**Maths Curriculum**

**Great Linford Primary School**



The Mathematics programme of study at Great Linford Primary School is structured around The National Curriculum (Published in 2013) and uses teaching for mastery and the White Rose scheme to implement this curriculum. We are committed to providing all children with a sense of enjoyment and curiosity about the subject as well as the fluency, problem solving and reasoning skills they need to understand the world. Mathematics in the classroom is taught through the Concrete, Pictorial, Abstract approach and has a clear focus on the teaching and use of mathematical vocabulary through the use of stem sentences. We aim to provide children with the ability to make connections across this subject and with others and to appreciate the beauty and power of mathematics. Pupils who grasp concepts rapidly are challenged by being offered rich and sophisticated problems, while those who are not sufficiently fluent in their practise consolidate their understanding through additional practise before moving on.

**Curriculum Progression: Maths skills**

**Number and Place Value**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can count to and across 100, forwards and backwards, beginning with 0 or 1 or from any given number.  I can count, read and write numbers to 100 in numerals.  I can count in multiples of 2s, 5s and 10s.  I can identify and represent numbers using concrete and pictorial representations including numberlines.  I can use the language of: equal to, more than, less than (fewer), most, least.  I can read and write numbers from 1 to 20 in numerals and words. | I can count in steps of 2, 3 and 5 from 0, and in 10s from any numbers, forward and backward.  I recognise the place value of each digit in a two-digit number (10s and 1s).  I can identify, represent and estimate numbers using different representations, including numberlines.  I can compare and order numbers from 0 to 100 and use < > and = signs.  I read and write numbers to at least 100 in numerals and words.  I use place value and number facts to solve problems.  I can partition numbers in different ways. | I can count from 0 in multiples of 4, 8, 50 and 100 and find 10 or 100 more or less than a given number.  I recognise the place value of each digit in a 3-digit numbers.  I can compare and order numbers up to 1000.  I can identify, represent and estimate numbers using different representations.  I can read and write numbers up to 1000 in numerals and words.  I can solve number problems and practical problems involving these ideas. | I can count in multiples of 6, 7, 9, 25 and 1000.  I can find 1000 more or less than a given number.  I can count backwards through 0 to include negative numbers.  I recognise the place value of each digit in a 4-digit number.  I can order and compare numbers beyond 1000.  I can identify, represent and estimate numbers using different representations.  I can round any number to the nearest 10, 100 or 1000.  I can solve problems involving all of the above with increasingly large positive numbers.  I can read Roman numerals to 100 and know that our number system changed over time to include the concept of 0 and place value.  I can connect estimation and rounding to the use of measuring instruments. | I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit  I can count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000  I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0  I can round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000  I can solve number problems and practical problems that involve all of the above  I can read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.  I can recognise and describe linear number sequences, including those involving fractions and decimals, and find the term-to-term rule in words. | I can read, write, order and compare numbers up to 10,000,000 and determine the value of each digit  I can round any whole number to a required degree of accuracy  I can use negative numbers in context, and calculate intervals across 0  I can solve number and practical problems that involve all of the above  I can use the whole number system, including saying, reading and writing numbers accurately.  I can solve problems which require answers to be rounded to specific degrees of accuracy.  Algebra  I can use simple formulae.  I can generate and describe linear number sequences.  I can express missing number problems algebraically.  I can find pairs of numbers that satisfy an equation with 2 unknowns.  I can enumerate possibilities of combinations of 2 variables. |

**Number – Addition and Subtraction**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can read, write and interpret number sentences using the + - = symbols.  I can represent and use number bonds and related subtraction facts within 20.  I can add and subtract one and two digit numbers to 20, including 0.  I can solve one-step problems that involve addition and subtraction, using concrete and pictorial, including missing number problems such as 7 = ? – 9.  I have memorized my number bonds in different forms.  I can solve problems with the following terms: put together, add, altogether, total, take away, distance between, difference between, more than, less than. | I can solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures.  I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.  I can add and subtract using concrete objects and pictorial representations to solve problems with:   * Two- digit number and 1s * Two- digit number and 10s * 2 two- digit numbers * Adding 3 one-digit numbers   I can show that addition can be done in any order (commutative) but that subtraction can not.  I recognise and use the inverse relationship between addition and subtraction to check my work and solve missing number problems.  I understand the language of addition and subtraction, including sum and difference.  I can record addition and subtraction in columns. | I can add and subtract mentally including:   * A three-digit number and 1s * A three-digit number and 10s * A three-digit number and 100s   I can add and subtract numbers with up to 3 digits using column addition and subtraction.  I can estimate the answer to a calculation and use inverse operations to check.  I can solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction. | I can add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.  I can estimate and use inverse operations to check answers.  I can solve two step addition and subtraction problems in contexts, deciding which operations to use. | I can add and subtract whole numbers with more than 4 digits, including using formal written methods.  I can add and subtract numbers mentally with increasingly large numbers  I can use rounding to check answers.  I can solve addition and subtraction multi-step problems in contexts, deciding which operations to use. | I can perform mental calculations, including with mixed operations and large numbers.  I can use my knowledge of the order of operations to carry out calculations involving the 4 operations.  I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.  I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.  I can use the formal written column methods for addition and subtraction.  I can undertake mental calculations with increasingly large numbers and more complex calculations. |

**Number – Multiplication and Division**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can 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.  Through grouping and sharing I am beginning to understand multiplication and division.  Through grouping and sharing I am beginning to be able to double and halve small quantities.  I can make connections between arrays, number patterns, and counting in 2s, 5s and 10s. | I can recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.  I can use the x ÷ and = symbols to write and solve mathematical statements.  I can show that multiplication of 2 numbers can be done in any order (commutative) but that division can not.  I can solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods and multiplication and division facts.  I can connect the 10 times tables to place value and the 5 times tables to the divisions on a clock face. | I can recall and use multiplication and division facts for the 3, 4 and 8 times tables.  I can write and calculate mathematical statements for times tables I know, including for two-digit times one-digit numbers, using mental and progressing to formal written methods  I can solve problems, including missing number problems, involving multiplication and division.  I can solve scaling and correspondence problems.  I can make connections between the 2, 4 and 8 times tables using doubling.  I can develop mental methods using commutativity and associativity to derive related facts (I know… so…)  I have developed formal written methods of short multiplication and division.  I can solve problems in contexts, deciding whether to use addition, subtraction, multiplication and why, including correspondence problems. | I can recall multiplication and division facts for multiplication tables up to 12 x 12.  I can use place value, known and derived facts to multiply and divide mentally, including:   * Multiplying by 0 and 1 * Dividing by 1 * Multiply 3 numbers together   I can recognise and use factor pairs and commutativity in mental calculations.  I can multiply 2 digit and 3 digit numbers by a 1 digit number using a formal written layout.  I can solve problems involving multiplying and adding, including using the distributive law to multiply 2 digit numbers by 1 digit.  I can solve integer scaling problems and harder correspondence problems.  I am becoming fluent in the formal written methods of short multiplication and division.  I can write statements about the equality of expressions using distributive and associative law.  I can solve two step problems in contexts, choosing the appropriate operation to use. | I can identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers  I can use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.  I can establish whether a number up to 100 is prime and recall prime numbers up to 19.  I can 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.  I can multiply and divide numbers mentally.  I can divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.  I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.  I can recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³).  I can solve problems involving the above, including problems that have a combination of all four operations and understanding the meaning of the equals sign.  I can solve problems involving scaling by simple fractions and problems involving simple rates. | I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.  I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division.  I can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.  I can divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate.  I can identify common factors, common multiples and prime numbers.  I can solve problems involving addition, subtraction, multiplication and division.  I can multiply one digit numbers with up to 2 decimal places by whole numbers.  I can use written division methods in cases where the answer has up to 2dp. |

**Number – Fractions, Decimals and Percentages**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.  I can recognise, find and name a quarter as 1 of 4 equal parts of an objects, shape or quantity.  I can make connections between halves and quarters and the equal sharing and grouping of sets of objects as well as measures.  I recognise halves and quarters as parts of a whole. | I can recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.  I can write simple fractions, for example ½ of 6 = 3 and recognise the equivalence of 2/4 and 1/2.  I can connect unit fractions to equal sharing and grouping, to numbers where they can be calculated, and to measures.  I can count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the numberline. | I can count up and down in tenths, recognising that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers by 10.  I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.  I can recognise and show, using diagrams, equivalent fractions with small denominators.  I can add and subtraction fractions with the same denominator within one whole.  I can compare and order unit fractions, and fractions with the same denominators.  I can solve problems involving the above.  I can connect tenths to place value and decimal measures.  I am beginning to understand unit and non-unit fractions as numbers on the number line. | I can recognise and show, using diagrams, families of common equivalent fractions.  I can count up and down in hundredths, recognising that hundredths arise when dividing an object by 100 and dividing tenths by 10.  I can 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.  I can add and subtract fractions with the same denominator.  I can recognise and write decimal equivalents of any number of tenths or hundredths.  I can recognise and write decimal equivalents to quarter, half and three quarters.  I can find the effect of dividing one or two digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths or hundredths.  I can round decimals with 1dp to the nearest whole number.  I can compare numbers with the same number of dp up to 2dp.  I can solve simple measure and money problems involving fractions and decimals to 2dp.  I can use a numberline to connect fractions, numbers and measures. | I can compare and order fractions whose denominators are all multiples of the same number  I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.  I can recognise mixed numbers and improper fractions and convert from one form to the other.  I can add and subtract fractions with the same denominator, and denominators that are multiples of the same number.  I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams  I can read and write decimal numbers as fractions.  I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.  I can round decimals with 2 decimal places to the nearest whole number and to 1 decimal place.  I can read, write, order and compare numbers with up to 3 decimal places.  I can solve problems involving number up to 3dp.  I can recognise the % symbol and understand that it relates to ‘number of parts per 100’.  I can write percentages as a fraction with denominator 100, and as a decimal.  I can solve problems using % and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. | I can use common factors and multiples to simplify fractions and express fractions in the same denomination.  I can compare and order fractions, including fractions >1.  I can add and subtract fractions with different denominators and mixed numbers.  I can multiply sumple pairs of proper fractions.  I can write a fraction answer in its simplest form.  I can divide proper fractions by whole numbers.  I can associate a fraction with division and calculate decimal fraction equivalents.  I can identify the value of each digit in numbers given to 3dp.  I can multiply and divide numbers by 10, 100 and 1000 giving answers up to 3dp.  I can recall and use equivalences between simple fractions, decimals and percentages.  Ratio and Proportion  I can solve problems involving the relative sizes of 2 quantities where missing values can be found using integer multiplication and division.  I can solve problems involving calculating % and the use of % for comparison.  I can solve problems involving similar shapes where the scale factor is known or can be found.  I can solve problems involving unequal sharing and grouping. |

**Measurement**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can compare, describe and solve practical problems for, and begin to measure:   * lengths/ heights * mass/ weight * capacity/ volume * time   I am able to use the vocabulary for measure including long, short, tall, heavy, light, full, empty, quicker, slower, earlier, later.  I recognise and know the value of different denominations of coins and notes.  I can sequence events in chronological order using chronology vocabulary including before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.  I recognise and use language relating to dates, including days of the week, weeks, months and years.  I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.  I am beginning to use measuring tools such as a ruler, weighing scales and containers. | I can choose and use appropriate standard units to estimate and measure to the nearest appropriate unit:   * length/height (m/cm) * mass (g/kg) * temperature (oC) * capacity (l/ml)   I can use rulers, scales, thermometers and measuring vessels.  I can compare and order measurements and record using < > =  I can recognise and use symbols for £ and p and combine amounts to make a particular value.  I can find different combinations of coins that equal the same amounts of money.  I can solve problems involving addition and subtraction of money of the same unit, including giving change.  I can compare and sequence intervals of time.  I can tell and write the time to five minutes, including quarter past/to the hour and draw hands on a clock to show these times.  I know the number of minutes in an hour and hours in a day. | I can measure, compare, add and subtract lengths, mass and volume/capacity.  I can measure the perimeter of simple 2D shapes.  I can add and subtract money to give change, using £ and p in practical contexts.  I can tell and write the time from an analogue clock, including using Roman numerals up to XII, and 12-hour and 24-hour clocks.  I can estimate and read time to the nearest minute.  I can read and compare time in terms of second, minutes and hours.  I can use time vocabulary including o’clock, am/pm, morning, afternoon, noon and midnight.  I know the number of seconds in a minute and days in each month, year and leap year.  I can compare durations of events.  I can compare and use mixed units e.g. 1kg and 200g and simple equivalents of mixed units.  I can compare measures using scaling and connect this to multiplication. | I can convert between different units of measure.  I can measure and calculate the perimeter of a rectilinear figure in cm and m.  I can find the area of rectilinear shapes by counting squares.  I can estimate, compare and calculate different measures, including money in pounds and pence.  I can read, write and convert time between analogue and digital 12 and 24 hour clocks.  I can solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.  I can relate area to arrays and multiplication. | I can convert between different units of metric measure.  I can understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.  I can measure and calculate the perimeter of composite rectilinear shapes in cm and m.  I can calculate and compare the area of rectangles and estimate the area of irregular shapes.  I can estimate volume and capacity.  I can solve problems involving converting between units of time.  I can use all four operations to solve measurement problems using decimal notation, including scaling. | I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3dp.  I can use, read, write and convert between standard units.  I can convert between miles and kilometers.  I can recognise that shapes with the same areas can have different perimeters and vice versa.  I can recognise when it is possible to use formulae for area and volume of shapes.  I can calculate the area of parallelograms and triangles.  I can calculate, estimate and compare volume of cubes and cuboids using standard units.  I can connect conversion to a graphical representation. |

**Geometry – Properties of Shapes**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can recognise and name common 2D and 3D shapes including:   * 2D shapes – rectangles, including squares, circles and triangles. * 3D shapes – cuboids, including cubes, pyramids and spheres.   I recognise common shapes in different orientations and sizes and know that rectangles, triangles, cuboids and pyramids are not always similar to each other (familiar with non-regular versions). | I can identify and describe the properties of 2D shapes including the number of sides and line symmetry in a vertical line.  I can identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.  I can identify 2D shapes on the surface of 3D shapes.  I can compare and sort common 2D and 3D shapes and everyday objects.  I can name 2D and 3D shapes including: quadrilaterials, polygons, cuboids, prisms and cones.  I can draw lines and shapes using a straight edge. | I can draw 2D shapes and make 3D shapes using modeling materials.  I can recognise 3D shapes in different orientations and describe them.  I can recognise angles as a property of shape or a description of a turn.  I can identify right angles and that 2 right angles make a half turn, 3 make three-quarters of a turn and 4 complete a turn.  I can identify whether angles are greater than or less than a right angle.  I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.  I can identify symmetrical and non-symmetrical polygons.  I can use accurate geometry language including acute and obtuse.  I can connect decimals and rounding to drawing and measuring straight lines in centimetres. | I can compare and classify geometric shapes including quadrilaterals and triangles, based on their properties and sizes.  I can identify acute and obtuse angles and compare and order angles up to 2 right angles by size.  I can identify lines of symmetry in 2D shapes presented in different orientations and where the line of symmetry does not dissect the original shape.  I can complete a simple symmetric figure with respect to a specific line of symmetry.  I can name different triangles including isosceles, equilateral and scalene triangles.  I can name different quadrilaterals including parallelogram, rhombus and trapezium.  I can compare lengths and angles to decide if a polygon is regular or irregular. | I can identify 3D shapes, including cubes and other cuboids, from 2D representations.  I know that angles are measured in degrees and can estimate and compare acute, obtuse and reflex angles.  I can draw given angles and measure them in degrees.  I can identify:   * Angles at a point and 1 whole turn * Angles at a point on a straight line and half a turn. * Other multiples of 90 degrees.   I can use the properties of rectangles to deduce related facts and find missing lengths and angles.  I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.  I can draw lines with a ruler to the nearest millimeter and can measure with a protractor.  I can use conventional markings for parallel lines and right angles. | I can draw 2D shapes using given dimensions and angles.  I can recognise, describe and build simple 3-D shapes, including making nets.  I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.  I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.  I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |

**Geometry – Position and Direction**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I can describe positions, direction and movement, including whole, half, quarter and three-quarter turns.  I can use language including left, right, top, middle, bottom, on top of, in front of, between, around, near, close, far, up, down, forwards, backwards, inside and outside.  I can make turns in both directions and connect turning clockwise with movement on a clock face. | I can order and arrange combinations of mathematical objects in patterns and sequences.  I can use vocabulary to describe position, direction and movement including movement in a straight line.  I can distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise). | ------ | I can describe positions on a 2D grid as coordinates in the first quadrant.  I can describe movements between positions as translations of a given unit to the left/right and up/down.  I can plot specified points and draw sides to complete a given polygon.  I can draw pairs of axes with equal scales and integer labels. | I can identify, describe and represent the position of a shape following a reflection or translation.  I can use the language of reflection and translation.  I know that after reflection or translation the shape has not changed. | I can describe positions on the full coordinate grid.  I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.  I can draw and label rectangles (including squares), parallelograms and rhombuses, specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes. |

**Statistics**

| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- |
| I am beginning to interpret and construct tally charts. | I can interpret and construct simple pictograms, tally charts, block diagrams and tables.  I can ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.  I can ask and answer questions about totaling and comparing categorical data.  I can record, interpret, collate, organise and compare information.  I can interpret pictograms with many-to-one correspondence with simple ratios 2, 5 or 10. | I can interpret and present data using bar charts, pictograms and tables.  I can solve one and two step problems using information presented in scaled bar charts, pictograms and tables.  I understand and use simple scales in pictograms and bar charts. | I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.  I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.  I can understand and use a greater range of scales in my representations. | I can solve comparison, sum and difference problems using information on a line graph.  I can complete, read and interpret information in tables, including timetables.  I can decide which representations of data are most appropriate and why. | I can interpret and construct pie charts and line graphs and use these to solve problems.  I can calculate and interpret the mean as an average.  I can connect my understanding of angles, fraction and percentages to the interpretation of pie charts. |

**EYFS**

| **Counting** | **Number and place value** | **Addition and Subtraction** | **Multiplication and Division** | **Sorting** | **Measurement** | **Geometry - Patterns** | Geometry – Shape and Space |
| --- | --- | --- | --- | --- | --- | --- | --- |
| I can count forwards and backwards beyond 20.  I can count up to 20 objects in different arrangements.  I can assign one number name to each object that is being counted.  I count each object only once, ensuring I have counted every object.  I know that numbers have to be said in a certain order.  I understand that the number name assigned to the final object in a group is the total number of objects in that group.  I understand that anything can be counted including things that cannot be touched including sounds and movements.  I understand that I can count objects in any order and there will still be the same number. | I can represent numbers in different ways, including using ten frames and number tracks .  I can count out a number of objects from a larger group.  I can compare numbers and representations of numbers and show amounts the same as, fewer or more than this number.  I can find one more and one less than a number.  I can order amounts using representations.  I understand the number name 0 and can represent it.  I know that 0 is one less than one.  I can record my work using mathematical jottings.  I can subitise to 6 and I’m beginning to subitise up to 10 using ten frames to support this. I am beginning to make numbers by combining smaller numbers, including 0. | I can represent different parts which combine to make the whole.  I can use concrete objects or draw pictures to help to explain what is missing from a part-whole model.  I can use first, then, now to understand mathematical stories in meaningful contexts.  I can count from different starting points.  I can represent number stories in different ways including ten frames, number tracks and using fingers.  I can use real objects to take away. | I know that double means ‘twice as many’.  I can build doubles using real objects.  I can relate doubles to real life contexts including pairs.  I can halve quantities by sharing items into 2 equal groups.  I can identify when an amount has been shared fairly.  I know that half, in the context of sharing, is one of 2 equal parts.  I can share fairly an amount between a small group of children.  I understand how odd and even links with sharing fairly.  I can identify odd and even amounts using concrete objects. | I can sort collections of objects into sets based on attributes such as colour, size or shape.  I can talk about what is the same and different between my sets.  I can sort the same collection of objects in different ways.  I can identify something that doesn’t belong in a set.  I can compare sets and talk about whether a set has more, fewer or the same number of items as another set. | I can order important times in my day.  I can use language to describe when events happen e.g. now, before, later, soon, after and next.  I can use time vocabulary to describe when relative events happen e.g. yesterday, today and tomorrow.  I can measure time in simple ways e.g. the number of sleeps.  I can use language to describe length and height e.g. tall, short.  I can compare lengths.  I can use objects and balance scales to measure and explore the length and weight of items e.g. cubes.  I can use language to describe weight e.g. heavy, light.  I can use language to describe capacity e.g. full, empty.  I can compare weights and capacities using balance scales and containers. | I can copy, continue and create my own simple repeating patterns.  I can explore patterns in a range of contexts including shapes, colours, sizes, actions and sounds.  I can build patterns both vertically and horizontally.  I can identify simple repeating patterns.  I can continue a pattern around a rectangle.  I can continue a pattern around a circle. | I can use positional language to describe how items are positioned in relation to other items.  I can represent real places I have visited or place in stories with drawings, maps or models.  I know the names of some 2D and 3D shapes and can describe similarities and differences between them.  I can identify 3D shapes that stack and roll.  I can construct my own 3D shapes in different ways.  I can name 2D shapes on the flat surfaces of 3D shapes.  I can identify 2D shapes in different orientations and sizes.  I can explore how shapes can be combined or partitioned to make new shapes. |

**Curriculum Progression: Maths knowledge (based on White Rose scheme)**

**EYFS**

| **Autumn** | **Spring** | **Summer** |
| --- | --- | --- |
| Place valye – Number to 5  Addition and Subtraction – sorting  Place value – Comparing groups  Addition and subtraction – Change within 5  Measurement - Time | Addition and subtraction – Numbers to 5  Place value – Numbers to 10  Addition and subtraction – Addition to 10  Geometry – Shape and space | Geometry – Exploring patterns  Addition and subtraction – count on and back  Place value – numbers to 20  Multiplication and division – numerical patterns  Measurement - measure |

**Year 1**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value within 10  Addition and subtraction within 10 | Geometry: Shape  Place value within 20 | Addition and subtraction within 20  Place value within 50 | Measurement: Length and Height  Measurement: Weight and Volume | Multiplication and division  Fractions  Position and direction | Place value within 100  Money  Time |

**Year 2**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value  Addition and subtraction | Money  Multiplication and division | Multiplication and division  Statistics  Geometry: Properties of shape | Fractions  Measurement: Length and height | Geometry: Position and direction  Problem solving and efficient methods | Measurement: Time  Measurement: Mass, Capacity and Temperature |

**Year 3**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value  Addition and subtraction | Addition and subtraction  Multiplication and division | Multiplication and division  Money  Statistics | Measurement: Length and perimeter  Fractions | Fractions  Measurement: Time | Geomtry: Properties of shape  Measurement: Mass and Capacity |

**Year 4**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value  Addition and subtraction | Measurement: Length and perimeter  Multiplication and division | Multiplication and division  Measurement: Area  Fractions | Fractions  Decimals | Decimals  Measurement: Money  Measurement: Time | Statistics  Geometry: Properties of shape  Geometry: Position and direction |

**Year 5**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value  Addition and subtraction | Statistics  Multiplication and division  Perimeter and area | Multiplication and division  Fractions | Fractions  Decimals and percentages | Decimals  Geometry: Properties of shapes | Geometry: Position and direction  Measurement: converting units  Measurement: volume |

**Year 6**

| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| --- | --- | --- | --- | --- | --- |
| Place value  Addition, subtraction, multiplication and division | Fractions  Geometry: Position and direction | Decimals  Percentages  Algebra  Measurement: Converting units | Measurement: Perimeter, area and volume  Ratio | Geometry: Properties of shape  Problem solving  Statistics | Consolidation and investigations  Financial literacy |