

# Evelyn Street Primary School

## MATHEMATICS

### Our Intended Curriculum

(Version 3, November 22)

## **Evelyn Street Primary Academy's Intended Curriculum**

Our school's curriculum has been designed with our community and our children at the heart of it. We operate in a disadvantaged area and therefore aim to provide a successful curriculum that allows the opportunities for children to live prosperous and fulfilling lives. We believe that mathematics is a significant pillar for academic achievement. Therefore, we have constructed a high quality curriculum that is challenging and supportive for all our children so that they can progress and achieve.

By planning out our curriculum provision from EYFS, we create firm foundations for children to be engaged, motivated and inspired by the maths within the world around them. We aim to develop critical thinking from an early stage so that children can become fluent mathematicians, who are able to reason and problem solve with increased complexity as they progress through the school.

We have mapped out the aims and objectives of the National Curriculum with that of the 2020 Maths guidance document to ensure that our children are Ready to Progress onto the next year. Consequently, children leave us in year 6 as confident and competent mathematicians who enjoy the subject, ready for their next stages in learning

# EYFS -NURSERY

## EYFS Mathematics (Nursery)

Children in EYFS (nursery) will learn and progress in mathematics through engagement, motivation and thinking:

| Playing & Exploring - Engagement   | Active Learning - Motivation   | Creating & Thinking Critically - Thinking  |
|--|--|--|
| <ul style="list-style-type: none"> <li>Finding out &amp; exploring</li> <li>Playing with what they know</li> <li>Being willing to 'have a go'</li> </ul> | <ul style="list-style-type: none"> <li>Being involved &amp; concentrating</li> <li>Keep on trying</li> <li>Enjoying achieving what they set out to do</li> </ul> | <ul style="list-style-type: none"> <li>Having their own ideas (creative thinking)</li> <li>Making links (building theories)</li> <li>Working with ideas (critical thinking)</li> </ul> |

Through the school's intended curriculum, high quality resources and these approaches to learning (mentioned above), children in nursery receive a firm foundation for understanding the world where they can begin to develop the capacity to think critically and reason mathematically about the world around them. We aim to ensure that all children appreciate the beauty and power of maths, and build a sense of enjoyment and curiosity about the subject.

**EYFS Statutory Framework** - Children to be able to count confidently and develop a deep understanding of numbers up to 10 through frequent a varied opportunities to build and apply this understanding. Resourcing to ensure manipulatives indoors and out (pebbles, shells, cones, jewels etc) will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. Rich opportunities to develop spatial reasoning skills across all areas of mathematics including shape, space and measures. Children to develop positive attitudes and interests in mathematics and to be confident to 'have a go' and not be afraid to make mistakes and talk to adults and peers about what they notice.

### ELG-Number (END GOALS)

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

-Automatically recall(without reference to rhymes, counting or other aids) number bonds up to 5(including subtraction facts) and some number bonds to 10, including double facts

### Numerical Patterns (END GOALS)

-Verbally count beyond 10, recognising the pattern of the counting system

-Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity

-Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Over the course of the year, children work towards achieving these end goals by engaging in, revisiting and progress within the key areas of mathematics based on the EYFS statutory framework.

| Nursery Knowledge | Autumn  | Spring   | Summer   |
|-------------------|---|--|--|
|                   | <b>Cardinality &amp; Counting 1</b><br><b>Measures 1</b><br><b>Spatial Reasoning 1</b><br><b>Shape 1</b><br><b>Sorting &amp; Sequencing 1</b> | <b>Cardinality &amp; Counting 2</b><br><b>Comparison 1</b><br><b>Measures 2</b><br><b>Spatial Reasoning 2</b><br><b>Shape 2</b><br><b>Sorting &amp; Sequencing 2</b> | <b>Cardinality &amp; Counting 3</b><br><b>Comparison 2</b><br><b>Measures 3</b><br><b>Spatial Reasoning 3</b><br><b>Shape 3</b><br><b>Sorting &amp; Sequencing 3</b> |

# EYFS- RECEPTION

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| Term   | <b>EYFS OVERVIEW</b> |              |                  |                 |                      |
|--------|----------------------|--------------|------------------|-----------------|----------------------|
| Autumn | Getting to know you  | Just like me | It's me 1,2,3!   | Light and dark  | Alive in 5!          |
| Spring | Growing 6,7,8        |              | Building 9,10    |                 | To 20 and beyond (1) |
| Summer | To 20 and beyond (2) |              | First, then, now | Find my pattern | On the move          |

Each unit is split into a number focus and a focus on measure, shape and spatial thinking.

## EYFS - Reception CONTINUOUS PROVISION, VOCABULARY AND LANGUAGE

|        |   |   |   |   |   |
|--------|---|---|---|---|---|
| Autumn | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Getting to know you</u></p> <p>Discuss key times of day and class routines. Explore inside and outside and discuss where things belong</p>   | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Just like me</u></p> <ul style="list-style-type: none"> <li>Match and sort</li> <li>Compare and order amounts</li> <li>Compare size, mass and capacity</li> <li>Explore pattern</li> </ul> | <p style="text-align: center; color: #0056b3; margin: 0;"><u>It's me 1,2,3!</u></p> <ul style="list-style-type: none"> <li>Representing 1,2,3</li> <li>Comparing 1,2,3</li> <li>Composition of 1,2,3</li> <li>Circles and triangles</li> <li>Spatial awareness</li> </ul> | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Light and dark</u></p> <ul style="list-style-type: none"> <li>Four</li> <li>Five</li> <li>One more, one less</li> <li>Shapes with 4 sides</li> <li>Time - Night and day</li> </ul> | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Alive in 5!</u></p> <ul style="list-style-type: none"> <li>Introducing zero</li> <li>Comparing numbers to 5</li> <li>Composition of 4 and 5</li> <li>Compare mass</li> <li>Compare capacity</li> </ul>       |
|        | <p><b>Autumn End Goals</b> – Children review and build upon their learning from Nursery.</p> <p>Through these units and continuous provision, children develop a deep understanding of number to 5, including the composition of each number; they are also able to subitise up to 5. They are beginning to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts). Children can verbally count to 5 recognising the pattern of the counting system. They can compare quantities up to 5 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</p> <p>In addition, children are beginning to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures</p>   |   |   |   |   |
| Spring | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Growing 6,7,8</u></p> <ul style="list-style-type: none"> <li>6,7,8</li> <li>Making pairs</li> <li>Combining 2 groups</li> <li>Length and height</li> <li>Time</li> </ul>   |   | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Building 9, 10</u></p> <ul style="list-style-type: none"> <li>9 and 10</li> <li>Comparing numbers to 10 –</li> <li>Bonds to 10</li> <li>3d shapes</li> <li>Pattern</li> </ul>                                |   | <p style="text-align: center; color: #0056b3; margin: 0;"><u>To 20 and beyond</u></p> <ul style="list-style-type: none"> <li>Building numbers beyond 10</li> <li>Counting patterns beyond 10</li> <li>Extend - Begin to look at 100</li> <li>Spatial reasoning</li> </ul> |
|        | <p><b>Spring End Goals</b> –</p> <p>Children have a deep understanding of number to 10, including the composition of each number. They can subitise up to 5 and beyond. They can automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p> <p>Children can verbally count to 10 and beyond, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. They explore and represent patterns within numbers up to 10.</p> <p>In addition, children are beginning to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures</p>  |   |   |   |   |
| Summer | <p style="text-align: center; color: #0056b3; margin: 0;"><u>To 20 and beyond continued</u></p> <ul style="list-style-type: none"> <li>Building numbers beyond 10</li> <li>Counting patterns beyond 10</li> <li>Extend - Begin to look at 100</li> <li>Spatial reasoning</li> </ul>   |   | <p style="text-align: center; color: #0056b3; margin: 0;"><u>First, then, now</u></p> <ul style="list-style-type: none"> <li>Adding more</li> <li>Taking away</li> <li>Extend – How many did I add on? How many did I take away?</li> <li>Spatial reasoning</li> </ul>    |   | <p style="text-align: center; color: #0056b3; margin: 0;"><u>Find my pattern</u></p> <ul style="list-style-type: none"> <li>Doubling</li> <li>Sharing and grouping</li> <li>Even and odd</li> <li>Spatial reasoning</li> </ul>  |
|        | <p><b>Summer End Goals</b> –</p> <p>Children have a deep understanding of number to 10, including the composition of each number. They can subitise (recognise quantities without counting) up to 5 They automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p> <p>Children verbally count beyond 20, recognising the pattern of the counting system. They compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. They explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p> <p>In addition, children have developed their spatial reasoning skills across all areas of mathematics including shape, space and measures. They are able to problem solve and to think critically about number, shape, space and measure.</p> |   |   |   |   |

# Year 1

| Term   | Year 1 Overview   |  |   |                                  |                                 |                   |
|--------|---|--|---|----------------------------------|---------------------------------|-------------------|
| Autumn | Number: Place Value (within 10)   | Number: Addition and Subtraction (within 10) |   | Geometry: Shape                  | Number: Place Value (within 20) |                   |
|        | <i>Multiplication tables - Count in 2, 5, 10</i>  |  |   |                                  |                                 |                   |
| Spring | Number: Addition and Subtraction (within 20)  |  | Number: Place Value (within 50) <i>includes counting in 2s and 5s</i> | Measurement: Length and Height   | Measurement: Mass and Volume    |                   |
|        | <i>Multiplication tables - Count in 5, 10 and recite 2</i>  |  |   |                                  |                                 |                   |
| Summer | Number: Multiplication and Division (reinforce multiples of 2, 5 and 10 to be included)                     | Number: Fractions                            | Geometry: Position & Direction  | Number: Place Value (within 100) | Measures: Money                 | Measurement: Time |
|        | <i>Multiplication tables - Recite 5, 10 and multiply 2<br/>Fluency – Addition and subtraction within 10</i> |  |   |                                  |                                 |                   |

# YEAR 1 Autumn End Goals

|        |  |  |  |   |   |  |
|--------|--|--|--|---|---|--|
| Autumn | <p><b><u>Number: Place Value (within 10)</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV1 Count within 100, forwards and backwards, starting with any number.</li> <li>RTP: NPV2 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></li> <li>NC: count, read and write numbers to 100 in numerals</li> <li>NC: given a number, identify 1 more and 1 less</li> <li>NC: 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>NC: read and write numbers from 1 to 20 in numerals and words.</li> </ul> |  | <p><b><u>Number: Addition and Subtraction (within 10)</u></b></p> <ul style="list-style-type: none"> <li>RTP: NF1 Develop fluency in addition and subtraction facts within 10.</li> <li>RTP: AS1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</li> <li>RTP: AS2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</li> <li>NC: read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>NC: represent and use number bonds and related subtraction facts within 20</li> <li>NC: add and subtract one-digit including 0</li> <li>NC: 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> |   | <p><b><u>Geometry: Shape</u></b></p> <ul style="list-style-type: none"> <li>RTP: G1 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.</li> <li>NC: 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>   | <p><b><u>Number: Place Value (within 20)</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV1 Count within 100, forwards and backwards, starting with any number.</li> <li>RTP: NPV2 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></li> <li>NC: given a number, identify 1 more and 1 less</li> <li>NC: 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>NC: read and write numbers from 1 to 20 in numerals and words.</li> </ul> |
|        | Spring   | <p><b><u>Number: Addition and Subtraction (within 20)</u></b></p> <ul style="list-style-type: none"> <li>RTP: AS2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</li> <li>NC: read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>NC: represent and use number bonds and related subtraction facts within 20</li> <li>NC: add and subtract one-digit and two-digit numbers to 20, including 0</li> <li>NC: 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> |  | <p><b><u>Place value within 50</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV1 Count within 100, forwards and backwards, starting with any number.</li> <li>RTP: NF2 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.</li> <li>NC: count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>NC: count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</li> <li>NC: given a number, identify 1 more and 1 less</li> <li>NC: 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>NC: read and write numbers from 1 to 20 in numerals and words.</li> </ul> |   | <p><b><u>Measurement: Length and height</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV2 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></li> <li>RTP: AS2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</li> <li>NC: compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/hal]</li> <li>NC: measure and begin to record lengths and heights</li> </ul>          |
| Summer |  | <p><b><u>Number: Multiplication and Division</u></b></p> <ul style="list-style-type: none"> <li>RTP: NF2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning</li> <li>NC: 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>  | <p><b><u>Number: Fractions</u></b></p> <ul style="list-style-type: none"> <li>NC: recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity</li> <li>NC: recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity</li> </ul>   | <p><b><u>Geometry: Position &amp; Direction</u></b></p> <ul style="list-style-type: none"> <li>RTP: G2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations</li> <li>NC: describe position, directions and movements, including whole, half, quarter and three-quarter turns.</li> </ul>  | <p><b><u>Number: Place Value (within 100)</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV1 Count within 100, forwards and backwards, starting with any number.</li> <li>NC: count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>NC: count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</li> <li>NC: given a number, identify 1 more and 1 less</li> <li>NC: identify and represent numbers using objects and pictorial representations including the number line, and use the language of correspondence</li> </ul> | <p><b><u>Measures: Money</u></b></p> <ul style="list-style-type: none"> <li>NC: recognise and know the value of different denominations of coins and notes</li> </ul>  |

# Year 2

| Term   | Year 2 Overview  |                                  |                               |                              |   |
|--------|--|----------------------------------|-------------------------------|------------------------------|---|
| Autumn | Number: Place Value  | Number: Addition and Subtraction |                               | Measurement: money           | Number: <u>Multiplication and division</u>  |
|        | <p><i>Multiplication tables - Recite 5, 10 and multiply 2 and count in 4s</i><br/>           2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p> |                                  |                               |                              |   |
| Spring | Number: Multiplication and Division  | Statistics                       | Geometry: Properties of Shape | Number: Fractions            |   |
|        | <p><i>Multiplication tables - Multiply 5, 10 and divide 2 and count in 4s</i><br/>           2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p> |                                  |                               |                              |   |
| Summer | Measurement: Time  | Geometry: Position and Direction | Problem solving               | Measurement: Length & Height | Measurement: Mass, Capacity and Temperature |
|        | <p><i>Multiplication tables - Divide 2, 5, 10 and recite in 4s</i><br/> <i>Fluency – Addition and subtraction across 10</i></p>  |                                  |                               |                              |   |



## YEAR 2 Autumn End Goals

|        |  |  |  |  |  |  |  |   |  |
|--------|--|--|--|--|--|--|--|---|--|
| Autumn | <p style="text-align: center;"><b><u>Number: Place Value</u></b></p> <ul style="list-style-type: none"> <li>RTP: NPV1 Recognise place value of each digit in 2 digit numbers; compose and decompose 2 digit numbers (standard + non- standard partitioning)</li> <li>NC: read and write numbers to at least 100 in numerals and in words</li> <li>RTP: NPV2 Reason about the location of any 2 digit number, including identifying the previous and next multiple of 10.</li> <li>NC: identify, represent and estimate numbers using different representations, including the number line</li> <li>NC: compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>NC: count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward</li> <li>NC: use place value and number facts to solve problems.</li> </ul>  |  | <p style="text-align: center;"><b><u>Number: Addition and Subtraction</u></b></p> <ul style="list-style-type: none"> <li>RTP: NF1 Secure fluency in addition and subtraction facts within 10, through continued practice.</li> <li>NC: recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>RTP: AS1 Add and subtract across 10.</li> <li>NC: add and subtract numbers using various representations <u>mentally</u>, including: a two-digit and 1s, a two-digit and 10s, 2 two-digit numbers, 3 one-digit numbers</li> <li>RTP: AS2 Recognise the subtraction structure of 'difference' (How many more...?)</li> <li>NC: show that addition of 2 numbers is commutative and subtraction of one number from another is not</li> <li>NC: recognise and use the inverse relationship between addition and subtraction (use to check and solve missing number problems)</li> <li>RTP: AS3 and AS4 Add and subtract within 100: add and subtract only ones or only tens to/from a two- digit number <u>and</u> add and subtract any 2 two- digit numbers.</li> <li>NC: solve problems with addition and subtraction using representations, applying their increasing knowledge of mental and written methods</li> </ul> |  | <p style="text-align: center;"><b><u>Measurement: money</u></b></p> <ul style="list-style-type: none"> <li>Continue to explore RTP: NPV2 and AS1 –AS4</li> <li>NC: recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <li>NC: find different combinations of coins that equal the same amounts of money.</li> <li>NC: solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</li> </ul> | <p style="text-align: center;"><b><u>Number: Multiplication and division</u></b></p> <ul style="list-style-type: none"> <li>RTP: MD1 Recognise repeated addition contexts.</li> </ul>  |  |   |  |
|        | <p style="text-align: center;"><b><u>Number: Multiplication and Division</u></b></p> <ul style="list-style-type: none"> <li>RTP: MD1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables</li> <li>RTP: MD2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).</li> <li>NC: recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including odd and even numbers</li> <li>NC: calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</li> <li>NC: show that multiplication of 2 numbers is commutative and division is not</li> <li>NC: solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul> |  | <p style="text-align: center;"><b><u>Statistics</u></b></p> <ul style="list-style-type: none"> <li>RTP: MD1</li> <li>RTP: NPV2</li> <li>NC: interpret and construct simple pictograms, tally charts, block diagrams and tables</li> <li>NC: ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>NC: ask and answer questions about totalling and comparing categorical data</li> </ul>  | <p style="text-align: center;"><b><u>Geometry: Properties of Shape</u></b></p> <ul style="list-style-type: none"> <li>RTP: G1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.</li> <li>NC: identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</li> <li>NC: identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>NC: identify 2-D shapes on the surface of 3-D shapes</li> <li>NC: compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul> |  | <p style="text-align: center;"><b><u>Number: Fractions</u></b></p> <ul style="list-style-type: none"> <li>NC: recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity</li> <li>NC: write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.</li> </ul>  |  |   |  |
| Spring | <p style="text-align: center;"><b><u>Measurement: Time</u></b></p> <ul style="list-style-type: none"> <li>NC: compare and sequence intervals of time</li> <li>NC: 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>NC: know the number of minutes in an hour and the number of hours in a day</li> </ul>   |  | <p style="text-align: center;"><b><u>Geometry: Position and Direction</u></b></p> <ul style="list-style-type: none"> <li>NC: order and arrange combinations of mathematical objects in patterns and sequences</li> <li>NC: 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>  |  | Problem solving and consolidation  | <p style="text-align: center;"><b><u>Measurement: Length &amp; Height</u></b></p> <ul style="list-style-type: none"> <li>NC: choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); to the nearest appropriate unit using rulers (tape measure etc)</li> <li>NC: compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> </ul> |  | <p style="text-align: center;"><b><u>Measurement: Mass, Capacity and Temperature</u></b></p> <ul style="list-style-type: none"> <li>NC: choose and use appropriate standard units for mass (kg/g); temperature (°C); capacity (litres/ml) use scales, thermometers and measuring vessels</li> <li>NC: compare and order measures and record the results using &gt;, &lt; and =</li> </ul> |  |
|        | <p style="text-align: center;"><b><u>Measurement: Mass, Capacity and Temperature</u></b></p> <ul style="list-style-type: none"> <li>NC: choose and use appropriate standard units for mass (kg/g); temperature (°C); capacity (litres/ml) use scales, thermometers and measuring vessels</li> <li>NC: compare and order measures and record the results using &gt;, &lt; and =</li> </ul>  |  |  |  |  |  |  |   |  |
| Summer | <p style="text-align: center;"><b><u>Measurement: Length &amp; Height</u></b></p> <ul style="list-style-type: none"> <li>NC: choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); to the nearest appropriate unit using rulers (tape measure etc)</li> <li>NC: compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> </ul>   |  | <p style="text-align: center;"><b><u>Measurement: Mass, Capacity and Temperature</u></b></p> <ul style="list-style-type: none"> <li>NC: choose and use appropriate standard units for mass (kg/g); temperature (°C); capacity (litres/ml) use scales, thermometers and measuring vessels</li> <li>NC: compare and order measures and record the results using &gt;, &lt; and =</li> </ul>  |  |  |  |  |   |  |

# Year 3

| Term   | Year 3 overview   |   |                   |  |
|--------|---|---|-------------------|--|
| Autumn | Number:<br>Place Value  | Number:<br>Addition and Subtraction     |                   | Number:<br>Multiplication and Division |
|        | <ul style="list-style-type: none"> <li>• <i>Language of 25, 50, 75, 100 must be needs to be a fluent spoken language pattern</i> <ul style="list-style-type: none"> <li>• <i>Yr 3= Multiplication tables - Divide 2, 5, 10 and recite in 4, 8, count 3, 11</i></li> </ul> </li> </ul> |   |                   |  |
| Spring | Number: Multiplication<br>and Division  | Measurement:<br>Length and<br>Perimeter | Number: Fractions | Measures:<br>Mass and Capacity         |
|        | <p><i>Yr 3= Multiplication tables - Divide 2, 5, 10 and multiply 4, 8, recite 3, 11</i></p>   |   |                   |  |
| Summer | Measure: Money  | Measurement:<br>Time                    | Statistics        | Geometry:<br>Properties of shape       |
|        | <p><i>Yr 3= Multiplication tables - Divide 2, 4, 5, 10 and multiply 8, 3, 11</i></p>  |   |                   |  |

## Year 3 End Goals

|        |   |  |   |  |  |   |
|--------|---|--|---|--|--|---|
|        | <b>Year 3 End Goals</b>   |  |   |  |  |   |
| Autumn | <b>Number: Place Value</b>  |  | <b>Number: Addition and Subtraction</b>   |  | <b>Number: Multiplication and Division</b>   |   |
|        | <ul style="list-style-type: none"> <li>NPV1 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.</li> <li>NPV2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.</li> <li>NPV3 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.</li> <li>NPV4 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.</li> <li>NC: solve number problems and practical problems involving these ideas</li> </ul> |  | <ul style="list-style-type: none"> <li>AS1 Calculate complements to 100, for example: <math>46 + ? = 100</math></li> <li>AS2 Add and subtract up to three-digit numbers using columnar methods.</li> <li>AS3 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.</li> <li>NF1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</li> <li>NF3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</li> <li>NC: solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> </ul> |  | <ul style="list-style-type: none"> <li>MD1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</li> <li>NF2 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</li> <li>NF3</li> <li>NPV1</li> </ul> <p>NC: solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p>   |   |
| Spring | <b>Multiplication and division</b>  |  | <b>Length and perimeter</b>   |  | <b>Fractions</b>   | <b>Measure</b>  |
|        | <ul style="list-style-type: none"> <li>MD1</li> <li>NC: recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>NC: 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>NC: 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>NPV2, AS2 and NPV3</li> <li>NC: measure, compare, add and subtract: lengths (m/cm/mm)</li> <li>NC: measure the perimeter of simple 2-D shapes</li> </ul>   |  | <ul style="list-style-type: none"> <li>F1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts (unit fractions and non-unit fractions with small denominators)</li> <li>F2 Find unit fractions of quantities using known division facts (multiplication tables fluency).</li> <li>F3 Reason about the location of any fraction within 1 in the linear number system.</li> <li>NC: count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>NC: recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>NC: compare and order unit fractions, and fractions with the same denominators</li> <li>F4 Add and subtract fractions with the same denominator, within 1.</li> <li>NC solve problems that involve all of the above</li> </ul> | <ul style="list-style-type: none"> <li>NC: measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> </ul>  |
| Summer | <b>Consolidation: place value, money</b>  |  | <b>Time</b>   |  | <b>Statistics</b>  | <b>Properties of shape</b>  |
|        | <ul style="list-style-type: none"> <li>NPV2 and AS2</li> <li>NPV4 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.</li> <li>NC: 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>NC: 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>NC: 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>NC: know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>NC: compare durations of events</li> </ul>   |  | <ul style="list-style-type: none"> <li>NC: interpret and present data - bar charts, pictograms and tables</li> <li>NC: solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables.</li> </ul>  | <ul style="list-style-type: none"> <li>G1 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.</li> <li>NC: 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>NC: recognise angles as a property of shape or a description of a turn</li> <li>G2 Draw polygons by joining marked points, and identify parallel and perpendicular sides. NC: identify horizontal and vertical lines</li> </ul> <p>NC: draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> |

# Year 4

| Term   | Year 4 overview  |   |                   |  |
|--------|--|---|-------------------|--|
| Autumn | Number:<br>Place Value   | Number:<br>Addition and Subtraction           |                   | Number:<br>Multiplication and Division                     |
|        | <ul style="list-style-type: none"> <li>• Language of 25, 50, 75, 100 must be needs to be a fluent spoken language pattern</li> <li>• Yr 4 = Multiplication tables - Divide 2, 4, 5, 10, 11 and multiply 3, 8 and recite 6, 7, 9, 12</li> </ul> |   |                   |  |
| Spring | Number: Multiplication<br>and Division   | Measurement:<br>Length, Perimeter<br>and area | Number: Fractions | Measures:<br>Mass and Capacity                             |
|        | Yr 4 = Multiplication tables - Divide 2, 3, 4, 5, 8, 10, 11 and multiply 6, 7, 9, 12   |   |                   |  |
| Summer | Number: Decimals<br>Measure: Money   | Measurement:<br>Time                          | Statistics        | Geometry: Properties of<br>shape<br>Position and direction |
|        | Yr 4 = Multiplication tables - Divide all to 12 x 12   |   |                   |  |

# Year 4 End Goals

|               |  |  |   |  |   |  |   |  |
|---------------|--|--|---|--|---|--|---|--|
|               | <b>Year 4 End Goals</b>  |  |   |  |   |  |   |  |
| <b>Autumn</b> | <b>Number: Place Value</b>   |  | <b>Number: Addition and Subtraction</b>   |  | <b>Number: Multiplication and Division</b>  |  |   |  |
|               | <ul style="list-style-type: none"> <li>NPV1 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.</li> <li>NPV2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning. NC: identify, represent and estimate numbers using different representations</li> <li>NPV3 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 10), and rounding to the nearest of each.</li> <li>NC: count backwards through 0 to include negative numbers</li> <li>NC: solve number and practical problems that involve all of the above and with increasingly large positive numbers</li> <li>NC: count in multiples of 25 and 1,000</li> <li>NC: read Roman numerals to 100 and know that over time, the numeral system changed to include 0 and place value</li> </ul> |  | <ul style="list-style-type: none"> <li>NF3 Apply place-value knowledge to known additive facts (scaling facts by 100)</li> <li>NC: add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li> <li>NC: estimate and use inverse operations to check answers to a calculation</li> <li>NC: 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>NF1 Recall multiplication and division facts up to 12x12 and recognise products in multiplication tables as multiples of the corresponding number.</li> <li>NF3 Apply place-value knowledge to known multiplicative number facts (scaling facts by 100)</li> <li>MD1 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.</li> <li>MD2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.</li> <li>NC: count in multiples of 6, 7, 9, 25 and 1,000</li> </ul>   |  |   |  |
| <b>Spring</b> | <b>Multiplication and division</b>   |  | <b>Length, perimeter and area</b>   |  | <b>Fractions</b>  |  | <b>Decimals</b>   |  |
|               | <ul style="list-style-type: none"> <li>NF1, NF3, MD2</li> <li>MD3 Understand and apply the distributive property of multiplication</li> <li>NF2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders</li> <li>NC: 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>NC: recognise and use factor pairs and commutativity in mental calculations</li> <li>NC: multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>NC: 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>NPV4 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.</li> <li>G2 Find the perimeter of regular and irregular polygons.</li> <li>NC: convert between different units of measure</li> <li>NC: measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> <li>NC: find the area of rectilinear shapes by counting squares</li> </ul> |  | <ul style="list-style-type: none"> <li>F1 Reason about the location of mixed numbers in the linear number system.</li> <li>F2 Convert mixed numbers to improper fractions and vice versa.</li> <li>F3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</li> <li>NC: recognise and show, using diagrams, families of common equivalent fractions</li> <li>NC: count up and down in hundredths; recognise that hundredths arise when dividing an object by a 100 and dividing tenths by 10.</li> <li>NC: 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>NC: solve simple measure and money problems involving fractions and decimals to 2 decimal places</li> </ul> |  | <ul style="list-style-type: none"> <li>NC: 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>NC: recognise and write decimal equivalents of any number of tenths or hundredths</li> </ul>   |  |
| <b>Summer</b> | <b>Decimals and money</b>  |  | <b>Time</b>   |  | <b>Statistics</b>   |  | <b>Properties of shape and Position and Direction</b>   |  |
|               | <p><b>Decimals</b></p> <ul style="list-style-type: none"> <li>NC: compare numbers with the same number of decimal places up to 2 decimal places</li> <li>NC: recognise and write decimal equivalents to <math>\frac{1}{4}</math>; <math>\frac{1}{2}</math>; <math>\frac{3}{4}</math></li> <li>NC: round decimals with 1 decimal place to the nearest whole number</li> </ul> <p><b>Money</b></p> <ul style="list-style-type: none"> <li>NC: estimate, compare and calculate different measures, including money in pounds and pence</li> <li>NC: solve simple measure and money problems involving fractions and decimals to 2 decimal places.</li> <li>NC: round decimals with 1 decimal place to the nearest whole number</li> </ul>   |  | <ul style="list-style-type: none"> <li>NC: read, write and convert time between analogue and digital 12 and 24-hour clocks</li> <li>NC: 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>NPV4 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.</li> <li>NC: interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</li> <li>NC: 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>NC: identify acute and obtuse angles and compare and order angles up to 2 right angles by size</li> <li>G2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal.</li> <li>NC: compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>G3 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.</li> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <li>NC: describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>G1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.</li> <li>NC: describe movements between positions as translations of a given unit to the left/right and up/down</li> </ul> |  |

# Year 5

|               | <b>Year 5 Overview</b>  |  |                                |  |  |
|---------------|---|--|--------------------------------|--|--|
| <b>Autumn</b> | <b>Number:</b><br><b>Place Value</b>                                    | <b>Number:</b><br><b>Four operations</b> |                                | <b>Number:</b><br><b>Fractions</b>                           |  |
| <b>Spring</b> | <b>Number:</b><br><b>Decimal and Percentages</b>                        | <b>Measure:</b><br><b>Convert units</b>  | <b>Number:</b><br><b>Ratio</b> | <b>Measure:</b><br><b>Perimeter,<br/>Area and<br/>Volume</b> | <b>Number:</b><br><b>FDP<br/>consolidation</b> |
| <b>Summer</b> | <b>Geometry:</b><br><b>Property of Shape<br/>Position and Direction</b> | <b>Statistics</b>                        |                                | <b>Investigations and<br/>consolidation</b>                  |  |

## Year 5 End Goals - Autumn

| Number: Place Value  | Number: Four operations  | Number: Fractions   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• NPV2 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.</li> <li>• NPV3 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.</li> <li>• NC: read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit</li> <li>• NC: count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000</li> <li>• NC: interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0</li> <li>• NC: round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000</li> <li>• NC: solve number problems and practical problems that involve all of the above</li> <li>• NC: read Roman numerals to 1,000 (M) and recognise years written in Roman numerals</li> <li>•</li> </ul> | <ul style="list-style-type: none"> <li>• NF2 Apply place-value knowledge to known additive facts</li> <li>• NC: add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar)</li> <li>• NC: add and subtract numbers mentally with increasingly large numbers</li> <li>• NC: use rounding to check answers and determine, in context, levels of accuracy</li> <li>• NC: solve + AND - multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>• MD1 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.</li> <li>• MD2 Find factors and multiples of positive integers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.</li> <li>• NC: know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers <u>and</u> establish whether a number up to 100 is prime; recall prime numbers to 19</li> <li>• NC: multiply and divide numbers mentally drawing upon known facts</li> <li>• NC: recognise and use square numbers and cube numbers, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> <li>• NC: solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes</li> <li>• NC: solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> <li>• MD3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.</li> <li>• NC: 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</li> <li>• MD4 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.</li> <li>• NC: 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>• 5F2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</li> <li>• 5F1 Find non-unit fractions of quantities</li> <li>• NC: compare and order fractions whose denominators are all multiples of the same number</li> <li>• NC: identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>• NC: recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number</li> <li>• NC: add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> <li>• NC: multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> </ul> |

## Year 5 End Goals - Spring

| Number: Decimal and Percentages   | Measure: Convert units   | Number: Ratio  | Measure: Perimeter, Area and Volume  | Consolidation |
|---|--|--|--|---------------|
| <ul style="list-style-type: none"> <li>• NPV1 - 4.</li> <li>• NC: read and write decimal numbers as fractions</li> <li>• NC: recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>• NC: read, write, order and compare numbers with up to 3 decimal places</li> <li>• F-3 and NC: solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.</li> <li>• NC: 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> <li>• MD1 and NF2</li> <li>• NC: add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>• NC: add and subtract numbers mentally with increasingly large numbers</li> <li>• NC: use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>• NC: solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>• NC: multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000</li> <li>• NC: solve problems involving number up to 3 decimal places</li> <li>• NC: use all four operations to solve problems involving measure using decimal notation including scaling.</li> <li>• NC: solve problems involving numbers up to 3 decimal places</li> </ul> | <p>NPV5 Convert between units of measure, including using common decimals and fractions.</p> <p>NC: understand and use approximate equivalences between metric units and common imperial units (inches, pounds, pints)</p> <p>NC: solve problems involving converting between units of time</p> <p>NC: use all four operations to solve problems involving measure using decimal notation including scaling.</p> | <p>NC: solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</p> | <p>G2 Compare areas and calculate the area of rectangles (including squares) using standard units. NC: including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes</p> <p>NC: measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres, <b>estimate</b></p> <p>NC: estimate volume and capacity</p> |               |

## Year 5 End Goals - Summer

| Geometry: Position and direction  | Geometry: Property of Shape  | Statistics   | Investigations and consolidation<br>Problem Solving |
|---|--|--|---|
| <ul style="list-style-type: none"> <li>• NC: 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>• G1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.</li> <li>• NC: acute, obtuse and reflex angles</li> <li>• NC: 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°) other multiples of 90°</li> <li>• NC: use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>• NC: distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> <li>• NC: identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li> <li>•</li> </ul> | <ul style="list-style-type: none"> <li>• NPV4 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.</li> <li>• NC: solve comparison, sum and difference problems using information presented in a line graph</li> <li>• NC: complete, read and interpret information in tables, including timetables</li> </ul> |   |



# Year 6

|        | <b>Year 6 Overview</b>  |  |                                |  |                                  |
|--------|---|--|--------------------------------|--|----------------------------------|
| Autumn | <b>Number:</b><br><b>Place Value</b>                                    | <b>Number:</b><br><b>Four operations</b> |                                | <b>Number:</b><br><b>Fractions</b>                           |                                  |
| Spring | <b>Number:</b><br><b>Decimal and Percentages</b>                        | <b>Measure:</b><br><b>Convert units</b>  | <b>Number:</b><br><b>Ratio</b> | <b>Measure:</b><br><b>Perimeter,<br/>Area and<br/>Volume</b> | <b>Number:</b><br><b>Algebra</b> |
| Summer | <b>Geometry:</b><br><b>Property of Shape<br/>Position and Direction</b> | <b>Statistics</b>                        |                                | <b>Investigations and<br/>consolidation</b>                  |                                  |

## Year 6 End Goals - Autumn

| Number: Place Value   | Number: Four operations  | Number: Fractions  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• NPV2 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.</li> <li>• NPV3 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.</li> <li>• NPV4 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.</li> <li>• NC: read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>• NC: use negative numbers in context, and calculate intervals across 0</li> <li>• NC: solve number and practical problems that involve all of the above</li> </ul> | <ul style="list-style-type: none"> <li>• AS/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).</li> <li>• AS/MD2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</li> <li>• NC: multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• NC: 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</li> <li>• NC: 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</li> <li>• NC: perform mental calculations, including with mixed operations and large numbers.</li> <li>• NC: identify common factors, common multiples and prime numbers</li> <li>• NC: use their knowledge of the order of operations to carry out calculations involving the 4 operations</li> <li>• NC: solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• NC: solve problems involving addition, subtraction, multiplication and division</li> <li>• NC: use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul> | <ul style="list-style-type: none"> <li>• 6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions.</li> <li>• 6F–2 Express fractions in a common denominator and use this to compare fractions that are similar in value.</li> <li>• 6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denominator as a comparison strategy.</li> <li>• 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.</li> <li>• NC: add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>• NC: multiply simple pairs of proper fractions, writing the answer in its simplest form</li> <li>• NC: divide proper fractions by whole numbers</li> <li>• NC: associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.</li> </ul> |

## Year 6 End Goals - Spring

| Number: Decimal and Percentages   | Measure: Convert units   | Number: Ratio   | Measure: Perimeter, Area and Volume   | Algebra   |
|---|--|---|---|---|
| <p>NPV2<br/>NC: identify the value of each digit in numbers given to three decimal places</p> <p>NPV1 (NC) giving answers are up to three decimal places</p> <p>NC: multiply one-digit numbers with up to 2 decimal places by whole numbers<br/>NC: use written division methods in cases where the answer has up to 2 decimal places</p> <p>NC: solve problems which require answers to be rounded to specified degrees of accuracy</p> <p>NC: solve problems involving the calculation of percentages</p> <p>NC: recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</p> <p>NC: recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</p> | <p>NC: solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate</p> <p>NC: 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 3 decimal places</p> <p>NC: convert between miles and kilometres</p> | <p>AS/MD3 Solve problems involving ratio relationships.</p> <p>NC: solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>NC: solve problems involving the calculation of %s and the use of % for comparison</p> <p>NC: solve problems involving similar shapes where the scale factor is known or can be found</p> <p>NC: solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p> | <p>G1.</p> <p>NC: recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>NC: recognise when it is possible to use formulae for area and volume of shapes</p> <p>NC: calculate the area of parallelograms and triangles</p> <p>NC: calculate, estimate and compare volume of cubes and cuboids using standard units(cm<sup>3</sup> and m<sup>3</sup> and other units)</p> | <p>6AS/MD–4 Solve problems with 2 unknowns.</p> <p>NC: use simple formulae<br/>NC: generate and describe linear number sequences<br/>NC: express missing number problems algebraically</p> <p>NC: find pairs of numbers that satisfy an equation with two unknowns</p> <p>NC: enumerate possibilities of combinations of 2 variables.</p> |

## Year 6 End Goals - Summer

| Geometry: Position and direction   | Geometry: Property of Shape  | Statistics  | <b>Investigations and consolidation<br/>Problem Solving</b> |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>• NC: describe positions on the full coordinate grid (all 4 quadrants)</li> <li>• NC: draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul> | <ul style="list-style-type: none"> <li>• <b>G1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.</b></li> <li>• NC: recognise, describe and build simple 3-D shapes, including making nets</li> <li>• NC: compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>• NC: 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>• NC: illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>• NC: interpret and construct pie charts and line graphs and use these to solve problems</li> <li>• NC: calculate and interpret the mean as an average</li> </ul> |   |