Progression of Skills - MATHS

Intent

Mathematics at Holly Lodge Primary Academy is challenging, exciting, creative and engaging, and enables children to become confident mathematicians with a love for the subject. Using a mastery approach, fluency, problem solving and reasoning are at the heart of our teaching. This ensures all children develop secure and transferable maths skills which are applicable to real life situations.

Implementation

The teaching of maths at Holly Lodge allows all children to achieve. The schemes, Power Maths and White Rose, are used to guide teachers' planning using the mastery approach. Lessons are carefully planned allowing the whole class to access the same lesson, whilst ensuring learning is personalised via support or challenge. Small steps in progression ensure that children are always making links to prior learning and building on previous understanding. Each new concept is practised and embedded via varied fluency, then reasoning and problem solving ensure a deep understanding of the methodologies within the maths. Children are taught to explain their understanding and give clear reasoning, using appropriate mathematical vocabulary. By exposing children to maths concepts in a range of representations (concrete, pictorial and abstract), and contexts, they are able to build on their knowledge and apply what they know to new areas. Where appropriate maths is woven into the wider curriculum, enabling children to recognise the relevance and value of maths in day-to-day life.
To support fluency in multiplication, we use Times Tables Rock Stars at home and in school.

Impact

- Children at Holly Lodge have a love for maths and approach learning with a 'can do' attitude.
- Children have a rapid recall of number facts and times tables enabling them to be agile mathematicians.
- Children are resilient learners and persevere to establish a deep understanding of mathematical methodologies and can use these in reasoning.
- Children are able to link their learning to solve real-life problems.
- Children readily accept maths challenges both within school and beyond that test their mathematical agility and deep understanding of mathematical concepts.

Progression of Skills - MATHS

Number and Place Value

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value Subitise Count beyond ten. Understand the 'one more than/one less than' relationship between consecutive numbers. **ELG** **Compare quantities up to 10 recognising when one quantity is greater than, less than or the same as the other quantities.** **Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.**	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 100 in numerals. Count in multiples of twos, fives and tens from any given number. Identify one more and one less. Identify and represent numbers using objects and pictures (including the number line). Read and write numbers from 1 to 20 in numerals and words.	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. Compare and order numbers from 0 up to 100; use and = signs. Identify, represent and estimate numbers using different representations (including the number line). Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two-digit number (tens, ones). Use place value and number facts to solve problems.	Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number. Compare and order numbers up to 1000. Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and in words. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Solve number problems and practical problems involving these ideas.	Count backwards through zero to include negative numbers. Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations. Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. Recognise the place value of each digit in a four-digit number	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000.	Use negative numbers in context, and calculate intervals across zero. Read, write, order and compare numbers up to 10 000000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Solve number and practical problems that involve all of the above

Progression of Skills - MATHS

Subitise (recognise quantities without counting) up to 5				(thousands, hundreds, tens, and ones). Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers	Solve number problems and practical problems that involve all of the above.	
Key Vocab Number Zero, one, two, three to twenty, and beyond None Count (on/up/to/from/down) Before, after More, less, many, few, fewer, least, fewest, smallest, greater, lesser Equal to, the same as Odd, even Pair Estimate, guess	Key Vocab More than, less than, most, fewer, least, equal, number, digit, same, different, count(ing) forwards, backwards, more (than), less (than), total fewer (than), most, least Tens, ones	Key Vocab Compare, order, greater than, less than, equal to, estimate, partition, tens, ones	Key Vocab Hundreds, one hundred and one, one hundred and two, one hundred and three, and so on up to one thousand	Key Vocab Negative numbers, round(ing), tenths, hundredths, thousands, Roman numerals to 100 'C', operation	Key Vocab Ten thousands, hundred thousands, millions, powers, Roman numerals to 1000 'M', linear sequence ,	Key Vocab Ten millions, intervals

Progression of Skills - MATHS

Addition & Subtraction

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–10. **ELG** **Automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts**	<u>Addition</u> Combining two parts to make a whole: part-part-whole model. Starting at the bigger number and counting on (using objects). Regrouping to make 10 using ten frame. <u>Subtraction</u> Taking away ones. Counting back. Find the difference. Part-part-whole model. Make 10 using the ten frame.	<u>Addition</u> Adding three single digits. Use of dienes to combine two numbers. <u>Subtraction</u> Counting back. Find the difference. Part-part-whole model. Use of dienes.	<u>Addition</u> Column method with regrouping. Using place value counters (up to 3-digits). <u>Subtraction</u> Column method with regrouping (up to 3-digits using place value counters)	<u>Addition</u> Column method with regrouping (up to 4-digits). <u>Subtraction</u> Column method with regrouping. (up to 4-digits)	<u>Addition</u> Column method with regrouping. Use of place value counters for adding decimals. <u>Subtraction</u> Column method with regrouping. Abstract for whole numbers. Start with place value counters for decimals (with the same amount of decimal places).	<u>Addition</u> Column method with regrouping. Abstract methods. Place value counters to be used for adding decimal numbers. <u>Subtraction</u> Column method with regrouping. Abstract methods. Place value counters for decimals (with different amounts of decimal places).

Progression of Skills - MATHS

Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab
Number Zero, one, two, three to twenty, and beyond None Count (on/up/to/from/down) Before, after More, less, many, few, fewer, least, fewest, smallest, greater, lesser Equal to, the same as Odd, even Pair	Add, addition, plus, more, altogether, take away, subtract, subtraction, less, part-part-whole, equal, number line, how many larger, smaller, compare, together, altogether, bonds, plus add(ition), subtract(ion) minus, difference (between), ones, tens, column(s), order, number, amount, value, size	Difference, total, tens, ones, partition, exchange, commutative	Column addition/ subtraction, regrouping,	Efficient written method		order of operations interval

Progression of Skills - MATHS

Multiplication & Division

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Not taught discreetly Recognise odd and even numbers Double facts Patterns in numbers	Recognising and making equal groups. Doubling Counting in multiples Use cubes, Numicon and other objects in the classroom Sharing objects into groups Division as grouping e.g. I have 12 sweets and put them in groups of 3, how many groups? Use cubes and draw round 3 cubes at a time.	Arrays- showing commutative multiplication Division as grouping Division within arrays- linking to multiplication Repeated subtraction	Arrays 2d × 1d using dienes Division with a remainder-using lollipop sticks, times tables facts and repeated subtraction. 2d divided by 1d using dienes or place value counters	Column multiplication introduced with place value counters. (2 and 3-digit multiplied by 1-digit) Division with a remainder Short division (up to 3-digits by 1-digit concrete and pictorial)	Column multiplication Abstract only but might need a repeat of year 4 first (up to 4-digit numbers multiplied by 1 or 2-digits) Short division (up to 4-digits by a 1-digit number including remainders)	Column multiplication Abstract methods (multi-digit up to 4-digits by a 2-digit number) Short division Long division with place value counters (up to 4-digits by a 2-digit number) Children should exchange into the tenths and hundredths column too
<u>Key Vocab</u> share, double, half	<u>Key Vocab</u> groups of, lots of, times, array, altogether, multiply, count share, share equally, one each, two each…, group, groups of, lots of	<u>Key Vocab</u> multiplied by, repeated addition, column, row, commutative, sets of, equal group of, times, as big as, once, twice, three times as…, times tables divide, divide by, divided into, division,	<u>Key Vocab</u> product multiples of four, eight, fifty and one hundred scale up inverse operations, integer(s),	<u>Key Vocab</u> multiplication facts (up to 12x12) factor, derive, remainder division facts inverse	<u>Key Vocab</u> factor pairs composite numbers, prime number, prime factors, square number, cubed number formal written method, power(s)	<u>Key Vocab</u> order of operations common factors, common multiples multi-step, long division

Progression of Skills - MATHS

		grouping, number line, left, left over			complement, composite, equivalence	

Progression of Skills - MATHS

Fractions (inc. decimals & percentages)

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Not taught discreetly Doubles and halves of objects, shape and amounts	Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 .	Count up and down in tenths. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators. Recognise and show, using diagrams, equivalent fractions	Count up and down in hundredths. Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Compare numbers with the same number of decimal places up to two decimal places. Round decimals with one decimal place to the nearest whole number. Recognise and show, using diagrams, families of common equivalent fractions. Recognise and write decimal equivalents of any number of tenths or hundredths.	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Compare and order fractions whose denominators are all multiples of the same number Read, write, order and compare numbers with up to three decimal places Round decimals with two decimal places to the nearest whole number and to one decimal place Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Read and write decimal numbers as	Compare and order fractions, including fractions >1 Identify the value of each digit in numbers given to three decimal places Solve problems which require answers to be rounded to specified degrees of accuracy Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) Recall and use equivalences between simple fractions, decimals and percentages,

Progression of Skills - MATHS

			with small denominators. Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7). Solve problems that involve all of the above.	Recognise and write decimal equivalents to 1/4; 1/2; 3/4. Add and subtract fractions with the same denominator. 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. 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. Solve simple measure and money problems involving fractions and decimals to two decimal places	fractions (e.g. 0.71 = 71/100) Add and subtract fractions with the same denominator and multiples of the same number Recognise mixed numbers fractions and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5) Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Solve problems involving numbers up to three decimal places Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 , 4/5 and those with a	including in different contexts. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8) Multiply one-digit numbers with up to two decimal places by whole numbers Divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6) Multiply one-digit numbers with up to two decimal places by whole numbers Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places Identify the value of each digit to three

Progression of Skills - MATHS

					denominator of a multiple of 10 or 25.	decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) Use written division methods in cases where the answer has up to two decimal places
Key Vocab Half of, double	Key Vocab Whole, half, share, 2 equal parts, quarter, 4 equal parts.	Key Vocab Parts, one third, two quarters, three quarters, equivalence, fraction, numerator, denominator, fraction bar, sharing, grouping	Key Vocab Fifths, sixths, sevenths, eights, ninths, tenths, unit fraction, non-unit fraction decimal(s), order, remainder	Key Vocab Equivalent fractions and decimals improper fraction, proper fraction, mixed number fraction, hundredth(s) decimal equivalents decimal point decimal places	Key Vocab Percent/ percentage, ratio, proportion, thousandths	Key Vocab Degree of accuracy simplify

Progression of Skills - MATHS

Measurement

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Taught within number and place value Comparing measures	Compare, describe and solve practical problems for: -lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] -mass/weight [e.g. heavy/light, heavier than, lighter than] -capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] -time [e.g. quicker, slower, earlier, later] Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Measure and begin to record the following: -lengths and heights -mass/weight -capacity and volume -time (hours, minutes, seconds)	Compare and order lengths, mass, volume/capacity and record the results using >, < and = Compare and sequence intervals of time Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins	Compare durations of events, for example to calculate the time taken by particular events or tasks Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure the perimeter of simple 2-D shapes Add and subtract amounts of money to give change, using	Estimate, compare and calculate different measures, including money in pounds and pence Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares Read, write and convert time between analogue and digital 12 and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days Convert between different units of measure (e.g.	Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes Estimate volume (e.g. using 1cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water) Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate Recognise that shapes with the same areas can have different perimeters and vice versa Calculate the area of parallelograms and triangles Recognise when it is possible to use

Progression of Skills - MATHS

	Recognise and know the value of different denominations of coins and notes Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Recognise and use language relating to dates, including days of the week, weeks, months and years	that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 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. Know the number of minutes in an hour and the number of hours in a day.	both £ and p in practical contexts Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks Know the number of seconds in a minute and the number of days in each month, year and leap year	kilometre to metre; hour to minute)	Solve problems involving converting between units of time Convert between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml) Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	formulae for area and volume of shapes Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places Convert between miles and kilometres
Key Vocab Bigger, smaller, taller, shorter	Key Vocab Length/ height/ width mass/ weight capacity/ volume long/ short, taller/ shorter, double/ half heavy/ light, heavier, lighter full/ empty, more than, less than, half, full, quarter before and after, next, first, today, yesterday, tomorrow,	Key Vocab cm/ m g/ kg ml/ l degrees (Celsius) thermometer change price, cost, money analogue, clockwise, anticlockwise, five minute intervals	Key Vocab a.m./p.m., morning, afternoon, noon and midnight, duration, leap year mm perimeter approximately roman numerals to XII, analogue clock digital clock	Key Vocab area rectilinear shapes 24 hour(s) convert conversion rectilinear dimensions kilometre 24-hour clock	Key Vocab composite rectilinear shapes metric units: cm^2, cm^3, m^2, m^3 imperial units: inch, pound, yard, mile, pint	Key Vocab mm^3 km^3 speed

Progression of Skills - MATHS

	morning, afternoon, evening, hours, minutes, seconds, hour (hand), minute (hand), early, earlier, late, later, clock (face), o'clock, half past, birthday, watch, year, month, week, weekend, day, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, January, February, March, April, May, June, July, August, September, October, November, December, pounds/£, pence/ p, coin, note, amount					

Progression of Skills - MATHS

Geometry - Shapes

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Develop spatial awareness	Recognise and name common 2-D and 3-D shapes, including: -2D shapes [e.g. rectangles (including squares), circles and triangles] -3D shapes [e.g. cuboids (including cubes), pyramids and spheres].	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2D and 3D shapes and everyday objects	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them Recognise angles as a property of shape or a description of a turn 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 Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Identify lines of symmetry in 2D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify acute and obtuse angles and compare and order angles up to two right angles by size	Identify 3D shapes, including cubes and other cuboids, from 2D representations Draw given angles, and measure them in degrees (°) Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Identify: -angles at a point and one whole turn (total 360°) -angles at a point on a straight line and ½ a turn (total 180°)	Recognise, describe and build simple 3D shapes, including making nets Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Draw 2D shapes using given dimensions and angles Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Recognise angles where they meet at a point, are on a straight line, or are vertically opposite,

Progression of Skills - MATHS

					-other multiples of 90°	and find missing angles
Key Vocab 2D and 3D shape names Curved, straight, corners	Key Vocab Line, straight, curved, rectangle, square, circle, triangle, oval, star, cube, cuboid, pyramid, sphere, side, corners, face, edges, vertex, vertices, pattern	Key Vocab surface, vertical/horizontal symmetry, polygon, pentagon, hexagon, prism, quadrilateral	Key Vocab angles right angle, horizontal, vertical, perpendicular, parallel, orientation, polyhedron, polyhedra, degree(s) quadrilateral	Key Vocab reflex angle, obtuse angle, acute angle, heptagon, octagon nonagon decagon isosceles, regular irregular reflex	Key Vocab degrees °, 180 °, 360 °, dimension, orientation, diagonal, reflection X-axis Y-axis	Key Vocab nets radius, diameter, circumference, dissect(ion)

Progression of Skills - MATHS

Geometry – Position & Direction

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Describe position, direction and movement, including half, quarter and three-quarter turns.	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) order and arrange combinations of mathematical objects in patterns and sequences		Describe positions on a 2D grid as coordinates in the first quadrant Describe movements between positions as translations of a given unit to the left/right and up/down Plot specified points and draw sides to complete a given polygon	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	Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Key Vocab On top of, under, next to, above, in between	Key Vocab Whole turn, half turn, quarter turn, three quarter turn, right, left, top, bottom, on top, in front, above, between, around, near, close, far, up, down, forwards, backwards, inside,	Key Vocab north, south, east, west, sequence, clockwise, anti-clockwise, rotate, rotation, right angle	Key Vocab	Key Vocab coordinates axis/axes quadrant plot grid scale translate/ translation x-axis, y-axis,	Key Vocab reflect/ reflection	Key Vocab four quadrants vertically opposite, complimentary angles

Progression of Skills - MATHS

	outside, in front of, behind, around					

Progression of Skills - MATHS

Statistics

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data	Interpret and present data using bar charts, pictograms and tables Solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Complete, read and interpret information in tables, including timetables Solve comparison, sum and difference problems using information presented in a line graph	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average
Key Vocab	Key Vocab	Key Vocab count, sort, tally, vote, data, graph, block diagram, pictogram, represent, group set, same, different, list, table, title, most popular, least popular, most common, least common, Venn diagram, Carroll diagram	Key Vocab axis, axes, diagram, interpret, category, scale	Key Vocab line graph continuous data	Key Vocab	Key Vocab average, mean pie chart construct, data set

Progression of Skills - MATHS

Algebra

Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Not taught discreetly Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9 (copied from Addition and Subtraction)	*Not taught discreetly* Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (copied from Addition and Subtraction)	*Not taught discreetly* Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction) Solve problems, including missing number problems, involving multiplication and division, including integer scaling (copied from Multiplication and Division)	*Not taught discreetly* Perimeter can be expressed algebraically as 2(a+b) where a and b are the dimensions in the same unit. (Copied from NSG measurement)	*Not taught discreetly* Use the properties of rectangles to deduce related facts and find missing lengths and angles (copied from Geometry: Shape)	Express missing number problems algebraically Find pairs of numbers that satisfy number sentences involving two unknowns Enumerate all possibilities of combinations of two variables Use simple formulae Generate and describe linear number sequences
Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab	Key Vocab Linear number sequence substitute variables symbol known values letter formula(e) algebraic(ally) equation

Progression of Skills - MATHS

						unknown, constant, generalise