



# Maths Progression of Learning Map



RECEPTION Autumn	Autumn					
	Match, sort and compare	Talk about measure and pattern	It's Me 1, 2, 3!	Circles and Triangles	1, 2, 3, 4, 5	Shapes with 4 sides
<p style="text-align: center;"><b>Key Mathematical Concepts</b></p> <p style="text-align: center;"><b>NCETM Areas of Early Mathematics Learning</b></p>	<p><b>Number:</b> Comparison <b>Shape, space and measure:</b> Pattern</p>	<p><b>Number:</b> Comparison <b>Shape, space and measure:</b> Spatial awareness <b>Shape, space and measure:</b> Pattern <b>Shape, space and measure:</b> Measure</p>	<p><b>Number:</b> Comparison <b>Number:</b> Counting <b>Number:</b> Cardinality <b>Number:</b> Composition</p>	<p><b>Shape, space and measure:</b> Spatial awareness <b>Shape, space and measure:</b> Shape</p>	<p><b>Number:</b> Comparison <b>Number:</b> Counting <b>Number:</b> Cardinality <b>Number:</b> Composition</p>	<p><b>Shape, space and measure:</b> Shape <b>Shape, space and measure:</b> Measure</p>
<b>Small Stems</b>	<ol style="list-style-type: none"> <li>1) Match objects</li> <li>2) Match pictures and objects</li> <li>3) Identify a set</li> <li>4) Sort objects to a type</li> <li>5) Explore sorting techniques</li> <li>6) Create sorting rules</li> <li>7) Compare amounts</li> </ol>	<ol style="list-style-type: none"> <li>1) Compare size</li> <li>2) Compare mass</li> <li>3) Compare capacity</li> <li>4) Explore simple patterns</li> <li>5) Copy and continue simple patterns</li> <li>6) Create simple patterns</li> </ol>	<ol style="list-style-type: none"> <li>1) Find 1, 2 and 3</li> <li>2) Subitise 1, 2 and 3</li> <li>3) Represent 1, 2 and 3</li> <li>4) 1 more</li> <li>5) 1 less</li> <li>6) Composition of 1, 2 and 3</li> </ol>	<ol style="list-style-type: none"> <li>1) Identify and name circles and triangles</li> <li>2) Compare circles and triangles</li> <li>3) Shapes in the environment</li> <li>4) Describe position</li> </ol>	<ol style="list-style-type: none"> <li>1) Find 4 and 5</li> <li>2) Subitise 4 and 5</li> <li>3) Represent 4 and 5</li> <li>4) 1 more</li> <li>5) 1 less</li> <li>6) Composition of 4 and 5</li> <li>7) Composition of 1-5</li> </ol>	<ol style="list-style-type: none"> <li>1) Identify and name shapes with 4 sides</li> <li>2) Combine shapes with 4 sides</li> <li>3) Shapes in the environment</li> <li>4) My day and night</li> </ol>
<p style="text-align: center;"><b>Curriculum Links:</b></p> <p><b>- Development Matters</b></p> <p><b>- DFE Statutory Framework for EYFS – Early Learning Goals</b></p> <p><b>- Educational Programme for Mathematics</b></p>	<p><b><u>Development Matters Reception</u></b> - Compare numbers.</p> <p><b><u>Birth to 5 Matters Range 5</u></b> - Compares two small groups of up to five objects, saying when there are the same number of objects in each group.</p> <p><b><u>Range 6</u></b> - Spots patterns in the environment, beginning to identify the pattern “rule”.</p> <p><b><u>WRM Rationale</u></b> - Matching is a simple form of sorting and is the beginning of logical</p>	<p><b><u>Development Matters 3 and 4-year-olds</u></b> - Make comparisons between objects relating to size, length, weight and capacity. - Talk about and identify the patterns around them.</p> <p><b><u>Reception</u></b> - Continue, copy and create repeating patterns.</p> <p><b><u>Birth to 5 Matters Range 4</u></b> - Explores differences in size, length, weight and capacity.</p> <p><b><u>Range 5</u></b> - In meaningful contexts, finds the longer or shorter,</p>	<p><b><u>Development Matters Reception</u></b> - Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. - Subitise - Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. - Understand the ‘one more than/one less than’ relationship between consecutive numbers. - Explore the composition of numbers to 10.</p> <p><b><u>Birth to 5 Matters</u></b></p>	<p><b><u>Development Matters 3 and 4-year-olds</u></b> - Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. - Describe a familiar route. - Discuss routes and locations, using words like ‘in front of’ and ‘behind’.</p> <p><b><u>Birth to 5 Matters Range 5</u></b> - Responds to and uses language of position and direction.</p> <p><b><u>Range 6</u></b></p>	<p><b><u>Development Matters Reception</u></b> - Link the number symbol (numeral) with its cardinal number value. - Subitise - Count objects, actions and sounds. - Understand the ‘one more than/one less than’ relationship between consecutive numbers. - Explore the composition of numbers to 10.</p> <p><b><u>Birth to 5 Matters Range 5</u></b> - Points or touches (tags) each item, saying one number for each item,</p>	<p><b><u>Development Matters 3 and 4-year-olds</u></b> - Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language. - Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’</p> <p><b><u>Reception</u></b> - Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</p> <p><b><u>Birth to 5 Matters</u></b></p>

## Maths Progression of Learning Map



	<p>thinking. Through matching, children learn one-to-one correspondence.</p> <ul style="list-style-type: none"> <li>- Matching objects to pictures develops children's understanding that objects can be represented by pictures.</li> <li>- Identifying and making sets is a precursor to counting. Children need this for the basis of the counting principles of cardinality and one-to-one correspondence.</li> <li>- When children sort objects, they are learning that some things are alike, and some are different. Early experiences of sorting objects into groups according to their similarities helps children to learn how to categorise and is a precursor to classifying</li> </ul>	<p>heavier or lighter and more/ less full of two items.</p> <ul style="list-style-type: none"> <li>- Explores and adds to simple linear patterns of two or three repeating items.</li> <li>- Joins in with simple patterns in sounds, objects, games and stories, dance and movement, predicting what comes next.</li> <li>- Creates their own spatial patterns showing some organisation or regularity.</li> </ul>	<p><b>Range 5</b></p> <ul style="list-style-type: none"> <li>- Links numerals with amounts up to 5 and maybe beyond.</li> <li>- Subitises one, two and three objects (without counting).</li> <li>- Beginning to recognise that each counting number is one more than the one before.</li> <li>- Positive relationships – Emphasise the one more, one less pattern in rhymes and traditional tales, asking children to predict the next number.</li> <li>- Separates a group of three or four objects in different ways, beginning to recognise that the total is the same.</li> </ul>	<ul style="list-style-type: none"> <li>- Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes.</li> </ul>	<p>using the stable order of 1, 2, 3, 4, 5.</p> <ul style="list-style-type: none"> <li>- Links numerals with amounts up to 5 and maybe beyond.</li> <li>- Beginning to recognise that each counting number is one more than the one before.</li> <li>- Positive relationships – Emphasise the one more, one less pattern in rhymes and traditional tales, asking children to predict the next number.</li> </ul> <p><b>Range 6</b></p> <ul style="list-style-type: none"> <li>- Engages in subitising numbers to four and maybe five.</li> <li>- Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects.</li> </ul>	<p><b>Range 5</b></p> <ul style="list-style-type: none"> <li>- Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes.</li> <li>- Shows awareness of shape similarities and differences between objects.</li> </ul> <p><b>Range 6</b></p> <ul style="list-style-type: none"> <li>- Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes.</li> <li>- Is increasingly able to order and sequence events using everyday language related to time.</li> </ul>
--	---	---	--	---	--	--

Spring						
RECEPTION Spring	Alive in 5	Mass and capacity	Growing 6, 7, 8	Length, height and time	Building 9 and 10	Explore 3D shapes
<p><b>Key Mathematical Concepts</b></p> <p><b>NCETM Areas of Early Mathematics Learning_</b></p>	<p><b>Number:</b> Comparison  <b>Number:</b> Counting  <b>Number:</b> Cardinality  <b>Number:</b> Composition</p>	<p><b>Shape, space and measure:</b>                      Measure</p>	<p><b>Number:</b> Comparison  <b>Number:</b> Counting  <b>Number:</b> Cardinality  <b>Number:</b> Composition  <b>Shape, space and measure:</b>                      Spatial awareness</p>	<p><b>Number:</b> Comparison  <b>Shape, space and measure:</b>                      Measure</p>	<p><b>Number:</b> Comparison  <b>Number:</b> Counting  <b>Number:</b> Cardinality  <b>Number:</b> Composition</p>	<p><b>Shape, space and measure:</b>                      Spatial awareness  <b>Shape, space and measure:</b>                      Shape  <b>Shape, space and measure:</b>                      Pattern</p>
<b>Small Stems</b>	<ol style="list-style-type: none"> <li>1) Introduce zero</li> <li>2) Find 0 to 5</li> <li>3) Subitise 0 to 5</li> </ol>	<ol style="list-style-type: none"> <li>1) Compare mass</li> <li>2) Find a balance</li> <li>3) Explore capacity</li> </ol>	<ol style="list-style-type: none"> <li>1) Find 6, 7 and 8</li> <li>2) Represent 6, 7 and 8</li> <li>3) 1 more</li> </ol>	<ol style="list-style-type: none"> <li>1) Explore length</li> <li>2) Compare length</li> <li>3) Explore height</li> </ol>	<ol style="list-style-type: none"> <li>1) Find 9 and 10</li> <li>2) Compare numbers to 10</li> </ol>	<ol style="list-style-type: none"> <li>1) Recognise and name 3D shapes</li> </ol>

## Maths Progression of Learning Map



	4) Represent 0 to 5 5) 1 more 6) 1 less 7) Composition 8) Conceptual subitising to 5	4) Compare capacity	4) 1 less 5) Composition of 6,7 and 8 6) Make pairs – odd and even 7) Double to 8 (find a double) 8) Double to 8 (make a double) 9) Combine 2 groups 10) Conceptual subitising	4) Compare height 5) Talk about time 6) Order and sequence time	3) Represent 9 and 10 4) Conceptual subitising to 10 5) 1 more 6) 1 less 7) Composition to 10 8) Bonds to 10 (2 parts) 9) Make arrangements of 10 10) Bonds to 10 (3 parts) 11) Doubles to 10 (find a double) 12) Doubles to 10 (make a double) 13) Explore even and odd	2) Find 2D shapes within 3D shapes 3) Use 3D shapes for tasks 4) 3D shapes in the environment 5) Identify more complex patterns 6) Copy and continue patterns 7) Patterns in the environment
<b>Curriculum Links:</b>  - Development Matters  - DFE Statutory Framework for EYFS – Early Learning Goals  - Educational Programme for Mathematics	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -	<u>Development Matters</u> 3 and 4-year-olds - Reception -  <u>Birth to 5 Matters</u> Range 5 - Range 6 -
<b>RECEPTION</b> Summer	Summer					
	<b>To 20 and beyond</b>	<b>How many now?</b>	<b>Manipulate, compose and decompose</b>	<b>Sharing and grouping</b>	<b>Visualise, build and map</b>	<b>Make connections</b>
<b>Key Mathematical Concepts</b>  NCETM Areas of Early	Number: Comparison Number: Counting	Number: Comparison Number: Cardinality Number: Composition	Shape, space and measure: Spatial awareness Shape, space and measure: Shape	Number: Comparison Number: Cardinality Number: Composition	Shape, space and measure: Spatial awareness Shape, space and measure: Shape Shape, space and measure: Pattern Shape, space and measure: Measure	Number: Comparison Number: Counting Number: Cardinality Number: Composition Shape, space and measure: Measure

## Maths Progression of Learning Map



Mathematics Learning						
<b>Small Stems</b>	<ol style="list-style-type: none"> <li>1) Build numbers beyond 10 (10-13)</li> <li>2) Continue patterns beyond 10 (10-13)</li> <li>3) Build numbers beyond 10 (14-20)</li> <li>4) Continue patterns beyond 10 (14-20)</li> <li>5) Verbal counting beyond 20</li> <li>6) Verbal counting patterns</li> </ol>	<ol style="list-style-type: none"> <li>1) Add more</li> <li>2) How many did I add?</li> <li>3) Take away</li> <li>4) How many did I take away?</li> </ol>	<ol style="list-style-type: none"> <li>1) Select shapes for a purpose</li> <li>2) Rotate shapes</li> <li>3) Manipulate shapes</li> <li>4) Explain shape arrangements</li> <li>5) Compose shapes</li> <li>6) Decompose shapes</li> <li>7) Copy 2D shape pictures</li> <li>8) Find 2D shapes within 3D shapes</li> </ol>	<ol style="list-style-type: none"> <li>1) Explore sharing</li> <li>2) Sharing</li> <li>3) Explore grouping</li> <li>4) Grouping</li> <li>5) Even and odd sharing</li> <li>6) Play with and build doubles</li> </ol>	<ol style="list-style-type: none"> <li>1) Identify units of repeating patterns</li> <li>2) Create own pattern rules</li> <li>3) Explore own pattern rules</li> <li>4) Replicate and build scenes and constructions</li> <li>5) Visualise from different positions</li> <li>6) Describe positions</li> <li>7) Give instructions to build</li> <li>8) Explore mapping</li> <li>9) Represent maps with models</li> <li>10) Create own maps from familiar places</li> <li>11) Create own maps and plans from story situations</li> </ol>	<ol style="list-style-type: none"> <li>1) Deepen understanding</li> <li>2) Patterns and relationships</li> </ol>
<p style="text-align: center;"><b>Curriculum Links:</b></p> <p>- Development Matters</p> <p>- DFE Statutory Framework for EYFS – Early Learning Goals</p> <p>- Educational Programme for Mathematics</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>	<p><u>Development Matters</u> 3 and 4-year-olds</p> <p>-</p> <p>Reception</p> <p>-</p> <p><u>Birth to 5 Matters</u> Range 5</p> <p>-</p> <p>Range 6</p> <p>-</p>
<b>YEAR 1</b> Autumn	<b>Autumn</b>					
	Number: Place value (within 10)	Number: Addition and subtraction (within 10)		Geometry: Shape		

## Maths Progression of Learning Map



<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Count forwards and backwards within 10</li> <li>Compare objects and numbers</li> <li>Order objects and numbers</li> </ul>	<ul style="list-style-type: none"> <li>Number bonds within 10 and to 10</li> <li>Addition +</li> <li>Subtraction -</li> <li>Fact families involving addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>Recognise, name and sort:                             <ul style="list-style-type: none"> <li>- 3D shapes</li> <li>- 2D shapes</li> </ul> </li> <li>Recognise, describe and make patterns</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> <li>Count to and across 100, forwards and backwards, beginning with zero or 1, from any given number</li> <li>Compare numbers using <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs</li> <li>Read and write numerals from 1 to 20 in numerals and words</li> </ul>	<ul style="list-style-type: none"> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer)</li> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>Represent and use number bonds and related subtraction facts within 20</li> <li>Add and subtract 1-digit and 2-digit numbers to 20, including zero</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]; 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</li> </ul>
<b>Ready to Progress Criteria</b>	1NPV-1 Count within 100, forwards and backwards, starting with any number. 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$	1NF-1 Develop fluency in addition and subtraction facts within 10 1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. 1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. 1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.
<b>Key Vocabulary</b>	digit, number, greater than $>$ , less than $<$ , equal to $=$ , match, order, compare, most, least, fewer, value, one less, one more, count back, count on	add +, subtract -, total, plus, part, whole, how many?, first, then, now, partition, number sentence, add more, take away, count on, count all, count back	square, rectangle, triangle, circle, 2D shape, 3D shape, face, pattern, repeat, curved, flat, cone, pyramid, cylinder, cuboid, sphere, cube
<b>Key Representations</b>	ten frames, number tracks, numicon, number lines	ten frames, part-whole models, number tracks, number lines, cubes	shapes, everyday objects, sorting diagrams

<b>YEAR 1 Spring</b>	<b>Spring</b>				
	<b>Number: Place value (within 20)</b>	<b>Number: Addition and subtraction (within 20)</b>	<b>Number: Place value (within 50)</b>	<b>Measurement: Length and height</b>	<b>Measurement: Mass and volume</b>
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Count and understand numbers within 20</li> <li>Extend the number line to 20</li> <li>Compare and order objects and numbers within 20</li> </ul>	<ul style="list-style-type: none"> <li>Addition                             <ul style="list-style-type: none"> <li>- Counting on</li> <li>- Number bonds</li> <li>- Doubles and near doubles</li> </ul> </li> <li>Subtraction                             <ul style="list-style-type: none"> <li>- Counting back</li> <li>- Difference</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Understand numbers to 50</li> <li>Unitise in 10s</li> <li>Partition numbers into 10s and 1s</li> </ul>	<ul style="list-style-type: none"> <li>Compare lengths and heights</li> <li>Measure lengths                             <ul style="list-style-type: none"> <li>- Non-standard units</li> <li>- Standard units of measure (cm)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Mass                             <ul style="list-style-type: none"> <li>- Measure</li> <li>- Compare</li> </ul> </li> <li>Volume                             <ul style="list-style-type: none"> <li>- Measure</li> <li>- Compare</li> </ul> </li> </ul>

## Maths Progression of Learning Map



		<ul style="list-style-type: none"> <li>Missing number problems</li> </ul>			
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number</li> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> <li>Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</li> <li>Read and write numbers from 1 to 20 in numerals and words</li> <li>Given a number, identify 1 more and 1 less</li> </ul>	<ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>Add and subtract 1-digit and 2-digit numbers to 20, including zero</li> <li>Represent and use number bonds and related subtraction facts within 20</li> <li>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = ? - 9</math></li> </ul>	<ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number</li> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> <li>Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</li> <li>Given a number, identify 1 more and 1 less</li> </ul>	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for: lengths and height; mass/weight; capacity and volume; time</li> <li>Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time</li> </ul>	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for: lengths and height; mass/weight; capacity and volume; time</li> <li>Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time</li> </ul>
<b>Ready to Progress Criteria</b>	<p>1NPV-1 Count within 100, forwards and backwards, starting with any number.</p> <p>1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using <math>&lt;</math> <math>&gt;</math> and <math>=</math></p>	<p>1NF-1 Develop fluency in addition and subtraction facts within 10</p> <p>1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</p>	<p>1NPV-1 Count within 100, forwards and backwards, starting with any number.</p> <p>1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using <math>&lt;</math> <math>&gt;</math> and <math>=</math></p>	<p>1NPV-2: Reason about the location of numbers to 20 within the linear number system, including comparing using <math>&lt;</math> <math>&gt;</math> and <math>=</math></p>	
<b>Key Vocabulary</b>	tens, ones, exchange, greater than $>$ , less than $<$ , equal to $=$ , compare, least, digit, fewer, number, count on, count back, compare, one less, value, one less, one more, order, match, most	how many are not?, count back, count on, how many more?, total, whole, part, difference, partition, number bond, add $+$ , subtract $-$ , first, then, now	less than $<$ , equal to $=$ , greater than $>$ , count on, count back, tens, ones, thirty-eight (38), order, compare, partition	compare, length, longest, tall, shortest, tallest, height, equal, measure, unit, ruler, centimetre (cm)	weigh, heavier, heaviest, half full, lightest, lighter, mass, capacity, volume, balanced
<b>Key Representations</b>	ten frames, part-whole models, base 10, number tracks, number lines	ten frames, part-whole models, bar models, base 10, number tracks, number lines	ten frames, base 10, number tracks, number lines, part-whole models, straws, half a hundred square	Non-standard units of measure: cubes, straws, hands Standard units of measure: ruler	balance scales, cubes, blocks, counters, pencils, containers

### Summer

<b>YEAR 1</b> Summer	<b>Summer</b>					
	<b>Number: Multiplication &amp; division</b>	<b>Number: Fractions</b>	<b>Geometry: Position &amp; direction</b>	<b>Number: Place value (within 100)</b>	<b>Measurement: Money</b>	<b>Measurement: Time</b>

## Maths Progression of Learning Map



<p style="text-align: center;"><b>Key Mathematical Concepts</b></p>	<ul style="list-style-type: none"> <li>Count in 10s</li> <li>Equal groups</li> <li>Arrays</li> <li>Doubles</li> <li>Grouping and sharing</li> </ul>	<ul style="list-style-type: none"> <li>Explore a half</li> <li>Explore a quarter</li> </ul>	<ul style="list-style-type: none"> <li>Describe turns</li> <li>Describe position</li> <li>Ordinal numbers</li> </ul>	<ul style="list-style-type: none"> <li>Count and understand numbers within 20</li> <li>Extend the number line to 20</li> <li>Compare and order objects and numbers within 20</li> </ul>	<ul style="list-style-type: none"> <li>Recognise coins</li> <li>Recognise notes</li> <li>Count in coins</li> </ul>	<ul style="list-style-type: none"> <li>Before and after</li> <li>Tell the time – o'clock and half hour</li> <li>Units of time                             <ul style="list-style-type: none"> <li>- Days</li> <li>- Weeks</li> <li>- Months</li> <li>- Years</li> </ul> </li> </ul>
<p style="text-align: center;"><b>National Curriculum Objectives</b></p>	<p>- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>- Solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher</p>	<p>- Recognise, find and name a half as one of two equal parts of an object, shape or quantity</p>	<p>- Describe position, direction and movement, including whole, half, quarter and three-quarter turns</p> <p>- Use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside (non-statutory guidance)</p> <p>- Practise counting (1, 2, 3...), ordering (for example, 1st, 2nd, 3rd ...) (non-statutory guidance)</p>	<p>- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number</p> <p>- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</p>	<p>- Recognise and know the value of different denominations of coins and notes</p> <p>- Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p>	<p>- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</p> <p>- Recognise and use language relating to dates, including days of the week, weeks, months and years</p> <p>- Compare, describe and solve practical problems for time</p> <p>- Measure and begin to record time (hours, minutes, seconds)</p> <p>- Tell the time to the hour and half past the hour and draw the hands on a clockface to show these times</p>
<p style="text-align: center;"><b>Ready to Progress Criteria</b></p>	<p>1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.</p>			<p>1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.</p> <p>1NPV-1 Count within 100, forwards and backwards, starting with any number.</p>	<p>1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.</p>	



## Maths Progression of Learning Map

YEAR 2 Autumn	Autumn					
Key Mathematical Concepts	Number: Place Value	Number: Addition and Subtraction	Geometry: Shape			
<b>Key Vocabulary</b>	equal, group, count, share, double, equally, unequal, array, column, row	share, equal, unequal, whole, part, half, quarter	Directional language - full turn, half turn, quarter turn, three-quarter turn, left, backwards, up, forwards, down, right Positional language – left, right, up, down, forwards, backwards, above, below, under, over, between, first, second, third, fourth	greater than >, less than <, equal to =, count on, count back, 1 less, 1 more, order, compare, partition, ones, tens	greater than >, less than <, money, pound £, pence p, worth, notes, value, coins	tens, ones, exchange, greater than >, less than <, equal to =, compare, least, digit, fewer, number, count on, count back, compare, one less, value, one less, one more, order, match, most
<b>Key Representations</b>	arrays, real life objects, rekenrek, half a hundred square	shapes, everyday objects, numicon, arrays, counters and straws	shapes, numicon, grids, hands – left, right	part-whole models, base 10, number tracks, number lines, place value chart, hundred square	pre-money tokens, play coins and notes	number lines, analogue clocks, calendars
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>- Read and write numbers from 1 to 20 in numerals and words (Y1)</li> <li>- Read and write numbers to at least 100 in numerals and in words</li> <li>- Identify, represent and estimate numbers using different representations, including the number line</li> <li>- Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward</li> <li>- Recognise the place value of each digit in a 2-digit number (tens, ones)</li> <li>- Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> </ul>	<ul style="list-style-type: none"> <li>- Represent and use number bonds and related subtraction facts within 20 (Y1)</li> <li>- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit number and 1s, a 2-digit number and 10s, two 2-digit numbers and adding three 1-digit numbers</li> <li>- Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> </ul>	<ul style="list-style-type: none"> <li>- Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line</li> <li>- Compare and sort common 2-D and 3-D shapes and everyday objects</li> <li>- Identify 2-D shapes on the surface of 3-D shapes</li> <li>- Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> </ul>			
<b>Ready to Progress Criteria</b>	2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. 2NPV-2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10	2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice. 2AS-1 Add and subtract across 10 2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.	2G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.			



## Maths Progression of Learning Map



		2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	
<b>Key Vocabulary</b>	digit, number, is greater than >, is less than <, is equal to =, less, more, count, numerals, greatest, least, fewer	number bonds, plus, difference, minus, altogether, subtract, column, total, reduce, increase, ones, tens, take away, more, sum, add, number sentence, how many less?, how many more?	2D, 3D, prism, pyramid, polygon, quadrilateral, square, sphere, circle, vertex, vertical, sides, curved surface, face, edge, surface
<b>Key Representations</b>	place value charts, part-whole models, number lines, base 10	ten frames, part-whole models, rekenrek, bar models, place value charts, base 10, number lines	shapes, everyday objects, geoboards, isometric paper, lolly sticks, squared paper

YEAR 2 Spring	Spring			
	Measurement: Money	Number: Multiplication and division	Measurement: Length and height	Measurement: Mass, capacity and temperature
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Count money</li> <li>Compare money</li> <li>Add and subtract money</li> <li>Two-step money problems</li> </ul>	<ul style="list-style-type: none"> <li>Equal groups</li> <li>Arrays</li> <li>2, 5, 10 times tables                             <ul style="list-style-type: none"> <li>Odd and even numbers (2 times-table)</li> <li>Doubling and halving</li> </ul> </li> <li>Division                             <ul style="list-style-type: none"> <li>Grouping</li> <li>Sharing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Measure using standard units of length (centimetres and metres)</li> <li>Read scales</li> <li>Compare and order lengths</li> <li>Problem solving</li> </ul>	<ul style="list-style-type: none"> <li>Measure mass (g and kg)</li> <li>Measure capacity (ml and l)</li> <li>Compare measurements</li> <li>Temperature (°C)</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <li>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</li> </ul>	<ul style="list-style-type: none"> <li>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</li> <li>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> </ul>	<ul style="list-style-type: none"> <li>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels</li> <li>Compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> <li>Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.</li> <li>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and</li> </ul>	<ul style="list-style-type: none"> <li>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels</li> <li>Compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> </ul>



## Maths Progression of Learning Map



			multiplication and division facts, including problems in contexts	
<b>Ready to Progress Criteria</b>	2AS-2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?". 2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).	2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.
<b>Key Vocabulary</b>	pence (p), pounds (£), notes, coins, money, difference, amount, buy, left, change, value, how much?	multiplication, column, equal groups, lots of, rows, total, equal parts, unequal parts, times-table, array, times x, __ times as many/heavy, divide, division	taller, length, equal to, shorter, measurement, height, longer, distance, centimetre (cm), metre (m)	volume, kilograms kg, mass, equal to, capacity, heavier than, millilitres ml, grams g, lighter than, litres l, weigh, balanced, degrees centigrade °C
<b>Key Representations</b>	pretend notes and coins, part-whole model, bar models, strips of paper	arrays, counters, bar models, number lines	everyday objects, number lines in contexts – tape measure, ruler, metre rule	number lines in context – thermometer, scale, jugs balance scales and masses
<b>YEAR 2 Summer</b>	<b>Summer</b>			
	<b>Number: Fractions</b>	<b>Measurement: Time</b>	<b>Statistics</b>	<b>Geometry: Position and direction</b>
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>• Make and recognise equal and unequal parts</li> <li>• Recognise and find a half, a quarter and a third</li> <li>• Find a whole from a given part</li> <li>• Recognise and find non-unit fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Quarter past and quarter to the hour</li> <li>• Tell the time to 5 minutes</li> <li>• Understand units of time: minutes, hours and days</li> </ul>	<ul style="list-style-type: none"> <li>• Tally charts</li> <li>• Pictograms</li> <li>• Block diagrams</li> </ul>	<ul style="list-style-type: none"> <li>• Describe movement</li> <li>• Describe turns</li> <li>• Create and describe shape and patterns</li> </ul>
<b>National Curriculum Objectives</b>	<p>- Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</p> <p>- Write simple fractions, for example <math>\frac{1}{2}</math> of <math>6 = 3</math> and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></p>	<p>- Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clockface to show these times</p> <p>- Know the number of minutes in an hour and the number of hours in a day</p>	<p>- Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p>	<p>- 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 anticlockwise)</p>

## Maths Progression of Learning Map



			<ul style="list-style-type: none"> <li>- Ask and answer questions about totalling and comparing categorical data</li> <li>- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> </ul>	
<b>Ready to Progress Criteria</b>		2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	2MD-1: Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	
<b>Key Vocabulary</b>	equal to, dividing by, grouping, parts, sharing, whole, half $\frac{1}{2}$ , third $\frac{1}{3}$ , quarter $\frac{1}{4}$ , unit fraction $\frac{1}{3}$ , non-unit fraction $\frac{2}{3}$ , denominator, numerator	minute, hour, day, o'clock, analogue, half past, intervals, quarter past, quarter to, 10 minutes past 6, 25 minutes to 1	horizontal, vertical, tally , tally chart, pictogram, block diagram, key, table	Positional language – over, up, beneath, forwards, under, left, beside, right, backwards, down Directional language – forwards, backwards, up, down, left, right, full turn, half turn, quarter turn, three-quarter turn, clockwise, anticlockwise
<b>Key Representations</b>	paper strips, bar models, shapes, counters	analogue clocks, double number lines	tally charts, block diagrams, pictograms	grids, 2-D shapes

<b>YEAR 3</b> Autumn	<b>Autumn</b>			
	<b>Number: Place Value</b>	<b>Number: Addition and Subtraction</b>	<b>Number: Multiplication and Division A</b>	
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>• To understand and represent whole numbers up to 1,000</li> <li>• Flexibly partition 3-digit numbers in a range of ways</li> <li>• Position 3-digit numbers on different number lines</li> <li>• Compare and order 3-digit numbers up to 1,000</li> </ul>	<ul style="list-style-type: none"> <li>• Mental methods when adding 1s, 10s and 100s</li> <li>• Mental methods when subtracting 1s, 10s and 100s</li> <li>• Written addition and subtraction formal methods up to 3-digits                             <ul style="list-style-type: none"> <li>- no exchange</li> <li>- one or more exchange</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The structures of multiplication</li> <li>• The structures of division</li> <li>• The 2, 4 and 8 times-tables</li> </ul>	
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>- Identify, represent and estimate numbers using different representations</li> <li>- Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones)</li> <li>- Count from zero in multiples of 4, 8, 50 and 100</li> <li>- Find 10 or 100 more or less than a given number</li> <li>- Read and write numbers up to 1,000 in numerals and words</li> <li>- Compare and order numbers up to 1,000</li> </ul>	<ul style="list-style-type: none"> <li>- Add and subtract numbers mentally, including: a 3-digit number and ones; a 3-digit number and tens; a 3-digit number and hundreds</li> <li>- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</li> <li>- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> <li>- Estimate the answer to a calculation and use inverse operations to check answers</li> </ul>	<ul style="list-style-type: none"> <li>- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods</li> <li>- Show that multiplication of two numbers can be done in any order (commutative) and division on one number by another cannot (Y2)</li> <li>- Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward (Y2)</li> </ul>	

## Maths Progression of Learning Map



			<ul style="list-style-type: none"> <li>- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2)</li> <li>- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> </ul>	
<b>Ready to Progress Criteria</b>	<p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10</p> <p>3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10</p> <p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>	<p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10</p> <p>3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p> <p>3AS-1 Calculate complements to 100</p> <p>3AS-2 Add and subtract up to three-digit numbers using columnar methods.</p> <p>3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.</p>	<p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10</p> <p>3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.</p> <p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>	
<b>Key Vocabulary</b>	place value, ones (1s), tens (10s), hundreds (100s), exchange, partition, equal to (=), greater than (>), less than (<)	ones (1s), tens (10s), hundreds (100s), add, subtract, exchange, partition, column method, inverse, equal to (=), greater than (>), less than (<), fewer, altogether	product, multiple, times, multiply, array, times-table, groups of, lots of, divide, grouping, sharing	
<b>Key Representations</b>	base 10, place value chart arrow cards, place value charts, counters, part-whole models, number lines	place value charts, counters, base 10, number lines, part-whole models	number lines, bar models, arrays, hundred squares	
<b>YEAR 3 Spring</b>	<b>Spring</b>			
	<b>Number: Multiplication and division B</b>	<b>Measurement: Length and perimeter</b>	<b>Number: Fractions A</b>	<b>Measurement: Mass and capacity</b>
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>• Multiply and divide with multiples of 10</li> <li>• Multiply a 2-digit number by a 1-digit number</li> <li>• Divide a 2-digit number by a 1-digit number</li> </ul>	<ul style="list-style-type: none"> <li>• Measure in millimetres, centimetres and metres</li> <li>• Equivalent lengths</li> <li>• Add and subtract lengths</li> <li>• Calculate and measure perimeter</li> </ul>	<ul style="list-style-type: none"> <li>• Role of denominator and numerator</li> <li>• Compare and order fractions</li> <li>• Fractions on a number line</li> <li>• Equivalent fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Measure mass and capacity</li> <li>• Equivalence in mass (g and kg) and capacity (ml and l)</li> <li>• Add and subtract units of measure</li> </ul>



## Maths Progression of Learning Map



<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>- Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2)</li> <li>- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods</li> <li>- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</li> </ul>	<ul style="list-style-type: none"> <li>- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>- Measure the perimeter of simple 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>- Compare and order unit fractions, and fractions with the same denominators</li> <li>- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>- Recognise and show, using diagrams, equivalent fractions with small denominators</li> </ul>	<ul style="list-style-type: none"> <li>- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> </ul>
<b>Ready to Progress Criteria</b>	<p>3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p> <p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>	<p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10</p> <p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>	<p>3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p> <p>3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.</p> <p>3F-3 Reason about the location of any fraction within 1 in the linear number system.</p>	
<b>Key Vocabulary</b>	times, grouping, hundreds, multiply, times-table, digits, array, partition, divide, ones, sharing, tens, exchanging, lots of, groups of	centimetres (cm), greater than >, height, length, compare, ruler, equal to =, less than <, measure, metres (m), equivalent, convert, millimetres (mm), perimeter	unit fraction, less than <, half, denominator, third, greater than >, non-unit fraction, whole, quarter, equal to =, numerator, fifth, sixth, seventh, eighth, equivalent	mass, compare, kilograms (kg), measurement, weigh, estimate, grams (g), capacity, volume, millilitres (ml), litres (l)
<b>Key Representations</b>	place value chart, place value counters, part-whole models, base 10, bar models	number lines, bar models, part-whole models	bar models, fraction wall, number lines	number lines, part-whole models, bar models

<b>YEAR 3 Summer</b>	<b>Summer</b>				
	<b>Number: Fractions B</b>	<b>Measurement: Money</b>	<b>Measurement: Time</b>	<b>Geometry: Shape</b>	<b>Statistics</b>
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>• Add fractions with a common denominator</li> <li>• Subtract fractions with a common denominator</li> <li>• Find fractions of set of objects</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between pounds and pence</li> <li>• Add and subtract money</li> <li>• Find change</li> </ul>	<ul style="list-style-type: none"> <li>• Tell the time to the nearest minute on an analogue clock</li> <li>• Understand am and pm</li> <li>• Relationships between units of time</li> </ul>	<ul style="list-style-type: none"> <li>• Turns and angles</li> <li>• Horizontal and vertical lines</li> <li>• Parallel and perpendicular lines</li> </ul>	<ul style="list-style-type: none"> <li>• Bar Charts</li> <li>• Read and interpret</li> <li>• Draw</li> <li>• Tables</li> <li>• Pictograms</li> <li>• Read and interpret</li> </ul>

## Maths Progression of Learning Map



			<ul style="list-style-type: none"> <li>Solve time problems</li> </ul>	<ul style="list-style-type: none"> <li>Classify 2-D and 3-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>Draw</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Add and subtract fractions with the same denominator within one whole</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts</li> </ul>	<ul style="list-style-type: none"> <li>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight</li> <li>Know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>Compare durations of events</li> </ul>	<ul style="list-style-type: none"> <li>Recognise angles as a property of shape or a description of a turn</li> <li>Identify right angles, recognise that two right angles make a half turn, three make three-quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</li> <li>Measure the perimeter of simple 2-D shapes</li> <li>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and present data using bar charts, pictograms and tables</li> <li>Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables</li> </ul>
<b>Ready to Progress Criteria</b>	3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3F-4 Add and subtract fractions with the same denominator, within 1	3AS-1 Calculate complements to 100 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.		3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. 3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.	
<b>Key Vocabulary</b>	numerator, whole, unit fraction, total, difference, equal parts, partition, denominator, partition, non-unit fraction, sum, altogether, subtract	pounds (£), convert, more, amount, total, less, pence (p), change, cost, note, coin, change, value, exchange, difference	seconds, minutes, hours, days, months, weeks, years, morning, night, afternoon, evening, leap year noon, midday, midnight, duration, minutes past, minutes	quarter turn, half turn, three-quarter turn, full turn, clockwise, anti-clockwise, face, edge, vertex, curved surface, angle, acute, right angle, obtuse, horizontal, vertical, parallel, perpendicular	column, row, symbol, tally chart, table, key, pictogram, bar chart, horizontal axis, vertical axis, scale

## Maths Progression of Learning Map



			to, Roman numerals - I V X, 12-hour digital clock - am pm		
<b>Key Representations</b>	part-whole models, counters, number lines	toy notes, coins, part-whole models, bar models, number lines	clocks, calendar, number lines	2-D shapes, 3-D shapes, lines, turns, angles	pictograms, tally charts, bar charts, two-way tables

YEAR 4 Autumn	Autumn			
	Number: Place Value	Number: Addition and Subtraction	Measurement: Area	Number: Multiplication and Division A
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Numbers to 1,000</li> <li>Represent</li> <li>Partition</li> <li>Position on a number line</li> <li>Numbers to 10,000</li> <li>Represent</li> <li>Partition</li> <li>Position on a number line</li> <li>Compare and order 4-digit numbers</li> <li>Roman numerals</li> <li>Round to the nearest 10, 100 and 1,000</li> </ul>	<ul style="list-style-type: none"> <li>Addition with numbers up to 4-digits</li> <li>Subtraction with numbers up to 4-digits</li> <li>Efficient strategies</li> <li>Problems in context</li> </ul>	<ul style="list-style-type: none"> <li>What is area?</li> <li>Counting squares</li> <li>Draw shapes accurately</li> <li>Calculate the area of rectilinear shapes</li> </ul>	<ul style="list-style-type: none"> <li>Multiplication and division facts up to <math>12 \times 12</math></li> <li>Multiply by 0</li> <li>Divide a number by 1 and itself</li> <li>Multiply 3 numbers</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Read and write numbers up to 1,000 in numerals and words (Y3)</li> <li>Identify, represent and estimate numbers using different representations</li> <li>Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones) (Y3)</li> <li>Count in multiples of 6, 7, 9, 25 and 1,000</li> <li>Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones)</li> <li>Find 1,000 more or less than a given number</li> <li>Order and compare numbers beyond 1,000</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate</li> <li>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</li> <li>Estimate and use inverse operations to check answers to a calculation</li> </ul>	<ul style="list-style-type: none"> <li>Find the area of rectilinear shapes by counting squares</li> </ul>	<ul style="list-style-type: none"> <li>Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>Recognise and use factor pairs and commutativity in mental calculations</li> <li>Count in multiples of 6, 7, 9, 25 and 1,000</li> <li>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</li> </ul>





## Maths Progression of Learning Map



	<ul style="list-style-type: none"> <li>- 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</li> <li>- Round any number to the nearest 10, 100 or 1,000</li> </ul>			
<b>Ready to Progress Criteria</b>	<p>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</p> <p>4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.</p> <p>4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</p> <p>4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</p>	4NF-3: Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).		<p>4NF-1 Recall multiplication and division facts up to <math>12 \times 12</math> and recognise products in multiplication tables as multiples of the corresponding number.</p> <p>4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.</p> <p>4MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.</p>
<b>Key Vocabulary</b>	place value, exchange, compare, partition, order, ones (1s), tens (10s), hundreds (100s), thousands (1,000s), equal to (=), greater than (>), less than (<), round, multiple	sum, exchange, total, inverse, estimate, add, difference, subtract, next multiple of, previous multiple of	area, rectilinear, columns, rows, side, length, array, larger, smaller, greatest	times, divide, multiply, multiple, lots of product, times table, sharing, grouping, groups of, array
<b>Key Representations</b>	base 10, number lines, place value chart arrow cards, place value chart, place value counters, Gattegno chart	number lines, bar models, place value charts, place value counters, part-whole models	square grids	counters, cubes, arrays, bar models, hundred squares
<b>YEAR 4</b>	<b>Spring</b>			
Spring	<b>Number: Multiplication and division B</b>	<b>Measurement: Length and perimeter</b>	<b>Number: Fractions</b>	<b>Number: Decimals A</b>



## Maths Progression of Learning Map

<p style="text-align: center;"><b>Key Mathematical Concepts</b></p>	<ul style="list-style-type: none"> <li>• Factors</li> <li>• Multiply and divide by 10 and 100</li> <li>• Formal written multiplication method</li> <li>• Informal written method to divide</li> </ul>	<ul style="list-style-type: none"> <li>• Understand kilometres</li> <li>• Equivalent lengths (m and km)</li> <li>• Perimeter of rectilinear shapes</li> <li>• Perimeter of polygons</li> </ul>	<ul style="list-style-type: none"> <li>• Mixed numbers and improper fractions</li> <li>• On a number line</li> <li>• Partitioning</li> <li>• Compare and order</li> <li>• Conversion</li> <li>• Equivalent fractions</li> <li>• Add and subtract fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Tenths</li> <li>• Hundredths</li> <li>• Divide 1 and 2-digit numbers by 10 and 100</li> </ul>
<p style="text-align: center;"><b>National Curriculum Objectives</b></p>	<ul style="list-style-type: none"> <li>- Recognise and use factor pairs and commutativity in mental calculations</li> <li>- Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5)</li> <li>- Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects</li> <li>- Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout</li> <li>- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers</li> </ul>	<ul style="list-style-type: none"> <li>- Convert between different units of measure [for example, kilometre to metre; hour to minute]</li> <li>- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> </ul>	<ul style="list-style-type: none"> <li>- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3)</li> <li>- Recognise and show, using diagrams, families of common equivalent fractions</li> <li>- Add and subtract fractions with the same denominator</li> </ul>	<ul style="list-style-type: none"> <li>- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 (Y3)</li> <li>- Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>- Compare numbers with the same number of decimal places up to 2 decimal places</li> <li>- Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>- Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10</li> <li>- Recognise and show, using diagrams, families of common equivalent fractions</li> </ul>
<p style="text-align: center;"><b>Ready to Progress Criteria</b></p>	<p>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</p> <p>4NF-1 Recall multiplication and division facts up to <math>12 \times 12</math> and recognise products in multiplication tables as multiples of the corresponding number.</p> <p>4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.</p> <p>4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).</p>	<p>4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</p>	<p>4F-1 Reason about the location of mixed numbers in the linear number system.</p> <p>4F-2 Convert mixed numbers to improper fractions and vice versa.</p> <p>4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</p>	<p>4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).</p>

## Maths Progression of Learning Map



	4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 4MD-3 Understand and apply the distributive property of multiplication.			
<b>Key Vocabulary</b>	divide, times-table, sharing, lots of, total, grouping, commutative, facto, digits, remainder, multiply, array, groups of, times, partition, ones, tens, hundreds, thousands	less than <, length, distance, millimetres (mm), height, equivalent, measure, equal to =, metres (m), perimeter, compare, ruler, greater than >, centimetres (cm), kilometres (km), rectilinear, regular, irregular	whole, denominator, numerator, equal parts, non-unit fraction, unit fraction, mixed number, improper fraction	ones, tenths, hundredths, fraction, decimal, decimal point, equivalent
<b>Key Representations</b>	base 10, arrays, part-whole models, place value charts, counters, factor diagrams	part-whole models, number lines, bar models	bar models, number lines, fractions shown in a variety of ways	ten frames, number lines, place value charts, place value counters, hundred squares

### Summer

YEAR 4 Summer	Number: Decimals B	Measurement: Money	Measurement: Time	Geometry: Shape	Statistics	Geometry: Position and direction
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Make a whole with tenths and hundredths</li> <li>Partition decimals</li> <li>Compare and order decimals</li> <li>Round decimals</li> </ul>	<ul style="list-style-type: none"> <li>Money notation using the decimal point</li> <li>Estimate with money</li> <li>Calculate with money</li> <li>Solve problems with money</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of time</li> <li>Convert between analogue and digital times</li> <li>Convert between 12-hour clocks and 24-hour clocks</li> </ul>	<ul style="list-style-type: none"> <li>Compare and order angles</li> <li>Line of symmetry</li> <li>Complete symmetric figures</li> <li>Polygons</li> <li>Triangles</li> <li>Quadrilaterals</li> </ul>	<ul style="list-style-type: none"> <li>Bar charts, pictograms and tables</li> <li>Comparison, sum and difference problems</li> <li>Line graphs</li> </ul>	<ul style="list-style-type: none"> <li>Coordinates</li> <li>Plot</li> <li>Describe</li> <li>Translation</li> <li>2-D shapes</li> <li>Describe</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>Solve simple measure and money problems involving fractions and decimals to 2 decimal places</li> <li>Compare numbers with the same number of decimal places up to 2 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>Estimate, compare and calculate different measures, including money in pounds and pence</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days</li> <li>Read, write and convert time between analogue and digital 12- and 24-hour clocks</li> </ul>	<ul style="list-style-type: none"> <li>Recognise angles as a property of shape or a description of a turn (Y3)</li> <li>Identify acute and obtuse angles and compare and order angles up to two right angles by size</li> <li>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</li> <li>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</li> </ul>	<ul style="list-style-type: none"> <li>Describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>Plot specified points and draw sides to complete a given polygon</li> <li>Describe movements between positions as translations of a given unit to the left/right and up/down</li> </ul>

## Maths Progression of Learning Map



	<ul style="list-style-type: none"> <li>- Round decimals with 1 decimal place to the nearest whole number</li> <li>- Recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math></li> </ul>			<ul style="list-style-type: none"> <li>- Identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>- Complete a simple symmetric figure with respect to a specific line of symmetry</li> </ul>		
<b>Ready to Progress Criteria</b>				<p>4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</p> <p>4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.</p>	<p>4NPV-4: Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</p>	<p>4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.</p>
<b>Key Vocabulary</b>	decimal, fraction, whole, tenths, hundredths, equivalent, decimal point, round, partition, less than <, equal to =, greater than >	estimate, approximate, round, pounds £, pence p, decimal point, convert	days, weeks, months, years, seconds, minutes, hours, am, pm, convert, analogue, 12-hour digital clock, 24-hour digital clock	clockwise, anti-clockwise, right angle, acute, obtuse, quarter turn, half turn, three-quarter turn, full turn, polygon, isosceles, scalene, equilateral, quadrilateral, regular, irregular	pictogram, horizontal axis, vertical axis, symbol, tally chart, bar chart, row, column, table, key, scale, sum, difference, line graph, plot, read	divide, times-table, sharing, lots of, total, grouping, commutative, factor, digits, remainder, multiply, array, groups of, times, partition, ones, tens, hundreds, thousands
<b>Key Representations</b>	part-whole models, ten frames, hundred squares, place value charts, place value counters, number lines	toy notes and coins, decimal point notation, number lines, part-whole models	clocks, doubles number lines, calendar	representations of 2-D shapes, lines of symmetry, squared paper, angle diagrams	pictograms, tally charts, bar charts, line graph	coordinates grid, translations

<b>YEAR 5</b> Autumn	<b>Autumn</b>			
	<b>Number: Place Value</b>	<b>Number: Addition and Subtraction</b>	<b>Number: Multiplication and Division A</b>	<b>Number: Fractions A</b>



## Maths Progression of Learning Map

<p style="text-align: center;"><b>Key Mathematical Concepts</b></p>	<ul style="list-style-type: none"> <li>• Understand place value in numbers to 1,000,000</li> <li>• Partition flexibly</li> <li>• Order</li> <li>• Compare</li> <li>• Round to the nearest 1,000, 10,000 and 100,000</li> <li>• Roman numerals</li> </ul>	<ul style="list-style-type: none"> <li>• Addition and subtraction with 4 and 5-digit numbers</li> <li>• No exchanges</li> <li>• One or more exchanges</li> <li>• Inverse operations and finding missing numbers</li> <li>• Multi-step problems</li> </ul>	<ul style="list-style-type: none"> <li>• Multiplicative reasoning</li> <li>• Common factors and common multiples</li> <li>• Prime numbers, composite numbers, square numbers and cube numbers</li> <li>• Multiplying and dividing by 10, 100 and 1,000</li> </ul>	<ul style="list-style-type: none"> <li>• Equivalent fractions</li> <li>• Improper fractions and mixed numbers</li> <li>• Order, compare and sequence fractions</li> <li>• Add and subtract fractions with different denominators</li> </ul>
<p style="text-align: center;"><b>National Curriculum Objectives</b></p>	<ul style="list-style-type: none"> <li>- Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals</li> <li>- Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit</li> <li>- Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000</li> <li>- Solve number problems and practical problems involving the above</li> <li>- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000</li> </ul>	<ul style="list-style-type: none"> <li>- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000</li> <li>- Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction)</li> <li>- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>- Add and subtract numbers mentally with increasingly large numbers</li> <li>- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> </ul>	<ul style="list-style-type: none"> <li>- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>- Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes</li> <li>- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>- Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>- Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)</li> <li>- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000</li> <li>- Multiple and divide numbers mentally, drawing upon known facts</li> </ul>	<ul style="list-style-type: none"> <li>- Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number</li> <li>- Compare and order fractions whose denominators are all multiples of the same number</li> <li>- Add and subtract fractions with the same denominator, and denominators that are multiples of the same number</li> </ul>
<p style="text-align: center;"><b>Ready to Progress Criteria</b></p>			<p>5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</p> <p>5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</p> <p>5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.</p> <p>5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.</p>	<p>5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</p>

## Maths Progression of Learning Map



<b>Key Vocabulary</b>	place value, partition round to the nearest..., negative, thousands (1,000s), ten thousands (10,000s), hundred thousands (100,000s), equal to (=), greater than (>), less than (<), round, multiple	exchange, estimate, place value column, thousands (1,000s), ten thousands (10,000s), hundred thousands (100,000s), how many more?, difference, sum	even, odd, divide, multiply, place value column, prime, composite, factor, multiple, common factor, common multiple, square ( $x^2$ ), cube ( $x^3$ ), ten times greater, one thousand times smaller	numerator, denominator, improper, mixed, unit fraction, equivalent, multiply, repeated addition, divide, factor, greater than (>), less than (<), equal to (=)
<b>Key Representations</b>	place value chart, place value counters, part-whole models, flexible partitioning, base 10, number lines, Gattegno charts	number lines, place value charts, place value counters, bar models	arrays, place value chart, multilink cubes	fractions wall, bar models, number lines

YEAR 5 Spring	Spring				
	Number: Multiplication and Division B	Number: Fractions B	Number: Decimals and percentages	Measurement: Perimeter and area	Statistics
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Multiply and divide with up to 4-digit numbers</li> <li>Divide involving remainders and understand remainders</li> <li>Problem solving with multiplication and division</li> </ul>	<ul style="list-style-type: none"> <li>Multiply fractions by integers</li> <li>Unit fractions</li> <li>Non-unit fractions</li> <li>Mixed numbers</li> <li>Find fractions of amounts</li> <li>Find the whole</li> <li>Fractions as operators</li> </ul>	<ul style="list-style-type: none"> <li>Thousandths</li> <li>Order and compare decimals to 3 decimal places</li> <li>Round with decimals</li> <li>Percentages</li> <li>Equivalent fractions, decimals and percentages</li> </ul>	<ul style="list-style-type: none"> <li>Perimeter                             <ul style="list-style-type: none"> <li>- Measure</li> <li>- Calculate</li> </ul> </li> <li>Calculate area                             <ul style="list-style-type: none"> <li>- Rectangle</li> <li>- Compound shapes</li> </ul> </li> <li>Estimate area</li> </ul>	<ul style="list-style-type: none"> <li>Line graphs                             <ul style="list-style-type: none"> <li>- Draw</li> <li>- Read and interpret</li> </ul> </li> <li>Tables</li> <li>Two-way tables</li> <li>Timetables</li> </ul>
<b>National Curriculum Objectives</b>	- Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers - Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context - Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes	- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams - 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 (Y4)	- Read, write, order and compare numbers with up to 3 decimal places - Read and write decimal numbers as fractions - Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths - Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{4}$ , $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres - Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ), and estimate the area of irregular shapes	- Solve comparison, sum and difference problems using information presented in a line graph - Complete, read and interpret information in tables, including timetables



## Maths Progression of Learning Map



			<ul style="list-style-type: none"> <li>- Solve problems involving numbers up to 3 decimal places</li> <li>- Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place</li> <li>- 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</li> </ul>		
<b>Ready to Progress Criteria</b>	<p>5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</p> <p>5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.</p> <p>5MD-4 Divide a number with up to 4 digits by a one- digit number using a formal written method, and interpret remainders appropriately for the context.</p>	<p>5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</p> <p>5F-1 Find non-unit fractions of quantities.</p>	<p>5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01</p> <p>5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.</p> <p>5NPV-3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.</p> <p>5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.</p> <p>5F-3 Recall decimal fraction equivalents for <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{1}{5}</math> and <math>\frac{1}{10}</math> and for multiples of these proper fractions.</p>	<p>5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.</p>	<p>5NPV-4: Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.</p>



## Maths Progression of Learning Map



<b>Key Vocabulary</b>	groups of, multiply, digit, partition, share equally, exchange, remainder, divide, product	non-unit fraction, numerator, part, multiply, unit fraction, denominator, mixed number, whole, integer, commutative	tenths, decimal place, fraction, part, digits, hundredths, place value, thousandths, percentage, percent, 100, There are _____ parts out of 100 shaded. This is _____%	rectilinear, perimeter, area, polygon, millimetres (mm), centimetres (cm), metres (m) formula, compound, square centimetres (cm <sup>2</sup> ), square metres (m <sup>2</sup> ), square millimetres (mm <sup>2</sup> )	timetable, scale, am, pm, minute, two-way table, data line graph, hour, axes
<b>Key Representations</b>	place value charts, place value counters, part-whole models, area model, bar models	bar models, number lines, counters, cubes	place value charts, place value counters, hundred square, bar models	hatch marks to show equal sides, squared and dotted paper, geoboards	line graphs, tables, timetables, two-way tables

### YEAR 5 Summer

YEAR 5 Summer	Summer					
Key Mathematical Concepts	Geometry: Shape	Geometry: Position and direction	Number: Decimals	Number: Negative numbers	Measurement: Converting units	Measurement: Volume
	<ul style="list-style-type: none"> <li>• Polygons</li> <li>• 3-D shapes</li> <li>• Angles</li> <li>• Measure in degrees with a protractor</li> <li>• Draw angles</li> <li>• Calculate on a straight line, around a point and in a shape</li> </ul>	<ul style="list-style-type: none"> <li>• Lines of symmetry</li> <li>• Coordinates</li> <li>• Problem solving</li> <li>• Reflection in horizontal and vertical mirror lines</li> <li>• Translation</li> <li>• Shapes</li> <li>• Points</li> </ul>	<ul style="list-style-type: none"> <li>• Add and subtract with decimal numbers</li> <li>• Multiply and divide decimal numbers by powers of 10</li> </ul>	<ul style="list-style-type: none"> <li>• Count through 0</li> <li>• Compare and order negative numbers</li> <li>• Find the difference between two numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Metric units</li> <li>• Kilograms and kilometres</li> <li>• Millimetres and millilitres</li> <li>• Converting</li> <li>• Time</li> <li>• Converting</li> <li>• Calculating with timetables</li> </ul>	<ul style="list-style-type: none"> <li>• What is volume?</li> <li>• Cubic centimetres (cm<sup>3</sup>)</li> <li>• Cubic metres (m<sup>3</sup>)</li> <li>• Compare volume</li> <li>• Estimate volume</li> </ul>
<b>National Curriculum Objectives</b>	- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles - Draw given angles, and measure them in degrees (°) - Identify angles at a point and 1 whole turn (total 360°) - Identify: angles at a point and 1 whole turn (total 360°); angles at a point on a straight line and half a turn (total 180°)	- 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	- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents - Solve problems involving number up to 3 decimal places - Read, write, order and compare numbers with up to 3 decimal places - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	- Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] - Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints - Solve problems involving converting between units of time	- Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity - Estimate volume and capacity [for example, using water]

## Maths Progression of Learning Map



	<ul style="list-style-type: none"> <li>- Use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li> <li>- Identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li> </ul>					
<b>Ready to Progress Criteria</b>	5G-1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.		5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.		5NPV-5 Convert between units of measure, including using common decimals and fractions.	
<b>Key Vocabulary</b>	angle, faces, regular, protractor, polygon, quarter turn, acute, obtuse, right angle, reflex, cuboid, irregular, vertices, cube	mirror line, reflection, axis, points, x-axis, vertices, y-axis, translation, origin, coordinates, object, image	tenths, hundredths, thousandths, decimal point add, subtract, sum, altogether, difference, inverse, ten times, greater, one thousand times smaller When multiplying by _____, the digits move _____ place value columns to the left. When dividing by _____, the digits move _____ place value columns to the right.	negative, multiple, number line, negative two -2, negative one -1, zero 0, one 1, two 2, greater than >, less than <, difference	multiply by 1,000, divide by 1,000, convert, kilo- kilogram, kilometre milli- millimetre, millilitre inch, pound (lb), pint, length, mass, capacity	3-D shape, equal to =, less than <, greater than >, cubic centimetre cm <sup>3</sup> , cubic metre m <sup>3</sup>  volume – the amount of solid space an object occupies capacity – the amount a container can hold
<b>Key Representations</b>	angle diagrams, polygons, isometric paper, 3-D shapes, protractor	squared grids, mirror lines, coordinates (first quadrant)	formal methods, place value charts, place value counters, counters, Gattegno chart, part-whole models	number lines in real life (thermometer), number lines	place value charts, counters, double number lines, timetables	interlocking cubes, measuring jug

### Autumn

<b>YEAR 6</b> Autumn	<b>Autumn</b>				
	<b>Number: Place Value</b>	<b>Number: Addition, Subtraction, Multiplication and Division</b>	<b>Number: Fractions A</b>	<b>Number: Fractions B</b>	<b>Measurement: Converting Units</b>



## Maths Progression of Learning Map



<p style="text-align: center;"><b>Key Mathematical Concepts</b></p>	<ul style="list-style-type: none"> <li>• Understand place value in numbers to 10,000,000</li> <li>- Compare and order</li> <li>- Partition</li> <li>• Powers of 10</li> <li>• Round any number within 10,000,000</li> <li>• Negative numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Formal methods</li> <li>• Long division</li> <li>• Types of number</li> <li>• Order of operations</li> </ul>	<ul style="list-style-type: none"> <li>• Simplify fractions</li> <li>• Compare and order fractions and mixed numbers</li> <li>• Add and subtract fractions and mixed numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply fractions by integers</li> <li>• Multiply fractions by fractions</li> <li>• Divide fractions by integers</li> <li>• Fractions of amounts</li> </ul>	<ul style="list-style-type: none"> <li>• Convert metric measures</li> <li>• Calculate with metric measures</li> <li>• Miles and kilometres</li> <li>• Imperial measures</li> </ul>
<p style="text-align: center;"><b>National Curriculum Objectives</b></p>	<ul style="list-style-type: none"> <li>- Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit</li> <li>- Round any whole number to a required degree of accuracy</li> <li>- Use negative numbers in context, and calculate intervals across zero</li> <li>- Solve number and practical problems that involve the above</li> </ul>	<ul style="list-style-type: none"> <li>- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>- Solve problems involving addition, subtraction, multiplication and division</li> <li>- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Identify common factors, common multiples and prime numbers</li> <li>- Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication</li> <li>- Perform mental calculations, including with mixed operations and large numbers</li> <li>- Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>- Divide numbers up to four digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>- Use their knowledge of the order of operations to carry out</li> </ul>	<ul style="list-style-type: none"> <li>- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>- Compare and order fractions, including fractions <math>&gt; 1</math></li> <li>- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>- Identify common factors, common multiples and prime numbers</li> <li>- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>- Solve problems involving addition, subtraction, multiplication and division</li> </ul>	<ul style="list-style-type: none"> <li>- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5)</li> <li>- Multiply simple pairs of proper fractions, writing the answer in its simplest form</li> <li>- Divide proper fractions by whole numbers</li> <li>- Solve problems involving addition, subtraction, multiplication and division</li> <li>- Associate a fraction with division and calculate decimal fraction equivalents</li> </ul>	<ul style="list-style-type: none"> <li>- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate</li> <li>- Use, 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 up to 3 decimal places</li> </ul>



## Maths Progression of Learning Map



		calculations involving the four operations		
<b>Ready to Progress Criteria</b>	<p>6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</p> <p>6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.</p> <p>6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.</p> <p>6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</p>	<p>6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</p> <p>6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</p>	<p>6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions.</p> <p>6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value.</p> <p>6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.</p>	<p>6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</p>
<b>Key Vocabulary</b>	place value, digit, partition, equal to (=), greater than (>), less than (<), zero (0), ten thousands (10,000s), hundred thousands (100,000s), million (1,000,000), ten million (10,000,000), round, multiple, negative	factor, remainder, grouping, array, common multiple, sum, times table, estimate, prime, multiply, divide, divisible, difference, sharing, product, long division, priority, order of operations	denominator, numerator, whole, highest common factor, less than (<), greater than (>), improper fraction, proper fraction, mixed number, lowest common multiple, part, simplify, integer, share, lots of, multiply, divide	<p>convert, mass, capacity, units, approximately equal to (≈)</p> <p>metric – gram, kilometre, millimetre, metre</p> <p>imperial - pint, feet, inch, stone, pounds (lbs)</p>
<b>Key Representations</b>	place value chart, place value counters, part-whole models, number lines, Gattegno chart	place value chart, place value counters, counters, cubes, expanded and short methods	bar models, fractions wall, number lines, area models	double number lines, bar models, place value charts

**YEAR 6**

**Spring**

## Maths Progression of Learning Map



Spring	Number: Ratio	Number: Algebra	Number: Decimals	Number: Fractions, decimals and percentages	Measurement: Area, perimeter and volume	Statistics
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Develop proportional reasoning</li> <li>Scaling and similar shapes</li> <li>Problem solving involving ratio and proportion</li> </ul>	<ul style="list-style-type: none"> <li>Understand and use algebraic notation</li> <li>Form and solve equations</li> <li>Solve problems involving two unknowns</li> </ul>	<ul style="list-style-type: none"> <li>Work with numbers with up to 3 decimal places</li> <li>Round decimals</li> <li>Use the four operations with decimals</li> </ul>	<ul style="list-style-type: none"> <li>Convert between fractions, decimals and percentages</li> <li>Order fractions, decimals and percentages</li> <li>Calculate percentages of amounts</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the area and perimeter or rectilinear shapes</li> <li>Area of a triangle</li> <li>Area of a parallelogram</li> <li>Volume of a cuboid</li> </ul>	<ul style="list-style-type: none"> <li>Line graphs</li> <li>Dual bar charts</li> <li>Pie charts</li> <li>The mean</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> </ul>	<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables</li> <li>Express missing number problems algebraically</li> </ul>	<ul style="list-style-type: none"> <li>Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places</li> <li>Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>Multiply 1-digit numbers with up to 2 decimal places by whole numbers</li> <li>Use written division methods in cases where the answer has up to 2 decimal places</li> <li>Solve problems involving addition, subtraction, multiplication and division</li> </ul>	<ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction</li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> <li>Compare and order fractions, including fractions &gt;1</li> <li>Solve problems involving the calculation of percentages and the use of percentages for comparison</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>Recognise when it is possible to use formulae for area and volume of shapes</li> <li>Calculate the area of parallelograms and triangles</li> <li>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4)</li> <li>Calculate and interpret the mean as an average</li> </ul>
<b>Ready to Progress Criteria</b>	6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and	6AS/MD-4 Solve problems with 2 unknowns.	6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with		6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and	6NPV-1: Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with

## Maths Progression of Learning Map



	<p>multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p> <p>6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p> <p>6AS/MD-3 Solve problems involving ratio relationships.</p>		labelled intervals divided into 2, 4, 5 and 10 equal parts.		area, and solve related problems.	labelled intervals divided into 2, 4, 5 and 10 equal parts.
<b>Key Vocabulary</b>	ratio, simplest form, scale factor, similar, enlarge, ___:___/___ to ___	formula, substitute, input, expression $2n + 5$ , unknown, output, solve, solution, equation $2n + 5 = 17$	integer, thousandth, tens, tenth, decimal point, ones, round, hundredth, to the nearest tenth, to 1 decimal place, ___ lies between ___ and ___, it is closer to ___, ___ is ___ times the size of ___	tenth, fraction, percentage, decimal, hundredth, divide, division, convert, equivalent, recurring	area, square, volume, triangle, formula, parallelogram, cuboid, perpendicular, formula, perimeter, perpendicular, square metres $m^2$ , cube centimetres $cm^3$ the <u>perpendicular</u> height of a shape is at a <u>right angle</u> from its base.	scale, line graph, dual bar chart, percentage, axis/axes, key, pie chart, mean
<b>Key Representations</b>	cubes, counters, double number lines, bar models	function machines, representations of equations, algebraic notation, concrete and pictorial representations	place value counters, place value chart, Gattegno chart, number line, formal methods	hundred square, number line, bar model, formal method of division	2d shapes, multilink cubes, 2d representations of 3d shapes	line graphs, dual bar charts, pie charts, the mean
<b>YEAR 6 Summer</b>	<b>Summer</b>					
	<b>Geometry: Shape</b>			<b>Geometry: Position and direction</b>		<b>Themed projects, consolidation and problem solving</b>
<b>Key Mathematical Concepts</b>	<ul style="list-style-type: none"> <li>Classify, measure and draw angles</li> <li>Draw shapes</li> <li>Nets</li> <li>Calculate</li> <li>Vertically opposite angles</li> <li>Angles in triangles</li> <li>Angles in other shapes</li> </ul>			<ul style="list-style-type: none"> <li>Four quadrants</li> <li>Translations</li> <li>Reflections</li> </ul>		

## Maths Progression of Learning Map



<p><b>National Curriculum Objectives</b></p>	<ul style="list-style-type: none"> <li>- Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> <li>- Draw given angles, and measure them in degrees (<math>^{\circ}</math>) (Y5)</li> <li>- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5)</li> <li>- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>- Draw 2-D shapes using given dimensions and angles</li> <li>- Recognise, describe and build simple 3-D shapes, including making nets</li> </ul>	<ul style="list-style-type: none"> <li>- Describe positions on the full coordinate grid (all four quadrants)</li> <li>- Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>	
<p><b>Ready to Progress Criteria</b></p>	<p>6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.</p>		
<p><b>Key Vocabulary</b></p>	<p>angle, acute, obtuse, right, reflect, protractor, polygon, faces, cube, irregular, regular, cuboid, quadrilateral, isosceles triangle, net, vertically opposite angles</p>	<p>x-axis, y-axis, left, points, coordinates, translation, mirror line, reflection, right, vertices</p>	
<p><b>Key Representations</b></p>	<p>angle diagrams, geometric notation, nets</p>	<p>coordinate grids, mirror lines</p>	