



# Nursery

## Number

- Subitise small amounts of up to 3 objects
- Link numeral and quantity up to 3
- Count reliably to 5, and beginning to count beyond 5
- Say one number name for each item in order 1,2,3,4,5
- Know the last number reached when counting a set of objects tells you how many there are ('cardinal principle')
- Show 'finger numbers' up to 3
- Solve real world mathematical problems up to 3
- Experiments with own symbols and marks as well as numerals
- Verbally rote count to 10
- Compares quantities by 'more than', 'less than' and 'the same'
- Knows, explores simple composition and sings a selection of number rhymes. e.g. 5 little frogs – 2 frogs on the log, 3 in the pool

## Numerical Patterns

- Extend and create simple AB patterns
  - Talks about and identifies patterns around them e.g. stripes on clothes
  - Spotting and exploring errors in repeating patterns
  - Begin to describe a sequence of events (real or fictional), using words such as first, then, etc
  - Sorts objects by a variety of criteria
  - Describes similarities and differences
- Shape and space (Spatial reasoning)**
- Talk about and explore 2D and 3D shapes, using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'.
  - Select shapes appropriately e.g. triangular prism for a roof.
  - Understand and use positional language
  - Make comparisons between objects relating to size, length, weight and capacity.

# Reception

## Number

- Have a deep understanding of number to 10 and 20, including the composition of each number. E.g. 15 has 1 10 and 5 ones
- Subitise numbers to 5, and use subitising skills to begin to identify larger numbers e.g. 5 and 2 is 7
- Know 1 more and 1 less
- Recall some double and halving facts

## Numerical Patterns

- Compare quantities**
- Be able to identify- More than, Less than, Equal to
  - Be able to share practically between different groups
  - Compare length, weight and capacity
- Number patterns**
- Explore, continue and create patterns (including AB, ABB and ABBC)



# Curriculum Overview: Maths Progression map

- Knows number bonds to 10, with rapid recall of numbers to 5
- Know the composition of numbers to 10 and use different examples to show this.
- Be able to complete simple addition and subtraction calculations using chosen resources to help
- Verbally count to 20 and beyond and confidently counts objects, actions and sounds

- Be aware of Odd and Even numbers and sharing
- Use stepping patterns to identify more/ less number patterns

### Shape and space (Spatial reasoning)

- Select rotate and manipulate shapes e.g. magnetic tiles, tangrams, blocks
- Compose and decompose shapes, recognising that shapes can have other shapes within them, e.g. 2 triangles can make a square- be able to identify some 2D and 3D

## Year 1

**Unit:** Number -Place Value (within 10)

**Term:** Autumn

National Curriculum

Progression steps

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s
- given a number, identify 1 more and 1 less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words

- Sort objects
- Count objects
- Count objects from a larger group
- Represent objects
- Recognise numbers as words
- Count on from any number
- 1 more
- Count backwards within 10
- 1 less
- Compare groups by matching
- Fewer, more, same
- Less than, greater than, equal to
- Compare numbers
- Order objects and numbers
- The number line



# Curriculum Overview: Maths Progression map

Unit: Number – Addition and Subtraction (within 10)	Term: Autumn
National Curriculum	Progression steps
<ul style="list-style-type: none"> <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 one-digit and two-digit numbers to 20, including 0</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>• Introduce parts and wholes</li> <li>• Part-whole model</li> <li>• Write number sentences</li> <li>• Fact families – addition facts</li> <li>• Number bonds within 10</li> <li>• Systematic number bonds within 10</li> <li>• Number bonds to 10</li> <li>• Addition – add together</li> <li>• Addition – add more</li> <li>• Addition problems</li> <li>• Find a part</li> <li>• Subtraction – Find a part</li> <li>• Fact families – the eight facts</li> <li>• Subtraction – take away/cross out (how many left?)</li> <li>• Take away (How many left?)</li> <li>• Subtraction on a number line.</li> <li>• Add or subtract 1 or 2</li> </ul>
Unit: Geometry - Shape	Term: Autumn
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>• recognise and name common 2-D and 3-D shapes, including:             <ul style="list-style-type: none"> <li>• 2-D shapes [for example, rectangles (including squares), circles and triangles]</li> <li>• 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Recognise and name 3-D shapes</li> <li>• Sort 3-D shapes</li> <li>• Recognise and name 2-D shapes</li> <li>• Sort 2-D shapes</li> <li>• Patterns with 2-D and 3-D shapes</li> </ul>



# Curriculum Overview: Maths Progression map

<p><b>Unit: Number -Place Value (within 20)</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <li>• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</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> <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>• read and write numbers from 1 to 20 in numerals and words</li> </ul>	<ul style="list-style-type: none"> <li>• Count forwards and backwards and write numbers to 20 in numerals and words</li> <li>• Numbers from 11 to 20</li> <li>• Tens and ones</li> <li>• Count one more and one less</li> <li>• Compare groups of objects</li> <li>• Compare numbers</li> <li>• Order groups of objects</li> <li>• Order numbers</li> </ul>
<p><b>Unit: Unit: Number – Addition and Subtraction (within 20)</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <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 one-digit and two-digit numbers to 20, including 0</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>• Add by counting on</li> <li>• Find &amp; make number bonds</li> <li>• Add by making 10</li> <li>• Subtraction – Not crossing 10</li> <li>• Subtraction – Crossing 10</li> <li>• Related facts</li> <li>• Compare number sentences</li> </ul>
<p><b>Unit: Number – Place value (within 50)</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>



# Curriculum Overview: Maths Progression map

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s
- given a number, identify 1 more and 1 less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words

- Numbers to 50
- Tens and ones
- Represent numbers to 50
- One more one less
- Compare objects within 50
- Order numbers within 50
- Count in 2s
- Count in 5s

## Unit: Measurement – Length and height

## Term: Spring

### National Curriculum

### Progression steps

- compare, describe and solve practical problems for:
  - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- measure and begin to record the following:
  - lengths and heights

- Compare lengths and heights
- Measure lengths

## Unit: Measurement – Mass and volume

## Term: Spring

### National Curriculum

### Progression steps

- compare, describe and solve practical problems for:
  - mass/weight [for example, heavy/light, heavier than, lighter than]
  - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]

- Introduce weight and mass
- Measure mass
- Compare mass
- Introduce capacity and volume
- Measure capacity



# Curriculum Overview: Maths Progression map

	<ul style="list-style-type: none"><li>• Compare capacity</li></ul>
<b>Unit: Number – Multiplication and division</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• Count in 10s</li><li>• Make equal groups</li><li>• Add equal groups</li><li>• Make arrays</li><li>• Make doubles</li><li>• Make equal groups – grouping</li><li>• Make equal groups - sharing</li></ul>
<b>Unit: Number - Fractions</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"><li>• recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity</li><li>• recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity</li></ul>	<ul style="list-style-type: none"><li>• Find a half</li><li>• Find a quarter</li></ul>
<b>Unit: Geometry – Position and direction</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"><li>• describe position, direction and movement, including whole, half, quarter and three-quarter turns</li></ul>	<ul style="list-style-type: none"><li>• Describe turns</li><li>• Describe position</li></ul>



# Curriculum Overview: Maths Progression map

<b>Unit: Number – Place value (within 100)</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</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> <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>read and write numbers from 1 to 20 in numerals and words</li> </ul>	<ul style="list-style-type: none"> <li>Counting forwards and backwards within 100</li> <li>Partitioning numbers</li> <li>Comparing numbers</li> <li>Ordering numbers</li> <li>One more one less</li> </ul>
<b>Unit: Measurement - Money</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>recognise and know the value of different denominations of coins and notes</li> </ul>	<ul style="list-style-type: none"> <li>Recognising coins</li> <li>Recognising notes</li> <li>Counting in coins</li> </ul>
<b>Unit: Measurement - Time</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>compare, describe and solve practical problems for:               <ul style="list-style-type: none"> <li>time [for example, quicker, slower, earlier, later]</li> </ul> </li> <li>measure and begin to record the following:               <ul style="list-style-type: none"> <li>time (hours, minutes, seconds)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Before and after</li> <li>Dates</li> <li>Time to the hour</li> <li>Time to the half hour</li> </ul>



# Curriculum Overview: Maths Progression map

- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times

- Writing time
- Comparing time

## Year 2

**Unit:** Number -Place Value

**Term:** Autumn

National Curriculum

Progression steps

- count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
- recognise the place value of each digit in a two-digit number (10s, 1s)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems

- Numbers to 20
- Count objects to 100 by making 10s
- Recognise tens and ones
- Use a place value chart
- Partition numbers to 100
- Write numbers to 100 in words
- Flexibly partition numbers to 100
- Write numbers to 100 in expanded form
- 10s on the number line to 100
- 10s and 1s on the number line to 100
- Estimate numbers on a number line
- Compare objects
- Compare numbers
- Order objects and numbers
- Count in 2s, 5s and 10s
- Count in 3s





# Curriculum Overview: Maths Progression map

Unit: Number – Addition and Subtraction		Term: Autumn	
National Curriculum		Progression steps	
<ul style="list-style-type: none"><li>• solve problems with addition and subtraction:<ul style="list-style-type: none"><li>• using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li><li>• applying their increasing knowledge of mental and written methods</li></ul></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:<ul style="list-style-type: none"><li>• a two-digit number and 1s</li><li>• a two-digit number and 10s</li><li>• 2 two-digit numbers</li><li>• adding 3 one-digit numbers</li></ul></li><li>• show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot</li><li>• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</li></ul>		<ul style="list-style-type: none"><li>• Bonds to 10</li><li>• Fact families – addition and subtraction bonds within 20</li><li>• Related facts</li><li>• Bonds to 100 (tens)</li><li>• Add and subtract 1s</li><li>• Add by making 10</li><li>• Add three 1-digit numbers</li><li>• Add to the next 10</li><li>• Add across a 10</li><li>• Subtract from a 10</li><li>• Subtract a 1-digit number from a 2-digit number (across a 10)</li><li>• 10 more, 10 less</li><li>• Add and subtract 10s</li><li>• Add two 2-digit numbers (not across a 10)</li><li>• Add two 2-digit numbers (across a 10)</li><li>• Subtract two 2-digit numbers (not across a 10)</li><li>• Subtract two 2-digit numbers (across a 10)</li><li>• Mixed addition and subtraction</li><li>• Compare number sentences</li><li>• Missing number problems</li></ul>	
Unit: Geometry - Shape		Term: Autumn	
National Curriculum		Progression steps	
<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></ul>		<ul style="list-style-type: none"><li>• Recognise 2-D and 3-D shapes</li><li>• Count sides on 2-D shapes</li><li>• Count vertices on 2-D shapes</li></ul>	



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>• identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</li> <li>• compare and sort common 2-D and 3-D shapes and everyday objects</li> </ul>	<ul style="list-style-type: none"> <li>• Draw 2-D shapes</li> <li>• Lines of symmetry on shapes</li> <li>• Use lines of symmetry to complete shapes</li> <li>• Sort 2-D shapes</li> <li>• Count faces on 3-D shapes</li> <li>• Count edges on 3-D shapes</li> <li>• Count vertices on 3-D shapes</li> <li>• Sort 3-D shapes</li> <li>• Make patterns with 2-D and 3-D shapes</li> </ul>
<p><b>Unit: Measurement - Money</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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>• find different combinations of coins that equal the same amounts of money</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>• Count money – pence</li> <li>• Count money- pounds (notes and coins)</li> <li>• Select money</li> <li>• Make the same amount</li> <li>• Compare money</li> <li>• Find the total</li> <li>• Find the difference</li> <li>• Find change</li> <li>• Two-step problems</li> </ul>
<p><b>Unit: Number – Multiplication and division</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise equal groups</li> <li>• Make equal groups</li> <li>• Add equal groups</li> <li>• Multiplication sentences using the X symbol</li> <li>• Multiplication sentences from pictures</li> </ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (=) signs</li> <li>• show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot</li> <li>• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</li> </ul>	<ul style="list-style-type: none"> <li>• Use arrays</li> <li>• 2 times-table</li> <li>• 5 times-table</li> <li>• 10 times-table</li> <li>• Make equal groups – Sharing</li> <li>• Make equal groups – Grouping</li> <li>• Divide by 2</li> <li>• Odd and even numbers</li> <li>• Divide by 5</li> <li>• Divide by 10</li> </ul>
<b>Unit: Measurement – Length and height</b>	<b>Term: Spring</b>
National Curriculum	Progression steps
<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 (<math>^{\circ}\text{C}</math>); 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 <math>&gt;</math>, <math>&lt;</math> and <math>=</math></li> </ul>	<ul style="list-style-type: none"> <li>• Measure length (cm)</li> <li>• Measure length (m)</li> <li>• Compare lengths</li> <li>• Order lengths</li> <li>• Four operations with lengths</li> </ul>
<b>Unit: Measurement – Mass, capacity and temperature</b>	<b>Term: Spring</b>
National Curriculum	Progression steps
<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 (<math>^{\circ}\text{C}</math>); 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 <math>&gt;</math>, <math>&lt;</math> and <math>=</math></li> </ul>	<ul style="list-style-type: none"> <li>• Compare mass</li> <li>• Measure mass in grams</li> <li>• Measure mass in kilograms</li> <li>• Compare volume</li> <li>• Millilitres</li> <li>• Litres</li> </ul>



# Curriculum Overview: Maths Progression map

	<ul style="list-style-type: none"> <li>• Temperature</li> </ul>
<b>Unit: Statistics</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>• interpret and construct simple pictograms, tally charts, block diagrams and tables</li> <li>• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>• ask-and-answer questions about totalling and comparing categorical data</li> </ul>	<ul style="list-style-type: none"> <li>• Make tally charts</li> <li>• Draw pictograms (1:1)</li> <li>• Interpret pictograms (1:1)</li> <li>• Draw pictograms (2,5 and 10)</li> <li>• Interpret pictograms (2,5 and 10)</li> <li>• Block diagrams</li> </ul>
<b>Unit: Number - Fractions</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>• 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</li> <li>• write simple fractions, for example <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></li> </ul>	<ul style="list-style-type: none"> <li>• Make equal parts</li> <li>• Recognise a half</li> <li>• Find a half</li> <li>• Recognise a quarter</li> <li>• Find a quarter</li> <li>• Recognise a third</li> <li>• Find a third</li> <li>• Unit fractions</li> <li>• Non-unit fractions</li> <li>• Equivalence of <math>\frac{1}{2}</math> and <math>\frac{2}{4}</math></li> <li>• Find three quarters</li> <li>• Count in fractions</li> </ul>



# Curriculum Overview: Maths Progression map

<b>Unit: Geometry – Position and direction</b>		<b>Term: Summer</b>	
National Curriculum		Progression steps	
<ul style="list-style-type: none"><li>order and arrange combinations of mathematical objects in patterns and sequences</li><li>use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)</li></ul>	<ul style="list-style-type: none"><li>Describe movements</li><li>Describe turns</li><li>Describe movement and turns</li><li>Making patterns with shapes</li></ul>		
<b>Unit: Measurement – Time</b>		<b>Term: Summer</b>	
National Curriculum		Progression steps	
<ul style="list-style-type: none"><li>compare and sequence intervals of time</li><li>tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times</li><li>know the number of minutes in an hour and the number of hours in a day</li></ul>	<ul style="list-style-type: none"><li>O'clock and half past</li><li>Quarter past and quarter to</li><li>Telling time to 5 minutes</li><li>Hours and days</li><li>Find durations of time</li><li>Compare durations of time</li></ul>		
<h1>Year 3</h1>			
<b>Unit: Number -Place Value</b>		<b>Term: Autumn</b>	
National Curriculum		Progression steps	



# Curriculum Overview: Maths Progression map

- count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
- recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)
- compare and order numbers up to 1,000
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1,000 in numerals and in words
- solve number problems and practical problems involving these ideas

- Represent numbers to 100
- Partition numbers to 100
- Number line to 100
- Hundreds
- Represent numbers to 1,000
- Partition numbers to 1,000
- Flexible partitioning of numbers to 1,000
- Hundreds, tens and ones
- Find 1, 10 or 100 more or less
- Number line to 1,000
- Estimate on a number line to 1,000
- Compare numbers to 1,000
- Order numbers to 1,000
- Count in 50s

## Unit: Number – Addition and Subtraction

## Term: Autumn

### National Curriculum

### Progression steps

- add and subtract numbers mentally, including:
  - a three-digit number and 1s
  - a three-digit number and 10s
  - a three-digit number and 100s
- add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

- Apply number bonds within 10
- Add and subtract 1s
- Add and subtract 10s
- Add and subtract 100s
- Spot the pattern
- Ass 1s across a 10
- Add 10s across a 100
- Subtract 1s across a 10
- Subtract 10s across a 100
- Make connections
- Add two numbers (no exchange)
- Add two numbers (across a 10)
- Add two numbers (across a 100)
- Subtract two numbers (across a 10)



# Curriculum Overview: Maths Progression map

	<ul style="list-style-type: none"> <li>• Subtract two numbers (across a 100)</li> <li>• Add 2-digit and 3-digit numbers</li> <li>• Subtract a 2-digit number from a 3-digit number</li> <li>• Complements to 100</li> <li>• Estimate answers</li> <li>• Inverse Operations</li> <li>• Make decisions</li> </ul>
<p><b>Unit:</b> Number – Multiplication and Division</p>	<p><b>Term:</b> Autumn</p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <li>• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and 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>• Multiplication – equal groups</li> <li>• Use arrays</li> <li>• Multiples of 2</li> <li>• Multiples of 5 and 10</li> <li>• Sharing and grouping</li> <li>• Multiply by 3</li> <li>• Divide by 3</li> <li>• The 3 times-table</li> <li>• Multiply by 4</li> <li>• Divide by 4</li> <li>• The 4 times-tables</li> <li>• Multiply by 8</li> <li>• Divide by 8</li> <li>• The 8 times-table</li> <li>• The 2,4, and 8 times-tables</li> </ul>
<p><b>Unit:</b> Number – Multiplication and Division</p>	<p><b>Term:</b> Spring</p>
<p>National Curriculum</p>	<p>Progression steps</p>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and 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>Comparing statements</li> <li>Related calculations</li> <li>Multiply 2-digits by 1-digit</li> <li>Divide 2-digits by 1-digit</li> <li>Scaling</li> <li>How many ways?</li> </ul>
<p><b>Unit: Measurement – Length and Perimeter</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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>Measure length</li> <li>Equivalent lengths – m &amp; cm</li> <li>Equivalent lengths – mm &amp; cm</li> <li>Compare lengths</li> <li>Add lengths</li> <li>Subtract lengths</li> <li>Measure perimeter</li> <li>Calculate perimeter</li> </ul>
<p><b>Unit: Number - Fractions</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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 one-digit numbers or quantities by 10</li> </ul>	<ul style="list-style-type: none"> <li>Making the whole</li> <li>Tenths</li> <li>Count in tenths</li> <li>Tenths as decimals</li> </ul>





# Curriculum Overview: Maths Progression map

<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>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> <li>add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</li> <li>compare and order unit fractions, and fractions with the same denominators</li> <li>solve problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Fractions on a number line</li> <li>Fractions of a set of objects</li> <li>Equivalent fractions</li> <li>Compare fractions</li> <li>Order fractions</li> <li>Add fractions</li> <li>Subtract fractions</li> </ul>
<b>Unit: Measurement – Mass and Capacity</b>	<b>Term: Spring</b>
National Curriculum	Progression steps
<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>	<ul style="list-style-type: none"> <li>Measure mass</li> <li>Compare mass</li> <li>Add and subtract mass</li> <li>Measure capacity</li> <li>Compare capacity</li> <li>Add and subtract capacity</li> </ul>
<b>Unit: Number - Fractions</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<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 one-digit numbers or quantities by 10</li> </ul>	<ul style="list-style-type: none"> <li>Making the whole</li> <li>Tenths</li> <li>Count in tenths</li> <li>Tenths as decimals</li> </ul>



# Curriculum Overview: Maths Progression map

<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>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> <li>add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</li> <li>compare and order unit fractions, and fractions with the same denominators</li> <li>solve problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Fractions on a number line</li> <li>Fractions of a set of objects</li> <li>Equivalent fractions</li> <li>Compare fractions</li> <li>Order fractions</li> <li>Add fractions</li> <li>Subtract fractions</li> </ul>
<b>Unit: Measurement – Money</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<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>Pounds and pence</li> <li>Convert pounds and pence</li> <li>Add money</li> <li>Subtract money</li> <li>Give change</li> </ul>
<b>Unit: Measurement – Time</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<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</li> </ul>	<ul style="list-style-type: none"> <li>Months and years</li> <li>Hours in a day</li> <li>Telling the time to 5 minutes</li> <li>Telling the time to a minute</li> <li>Using a.m. and p.m.</li> </ul>



# Curriculum Overview: Maths

## Progression map

<p>hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight</p> <ul style="list-style-type: none"> <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 [for example, to calculate the time taken by particular events or tasks]</li> </ul>	<ul style="list-style-type: none"> <li>24-hour clock</li> <li>Finding the durations</li> <li>Comparing durations</li> <li>Start and end times</li> <li>Measuring time in seconds</li> </ul>
<p><b>Unit: Geometry - Shape</b></p>	<p><b>Term: Summer</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <li>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>recognise angles as a property of shape or a description of a turn</li> <li>identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle</li> <li>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul>	<ul style="list-style-type: none"> <li>Turns and angles</li> <li>Right angles in shapes</li> <li>Compare angles</li> <li>Draw accurately</li> <li>Horizontal and vertical</li> <li>Parallel and perpendicular</li> <li>Recognise and describe 2-d shapes</li> <li>Recognise and describe 3-d shapes</li> <li>Make 3d shapes</li> </ul>
<p><b>Unit: Statistics</b></p>	<p><b>Term: Summer</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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 [for example 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</li> </ul>	<ul style="list-style-type: none"> <li>Pictograms</li> <li>Bar charts</li> <li>Tables</li> </ul>



# Year 4

Unit: Number – Place value		Term: Autumn	
National Curriculum		Progression steps	
<ul style="list-style-type: none"><li>count in multiples of 6, 7, 9, 25 and 1,000</li><li>find 1,000 more or less than a given number</li><li>count backwards through 0 to include negative numbers</li><li>recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)</li><li>order and compare numbers beyond 1,000</li><li>identify, represent and estimate numbers using different representations</li><li>round any number to the nearest 10, 100 or 1,000</li><li>solve number and practical problems that involve all of the above and with increasingly large positive numbers</li><li>read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value</li></ul>		<ul style="list-style-type: none"><li>Represent numbers to 1,000</li><li>Partition numbers to 1,000</li><li>Number line to 1,000</li><li>Thousands</li><li>Represent numbers to 10,000</li><li>Partition numbers to 10,000</li><li>Flexible partitioning of numbers to 10,000</li><li>Find 1, 1, 100, 1,000 more or less</li><li>Number line to 10,000</li><li>Estimate on a number line to 10,000</li><li>Compare numbers to 10,000</li><li>Order numbers to 10,000</li><li>Roman numerals</li><li>Round to the nearest 10</li><li>Round to the nearest 100</li><li>Round to the nearest 1,000</li><li><b>Round to the nearest 10, 100 or 1,000</b></li></ul>	
Unit: Number – Addition and Subtraction		Term: Autumn	
National Curriculum		Progression steps	
<ul style="list-style-type: none"><li>add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li></ul>		<ul style="list-style-type: none"><li>Add and subtract 1s, 10s, 100s and 1000s</li><li>Add up to two 4-digit numbers – no exchange</li></ul>	



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>estimate and use inverse operations to check answers to a calculation</li> <li>solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</li> </ul>	<ul style="list-style-type: none"> <li>Add two 4-digit numbers – one exchange</li> <li>Add two 4-digit numbers – more than one exchange</li> <li>Subtract two 4-digit numbers – no exchange</li> <li>Subtract two 4-digit numbers – one exchange</li> <li>Subtract two 4-digit numbers – more than one exchange</li> <li>Efficient subtraction</li> <li>Estimate answers</li> <li>Checking strategies</li> </ul>
<p><b>Unit: Measure – Area</b></p>	<p><b>Term: Autumn</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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>What is area?</li> <li>Counting squares</li> <li>Making Shapes</li> <li>Comparing area</li> </ul>
<p><b>Unit: Number – Multiplication and Division</b></p>	<p><b>Term: Autumn</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <li>recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></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> <li>recognise and use factor pairs and commutativity in mental calculations</li> <li>multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling</li> </ul>	<ul style="list-style-type: none"> <li>Multiples of 3</li> <li>Multiply and divide by 6</li> <li>6 times table and division facts</li> <li>Multiply and divide by 9</li> <li>9 times table and division fact</li> <li>The 3,6 and 9 times-tables</li> <li>Multiply and divide by 7</li> <li>7 times table and division facts</li> <li>11 times-table and division facts</li> <li>12 times-table and division facts</li> <li>Multiply by 1 and 0</li> </ul>



# Curriculum Overview: Maths Progression map

<p>problems and harder correspondence problems such as n objects are connected to m objects</p>	<ul style="list-style-type: none"> <li>• Divide by 1 and itself</li> <li>• Multiply three numbers</li> </ul>
<p><b>Unit: Number – Multiplication and Division</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<ul style="list-style-type: none"> <li>• recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></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> <li>• recognise and use factor pairs and commutativity in mental calculations</li> <li>• multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>• solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects</li> </ul>	<ul style="list-style-type: none"> <li>• Factor pairs</li> <li>• Efficient multiplication</li> <li>• Written methods</li> <li>• Multiply 2-digits by 1 digit</li> <li>• Multiply 3-digits by 1-digit</li> <li>• Divide 2-digits by 1-digit</li> <li>• Divide 3-digit by 1-digit</li> <li>• Correspondence problems</li> <li>• Multiply by 10</li> <li>• Multiply by 100</li> <li>• Divide by 10</li> <li>• Divide by 100</li> </ul>
<p><b>Unit: Measure – Length &amp; Perimeter</b></p>	<p><b>Term: Spring</b></p>
<p>National Curriculum</p>	<p>Progression steps</p>
<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> <li>• find the area of rectilinear shapes by counting squares</li> </ul>	<ul style="list-style-type: none"> <li>• Kilometres</li> <li>• Perimeter on a grid</li> <li>• Perimeter of a rectangle</li> <li>• Perimeter of rectilinear shapes</li> </ul>
<p><b>Unit: Number – Fractions</b></p>	<p><b>Term: Spring</b></p>



# Curriculum Overview: Maths Progression map

National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>recognise and show, using diagrams, families of common equivalent fractions</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>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</li> <li>add and subtract fractions with the same denominator</li> <li>recognise and write decimal equivalents of any number of tenths or hundreds</li> <li>recognise and write decimal equivalents to <math>\frac{1}{4}, \frac{1}{2}, \frac{3}{4}</math></li> <li>find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>round decimals with 1 decimal place to the nearest whole number</li> <li>compare numbers with the same number of decimal places up to 2 decimal places</li> <li>solve simple measure and money problems involving fractions and decimals to 2 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>What is a fraction?</li> <li>Equivalent fractions</li> <li>Fractions greater than 1</li> <li>Count in fractions</li> <li>Add fractions</li> <li>Add 2 or more fractions</li> <li>Subtract 2 fractions</li> <li>Subtract from whole amounts</li> <li>Calculate fractions of a quantity</li> <li>Problem solving – calculate quantities</li> </ul>
<b>Unit: Number – Decimals</b>	<b>Term: Spring &amp; Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>recognise and write decimal equivalents of any number of tenths or hundreds</li> <li>recognise and write decimal equivalents to <math>\frac{1}{4}, \frac{1}{2}, \frac{3}{4}</math></li> </ul>	<ul style="list-style-type: none"> <li>recognise tenths and hundredths</li> <li>Tenths as decimals</li> <li>Tenths on a place value grid</li> <li>Tenths on a number line</li> </ul>



# Curriculum Overview: Maths

## Progression map

<ul style="list-style-type: none"> <li>• find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>• round decimals with 1 decimal place to the nearest whole number</li> <li>• compare numbers with the same number of decimal places up to 2 decimal places</li> <li>• solve simple measure and money problems involving fractions and decimals to 2 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>• Divide 1-digit by 10</li> <li>• Divide 2-digits by 10</li> <li>• Hundredths</li> <li>• Hundredths as decimals</li> <li>• Hundredths on a place value grid</li> <li>• Divide 1 or 2-digits by 100</li> <li>• Make a whole</li> <li>• Write decimals</li> <li>• Compare decimals</li> <li>• Order decimals</li> <li>• Round decimals</li> <li>• Halves and quarter</li> </ul>
<b>Unit: Measure – Money</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<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>• Pounds and pence</li> <li>• Ordering money</li> <li>• Estimating money</li> <li>• Four operations</li> </ul>
<b>Unit: Measure - Time</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>• read, write and convert time between analogue and digital 12- and 24-hour clocks</li> <li>• solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days</li> </ul>	<ul style="list-style-type: none"> <li>• Hours, minutes and seconds</li> <li>• Years, months, weeks and days</li> <li>• Analogue to digital – 12 hour</li> <li>• Analogue to digital – 24 hour</li> </ul>
<b>Unit: Geometry - Shape</b>	<b>Term: Summer</b>





# Curriculum Overview: Maths Progression map

National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>identify acute and obtuse angles and compare and order angles up to 2 right angles by size</li> <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>	<ul style="list-style-type: none"> <li>Identify angles</li> <li>Compare and order angles</li> <li>Triangles</li> <li>Quadrilaterals</li> <li>Lines of symmetry</li> <li>Complete a symmetric figure</li> </ul>
<b>Unit: Statistics</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<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 graph</li> </ul>	<ul style="list-style-type: none"> <li>Interpret charts</li> <li>Comparison, sum and difference</li> <li>Introducing line graphs</li> <li>Line graphs</li> </ul>
<b>Unit: Geometry – Position &amp; Direction</b>	<b>Term: Summer</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>describe movements between positions as translations of a given unit to the left/right and up/down</li> <li>plot specified points and draw sides to complete a given polygon</li> </ul>	<ul style="list-style-type: none"> <li>Describe a position</li> <li>Draw on a grid</li> <li>Move on a grid</li> <li>Describe movement on a grid</li> </ul>



# Year 5

Unit: Number – Place value	Term: Autumn
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>Count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000</li> <li>Count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>Read, write (order and compare) numbers to at least 1,000,000 and determine the value of each digits</li> <li>Read Roman numerals to 100 and recognise years written in Roman numerals</li> <li>Interpret negative numbers in context</li> <li>Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10 000, and 100 000</li> <li>Solve number problems and practical problems that involve all of the above</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>Roman numerals to 1,000</li> <li>Numbers to 10,000</li> <li>Numbers to 100,000</li> <li>Numbers to a million</li> <li>Powers of 10</li> <li>10/100/1000/10,000/100,000 more or less</li> <li>Partition numbers to 1,000,000</li> <li>Number line to 1,000,000</li> <li>Compare and order numbers to 100,000</li> <li>Round numbers within 100,000</li> <li>Compare and order numbers to one million</li> <li>Round to the nearest 10, 100 and 1,000</li> <li>Round within 100,000</li> <li>Round within 1,000,000</li> </ul>
Unit: Number – Addition & subtraction	<ul style="list-style-type: none"> <li>Term: Autumn</li> </ul>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>Add and subtract whole numbers with more than 4 digits, using the formal written methods</li> </ul>	<ul style="list-style-type: none"> <li>Mental Strategies</li> <li>Add whole numbers with more than 4 digits (column method)</li> <li>Subtract whole numbers with more than 4 digits (column method)</li> </ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• Add and subtract numbers mentally with increasingly large 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 and a combination of these, including understanding the meaning of the equals sign</li> </ul>	<ul style="list-style-type: none"> <li>• Round to check answers</li> <li>• Inverse operations</li> <li>• Multi-step addition and subtraction problems</li> <li>• Compare calculations</li> <li>• Find Missing numbers</li> </ul>
<b>Unit: Number – Multiplication and division</b>	<b>Term: Autumn</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Identify multiples and factors, including factor pairs of a number, and common factors of two numbers</li> <li>• Know and use the vocabulary of prime numbers, prime factors and composite 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 and cubed.</li> <li>• Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</li> <li>• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> </ul>	<ul style="list-style-type: none"> <li>• Multiples</li> <li>• Common Multiples</li> <li>• Factors</li> <li>• Common Factors</li> <li>• Prime Numbers</li> <li>• Square numbers</li> <li>• Cube numbers</li> <li>• Multiply by 10, 100 and 1000</li> <li>• Divide by 10, 100 and 1,000</li> <li>• Multiples of 10, 100 and 1000</li> </ul>
<b>Unit: Number: Fractions</b>	<b>Term: Autumn</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> </ul>	<ul style="list-style-type: none"> <li>• Equivalent Fractions to unit fractions</li> <li>• Equivalent fractions to non-unit fractions</li> <li>• Recognise equivalent fractions</li> <li>• Improper fractions to mixed numbers</li> </ul>



# Curriculum Overview: Maths Progression map

- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  $> 1$  as a mixed number
- Compare and order fractions whose denominators are all multiples of the same number
- Add and subtract fractions with the same denominator and denominators that are multiples of the same numbers
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

- Mixed numbers to improper fractions
- Compare fractions less than 1
- Order fractions less than 1
- Compare and order fractions greater than 1
- Add and subtract fractions with the same denominator
- Add fractions within 1
- Add fractions with a total greater than 1
- Add to a mixed number
- Add two mixed numbers
- Subtract fractions
- Subtract from a mixed number
- Subtract from a mixed number – Breaking the whole
- Subtract 2 mixed numbers

**Unit:** Number: Multiplication and division

**Term:** Spring

**National Curriculum**

**Progression steps**

- Multiply numbers up to 4-digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- Multiply and divide numbers mentally drawing upon known facts
- Divide numbers up to 4 digits by a one-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
- Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

- Multiply 4-digits by 1-digit
- Multiply 2-digits (grid)
- Multiply 2-digits by 2-digits
- Multiply 3-digits by 2-digits
- Multiply 4-digits by 2-digits
- Divide 4-digits by 1-digit
- Divide with remainders

**Unit:** Number: Fractions

**Term:** Spring



# Curriculum Overview: Maths Progression map

National Curriculum	Progression steps
<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 numbers</li> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> </ul>	<ul style="list-style-type: none"> <li>Multiply unit fractions by an integer</li> <li>Multiply non-unit fractions by an integer</li> <li>Multiply mixed numbers by integers</li> <li>Fraction of an amount</li> <li>Using fractions as operators</li> </ul>
<b>Unit: Number – Decimals &amp; Percentages</b>	<b>Term: Spring</b>
National Curriculum	Progression steps
<ul style="list-style-type: none"> <li>Read and write decimal numbers as fractions</li> <li>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>Round decimal with two decimal places to the nearest whole number and to one decimal place</li> <li>Read, write, order and compare numbers with up to 3 decimal places</li> <li>Recognise the percent symbol and understand that percent relates to number of parts per hundred, and write percentages as a fraction with denominator 100, and as a decimal</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>Decimals up to 2 decimal places</li> <li>Decimals as fractions</li> <li>Understand thousandths</li> <li>Thousandths as decimals</li> <li>Rounding decimals</li> <li>Order and compare decimals</li> <li>Understand percentages</li> <li>Percentages as fractions and decimals</li> <li>Equivalent fractions, decimals and percentages.</li> </ul>



# Curriculum Overview: Maths Progression map

<b>Unit: Measurement – Perimeter and area</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"><li>• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li><li>• Calculate and compare the areas of rectangles (including squares), and including using standard units, square centimetres and square metres and estimate the area of irregular shapes</li></ul>	<ul style="list-style-type: none"><li>• Measure perimeter</li><li>• Calculate perimeter</li><li>• Area of rectangles</li><li>• Area of compound shapes</li><li>• Area of irregular shapes.</li></ul>
<b>Unit: Statistics</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"><li>• Complete, read and interpret information in tables, including timetables</li><li>• Solve comparison, sum and difference problems using information presented in a line graph</li><li>• Interpret and construct pie charts and line graphs and use these to solve problems</li></ul>	<ul style="list-style-type: none"><li>• Read and interpret line graphs</li><li>• Draw line graphs</li><li>• Use line graphs to solve problems</li><li>• Read and interpret tables</li><li>• Two-way tables</li><li>• Timetables</li><li>• Read and interpret line graphs</li><li>• Draw line graphs</li><li>• Use line graphs to solve problems</li></ul>
<b>Unit: Geometry – Properties of Shape</b>	<b>Term: Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"><li>• Draw 2-D shapes using given dimensions and angles</li></ul>	<ul style="list-style-type: none"><li>• Measure angles in degrees</li><li>• Measure with a protractor</li></ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• Compare and classify geometric shapes based on their properties and sizes</li> <li>• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>• Recognise, describe and build simple 3-D shapes, including making nets</li> <li>• Find unknown angles in any triangles, quadrilaterals and regular polygons</li> <li>• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>	<ul style="list-style-type: none"> <li>• Drawing lines and angles accurately</li> <li>• Calculating angles on a straight line</li> <li>• Calculating angles around a point</li> <li>• Calculating lengths and angles in shapes</li> <li>• Regular and irregular polygons</li> <li>• Reasoning about 3-d shapes</li> </ul>
<b>Unit: Geometry – Position &amp; Direction</b>	<b>Term: Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• Position in the first quadrant</li> <li>• Translation</li> <li>• Translation with coordinates</li> <li>• Reflection</li> <li>• Reflection with coordinates</li> </ul>
<b>Unit: Number – Decimals</b>	<b>Term: Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>• Round decimal with two decimal places to the nearest whole number and to one decimal place</li> <li>• Read, write, order and compare numbers with up to 3 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>• Adding decimals within 1</li> <li>• Subtracting decimals within 1</li> <li>• Compliments to 1</li> <li>• Adding decimals – crossing the whole</li> <li>• Adding decimals with the same number of decimal places</li> <li>• Subtracting decimals with the same number of decimal places</li> <li>• Adding numbers with a different number of decimal places</li> </ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• solve problems involving number up to 3 decimal places</li> </ul>	<ul style="list-style-type: none"> <li>• Subtracting decimals with a different number of decimal places</li> <li>• Adding and subtracting wholes and decimals</li> <li>• Decimal sequences</li> <li>• Multiplying decimals by 10, 100 and 1,000</li> <li>• Dividing decimals by 10,100 and 1,000</li> </ul>
<b>Number – Negative numbers</b>	<b>Term - Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0</li> <li>• solve number problems and practical problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>• Negative numbers</li> </ul>
<b>Measure – Converting units</b>	<b>Term - Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• convert between different units of measure [for example, kilometre to metre; hour to minute]</li> </ul>	<ul style="list-style-type: none"> <li>• Kilograms and kilometres</li> <li>• Millimetres and millilitres</li> <li>• Metric units</li> <li>• Imperial units</li> <li>• Converting units of time</li> <li>• Timetables</li> </ul>
<b>Unit: Volume</b>	<b>Term: Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>





# Curriculum Overview: Maths Progression map

- Recognise when it is possible to use formulae for area and volume of shapes
- Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extending to other units

- What is volume?
- Compare volume
- Estimate Volume
- Estimate Capacity

## Year 6

**Unit:** Number – Place value

**Term:** Autumn

**National Curriculum**

**Progression steps**

Pupils should be taught to:

- Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero
- solve number and practical problems that involve all of the above.

- Numbers to 1,000,000
- Numbers to 10,000,000
- Read and write numbers to 10,000,000
- Powers of 10
- Number line to 10,000,000
- Compare and order any integers
- Round any Integer
- Negative numbers

**Unit:** Number – Addition, subtraction, multiplication and division

• **Term:** Autumn

**National Curriculum**

**Progression steps**

- Perform mental calculations, including with mixed operations and large numbers
- Use their knowledge of the order of operations to carry out calculation involving the four operations

- Add and subtract integers
- Common Factors
- Common Multiples
- Rules of divisibility



# Curriculum Overview: Maths Progression map

- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- Identify common factors, common multiples and prime numbers
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- Perform mental calculations, including with mixed operations and large numbers
- Solve problems involving addition, subtraction, multiplication and division
- Use their knowledge of the order of operations to carry out calculations involving the four operations

- Prime numbers to 100
- Square and cube numbers
- Multiply a 4-digit number by and 2-digit number
- Solve problems with multiplication
- Short division
- Division using factors
- Introduction to Long Division
- Long Division with remainders
- Solve problems with division
- Solve multi-step problems
- Order of operations
- Mental calculations and operations
- Reason from known facts

## Unit: Fractions

## Term: Autumn

### National Curriculum

### Progression steps

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Compare and order fractions, including fractions  $> 1$
- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Multiply simple pairs of proper fractions, writing the answer in its simplest form
- Divide proper fractions by whole numbers

- Equivalent fractions and simplifying
- Equivalent fractions on a number line
- Compare and order fractions with different denominators
- Compare and order fractions with the same numerator
- Add and subtract fractions
- Add and subtract any 2 fractions
- Add mixed numbers
- Subtract mixed numbers
- Multi-step problems



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Multiply fractions by integers</li> <li>• Multiply fractions by fractions</li> <li>• Divide a fraction by an integer</li> <li>• Divide any fraction by an integer</li> <li>• Mixed questions with fractions</li> <li>• Fractions of amounts</li> <li>• Fractions of amounts (find the whole)</li> </ul>
<b>Unit: Measurement – Converting Units</b>	<b>Term: Autumn</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three 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 to up to three decimal places</li> <li>• Convert between miles and kilometres</li> <li>• Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit and vice versa</li> </ul>	<ul style="list-style-type: none"> <li>• Metric measures</li> <li>• Convert metric measures</li> <li>• Calculate with metric measures</li> <li>• Miles and kilometres</li> <li>• Imperial Measures</li> </ul>
<b>Unit: Number - Ratio</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Solve problems involving the relative sizes of two quantities where missing values can be found by integer multiplication and division facts</li> </ul>	<ul style="list-style-type: none"> <li>• Use ratio language</li> <li>• Ratios and fractions</li> <li>• Introducing the ratio symbol</li> <li>• Calculating ratio</li> </ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>Solve problems involving the calculation of percentages and the use of percentages for comparison</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> </ul>	<ul style="list-style-type: none"> <li>Using scale factors</li> <li>Calculating scale factors</li> </ul>
<b>Unit: Number: Algebra</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Express missing number problems algebraically</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables</li> </ul>	<ul style="list-style-type: none"> <li>Find a rule with 1 step</li> <li>Find a rule with 2 steps</li> <li>Forming expressions</li> <li>Substitution</li> <li>Formulae</li> <li>Forming Questions</li> <li>Solve simple one-step equations</li> <li>Solve two-step equations</li> <li>Find pairs of values</li> <li>Enumerate possibilities</li> </ul>
<b>Unit: Number: Decimals</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>Identify the value of each digit in numbers given to three decimal places</li> <li>Multiply and divide numbers by 10, 100 and 1000 given answers up to three decimal places</li> <li>Multiply one-digit numbers with up to two decimal places by whole numbers</li> </ul>	<ul style="list-style-type: none"> <li>Identify the value of numbers with 3 decimal places</li> <li>Multiply decimal numbers by 10, 100 or 1000</li> <li>Divide decimal numbers by 10,100 or 1000</li> <li>Multiply decimal numbers by integers</li> <li>Divide decimals by integers</li> <li>Decimals as fractions</li> </ul>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• Use written division methods in cases where the answer has up to two decimal places</li> <li>• Solve problems which require answers to be rounded to specific degrees of accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Fractions to decimals</li> </ul>
<b>Unit: Number: Percentages</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<ul style="list-style-type: none"> <li>• Recall and use equivalences between simple fractions, decimals and percentages including in different context</li> </ul>	<ul style="list-style-type: none"> <li>• Fractions to percentages</li> <li>• Equivalent fractions, decimals and percentages</li> <li>• Percentages of an amount</li> <li>• Percentages – Missing values</li> </ul>
<b>Unit: Measurement – Area, Perimeter and Volume</b>	<b>Term: Spring</b>
<b>National Curriculum</b>	<b>Progression steps</b>
<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 and cubic metres, and extending to other units</li> </ul>	<ul style="list-style-type: none"> <li>• Shapes with the same area</li> <li>• Area and perimeter</li> <li>• Area of a triangle</li> <li>• Area of a parallelogram</li> <li>• Volume</li> <li>• Volume using cubes</li> <li>• Volume of a cuboid</li> </ul>
<b>Unit: Number - Statistics</b>	<b>Term: Summer</b>
<b>National Curriculum</b>	<b>Progression steps</b>



# Curriculum Overview: Maths Progression map

<ul style="list-style-type: none"> <li>• Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>• Calculate and interpret the mean as an average</li> </ul>	<ul style="list-style-type: none"> <li>• Read and interpret line graphs</li> <li>• Draw line graphs</li> <li>• Use line graphs to solve problems</li> <li>• Parts of circles</li> <li>• Read and interpret pie charts</li> <li>• Pie charts with percentages</li> <li>• Draw pie charts</li> <li>• Mean</li> </ul>
<p><b>Unit: Geometry – Properties of Shape</b></p>	<p><b>Term: Summer</b></p>
<p><b>National Curriculum</b></p>	<p><b>Progression steps</b></p>
<ul style="list-style-type: none"> <li>• Draw 2-D shapes using given dimensions and angles</li> <li>• Compare and classify geometric shapes based on their properties and sizes</li> <li>• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>• Recognise, describe and build simple 3-D shapes, including making nets</li> <li>• Find unknown angles in any triangles, quadrilaterals and regular polygons</li> <li>• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> </ul>	<ul style="list-style-type: none"> <li>• Measure with a protractor</li> <li>• Introduce angles</li> <li>• Calculate angles</li> <li>• Vertically opposite angles</li> <li>• Angles in a triangle</li> <li>• Angles in a triangle – Missing angles</li> <li>• Angles in special quadrilaterals</li> <li>• Angles in regular polygons</li> <li>• Draw shapes accurately</li> <li>• Draw net of 3-D shapes</li> </ul>
<p><b>Unit: Geometry- Position and direction</b></p>	<p><b>Term: Summer</b></p>
<p><b>National Curriculum</b></p>	<p><b>Progression steps</b></p>



Middleforth Church of England Primary School

## Curriculum Overview: Maths Progression map

- |  |   |
|--|---|
| <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> | <ul style="list-style-type: none"><li>• Use co-ordinates in the first quadrant</li><li>• Use co-ordinates in the 4 quadrants</li><li>• Reflections</li><li>• Translations</li></ul> |
|--|---|