name a quarter as one of four equal parts of an object, shape or quantity

Developing and applying calculation		
Addition and Subtraction 2 weeks	Addition and Subtraction 2 weeks	Addition and Subtraction 2 weeks
<ul style="list-style-type: none"> • Represent and use number bonds and related subtraction facts within 10 <i>using concrete objects and pictorial representations to support understanding.</i> • Memorise and reason with number bonds to 10 in several forms (for example, $3 + 4 = 7$; $7 - 4 = 3$; $4 = 7 - 3$). This establishes addition and subtraction as related operations. • Add and subtract one-digit numbers including zero (<i>progressing from counting to non counting strategies, starting to use recall of number bonds</i>). • Realise the effect of adding or subtracting zero. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Combine and increase numbers, counting forwards and backwards. • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$. • Discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly. 	<ul style="list-style-type: none"> • Represent and use number bonds and related subtraction facts within 20 <i>using concrete objects and pictorial representations to support understanding.</i> • Memorise and reason with number bonds to 10 and 20 in several forms (for example, $9 + 7 = 16$; $16 - 7 = 9$; $7 = 16 - 9$). This establishes addition and subtraction as related operations. • <i>Make connections between bonds for 10 and 20 e.g. between $7 + 2 = 9$ and $17 + 2 = 19$ supported by representations</i> • Add and subtract one-digit and two-digit numbers to 20, including zero (<i>progressing from counting to non counting strategies, starting to use recall of number bonds</i>). • Realise the effect of adding or subtracting zero. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Combine and increase numbers, counting forwards and backwards • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$. • Discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly. 	<ul style="list-style-type: none"> • Represent and use number bonds and related subtraction facts within 20 <i>using concrete objects and pictorial representations to support understanding.</i> • Memorise and reason with number bonds to 10 and 20 in several forms (for example, $9 + 7 = 16$; $16 - 7 = 9$; $7 = 16 - 9$). This establishes addition and subtraction as related operations. • <i>Make connections between bonds for 10 and 20 e.g. between $7 + 2 = 9$ and $17 + 2 = 19$ supported by representations.</i> • Add and subtract one-digit and two-digit numbers to 20, including zero (<i>progressing from counting to non counting strategies, starting to use recall of number bonds</i>). • Realise the effect of adding or subtracting zero. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Combine and increase numbers, counting forwards and backwards • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$. • Discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly.

Multiplication and Division 2 weeks	Multiplication and Division 2 weeks	Multiplication and Division 2 weeks
<ul style="list-style-type: none"> • Count in multiples of two. • Make connections between arrays, number patterns, and counting in twos. • <i>Recall doubles of numbers to 5 and corresponding halves.</i> 	<ul style="list-style-type: none"> • 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. • Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and <i>make connections with</i> finding simple fractions of objects, numbers and quantities • Make connections between arrays, number patterns, and counting in twos and fives. • <i>Recall doubles of numbers to 10 and corresponding halves</i> 	<ul style="list-style-type: none"> • 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. • Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and <i>make connections with</i> finding simple fractions of objects, numbers and quantities • Make connections between arrays, number patterns, and counting in twos, fives and tens. • <i>Recall doubles of numbers to 10 and corresponding halves</i>
Measurement 2 weeks	Measurement 2 weeks	Measurement 2 weeks
<ul style="list-style-type: none"> • Compare, describe and solve practical problems for: <ul style="list-style-type: none"> • lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] • Move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units. • Begin to use measuring tools such as a ruler, weighing scales and containers. • measure and begin to record the following: <ul style="list-style-type: none"> • lengths and heights • Recognize and know the value of different denominations of coins and notes. • Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, 	<ul style="list-style-type: none"> • Compare, describe and solve practical problems for: <ul style="list-style-type: none"> • time [e.g. quicker, slower, earlier, later]. • Move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units. • Begin to use measuring tools such as a ruler, weighing scales and containers. • measure and begin to record the following: <ul style="list-style-type: none"> • time (hours, minutes, seconds). • Recognize and know the value of different denominations of coins and notes. • Recognize 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 	<ul style="list-style-type: none"> • Compare, describe and solve practical problems for: <ul style="list-style-type: none"> • mass/weight [e.g. heavy/light, heavier than, lighter than] • capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] • Move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units. • Begin to use measuring tools such as a ruler, weighing scales and containers. • measure and begin to record the following: <ul style="list-style-type: none"> • mass/weight • capacity and volume • Recognize and know the value of different

<p>afternoon and evening].</p> <ul style="list-style-type: none"> Recognize and use language relating to dates, including days of the week, weeks, months and years. 	<p>hour and draw the hands on a clock face to show these times.</p> <ul style="list-style-type: none"> Use the language of time, including telling the time throughout the day, first using o'clock and then half past. 	<p>denominations of coins and notes.</p> <ul style="list-style-type: none"> Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Use the language of time, including telling the time throughout the day, first using o'clock and then half past. Connect experiences of turning clockwise with movement of hands on a clock face.
<p>Geometry 2 weeks</p>	<p>Geometry 2 weeks</p>	<p>Geometry 2 weeks</p>
<p>Properties of Shapes</p>		
<p>Recognize and name common 2-D and 3-D shapes, including:</p> <ul style="list-style-type: none"> 2-D shapes [e.g. rectangles (including squares), circles and triangles] 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. Pupils handle common 2-D and 3-D shapes, naming these and related everyday objects fluently. They recognize these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other. <i>Compare and sort common 2D and 3D shapes and everyday objects.</i> <i>Recognize and create repeating patterns with objects and with shapes.</i> 	<p>Recognize and name common 2-D and 3-D shapes, including:</p> <ul style="list-style-type: none"> 2-D shapes [e.g. rectangles (including squares), circles and triangles] 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. Pupils handle common 2-D and 3-D shapes, naming these and related everyday objects fluently. They recognize these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other. <i>Compare and sort common 2D and 3D shapes and everyday objects.</i> 	<ul style="list-style-type: none"> <i>Compare and sort common 2D and 3D shapes and everyday objects.</i> <i>Recognize and create repeating patterns with objects and with shapes.</i>
<p>Position and Direction</p>		
<ul style="list-style-type: none"> Use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside. 	<ul style="list-style-type: none"> Describe position, direction and movement, including half, quarter and three-quarter turns. Make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face. Use the language of position, direction and motion, including: left and right, top, middle 	<ul style="list-style-type: none"> Describe position, direction and movement, including half, quarter and three-quarter turns. Make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face..

	and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.	
Statistics 1 week	Statistics 1 week	Statistics 1 week
Interpreting, Constructing and Presenting Data	Interpreting, Constructing and Presenting Data	Interpreting, Constructing and Presenting Data
	<p><i>NB this is not included in the National Curriculum for Year 1 but schools may wish to introduce pupils to these skills or use data contexts to support problem solving</i></p> <ul style="list-style-type: none"> <i>Begin to interpret and construct simple pictograms, tally charts, block diagrams and simple tables often in cross curricular contexts.</i> <i>Begin to ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</i> 	<p><i>NB this is not included in the National Curriculum for Year 1 but schools may wish to introduce pupils to these skills or use data contexts to support problem solving</i></p> <ul style="list-style-type: none"> <i>Begin to interpret and construct simple pictograms, tally charts, block diagrams and simple tables often in cross curricular contexts.</i> <i>Begin to ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</i>