# Maths Long Term Plan with Concepts and Milestones

*Black text shows coverage of the **NC objectives** following the White Rose Maths small steps relating to the concepts used in the Essentials Curriculum- Know and use numbers; add and subtract; multiply and divide; use fractions; understand the properties of shapes; describe position, direction and movement; use measures; use statistics; use algebra.*

*Children learn at different paces, and this can vary both between individuals and across year groups. As a result, teachers may adjust the amount of time spent on each math unit based on ongoing formative and summative assessments, as well as discussions with the math lead. This means the long-term plan may not always be followed exactly in terms of time, but the math concepts will still be taught in the same order, step by step.*

*At Mayflower we believe it is essential for children to recall previous learning in order for it to be stored in their long-term memory. Therefore, learning from previous years/milestones will be recapped at the start of topics/lessons and during 'Flashback 4' to ensure children have an in-depth knowledge of the curriculum. This will enable them to make links between different topics/concepts to deepen their understanding.*

*Year groups are expected to recap previously taught vocabulary from the corresponding units taught in previous years.*

# EYFS

Mathematics is a 'specific' area of learning in the EYFS statutory framework and Development Matters documents, which our teachers use to plan high quality teaching and learning opportunities for Maths in our EYFS year. Although highlighted as an area which is taught specifically, Maths is interwoven throughout the EYFS curriculum to strengthen children's development within all the areas of the EYFS curriculum to support children's overall development.

In Early Years, we aim for our children to have a strong understanding of numbers up to 10, the relationships between them and the patterns within those numbers. We encourage our children to use manipulatives to develop a secure base of number knowledge and provide a curriculum that gives children rich opportunities to develop their spatial reasoning skills across all areas of maths including space, shape and measure.

| Autumn | Spring | Summer |
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| Children will match and sort.<br>Children will compare amounts, size, mass and capacity.<br>Children will make AB patterns.<br>Children will represent, compose and compare numbers to 5.<br>Children will identify and describe circles, triangles, squares and rectangles.<br>Children will use positional language Including above, under, next to.<br>Children will identify one more and one less within 5. | Children will count forwards and backwards within 10.<br>Children will identify 0.<br>Children will represent, compose and compare numbers to 8.<br>Children will compare mass and capacity.<br>Children will make pairs.<br>Children will combine 2 groups.<br>Children will explore length, height and time.<br>Children will compare numbers to 10.<br>Children will identify a cube, sphere, cylinder and cone.<br>Children will make ABB/AAB repeated patterns. | Children will build and identify numbers to 20.<br>Children will match patterns using tangrams and shapes.<br>Children will add more and take away within 20.<br>Children will double within 10.<br>Children will equally share into two groups.<br>Children will identify even and odd numbers up to 10.<br>Children will recall number bonds to 5. |

# Year 1

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place value (within 10)<br>● Count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number<br>● Count numbers to 10 in numerals<br>● Identify and represent numbers using objects and pictorial representations<br>● Read and write numbers to 10 in numerals<br>● Read and write numbers from 1 to 10 in numerals and words<br>● Identify one more or one less from a given number<br><br>**Add and subtract**<br>Addition and subtraction (within 10)<br>● Add and subtract one-digit and two-digit numbers to 10, including zero<br>● Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems<br><br>**Understand the properties of shapes**<br>2D and 3D shapes<br>● Recognise and name common 2-D shapes<br>● Recognise and name common 3-D shapes | **Know and use numbers**<br>Place value (within 20)<br>● Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number<br>● Count numbers to 20 in numerals; count in multiples of twos, fives and tens<br>● Identify and represent numbers using objects and pictorial representations<br>● Read and write numbers to 20 in numerals<br>● Read and write numbers from 1 to 20 in numerals and words<br>● Identify one more or one less from a given number<br><br>**Add and subtract**<br>Addition and subtraction (within 20)<br>● Add and subtract one-digit and two-digit numbers to 20, including zero<br>● Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems<br><br>**Know and use numbers**<br>Place value (within 50)<br>● Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number | **Multiply and divide**<br>Multiplication and division<br>● Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representation and arrays with the support of the teacher<br><br>**Use fractions decimals and percentages**<br>Fractions<br>● Recognise, find and name a half as one of two equal parts of an objects, shape or quantity<br>● Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity<br><br>**Describe position, direction and movement**<br>Position and direction<br>● Describe position, direction and movement, including whole, half, quarter and three-quarter turns<br><br>**Know and use numbers**<br>Place value (within 100) |

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| | ● Count numbers to520 in numerals; count in multiples of twos, fives and tens<br>● Identify and represent numbers using objects and pictorial representations<br>● Read and write numbers to 50 in numerals<br>● Read and write numbers from 1 to 20 in numerals and words<br>● Identify one more or one less from a given number<br><br>**Use measures**<br><u>Length, height, mass and volume</u><br>● Compare, describe and solve practical problems for:<br>Lengths and heights<br>Mass/weight<br>Capacity and volume<br>● Measure and begin to record the following:<br>Lengths and heights<br>Mass/weight<br>Capacity and volume | ● Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number<br>● Count numbers to 100 in numerals; count in multiples of twos, fives and tens<br>● Identify and represent numbers using objects and pictorial representations<br>● Read and write numbers to 100 in numerals<br>● Read and write numbers from 1 to 20 in numerals and words<br>● Identify one more or one less from a given number<br><br>**Use measures**<br><u>Money and Time</u><br>● Compare, describe and solve practical problems for:<br>Time<br>● Measure and begin to record the following:<br>Time (hours, minutes, seconds)<br>● Recognise and know the value of different denominations of coins and notes<br>● Sequence events in chronological order using language (for example: before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) |

# Year 2

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place Value<br>● Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward<br>● Read and write numbers to at least 100 in numerals and words<br>● Identify, represent and estimate numbers using different representations, including the number line<br>● Recognise the place value of each digit in a two-digit number (tens and ones)<br>● Compare and order numbers from 0 up to 100; use <,> and = signs<br>● Use place value and number facts to solve problems<br><br>**Add and subtract**<br>Addition and subtraction<br>● Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:<br>A two-digit number and ones<br>A two-digit number and tens<br>Two two-digit numbers<br>Adding three one-digit numbers<br>● Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures | **Use measures**<br>Money<br>● Recognise and use symbols for pounds and pence; combine amounts to make particular value<br>● Find different combinations of coins that equal the same amounts of money<br>● Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change<br><br>**Multiply and divide**<br>Multiplication and division<br>● Recall and use multiplication and division facts for the 2, 5, and 10 multiplication tables, including recognising odd and even numbers<br>● Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot<br>● Calculate mathematical statement for multiplication and division within the multiplication tables and write them using the multiplication, division and equals signs<br>● Solve problems involving multiplication and division, using arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts<br><br>**Use measures** | **Use fractions decimals and percentages**<br>Fractions<br>● Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity<br>● Recognise the equivalence of 2/4 and ½<br>● Write simple fractions for example ½ of 6 = 3<br><br>**Use measures**<br>Time<br>● Compare and sequence intervals of time<br>● Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock ace to show these times<br>● Know the number of minutes in an hour and the number of hours in a day<br><br>**Use statistics**<br>Statistics<br>● Interpret and construct simple pictograms, tally charts, block diagrams and simple tables<br>● Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity<br>● Ask and answer questions about totalling and comparing categorical data |

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| ● Applying their increasing knowledge of mental and written methods<br><br>**Understand the properties of shapes**<br><u>Shape</u><br>● Identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line<br>● Identify 2-D shapes on the surface of 3-D shapes<br>● Compare and sort common 2-D shapes and everyday objects<br>● Recognise and name common 3-D shapes<br>● Compare and sort common 3-D shapes and everyday objects | <u>Length, height, mass, capacity and temperature</u><br>● Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature; capacity (l/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels<br>● Compare and order lengths, mass, volume/capacity and record the results using <> and = | **Describe position, direction and movement**<br><u>Position and direction</u><br>● Order and arrange combinations of mathematical objects in patterns and sequences<br>● 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) |

# Year 3

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place Value<br>● Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number<br>● Identify, represent and estimate numbers using different representations<br>● Read and write numbers up to 1000 in numerals and in words<br>● Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)<br>● Compare and order numbers up to 1000<br>● Solve number problems and practical problems involving these ideas<br><br>**Add and subtract**<br>Addition and subtraction<br>● Add and subtract numbers mentally including:<br>A three-digit number and ones<br>A three-digit number and tens<br>A three-digit number and hundreds<br>● Add and subtract numbers with up to three digits, using formal written methods and columnar addition and subtraction<br>● Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction<br><br>**Multiply and divide** | **Multiply and divide**<br>Multiplication and division continued<br>● Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know including for two-digit number times one-digit numbers, using mental and progressing to formal written methods<br>● 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<br><br>**Use measures**<br>Length, perimeter, mass and capacity<br>● Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)<br>● Measure the perimeter of simple 2-D shapes<br><br>**Use fractions decimals and percentages**<br>Fractions<br>● 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<br>● Recognise, find and write fractions of a discrete set of objects: unit fractions and non- | **Use fractions decimals and percentages**<br>Fractions continued<br>● Recognise and show, using diagrams equivalent fractions with small denominators<br>● Compare and order unit fractions and fractions with the same denominators<br>● Add and subtract fractions with the same denominator within one whole<br>● Solve problems that involve all of the above<br><br>**Use measures**<br>Money and time<br>● Add and subtract amounts of money to give change, using both pounds and pence and practical contexts<br>● Tell and write the time from an analogue clock, including using Roman numerals and 12-hour and 24-hour clocks<br>● 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, a.m./p.m. morning, afternoon, noon and midnight<br>● Know the number of seconds in a minute and the number of days in each month, year and leap year<br>● Compare durations of events (for example to calculate the time taken by particular events |

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| Multiplication and division<br>● Recall and use multiplication and division facts for the 3, 4, and 8 multiplication tables | unit fractions with small denominators<br>● Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | or tasks).<br><br>**Understand the properties of shapes**<br>Shape<br>● Draw 2-D shapes<br>● Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them<br>● Recognise angles as a property of shape or a description of a turn<br>● Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle<br>● Identify horizontal and vertical lines and pairs of perpendicular and parallel lines<br><br>**Use statistics**<br>Statistics<br>● Interpret and present data using bar charts, pictograms and tables<br>● Solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables |

# Year 4

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place value<br>● Count in multiples of 6, 7, 9, 25 and 1000<br>● Count backwards through zero to include negative numbers<br>● Identify, represent and estimate numbers using different representations<br>● Read Roman numbers to 100 (I to C) and know that over times, numeral system changed to include the concept of zero and place value<br>● Find 1000 more or less than a given number<br>● Recognise the place value of each digit in four-digit number (thousands, hundreds, tens and ones)<br>● Order and compare numbers beyond 1000<br>● Round any number to the nearest 10, 100 or 1000<br>● Solve number and practical problems that involve all of the above and with increasingly large positive numbers<br><br>**Add and subtract**<br>Addition and subtraction<br>● Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate<br>● Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | **Multiply and divide**<br>Multiplication and division (continued)<br>● Multiply two-digit and three-digit numbers by a one-digit number using formal written layout<br>● Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects<br><br>**Use measures**<br>Length and perimeter<br>● Convert between different units of measure (for example kilometre to metre)<br>● Estimate, compare and calculate different measures<br>● Estimate, compare and calculate different measures<br>● Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres<br><br>**Use fractions decimals and percentages**<br>Fractions and decimals | **Use fractions decimals and percentages**<br>Decimals (continued)<br>● Round decimals with one decimals place to the nearest whole number<br>● Compare numbers with the same number of decimals places up to two decimals places<br>● Solve simple measure and money problems involving fractions and decimals to two decimal places<br><br>**Use measures**<br>Money and time<br>● Convert between different units of measure (for example hour to minute)<br>● Estimate, compare and calculate different measures<br>● Estimate, compare and calculate different measures, including money in pounds and pence<br>● Read, write and convert time between analogue and digital 12 and 24-hour clocks<br>● Solve problems involving converting from hours to minutes; minutes to seconds; years to months; week to days<br><br>**Understand the properties of shapes**<br>Shape |

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| **Use measures**<br>Measurement - area<br>● Find the area of rectilinear shapes by counting squares<br><br>**Multiply and divide**<br>Multiplication and division<br>● Recall multiplication and division facts for multiplication tables up to 12 x 12<br>● Use place value, know and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers<br>● Recognise and use factor pairs and commutativity in mental calculations | ● Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten<br>● Recognise and show, using diagrams, families of common equivalent fractions<br>● Add and subtract fractions with the same denominator<br>● 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<br>● Recognise and write decimals equivalents of any number of tenths or hundredths<br>● Recognise and write decimals equivalents to ¼, ½, ¾ | ● Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes<br>● Identify lines of symmetry in 2-D shapes presented in different orientations<br>● Identify acute and obtuse angles and compare and order angles up to two right angles by size<br>● Identify lines of symmetry in 2-D shapes presented in different orientations<br>● Complete a simple symmetric figure with respect to a specific line of symmetry<br><br>**Use statistics**<br>Statistics<br>● Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs<br>● Solve comparison, sum and different problems using information presented in bar charts, pictograms, tables and other graphs<br><br>**Describe position, direction and movement**<br>Position and direction<br>● Describe positions on a 2-D grid as coordinates in the first quadrant<br>● Describe movements between positions as translations of a given unit to the left/right and up/down<br>● Plot specified points and draw sides to complete a given polygon |

# Year 5

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place Value<br>● Count forwards or backwards in steps of powers of 10 for any given number up to 1000000<br>● Read, write, order and compare numbers to at least 1000000 and determine the value of each digit<br>● Read Roman numerals to 1000 (M) and recognise years written in Roman numerals<br>● Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000<br>● Solve number problems and practical problems that involve all of the above<br><br>**Add and subtract**<br>Addition and subtraction<br>● Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)<br>● Add and subtract numbers mentally with increasingly large numbers<br>● Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why<br>● Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign | **Multiply and divide**<br>Multiplication and division (continued)<br>● Multiply numbers up to 4-digits by a one or two-digit number using a formal written method, including long multiplication or two-digit numbers<br>● Multiply and divide numbers mentally drawing upon known facts<br>● Divide number up to 4-digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context<br>● Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000<br>● Solve problems involving multiplication and division including using their knowledge of factors and multiples, square and cubes<br>● Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates<br>● Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign<br><br>**Use fractions decimals and percentages**<br>Fractions (continued); Decimals and percentages | **Understand the properties of shapes**<br>Shape<br>● Distinguish between regular and irregular polygons based on reasoning about equal sides and angles<br>● Use the properties of rectangles to deduce related facts and find missing lengths and angles<br>● Identify 3-D shapes, including cubes and other cuboids, from 2-D representations<br>● Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles<br>● Draw given angles, and measure them in degrees<br>● Identify:<br>Angles at a point and one whole turn total 360 degrees<br>Angels at a point on a straight line and ½ a turn total 180 degrees<br>Other multiples of 90 degrees<br><br>**Describe position, direction and movement**<br>Position and Direction<br>● Identify, describe and represent the position of a shape following a reflection or translation, |

## Multiply and divide

Multiplication and division

- Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers
- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
- Establish whether a number up to 100 is prime and recall prime numbers up to 19
- Recognise and use square number and cube numbers and the notation for squared and cubed

## Use fractions decimals and percentages

Fractions

- Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements
- 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 number
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- Read and write decimal numbers as fractions
- 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
- Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25

## Use measures

Perimeter and Area

- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres and square metres and estimate the area of irregular shapes

## Use statistics

Statistics

- Complete, read and interpret information in tables, including timetables

using the appropriate language and know that the shape has not changed

## Use fractions decimals and percentages

Decimals

- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- Round decimals with two decimal places to the nearest whole number and to one decimal place
- Read, write, order and compare number with up to three decimal places

## Know and use numbers

Negative numbers

- Count forwards and backwards with positive and negative whole numbers, including through zero
- Interpret negative numbers in context
- Solve number problems and practical problems that involve all of the above

## Use measures

Converting units; Measurement - volume

- Convert between different units of measure (for example kilometre to metre; hour to minute)
- Estimate, compare and calculate different measures
- Estimate, compare and calculate different measures, including money in pounds and pence

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| | ● Solve comparison, sum and difference problems using information presented in a line graph | ● Read, write and convert time between analogue and digital 12 and 24-hour clocks<br>● Solve problems involving converting from hours to minutes; minutes to seconds; years to months; week to days |

# Year 6

| Autumn | Spring | Summer |
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| **Know and use numbers**<br>Place Value<br>● Read, write, order and compare numbers up to 10000000 and determine the value of each digit<br>● Round any whole number to a required degree of accuracy<br>● Use negative numbers in context, and calculate intervals across zero<br>● Solve number and practical problems that involve all of the above<br><br>**Add and subtract**<br>Addition and subtraction<br>● Perform mental calculations, including with mixed operations and large numbers<br>● Use their knowledge of the order of operations to carry out calculations involving the four operations<br>● Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why<br><br>**Multiply and Divide**<br>Multiplication and division<br>● Identify common factors, common multiples and prime numbers | **Understand ratio, proportion and algebra**<br>Ratio and Algebra<br>● Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts<br>● Solve problems involving the calculation/use of percentages for comparison<br>● Solve problems involving similar shapes where the scale factor is known or can be found<br>● Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples<br>● Use simple formulae<br>● Generate and describe linear number sequences<br>● Express missing number problems algebraically<br>● Find pairs of numbers that satisfy an equation with two unknowns<br>● Enumerate possibilities of combinations of two variables<br><br>**Use fractions decimals and percentages**<br>Fractions, decimals and percentages<br>● Identify the value of each digit in numbers given to three decimal places | **Understand the properties of shapes**<br>Shape<br>● Draw 2-D shapes using given dimensions and angles<br>● Compare and classify geometric shapes based on their properties and sizes<br>● Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius<br>● Recognise, describe and build simple 3-D shapes, including making nets<br>● Find unknown angles in any triangles, quadrilaterals and regular polygons<br>● Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles<br><br>**Describe position, direction and movement**<br>Position and direction<br>● Describe positions on the full coordinate grid (all four quadrant)<br>● Draw and translate simple shapes on the coordinate plane, and reflect them in the axes |

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| ● Use estimation to check answers to calculations and determine, in the context of a problem an appropriate degree of accuracy<br>● Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication<br>● 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<br>● Perform mental calculation, including with mixed operations and large numbers<br>● Solve problems involving addition, subtraction, multiplication and division<br>● Use their knowledge of the order of operations to carry out calculation involving the four operations<br><br>**Use fractions decimals and percentages**<br><u>Fractions</u><br>● Use common factors to simplify fractions; use common multiples to express fractions in the same denomination<br>● Compare and order fractions, including fractions >1<br>● Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions<br>● Multiply simple pairs of proper fractions, writing the answer in its simplest form<br>● Divide proper fractions by whole numbers | ● Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction<br>● Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts<br><br>**Use measures**<br><u>Area, perimeter and volume</u><br>● Recognise that shapes with the same areas can have different perimeters and vice versa<br>● Recognise when it is possible to use formulae for area and volume of shapes<br>● Calculate the area of parallelograms and triangles<br>● Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres and extending to other units<br><br>**Use statistics**<br><u>Statistics</u><br>● Interpret and construct pic charts and line graphs and use these to solve problems<br>● Calculate and interpret the mean as an average | |

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| **Use measures**<br>Measurement - converting units<br>● Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p where appropriate<br>● Use, read, write and convert between standard unit, 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 d.p<br>● Convert between miles and kilometres<br>● 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 | | |