

## Early Years Foundation Stage

### Mathematics Number ELG

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- 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.

Numerical Patterns ELG Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

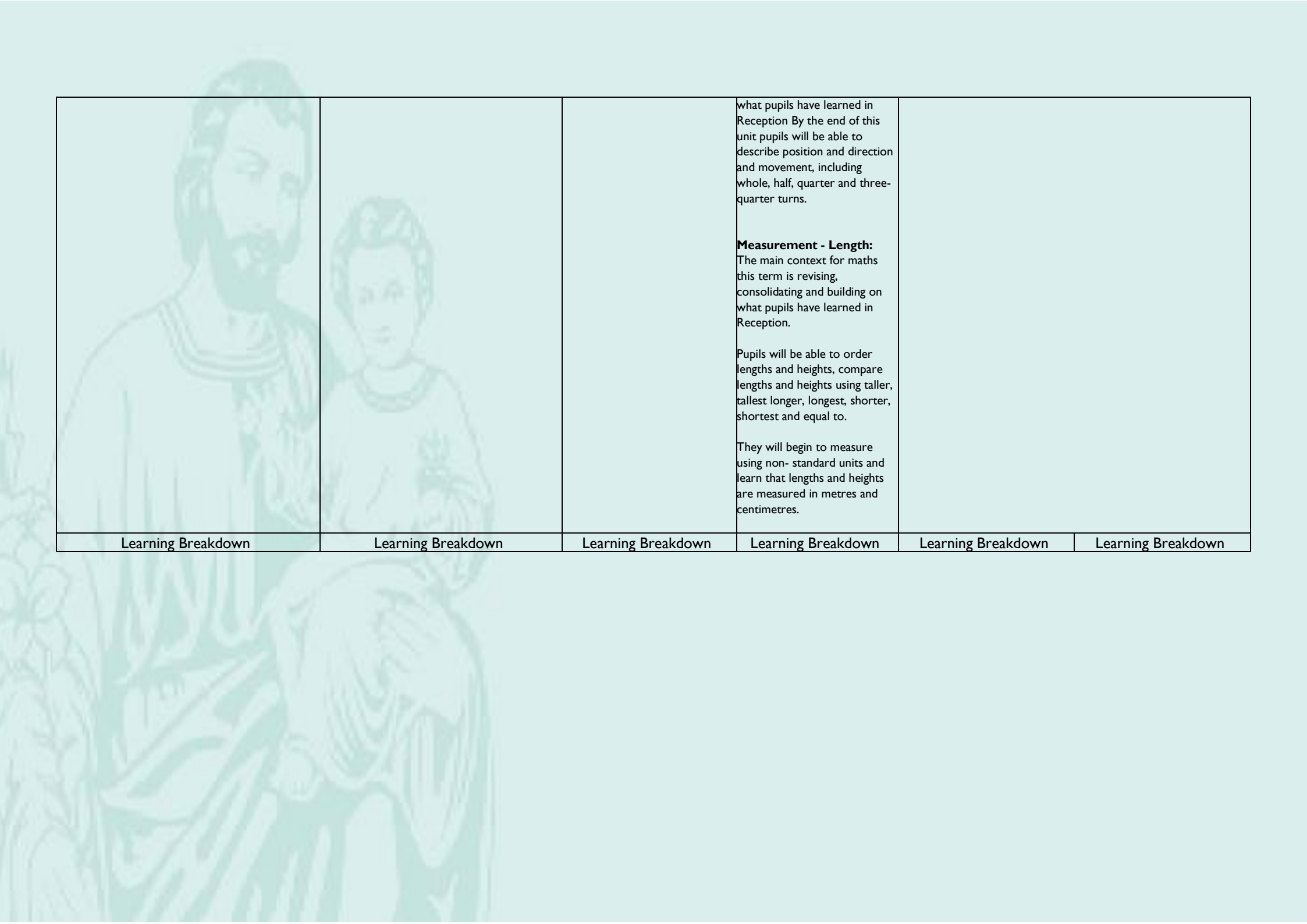
*Developing Matters states:*

*'EYFS Statutory Educational Programme: Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.'*

Autumn		Spring		Summer	
1	2	1	2	1	2
Overview	Overview	Overview	Overview	Overview	Overview
Counting to 1,2,3 Counting to 4 Counting to 5 Sorting into 2 groups Comparing quantities of identical objects Comparing quantities of non-identical objects One more/One fewer My Day		Introducing the part-whole model Counting to 6, 7 and 8 Counting to 9 and 10 Comparing Groups to 10 Combining two groups to create a total Using a 10 frame The part-whole model to 10 Spatial Awareness 2D and 3D shapes		Making simple patterns Making complex patterns Adding on by counting on Taking away by counting back Counting to 20 Doubling Halving and Sharing Odds and Evens Length height and distance Volume and Capacity Weight	

Although these are approximate areas of learning, it is important to note that baseline assessments will dictate the pace at which staff members will plan a short-term approach to learning – and staff may find they progress through the curriculum more quickly, depending on the cohort. Children will not be hindered by this outline plan if they are able to demonstrate competency in counting, comparing and combining in baseline assessments.

Mathematics				Year group: 1	
Autumn		Spring		Summer	
1	2	1	2	1	2
Overview	Overview	Overview	Overview	Overview	Overview
<p><b>Number and Place Value:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception. Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will gradually be introduced to more abstract methods used across the school.</p> <p>Links can be made to science in Number and Place Value, when pupils will go outside to collect evidence of autumn and will count leaves, conkers, acorns, etc. Pupils will also create pictograms in science related to the senses.</p> <p>By the end of this term, pupils will become more confident reading, writing and counting numbers up to 100. They will understand place value and be able to identify the value of digits in a two-digit number.</p> <p>They will be able to use this understanding to order numbers and find missing value numbers.</p> <p><b>Addition and Subtraction:</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception. Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will gradually be introduced to more abstract methods used across the school.</p> <p>By the end of this unit pupils will be able to solve mathematical statements for addition and subtraction.</p>	<p><b>Geometry - Properties of Shapes:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception</p> <p>Pupils will recognise and name common 2-D shapes and 3-D shapes and use mathematical vocabulary to describe the shapes. They will sort and compare 2d and 3D shapes and solve problems using 2D and 3D shapes.</p>	<p><b>Number and Place Value to 50 and 100:</b></p> <p>In this small step, children count forwards and backwards between 20 and 50, progressing onto 100. They will be exposed to partitioning into tens and ones and will compare numbers with the same number of tens. They will revise 1 more and 1 less and utilise 100 squares to understand the significance of place value.</p> <p><b>Multiplication and Division:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception.</p> <p>Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will gradually be introduced to more abstract methods used across the school.</p> <p>Pupils will build confidence, both forwards and backwards from any given number and count in 2s and 10s with increasing accuracy.</p> <p>By the end of this unit pupils will be able to solve mathematical statements for multiplication and division,</p>	<p><b>Factions:</b> Pupils will develop their knowledge of halves and quarters using mathematical concepts in a practical, concrete and pictorial way.</p> <p><b>Measurement - Money:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception</p> <p>Pupils will recognise and compare different coins and their values and begin to add and subtract different amounts of money.</p> <p><b>Measurement - Weight:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception</p> <p>Pupils will order weights, compare weights, use balances and non -standard units. They will understand that mass is measured in grams and kilograms and weigh objects using scales and kg and g.</p> <p><b>Geometry - Position and Direction:</b></p> <p>The main context for maths this term is revising, consolidating and building on</p>	<p><b>Measurement - Time:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception.</p> <p>By the end of this unit pupils will be able to sequence events in chronological order. Find times earlier and later using clocks and solve time problems.</p> <p><b>Measurement - Capacity and Volume:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception</p> <p>Pupils will measure liquids using terms full, half full, empty, more than, less than, and compare different volumes. They will learn that volume is measured in litres and millilitres.</p> <p>Throughout this term, consolidation of problem-solving objectives will take place as well as refinement and development of pupils’ reasoning skills.</p> <p>Where possible, and cohort depending, there may be opportunities to embark on the next year's curriculum, but this will be decided upon evaluation of assessments which occur in the summer term.</p> <p>Where able, a personalised approach using the information gathered from question-level analysis assessments will be implemented in order to close any gaps which may have occurred throughout the course of the year.</p> <p>Quality first teaching is the best tool for subject knowledge improvement and a variety of teaching resources, teaching support and problems solving activities will occur to ensure this.</p>	



			<p>what pupils have learned in Reception By the end of this unit pupils will be able to describe position and direction and movement, including whole, half, quarter and three-quarter turns.</p> <p><b>Measurement - Length:</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Reception.</p> <p>Pupils will be able to order lengths and heights, compare lengths and heights using taller, tallest longer, longest, shorter, shortest and equal to.</p> <p>They will begin to measure using non- standard units and learn that lengths and heights are measured in metres and centimetres.</p>		
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown

<p><b>Number and Place Value:</b>  To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.  To count, read and write numbers to 100 in numerals.  To read and write numbers to 20, in words.  To identify one more and one less than a given number.  To show an understanding of tens and units through practical activities.  To say how many tens and units there are in two-digit numbers and say the value of each digit.  To compare and order numbers using an understanding of place value. (More, less, fewer, most least and equal to.)  To fill in missing numbers on a number line.</p> <p><b>Addition and subtraction:</b>  To read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs.  To revisit number bonds to 10.  To learn number bonds to 20.  To solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations.  To begin to use a number line to solve addition and subtraction problems.  To begin to use a hundred square to solve addition and subtraction problems.  To find missing numbers in addition number sentences.  To find missing numbers in subtraction number sentences.</p>	<p><b>Geometry - Properties of Shapes:</b>  To recognise and name common 2-D shapes [rectangles (including squares), circles and triangles].  To learn the mathematical terms of sides, straight, curved, points.  To recognise and name common 3-D shapes [cuboids (including cubes), pyramids and spheres].  To learn the mathematical terms edges, faces and vertices.  To describe 2D and 3D shapes.  To sort and compare 2d and 3D shapes.  To solve problems using 2D and 3D shapes.</p> <p>To double and halve numbers in a practical context.</p> <p><b>Geometry - Position and Direction:</b>  To describe position and direction and movement, including whole, half, quarter and three-quarter turns.</p>	<p><b>Number and Place Value:</b>  To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.  To count, read and write numbers to 100 in numerals.  To read and write numbers to 20, in words.  To identify one more and one less than a given number.  To show an understanding of tens and units through practical activities.  To say how many tens and units there are in two-digit numbers and say the value of each digit.  To compare and order numbers using an understanding of place value. (More, less, fewer, most least and equal to.)  To fill in missing numbers on a number line.</p> <p><b>Multiplication:</b>  To count in multiples of 2 and 10.  To identify odd and even numbers.  To use objects to make groups, using the vocabulary 'lots of', 'groups of' and 'sets of'.  To record groups of objects as repeated addition.  To introduce the multiplication sign.  To record groups as repeated addition and a multiplication number sentence.  To use a number line to find the answer to multiplication problems.  To make arrays to show a repeated addition and multiplication.</p>	<p><b>Fractions:</b>  To share apples into two pieces and introduce the word half.  To understand that halving means making two equal groups.  To cut pictures in half.  To halve sets of objects.  To begin to record halving using 1/2.  To find half of shapes and numbers.  To understand quarters in a practical context.  To find quarters of objects in a practical context.</p> <p><b>Measurement - Money:</b>  To recognise coins of different values.  To compare values of coins.  To recognise notes of different values.  To compare values of notes.  To add and subtract different amounts of money.</p> <p><b>Measurement - Weight:</b>  To order weights by holding objects and looking at pictures.  To compare weights using heavier, lighter, more than, less than and equal to.  To weigh using balances and non -standard units.  To learn that mass is measured in grams and kilograms.  To weigh objects using scales and Kg and g.</p> <p><b>Measurement - Length:</b>  To order lengths and heights.  To compare lengths and heights using taller, tallest longer,</p>	<p><b>Measurement - Time:</b>  To sequence events in chronological order. To find times earlier and later using clocks.  To solve time problems.</p> <p><b>Measurement - Capacity and Volume:</b>  To measure liquids using terms full, half full, empty, more than, less than.  To compare different volumes.  To learn that volume is measured in litres and millilitres.  To measure capacity using l and ml.</p> <p><b>Revision of Core Content:</b>  To show an emphasis on problem solving contexts, building confidence, clarity and understanding.  To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Number and Place Value:</b>  To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.  To count in multiples of 2 and 10.  To count, read and write numbers to 100 in numerals.  To identify ten more and ten less than a number.  To identify numbers represented by a digit (hundred tens and ones).  To identify value of digits underlines in a number (hundred tens and ones).</p>	<p><b>Revision of Core Content:</b>  To show an emphasis on problem solving contexts, building confidence, clarity and understanding.  To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Multiplication and Division:</b>  To solve one step problems involving multiplication using concrete objects, pictures or arrays to help find the answer.  To solve one step problems involving division using concrete objects, pictures or arrays to help find the answers.</p> <p><b>Shape – 2D and 3D:</b>  To describe 2D and 3D shapes.  To sort and compare 2d and 3D shapes.  To solve problems using 2D and 3D shapes</p> <p><b>Fractions:</b>  To halve sets of objects.  To begin to record halving using 1/2.  To find half of shapes and numbers.  To understand quarters in a practical context.  To find quarters of objects in a practical context.</p> <p><b>Measurement:</b>  To recall that lengths and heights are measured in metres and centimetres.  To measure objects in m and cm.</p>
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		<p>To write multiplication number sentences from an array. To solve problems counting in 2s. To solve problems counting in 10s.</p> <p><b>Division:</b> To share objects into groups. To share objects into groups and record as -- shared into -- groups is --. To introduce the division sign. To record sharing sets of objects as a division number sentence. To understand division as sharing equally. To share objects between children. To share objects equally and write a division number sentence. To solve division problems.</p>	<p>longest, shorter, shortest and equal to. To order the heights of the children from tallest to shortest. To measure using non-standard units. To learn that lengths and heights are measured in metres and centimetres. To measure objects in m and cm.</p>	<p>To find numbers more than, less than and between. To fill in missing numbers on a number line beyond 100. To read and write numbers to 20.</p> <p><b>Addition and Subtraction:</b> To add two digit and one-digit numbers (mentally and using number lines). To subtract one digit from a two-digit number (mentally and using number lines). To find missing numbers in addition number sentences. To solve word problems involving addition. To find missing numbers in subtraction number sentences. To solve word problems involving subtraction.</p> <p><b>Money:</b> To recognise coins of different values. To compare values of coins. To recognise notes of different values. To compare values of notes. To add and subtract different amounts of money.</p>	<p>To weigh using balances and non-standard units. To recall that mass is measured in grams and kilograms. To weigh objects using scales and Kg and g. To recall that volume is measured in litres and millilitres. To measure capacity using l and ml.</p>
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Subject: Mathematics					
Year group: 2					
Autumn		Spring		Summer	
1	2	1	2	1	2
Overview		Overview		Overview	
<p><b>Number: Number and Place Value: Numbers to 100</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1. Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will be gradually introduced to written methods and complex concepts.</p> <p>As a result of this term's learning, pupils will develop their confidence when reading and writing numbers to 100 and through the application of place value in simple word problems.</p> <p><b>Number: Addition and Subtraction (1):</b></p> <p>In the teaching of addition and subtraction, pupils will gradually move away from using pictorial representations and using more formal methods to solve addition and subtraction problems.</p>	<p><b>Number: Addition and Subtraction (2):</b></p> <p>In the teaching of addition and subtraction, pupils will gradually move away from using pictorial representations and using more formal methods to solve addition and subtraction problems.</p> <p><b>Geometry: Properties of Shape: 2D and 3D:</b> Pupils will draw upon their prior knowledge of shape and be introduced to new shapes and properties, becoming more confident to recognise the shapes within the classroom/home environment.</p> <p><b>Money:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1</p> <p>Pupils will be able to recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value, different combinations of coins that equal the same amounts of money and solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</p> <p><b>Multiplication and Division (1):</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1.</p> <p>Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will be gradually introduced to written</p>	<p><b>Multiplication and Division (2):</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1. Pupils will continue to develop mathematical concepts in a practical, concrete and pictorial way but will be gradually introduced to written methods and complex concepts in multiplication and division. This will allow pupils to make links in grouping/sharing.</p> <p><b>Number: Fractions:</b> To support teaching of fractions, multiplication and division will be taught in a very practical approach. This will allow pupils to make links grouping/sharing and building confidence when revisiting fractions and measurement. Taking on a more practical approach will provide a visual stimulus for all pupils, regardless of their stage in their learning journey.</p> <p><b>Measurement – Length &amp; Height:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1</p> <p>Pupils will choose and use appropriate standard units to estimate and measure length/height in any direction, and compare and order lengths and heights.</p> <p>They will solve problems involving measurement.</p> <p><b>Measurement - Weight/Capacity/Temperature:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1</p>	<p><b>Statistics:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1.</p> <p>Pupils will be able to interpret and construct simple pictograms, tally charts, block diagrams and simple tables.</p> <p>They will ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</p> <p><b>Number: Fractions:</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1.</p> <p>Fractions, will be taught in a practical context. Pupils will recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math>, <math>\frac{3}{4}</math> quarters of a length, shape, set of objects or quantity.</p> <p><b>REVISION – Preparation for Key Stage 1 end of year assessments</b></p> <ul style="list-style-type: none"> <li>• Revision of number and place value</li> <li>• Revision of addition and subtraction</li> <li>• Revision of measure</li> <li>• Revision of multiplication and division</li> <li>• Revision of fractions</li> </ul>	<p><b>Geometry - Position and Direction:</b></p> <p>The main context for maths this term is revising, consolidating and building on what pupils have learned in Year 1</p> <p>Pupils will 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).</p> <p><b>Time:</b></p> <p>To build on from Year 1, time will be revisited regularly and linked to other curriculum areas if possible. By adopting this approach, it will allow pupils to explore this maths topic in a variety of ways – providing problem solving opportunities and reinforcing time in a fun and memorable way.</p> <p><b>Problem Solving and Efficient Methods:</b></p> <p>Throughout this half-term consolidation of problem-solving objectives will take place as well as refinement and development of pupils' reasoning skills.</p> <p><b>Revision:</b></p> <ul style="list-style-type: none"> <li>• Revision of multiplication and division</li> <li>• Revision of fractions</li> <li>• Revision of statistics</li> <li>• Revision of geometry</li> </ul>	<p>Throughout this half-term consolidation of problem-solving objectives will take place as well as refinement and development of pupils' reasoning skills.</p> <p><b>Revision:</b></p> <ul style="list-style-type: none"> <li>• Revision of multiplication and division</li> <li>• Revision of fractions</li> <li>• Revision of statistics</li> <li>• Revision of geometry</li> </ul> <p>Where able, a personalised approach using the information gathered from question-level analysis assessments will be implemented in order to close any gaps which may have occurred throughout the course of the year.</p>

	methods and complex concepts in multiplication and division. This will allow pupils to make links in grouping/sharing.	Pupils will choose and use appropriate standard units to estimate and measure weight/capacity/temperature. They will compare and order weight/capacity/temperature and record the results.  They will solve problems involving measurement.	<ul style="list-style-type: none"> <li>Revision of statistics</li> <li>Revision of geometry</li> </ul>		
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown
<b>Number and Place Value:</b> Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (Year 1) Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens (Year 1) To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. To recognise the place value of each digit in a two-digit number (tens, ones). To identify, represent and estimate numbers using different representations, including the number line. To compare and order numbers from 0 up to 100; use <, > and = signs. To read and write numbers to at least 100 in numerals and in words. To use place value and number facts to solve problems.	<b>Addition and Subtraction (2):</b> To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. To add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and tens. To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures.	<b>Multiplication and Division (2):</b> To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	<b>Statistics:</b> To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. To ask and answer questions about totalling and comparing categorical data.	<b>Geometry - Position and Direction:</b> To revise shape name and properties throughout basic skills. To order and arrange combinations of mathematical objects in patterns and sequences. To 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).	<b>Revision of Core Content:</b> To show an emphasis on problem solving contexts, building confidence, clarity and understanding. To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:
To identify, represent and estimate numbers using different representations, including the number line. To compare and order numbers from 0 up to 100; use <, > and = signs. To read and write numbers to at least 100 in numerals and in words. To use place value and number facts to solve problems.	<b>Shape – Properties of shape: 2D and 3D:</b> To compare and sort common 2-D and 3-D shapes and everyday objects. To identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. To order and arrange combinations of mathematical objects in patterns and sequences To identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. To identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder and a triangle on a pyramid).	<b>Measurement – Length and Height:</b> To choose and use appropriate standard units to estimate and measure length/height in any direction. To compare and order lengths and record the results using >, < and = on (m/cm) to the nearest appropriate unit, using rulers. To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	<b>Fractions:</b> To recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1) To recognise, find, name and write fractions 1/3, 1/4, 2/4, 3/4 quarters of a length, shape, set of objects or quantity. To write simple fractions for example, 1/2 of 6 = 3. To recognise the equivalence of 2/4 and 1/2. Non-statutory: To count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (for example, 1 1/4, 1 2/4 (or 1 1/2), 1 3/4, 2).	<b>Time:</b> To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times (Year 1) To 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. To compare and sequence intervals of time. To know the number of minutes in an hour and the number of hours in a day.	<b>Multiplication and Division:</b> To solve problems involving multiplication and division. To recognise and write multiplication and division facts using the multiplication (×), division (÷) and equals (=) sign.
<b>Addition and Subtraction (1):</b> To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 To add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones and adding three one-digit numbers.	<b>Money:</b> To recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. To find different combinations of coins that equal the same amounts of money. To solve simple problems in a practical context involving addition and	<b>Measurement - Weight/Capacity/Temperature:</b> To choose and use appropriate standard units to estimate and measure weight/capacity/temperature. To compare and order weight/capacity/temperature and record the results using >, < and = on (m/cm - g/kg - ml/l - °C) to the nearest appropriate unit, using rulers, weights, measuring vessels, scales and thermometers.	<b>REVISION – Preparation for Key Stage 1 end of year</b>	<b>Problem Solving and Efficient Methods:</b> To use place value and number facts to solve problems. To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures. To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	<b>Fractions:</b> To revise identification of simple fractions of shapes, amounts and quantities. To write simple fractions for example, 1/2 of 6 = 3 (GD).
				<b>Revision of Core Content:</b>	<b>Measurement:</b> To tell the time to five minutes. To read and write the time accurately.
					<b>Statistics:</b> To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

<p>To solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.</p> <p>To solve problems with addition/subtraction applying their increasing knowledge of mental and written methods</p> <p>To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.</p> <p>To solve problems with addition/subtraction using concrete objects, pictorial representations and mentally including a two-digit number and ones/tens including addition/subtraction of three one-digit numbers.</p> <p>To show that addition of two numbers can be done in any order (commutative) and subtraction from one number from another cannot.</p> <p>To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>subtraction of money of the same unit, including giving change.</p> <p><b>Multiplication and Division (1):</b> To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</p> <p>To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (<math>=</math>) signs.</p> <p>To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p> <p>To solve problems involving multiplication, using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts.</p> <p>To solve problems involving division, using materials, arrays, repeated addition, mental methods, and division facts, including problems in contexts.</p>	<p>To solve a range of problems involving measurement.</p>	<p><b>assessments</b> (objectives as per summer term)</p> <ul style="list-style-type: none"> <li>Revision of number and place value</li> <li>Revision of addition and subtraction</li> <li>Revision of measure</li> <li>Revision of multiplication and division</li> <li>Revision of fractions</li> <li>Revision of statistics</li> <li>Revision of geometry</li> </ul>	<p>To show an emphasis on problem solving contexts, building confidence, clarity and understanding.</p> <p>To show determination and resilience as pupils continue to revise and build-upon the skills taught.</p> <p>Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Number and Place Value:</b></p> <p>To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.</p> <p>To use place value and number facts to solve problems.</p> <p>To compare numbers using <math>&lt;</math> <math>&gt;</math> <math>=</math>.</p> <p><b>Addition and Subtraction:</b></p> <p>To solve problems with addition and subtraction.</p> <p>To revise formal written methods of addition and subtraction.</p> <p><b>Measurement:</b></p> <p>To choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using scales.</p> <p>To choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, using measuring vessels.</p> <p>To compare and order mass and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</p> <p>To compare and order volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</p> <p>To choose and use appropriate standard units to estimate and measure temperature (<math>^{\circ}\text{C}</math>); to the nearest appropriate unit, using thermometers.</p>	<p>To ask and answer questions about totalling and comparing categorical data.</p> <p><b>Geometry - Position and Direction:</b></p> <p>To order and arrange combinations of mathematical objects in patterns and sequences.</p> <p>To 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).</p>
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Subject: Mathematics				Year group: 3	
Autumn		Spring		Summer	
1	2	1	2	1	2
Overview		Overview		Overview	
<p><b>Number and Place Value:</b></p> <p>The main context for learning is to provide opportunities for children to develop good place value understanding. This essential</p>	<p><b>Multiplication and Division:</b></p> <p>The main context for learning is to revise and consolidate pupil's knowledge of multiplication and division.</p>	<p><b>Fractions:</b></p> <p>The main context for learning is to give the pupils a deeper understanding of previously learned fractions. This will enable them to extend to more</p>	<p><b>Measurement:</b></p> <p>The main context for learning is to revise and develop pupils' skills with measurement.</p>	<p>Throughout this term, consolidation of problem-solving objectives will take place as well as refinement and development of pupils' reasoning skills.</p>	



<p>knowledge of digits and their value will inform and support their learning of all four operations (+, -, x and+). Pupils will use their understanding of place value to undertake formal written methods and complex concepts.</p> <p>Pupils will build on prior learning from Year 2, by recognising bigger numbers and their place value. Pupils will use greater numbers to compare, order and add/subtract.</p> <p>By the end of this unit, pupils will have a greater understanding of the place value positions of greater numbers.</p> <p><b>Addition and Subtraction:</b> The main context for maths this term is revising, consolidating and building on what pupils have learned in Year2.</p> <p>Pupils will build on prior learning and be able to apply this when solving addition and subtraction problems. They will understand that subtraction is the inverse of addition. They will also be able to understand and correctly set out formal written methods.</p>	<p>Pupils will build on prior learning by increasing their knowledge of key multiplication and division facts.</p> <p>By the end of this unit, they will understand that division is the inverse of multiplication and use this knowledge to perform a range of calculations. They will solve problems and reasoning using this knowledge.</p> <p><b>Geometry - Properties of Shape:</b> They will further develop their understanding of shape by investigating their properties further.</p> <p>By the end of this unit, pupils will have a greater understanding of shape and their features, particularly angles and be able to solve more complex multiplication and division problems using the formal method.</p>	<p>complex calculations and actively make links with multiplication and division. This will be revised using concrete and visual methods initially, then extended to more formal methods as children develop their understanding of fractions.</p> <p>Pupils will build on prior learning by investigating simple fractions and learning to not only recognise them but manipulate them to then solve complex problems.</p> <p>By the end of this unit, pupils will recognise a more complex range of fractions and their equivalent fractions by manipulating them accordingly. They will be able to perform calculations involving fractions which increase in complexity as their knowledge develops.</p> <p><b>Statistics:</b> The main context for learning is to give pupils skills that can be used across the curriculum, particularly science. The skills they learn will enable them to collate, record and interpret data. This will enable them to apply their skills to undertake increasingly complex science experiments and investigations.</p> <p>By the end of this unit, pupils will be able to read and interpret a range of charts as well as collect and present information on their own. They will be confident in undertaking maths investigations and challenges that involve collecting, recording, interpreting and presenting data.</p>	<p>Pupils will explore this topic by using practical apparatus and applying their understanding of measurement in their written work. They will convert between more complex units of measurement and be confident when applying this in real-life contexts.</p> <p>By the end of this unit, pupils will be able to: multiply and divide by 10, 100 and 1000 to convert length, weight and capacity; read and write time on a 12- and 24-hour clock; find the perimeter and area of an object; and convert between different units of time.</p>	<p>Where possible, and cohort depending, there may be opportunities to embark on the next year's curriculum, but this will be decided upon evaluation of assessments which occur in the summer term.</p> <p>Where able, a personalised approach using the information gathered from question-level analysis assessments will be implemented in order to close any gaps which may have occurred throughout the course of the year.</p> <p>Quality first teaching is the best tool for subject knowledge improvement and a variety of teaching resources, teaching support and problems solving activities will occur to ensure this.</p>	
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	
<p><b>Number and Place Value:</b> To compare and order numbers up to 1000. To identify, represent and estimate numbers using different representations. To read and write numbers up to 1000 in numerals and in words.</p>	<p><b>Multiplication and Division:</b> To recall and use multiplication/division facts for the 3-, 4-, and 8-times tables. To write and calculate mathematical statements for multiplication using the multiplication tables they know, including for two-digit numbers times one-digit numbers,</p>	<p><b>Fractions:</b> To recognise, find and write fractions. of a discrete set of objects, unit recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. To recognise and show, using diagrams,</p>	<p><b>Measurement:</b> To measure and compare, length, mass and volume. To measure the perimeter of simple 2d shapes (revision of 2d shapes and properties).</p>	<p><b>Revision of Core Content:</b> To show an emphasis on problem solving contexts, building confidence, clarity and understanding. To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of</p>	<p><b>Revision of Core Content:</b> To show an emphasis on problem solving contexts, building confidence, clarity and understanding. To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of</p>

<p>To count from 0 in multiples of 4, 8, 50 and 100. To find 10 or 100 more or less than a given number.</p> <p><b>Addition and Subtraction:</b> To add numbers mentally, including three-digit number and ones, tens and hundreds. To subtract numbers mentally including three-digit numbers and ones, tens and hundreds. To add numbers with up to three digit using formal written methods of column addition. To subtract numbers with up to three digit using formal written methods of column subtraction. To estimate the answer to a calculation and use inverse operation to check answer. To solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.</p>	<p>using mental and progressing to formal written methods.</p> <p><b>Geometry - Properties of Shape:</b> To draw 2d shapes and make 3D shapes using modelling materials. To recognise 3d shapes in different orientations and describe them. To recognise angles as a property of shape or a description of a turn. To identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn. To identify whether angles are greater than or less than a right angle. To identify horizontal and vertical lines and pairs of parallel/perpendicular lines.</p>	<p>equivalent fractions with small denominators. To add and subtract fractions with the same denominator within one whole number. To compare unit fractions, and fractions with the same denominators. To order unit fractions, and fractions with same denominators. To count on and back in tenths. To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. To solve problems including all of the above.</p> <p><b>Statistics:</b> To interpret and present data using, bar charts, pictograms and tables. To solve one step problems and two step problems using information. presented in a scaled bar chart and pictograms and tables.</p>	<p>To add and subtract amounts of money to give change, using both £ and p in practical contexts. To tell and write the time from analogue clock and 12 hour and 24 hours. To read and use Roman numerals from I to XII. To estimate and read time with increasing accuracy to the nearest minute; use vocabulary such as o' clock, am/pm, morning, afternoon, noon midnight. To know the number of seconds in a minute and the number of days in each month, year and leap year. To compare durations of events.</p>	<p>mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Number and Place Value:</b> To count from 0 in multiples of 4, 8, 50 and 100. To find 10 or 100 more or less than a given number.</p> <p><b>Addition and Subtraction:</b> To add numbers with up to three digit using formal written methods of column addition. To subtract numbers with up to three digit using formal written methods of column subtraction. To solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.</p> <p><b>Multiplication and Division:</b> To recall and use multiplication/division facts for the 3-, 4-, and 8-times tables. To write and calculate mathematical statements for multiplication using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</p>	<p>mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Geometry - Properties of Shape:</b> To recognise 3d shapes in different orientations and describe them. To recognise angles as a property of shape or a description of a turn. To identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn.</p> <p><b>Statistics:</b> To solve one step problems and two step problems using information. presented in a scaled bar chart and pictograms and tables.</p> <p><b>Fractions:</b> To recognise, find and write fractions. of a discrete set of objects, unit recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. To recognise and show, using diagrams, equivalent fractions with small denominators. To solve problems including all of the above.</p> <p><b>Measurement:</b> To measure and compare, length, mass and volume. To measure the perimeter of simple 2d shapes (revision of 2d shapes and properties). To add and subtract amounts of money to give change, using both £ and p in practical contexts. To tell and write the time from analogue clock and 12 hour and 24 hours. To estimate and read time with increasing accuracy to the nearest minute; use vocabulary such as o' clock, am/pm, morning, afternoon, noon midnight.</p>
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**Subject: Mathematics**
**Year group: 4**

Autumn		Spring		Summer	
1	2	1	2	1	2
Overview	Overview	Overview	Overview	Overview	
<p><b>Number and Place Value:</b> This builds on the pupil's prior learning from Year 3 where they learned to: count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number; recognise the place value of each digit in a 3-digit number (100s, 10s, 1s); compare and order numbers up to 1,000; identify, represent, and estimate numbers using different representations; read and write numbers up to 1,000 in numerals and in words; and solve number problems and practical problems involving these ideas.</p> <p>As a result of this unit, the pupils will have a deeper understanding of place value up to the 1000's column. They will also be able to apply this knowledge to support their learning in other areas of the maths curriculum.</p> <p><b>Addition and Subtraction:</b> This builds on the pupil's prior learning from Year 3 where they were taught to add and subtract numbers mentally, including: a three-digit number and 1s; a three-digit number and 10s; a three-digit number and 100s; add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction; estimate the answer to a calculation and use inverse operations to check</p>	<p><b>Geometry – Properties of Shape:</b> This builds on the pupil's prior learning from Year 3 where they were taught to: draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them; recognise angles as a property of shape or a description of a turn; identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle; and identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</p> <p>As a result of this unit, the pupils will be able to compare and classify different triangles and quadrilaterals and be able to identify the several types of angles and identify lines of symmetry.</p> <p><b>Multiplication and Division:</b> This builds on the pupil's prior learning from Year 3 when they were taught to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables; write 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</p>	<p><b>Fractions:</b> This builds on the children's prior learning from Year 3 when they were taught to 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; recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators; recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators; recognise and show, using diagrams, equivalent fractions with small denominators; add and subtract fractions with the same denominator within one whole [for example, <math>5/7 + 1/7 = 6/7</math>]; compare and order unit fractions, and fractions with the same denominators; and solve problems that involve all of the above.</p> <p>As a result of this unit, pupils will be able to recognise the link between multiplication/division and fractions and be able to apply this to solve fraction of quantities; identify equivalent fractions with simple multiples e.g., <math>1/2</math> and <math>2/4</math>; and understand how to add and subtract fractions with the same denominator.</p> <p><b>Statistics:</b></p>	<p><b>Measurement:</b> This builds on the pupil's prior learning from Year 3 when they were taught to measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml); measure the perimeter of simple 2-D shapes; add and subtract amounts of money to give change, using both £ and p in practical contexts; tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks; 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, am/pm, morning, afternoon, noon and midnight; know the number of seconds in a minute and the number of days in each month, year and leap year; and compare durations of events [for example, to calculate the time taken by particular events or tasks].</p> <p>As a result of this unit, pupils will be able to: multiply and divide by 10, 100 and 1000 to convert length, weight, and capacity; read and write time on a 12- and 24-hour clock; find the perimeter and area of an object; and convert between different units of time.</p> <p><b>Geometry – Position and Direction:</b></p>	<p>Throughout this term, consolidation of problem-solving objectives will take place as well as refinement and development of pupils' reasoning skills.</p> <p>Where possible, and cohort depending, there may be opportunities to embark on the next year's curriculum, but this will be decided upon evaluation of assessments which occur in the summer term.</p> <p>Where able, a personalised approach using the information gathered from question-level analysis assessments will be implemented in order to close any gaps which may have occurred throughout the course of the year.</p> <p>Quality first teaching is the best tool for subject knowledge improvement and a variety of teaching resources, teaching support and problems solving activities will occur to ensure this.</p>	



<p>answers; and solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p> <p>As a result of this unit, pupils will be confident at accurately answering addition and subtraction calculation and be able to apply this knowledge to solve more complex word problems.</p>	<p>progressing to formal written methods; and 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.</p> <p>As a result of this unit, pupils will have a deepened knowledge of times tables and be able to apply this to solve short multiplication and division problems.</p>	<p>This builds on the pupil's prior learning from Year 3 when they were taught to: interpret and present data using bar charts, pictograms, and tables; and 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.</p> <p>As a result of this unit, pupils will be able to use data to draw a graph and interpret information from several types of graphs.</p>	<p>This builds on the pupil's prior learning from Year 2 where they were taught to order and arrange combinations of mathematical objects in patterns and sequences and 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).</p> <p>As a result of this unit, the pupils will be able to plot on a quadrant and have a firm understanding of the order in which coordinates are given (along the corridor, up the stairs).</p>		
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown
<p><b>Number and Place Value:</b></p> <p>To count in multiples of 6, 7, 9, 25 and 1000.</p> <p>To find 1000 more or less than a given number.</p> <p>To read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</p> <p>To find 1000 more or less than a given number.</p> <p>To count backwards through zero to include negative numbers.</p> <p>To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</p> <p>To order and compare numbers beyond 1000.</p> <p>To identify, represent, and estimate numbers using different representations.</p> <p>To round any number to the nearest 10, 100 or 1000</p>	<p><b>Geometry – Properties of Shape:</b></p> <p>To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>To identify acute and obtuse angles.</p> <p>To compare and order angles up to two right angles by size.</p> <p>To identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>To complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p><b>Multiplication and Division:</b></p> <p>To recall multiplication facts for multiplication tables up to <math>12 \times 12</math>.</p> <p>To use call division facts for multiplication tables up to <math>12 \times 12</math>.</p> <p>To use place value, known and derived facts to multiply and divide mentally, including multiplying by 0</p>	<p><b>Fractions:</b></p> <p>To recognise and show, using diagrams, families of common equivalent fractions.</p> <p>To count on and back in hundredths, recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</p> <p>To solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</p> <p>To add and subtract fractions with the same denominator and denominators that are multiples of the same number.</p> <p>To add and subtract fractions with the same denominator.</p> <p>To recognise and write decimal equivalents of any number of tenths or hundredths.</p> <p>To recognise and write decimal equivalents to <math>1/4</math>, <math>1/2</math>, <math>3/4</math></p>	<p><b>Measurement:</b></p> <p>To convert between different units of measure (for example, kilometre to metre, hour to minute).</p> <p>To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.</p> <p>To find the area of rectilinear shapes by counting squares.</p> <p>To estimate, compare and calculate different measures, including money in pounds and pence.</p> <p>To read, write, and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>To solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.</p> <p><b>Geometry – Position and Direction:</b></p>	<p><b>Revision of Core Content:</b></p> <p>To show an emphasis on problem solving contexts, building confidence, clarity and understanding.</p> <p>To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Number and Place Value:</b></p> <p>To find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths, and hundredths.</p> <p>To round decimals with one decimal place to the nearest whole number.</p> <p>To compare numbers with the same number of decimal places up to two decimal places.</p>	<p><b>Revision of Core Content:</b></p> <p>To show an emphasis on problem solving contexts, building confidence, clarity and understanding.</p> <p>To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p><b>Fractions (continued):</b></p> <p>To recognise and write decimal equivalents of any number of tenths or hundredths.</p> <p>To recognise and write decimal equivalents to <math>1/4</math>, <math>1/2</math>, <math>3/4</math>.</p> <p><b>Measurement:</b></p>



<p>10) solve number and practical problems that involve all of the above and with increasingly large positive numbers.</p> <p><b>Addition and Subtraction:</b>          To add numbers with up to 4 digits using the formal written methods of columnar addition.          To subtract numbers with up to 4 digits using the formal written methods of columnar subtraction.          To estimate and use inverse operations to check answers to a calculation.          To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>and 1; dividing by 1; multiplying together three numbers.          To recognise and use factor pairs and commutativity in mental calculations.          To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.          To solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</p>	<p>To find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths, and hundredths.          To round decimals with one decimal place to the nearest whole number          To compare numbers with the same number of decimal places up to two decimal places.          To solve simple measure problems involving fractions and decimals to two decimal places.          To solve simple money problems involving fractions and decimals to two decimal places.</p> <p><b>Statistics:</b>          To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.          To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables, and other graphs.</p>	<p>To describe positions on a 2-D grid as coordinates in the first quadrant.          To describe movements between positions as translations of a given unit to the left/right and up/down.          To plot specified points and draw sides to complete a given polygon.</p>	<p><b>Multiplication and Division:</b>          To use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers.          To recognise and use factor pairs and commutativity in mental calculations.          To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.          To solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</p> <p><b>Fractions:</b>          To recognise and show, using diagrams, families of common equivalent fractions.          To count on and back in hundredths, recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.          To solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.          To add and subtract fractions with the same denominator and denominators that are multiples of the same number.          To add and subtract fractions with the same denominator.</p>	<p>To solve simple measure problems involving fractions and decimals to two decimal places.          To solve simple money problems involving fractions and decimals to two decimal places.          To revision of measurement.          To convert between different units of measure [for example, kilometre to metre, hour to minute].          To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.          find the area of rectilinear shapes by counting squares.          To estimate, compare and calculate different measures, including money in pounds and pence.          To read, write, and convert time between analogue and digital 12- and 24-hour clocks.          To solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.</p>
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Subject: Mathematics				Year group: 5	
Autumn		Spring		Summer	
1	2	1	2	1	2
Overview	Overview	Overview	Overview	Overview	
<p><b>Number and Place Value:</b> This builds on pupils' prior learning from Year 4, when pupils had developed an understanding of place value up to the thousand's column.</p> <p>As a result of this unit, pupils will be able to read, write, order and compare numbers up to 1 million, including negative numbers. They will also learn how to round numbers, and this is often taught in real-life contexts.</p> <p><b>Addition and Subtraction:</b> The addition and subtraction unit of study builds on pupils' prior learning in Year 4, where pupils had experience using the formal methods of addition and subtraction. Pupils will have looked at addition and subtraction using chunking methods and partitioning whole number amounts.</p> <p>As a result of the addition and subtraction unit, pupils will be able to progress onto continually using the formal method of column addition and subtraction for solving larger number calculations, negative</p>	<p><b>Multiplication and Division:</b> In this unit of study, pupils will develop their understanding of multiples and factors, recognising and using these in different contexts. They will also learn how to multiply and divide numbers by 10, 100 and 1,000.</p> <p>Children will also learn to identify and use prime, square and cube numbers.</p> <p><b>Statistics:</b> The statistics unit of study builds on pupils prior learning in Year 4 where they began looking at graphs and interpreting information shown. Pupils will have experience of solving one-step and two-step problems related to information presented in graphs.</p> <p>As a result of the statistics unit of study in Year 5, pupils will be able to read and interpret tables (such as bus/train timetables) and line graphs. Pupils will also have the opportunity to collect data and create their own line graphs. This skill will be further developed in science lessons.</p> <p>Learning in this unit of study will include a range of real-life contexts which require pupils to solve problems which may</p>	<p><b>Multiplication and Division:</b> The multiplication and division scheme of work builds on pupils' prior learning in Year 4, when they looked at short multiplication and division.</p> <p>As a result of the multiplication and division unit of study in Year 4, pupils will be able to apply their understanding of short multiplication and division to a variety of contexts in Year 5. They will also learn to multiply increasingly larger numbers using both the grid method and long multiplication. In Year 5, pupils will interpret remainders when dividing.</p> <p>In Year 4, pupils solved a range of word problems, requiring them to decipher which operation was needed. In Year 5, this will continue, requiring pupils to solve word problems which may require all four operations to be used.</p> <p><b>Fractions:</b> In Year 4, pupils learnt to identify and count in tenths and hundredths, to identify equivalent fractions and to add and subtract fractions.</p>	<p><b>Decimals and Percentages:</b> Pupils will have a firm understanding of basic decimals prior to starting this unit, due to learning in previous year groups and constant recapping. In this unit of study, Year 5 pupils will explore decimal numbers in detail. Children will learn to read and write numbers with up to 3 decimal places and they will be able to convert decimals to fractions. Children will also order, compare and round decimal numbers.</p> <p>In this unit of study, pupils will also learn that percent means 'number of parts per 100'. They will learn to understand percentages, using diagrams, and to write percentages as fractions and decimals. They will then apply the skills they have learnt in the context of problem solving, involving fractions, decimals and percentages.</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>	<p><b>Decimals:</b> This unit of study will build on skills and knowledge gained from the Spring 2 unit 'Decimals and Percentages'. Pupils will understand how to add and subtract decimals, and they will practise multiplying and dividing decimals by 10, 100 and 1,000.</p> <p><b>Geometry – Properties of Shapes</b> Pupils will have prior knowledge of shape and the properties associated with 2D and 3D shapes. In Year 4, pupils classified a range of shapes based on their properties (i.e., regular/irregular/types of triangle), and they identified, compared and ordered angles.</p> <p>As a result of the Geometry unit of study in Year 5, pupils will be able to use a protractor to measure angles and they will learn how to accurately draw lines and angles. They will also calculate lengths and angles in shapes. Pupils will know the difference between parallel and perpendicular lines, and they will develop their reasoning skills in relation to 3D shapes.</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>	<p><b>Geometry - Position and Direction</b> In Year 4, pupils explored symmetry inside and outside of shapes and they learnt how to complete symmetric shapes and figures. The Year 5 unit of study follows on from this, so pupils will learn how to reflect and translate shapes in coordinates.</p> <p><b>Measure - Converting Units</b> In Year 4, pupils were exposed to the conversion rules required to navigate from metric and imperial units., as well as between units of time.</p> <p>In Year 5, children will apply their knowledge of place value (and multiplying/dividing by 10, 100 and 1,000) to convert between different units of measurement. Pupils will also solve word problems associated with imperial and metric measurements. As part of this, pupils will consolidate previous learning by working with measurements that have different numbers of decimal places, as well as fractions of units.</p> <p><b>Measure - Volume and Capacity:</b> This unit builds on pupils' prior knowledge and understanding of cubes, cuboids and other solids. It extends children's basic understanding of how to measure/calculate the area of a shape by estimating the space taken up by an object, and the amount of space a container can hold.</p> <p>During this unit of study, pupils will be introduced to the concept of the volume of a 3D shape, then they will learn how to estimate, compare and order capacity.</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>

<p>number and decimal number calculations. They will also learn the most efficient methods to add and subtract numbers mentally.</p> <p>Pupils will apply their learning to solve one-step and two-step addition and subtraction word problems.</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>	<p>require formal methods of addition, subtraction, multiplication and division.</p> <p><b>Measure – Area and Perimeter:</b> In Year 4, pupils learnt how to measure the perimeter of rectangles and rectilinear shapes, and they calculated the area of shapes by counting squares within them. The Year 5 unit of study progresses from this and teaches pupils how to calculate the perimeter and area of a range of shapes. This unit also supports pupils to revise and further understand units of measure (e.g. cm, m etc.).</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>	<p>They applied these skills to solve problems.</p> <p>In Year 5, pupils will further develop their understanding of the correlation between fractions and multiplication and division. They will learn how to convert improper fractions to mixed numbers, and vice versa, and they will compare and order fractions with different denominators. Pupils will add and subtract fractions and use these skills to solve word problems. Finally, they will learn how to multiply fractions and how to find fractions of amounts.</p> <p>Pupils will have exposure to the terminology used throughout the fraction's unit of study, acknowledging the difference between the denominator and the numerator.</p> <p>Throughout the term, pupils will continually recap learning from previous year groups, and they will have daily practice of 'basic maths'.</p>			
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown
<p><b>Number and Place Value:</b> To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. To count forwards or backwards in steps of</p>	<p><b>Multiplication and Division:</b> To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. To know and use the vocabulary of prime numbers,</p>	<p><b>Multiplication and Division:</b> To multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. To divide numbers up to 4 digits by a one-digit number</p>	<p><b>Decimals and Percentages:</b> To read and write decimal numbers as fractions [for example, 0.71 = 71/100]. To recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. To round decimals with 2 decimal places to the nearest</p>	<p><b>Decimals:</b> To add and subtract decimal less than one and greater than one. To add and subtract decimals with different numbers of decimal places. To add and subtract decimal numbers with up to 4 digits from whole numbers. To solve problems that involve adding and subtracting decimals with up to 3 decimal places.</p>	<p><b>Geometry – Position and Direction</b> To identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.</p> <p><b>Measure – Converting Units:</b> To convert between different units of metric measure - length (mm, cm, m, km). To convert between different units of metric measure - weight (mass) (g, kg).</p>

<p>powers of 10 for any given number up to 1 000 000.</p> <p>To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</p> <p>To round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</p> <p>To solve number problems and practical problems that involve all of the above.</p> <p>To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</p> <p><b>Addition and Subtraction:</b></p> <p>To add whole numbers with more than 4 digits, including using formal written methods.</p> <p>To subtract whole numbers with more than 4 digits, including using formal written methods.</p> <p>To add numbers mentally with increasingly large numbers.</p> <p>To subtract numbers mentally with increasingly large numbers.</p> <p>To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p>To solve addition multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>To solve subtraction multi-step problems in contexts, deciding which operations</p>	<p>prime factors and composite (non-prime) numbers.</p> <p>To recall prime numbers up to 19.</p> <p>To multiply whole numbers by 10, 100 and 1000.</p> <p>To divide whole numbers by 10, 100 and 1000.</p> <p>To solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes.</p> <p>To solve problems involving division including using their knowledge of factors and multiples, squares and cubes.</p> <p>To solve problems involving multiplication, including scaling by simple fractions and problems involving simple rates.</p> <p><b>Statistics:</b></p> <p>To solve comparison, sum and difference problems using information presented in a line graph.</p> <p>To complete, read and interpret information in tables, including timetables.</p> <p>To organise and interpret data presented in frequency tables and graphs.</p> <p><b>Measure – Area and Perimeter:</b></p> <p>To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</p> <p>To calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes.</p>	<p>using the formal written method of short division and interpret remainders appropriately for the context.</p> <p>To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign.</p> <p><b>Fractions:</b></p> <p>To compare and order fractions whose denominators are all multiples of the same number.</p> <p>To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p> <p>To recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math>.</p> <p>To add and subtract fractions with the same denominator, and denominators that are multiples of the same number.</p> <p>To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</p>	<p>whole number and to 1 decimal place.</p> <p>To read, write, order and compare numbers with up to 3 decimal places.</p> <p>To solve problems involving number up to 3 decimal places.</p> <p>To recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction.</p> <p>To solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</p>	<p><b>Geometry – Properties of Shapes:</b></p> <p>To identify 3D shapes, including cubes and other cuboids, from 2D representations.</p> <p>To know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</p> <p>To draw given angles and measure them in degrees (°).</p> <p>To identify angles at a point and one whole turn (total 360°).</p> <p>To identify angles at a point on a straight line and a half a turn (total 180°).</p> <p>To identify other multiples of 90°.</p> <p>To use the properties of rectangles to deduce related facts and find missing lengths and angles.</p> <p>To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p>	<p>To convert between different units of metric measure - capacity (ml, l).</p> <p>To understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</p> <p>To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p> <p><b>Measure – Volume and Capacity</b></p> <p>To estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)].</p> <p>To estimate capacity [for example, using water].</p> <p>To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p>
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and methods to use and why.					
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Subject: Mathematics				Year group: 6	
Autumn		Spring		Summer	
1	2	1	2	1	2
Overview	Overview	Overview	Overview	Overview	Overview
<p><b>Number and Place Value:</b> This unit builds on prior learning which has developed over the course of KS2.</p> <p>Pupils read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. They will round any whole number to a required degree of accuracy and use negative numbers in context and calculate intervals across zero.</p> <p>Pupils will also be able to extend their thinking and articulate why an answer is correct or incorrect, using terminology and specific vocabulary in their responses.</p> <p><b>Addition and Subtraction</b> Pupils will solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p><b>Multiplication and Division:</b> Pupils will explore factors, multiples and common multiples. They will build on their understanding of</p>	<p><b>Multiplication and Division:</b> Pupils will solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. They will use their understanding of factors and multiples to multiply and divide larger numbers using formal written methods.</p> <p><b>Fractions:</b> This unit builds on pupils' understanding of fractions from previous years in KS2.</p> <p>This year, they will become fluent at using fractions in calculations by adding, subtracting, multiplying and dividing fractions involving improper fractions, mixed numbers and whole numbers.</p> <p>Pupils will also extend and further their understanding of how to compare, order and sequence a range of fractions with different denominators. As the year progresses, this will develop into ordering a combination of fractions, decimals and percentages with pupils being able to explain their reasoning behind their choices.</p>	<p><b>Decimals, Fractions and Percentages:</b> This topic will build on work the pupils engaged with in Year 5. They will learn that decimals, fractions and percentages are ways of expressing numbers and proportions. Pupils learn decimal notation and the language associated with it, including in the context of measurements.</p> <p><b>Algebra:</b> Pupils will engage in new learning through the topic, Algebra. In this they will approach mathematical problems from a different perspective and learn how to follow specific methods and formulae to reach their answer.</p> <p><b>Measurement:</b> This unit builds upon pupils' understanding of measurement and shape from previous years in KS2. They will extend their understanding of the relationship between various measures by applying these rules to problem-solving and reasoning contexts.</p>	<p><b>Geometry – Shape:</b> In this topic, children will build on their learning in Year 5 to extend their understanding of 2D and 3D shapes. Children will learn the parts of a circle and will be able to classify and compare geometric shapes.</p> <p><b>Statistics:</b> Pupils will extend their understanding of data presentation by learning how to interpret and construct pie charts. They will use their understanding of angles to identify the required angle for each section of the pie chart and will use a protractor to construct them.</p> <p>Pupils will also be introduced to the formula for calculating the mean as an average for a set of data.</p> <p><b>Ratio and Proportion:</b> In this new topic of learning, pupils will extend their understanding of fractions, percentages and decimals to recognise proportionality, solving problems which involve unequal</p>	<p><b>Revision of KS2 coverage in preparation for assessments:</b> Pupils will revise the main components of the KS2 curriculum and will consolidate their understanding by completing a range of problem-solving questions.</p> <p>Pupils will also use all arithmetic skills to complete practice assessments accurately and within a specific time.</p> <p><b>Revision of Core Content:</b> Throughout this term, consolidation of problem-solving objectives will take place as well as refinement and development of pupils' reasoning skills.</p> <p>Where possible, and cohort depending, there may be opportunities to embark on the next year's curriculum, but this will be decided upon evaluation of assessments which occur in the summer term.</p> <p>Where able, a personalised approach using the information gathered from question-level analysis assessments will be implemented in order to close any gaps which may have occurred throughout the course of the year.</p> <p>Quality first teaching is the best tool for subject knowledge improvement and a variety of teaching resources, teaching support and problems solving activities will occur to ensure this.</p>	

<p>square and cube numbers from Year 5.</p> <p>Learning activities will encompass:</p> <ul style="list-style-type: none"> <li>daily basic skills, retrieval practice and arithmetic practice</li> <li>consolidation/revision of formal methods</li> <li>application in problem-solving SATs-style questions</li> <li>Stem sentences to support children to articulate their thinking and reason mathematically.</li> </ul>	<p><b>Geometry – Position and Direction:</b></p> <p>In Geometry, pupils will build upon their understanding of describing translations and reflections from Year 5 and will learn how to accurately translate shapes across all four quadrants.</p>		<p>quantities using knowledge of factors and multiples.</p>		
Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown	Learning Breakdown
<p><b>Number and Place Value:</b></p> <p>To read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.</p> <p>To round any whole number to a required degree of accuracy.</p> <p>To use negative numbers in context and calculate intervals across zero.</p> <p><b>Addition and Subtraction:</b></p> <p>To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p><b>Multiplication and Division:</b></p> <p>Identify common factors, common multiples and prime numbers.</p> <p>Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).</p> <p>To use BIDMAS to understand how to order operations.</p>	<p><b>Multiplication and Division:</b></p> <p>To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.</p> <p>To divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, decimals or by rounding, as appropriate for the context.</p> <p>To divide numbers up to 4 digits by a two-digit number using the formal written method of short division.</p> <p><b>Fractions:</b></p> <p>To use common factors to simplify fractions.</p> <p>To use common multiples to express fractions in the same denomination.</p> <p>To compare and order fractions, including fractions <math>&gt;1</math>.</p> <p>To add and subtract fractions with different denominators and mixed numbers.</p> <p>To use the concept of equivalent fractions, multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g., <math>1/4 \times 1/2 = 1/8</math>).</p>	<p><b>Decimals, fractions and Percentages</b></p> <p>Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.</p> <p>Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>3/8</math>].</p> <p>Multiply one-digit numbers with up to two decimal places by whole numbers.</p> <p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p> <p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p> <p><b>Algebra:</b></p> <p>To generate and describe linear number sequences.</p> <p>To use simple formulae.</p> <p>To express missing number problems algebraically.</p> <p>To find pairs of numbers that satisfy an equation with two unknowns.</p>	<p><b>Geometry - Shape:</b></p> <p>To draw 2D shapes using given dimensions and angles.</p> <p>To recognise, describe and build simple 3D shapes, including making nets.</p> <p>To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilateral and regular polygons.</p> <p>To illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p> <p>To recognise angles, where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p> <p><b>Statistics:</b></p> <p>To interpret and construct pie charts and line graphs and use these to solve problems.</p> <p>To calculate and interpret the mean as an average.</p> <p><b>Ratio and Proportion</b></p>	<p><b>Revision of KS2 coverage in preparation for assessments:</b></p> <p><i>Ensuring quick recall of key facts and fast and efficient application of knowledge in test problem situations.</i></p> <p>Number and Place Value including Roman numerals.</p> <p>Multiplication and Division – particularly with reference from miles to kilometres.</p> <p>Fractions - numerical and pictorial</p> <p>Ratio and Algebra.</p> <p>Measurement and Geometry - including protractor drawing of shapes and angles around a point.</p> <p>Position and Direction – particularly translations, coordinates and missing coordinates.</p> <p>Statistics – including range and mean – interpreting pie charts and percentages of amounts.</p>	<p><b>Revision of Core Content:</b></p> <p>To show an emphasis on problem solving contexts, building confidence, clarity and understanding. To expose children to a range of SATS style questions in preparation for Year 6.</p> <p>To show determination and resilience as pupils continue to revise and build-upon the skills taught. Build-up increasing fluency in the areas of mathematics and focus on challenging areas from curriculum e.g., recap of:</p> <p>To refine problem solving skills in number e.g., perfect squares, prime numbers, perfect cubes, powers, palindromic factors, medians, odd numbers. <a href="https://nrich.maths.org/1887">https://nrich.maths.org/1887</a></p> <p>To use a compass to draw flowers – paying particular attention to symmetry and angle measurements.</p> <p>To complete further revision of n-th terms. <a href="https://nrich.maths.org/1155">https://nrich.maths.org/1155</a> Cube number investigation.</p> <p>To explore probability through problem solving activities <a href="https://nrich.maths.org/5516">https://nrich.maths.org/5516</a> 'It's a tie'.</p>

To divide proper fractions by whole numbers (e.g.,  $\frac{1}{3} \div 2 = \frac{1}{6}$ ).  
To associate a fraction with division and to calculate decimal fraction equivalents (e.g., 0.375) for a simple fraction (e.g.  $\frac{3}{8}$ ).

**Geometry, position and direction**

Describe positions on the full coordinate grid (all four quadrants).  
Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.  
Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

**Measurement:**

To solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.  
To read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.  
To convert between miles and kilometres and recognise that shapes with the same areas can have different perimeters.  
To calculate the area of parallelograms and triangles.  
To calculate, estimate and compare the volume of cubes and cuboids using standard units, including centimetre cubed ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ) and extending to other units, such as  $\text{mm}^3$  and  $\text{km}^3$ .

To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.