Curriculum intent

Place value

	Year 3	Year 4	Year 5	Year 6
Place Value: Counting **KS1 expectations**: *Count in steps from 1 and 10 forward and backwards through 100 from any given number Count in steps of 2, 3 and 5 from 0	-Count from 0 in multiples of 4, 8, 50 and 100 -Find 10 or 100 more or less than a given number **Autumn 1** **Autumn 2**	-Count in multiples of 6, 7, 9, 25 and 1000 -Count backwards through zero including negative numbers **Autumn 1** **Autumn 2**	-Count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000 -Count forwards and backwards with positive and negative numbers, including through zero **Autumn 1**	
Place Value: Represent **KS1 expectations**: *Read and write numbers to at least 100 in words and numerals Identify, represent and estimate numbers using different representations (including a number line)	-Identify, represent and estimate numbers using different representations -Read and write numbers up to 1000 in numerals and words **Autumn 1**	-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 **Autumn 1**	-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 **Autumn 1**	-Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit **Autumn 1**
Place Value: Use PV and Compare **KS1 expectations**: *Recognise the place value of each digit in a two-digit number Compare and order numbers from 0 to 100 using < > and =	-Recognise the place value of each digit in a three digit number (H,T,O) -Compare and order numbers up to 1000 **Autumn 1**	-Find 1000 more or less than a given number -Recognise the place value of each digit in a four digit number (Th,H,T,O) -Order and compare numbers beyond 1000 **Autumn 1**	-Read, write. order and compare numbers to at least 1 000 000 and determine the value of each digit **Autumn 1**	-Read, write, order and compare numbers to 10 000 000 and determine the value of each digit **Autumn 1**
Place Value: Problems and Rounding **KS1 expectations**: *Use place value and number facts to solve problems	-Solve number problems and practical problems involving these ideas **Autumn 1**	-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 **Autumn 1**	-Interpret negative numbers in context -Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 -Solve number problems and practical problems that involve all of the above **Autumn 1**	-Round any whole number to a required degree of accuracy -Use negative numbers in context and calculate intervals across zero -Solve number and practical problems that involve all of the above **Autumn 1**

| Topic vocabulary

(Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only) | ones tens, hundreds digit one-, two- or three-digit number, 'teens', number place, place value, stands for, represents
exchange, the same number as, as many as
equal to, greater, more, larger, bigger less, fewer, smaller, greatest, most, biggest, largest, least, fewest, smallest, one more, ten more, **one hundred more**, one less, ten less, **one hundred less**, compare, order, size, first, second, third... tenth... twentieth... twenty-first, twenty-second... last, last but one, before, after, next, between, half-way between, above, below, guess how many, estimate, nearly, roughly, close to, about the same as, **approximate**, **approximately**, just over, just under, exact, exactly, too many, too few, enough, not enough, round (up or down), nearest, round to the nearest ten, | **All previous words – new words:**
four-digit number, >, greater than, more than, larger than, <, less than, fewer than, smaller than, one thousand more/less, round to the nearest hundred, integer, positive, negative, above/below zero, minus, next, consecutive, sort, classify, property | **All previous words – new words:**
≥, greater than or equal to, ≤, less than or equal to ascending/descending, order, ≈, is approximately equal to round to the nearest thousand, formula, divisibility, square number one squared, two squared... (1^2, 2^2), thousandth, prime, prime factor | **Revision of all key language.**
factorise |
| Cross curricular activities carried out | **Science** – How tall is General Sherman?
History – Ordering dates on time lines (chronological). | **Science**
History
DT | **Science**
History
DT | **Science**
History
DT |

Addition and subtraction

	Year 3	Year 4	Year 5	Year 6
Addition and subtraction: Recall, represent, use **KS1 expectations**: *Recall and use addition and subtraction facts to 20 fluently, derive and use related facts up to 100 *Show that addition of two numbers can be done in any order (commutativity) and subtract of one number from another can not *Recognise and use inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	-Estimate the answer to a calculation and use the inverse operations to check answers **Autumn 2**	-Estimate and use inverse operations to check answers to a calculation **Autumn 2**	-Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy **Autumn 2**	
Addition and subtraction: Calculations **KS1 expectations**: *Add and subtract number including concrete objects, pictorial representations and mentally including: ➢ a two digit numbers and ones ➢ a two digit numbers and tens ➢ two, two digit ➢ adding three one digit numbers	-Add and subtract numbers mentally, including: *a three digit number and ones *a three digit number and tens *a three digit number and hundreds -Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction **Autumn 2**	-Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **Autumn 2**	-Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) -Add and subtract numbers and mentally with increasingly large numbers **Autumn 2**	-Perform mental calculations, including with mixed operations and large numbers -Use their knowledge of the order of operations to carry out calculations involving the four operations **Autumn 2**
Addition and subtraction: Solving problems **KS1 expectations**: *Solve problems with addition and subtraction: ➢ using concrete objects and pictorial representations,	-Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction **Autumn 2**	-Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why **Autumn 2**	-Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why -Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	-Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why **Autumn 2**

			Autumn 2	
Topic Vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	+, add, addition, more, plus, make, sum, total, altogether, score, double, near double, one more, two more... ten more... one hundred more, how many more to make...? how many more is... than...? how much more is...? –, subtract, subtraction, take (away), minus leave, how many are left/ left over? one less, two less... ten less... one hundred less, how many fewer is... than...? how much less is...? difference between half, halve =, equals, sign, is the same as tens boundary, hundreds boundary	**All previous words – new words:** increase, decrease, inverse	**All previous words – new words:** units boundary, tenths boundary	
Cross curricular activities carried out			**DT:** Shelters – adding lengths	

Multiplication and Division

	Year 3	Year 4	Year 5	Year 6
Multiplication and division: Recall, represent, use **KS1 expectations**: *Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including and recognising odd and even numbers *Show that multiplication of two numbers can be done in any order (commutitive) and division of one number by another cannot	-recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **Autumn 3**	-recall multiplication and division facts for the multiplication tables up to 12x12 -use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers -recognise and use factor pairs and commutativity in mental calculations **Autumn 2** **Spring 1**	-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 numbers and cube numbers and the notation for squared (^{2}) and cubed (^{3}) **Autumn 2**	-identify common factors, common multiples and prime numbers -use estimation to check answers to calculations and determine, in the context of a problem, an accurate degree of accuracy **Autumn 2**
Multiplication and division: Calculations **KS1 expectations**: *Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs	-write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods **Autumn 2** **Spring 1**	-multiply two-digit and three-digit numbers by one-digit number using formal written layout **Spring 1**	-multiply numbers up to 4 digits by a one-digit number using formal written method, including long multiplication for two-digit numbers -multiply and divide numbers mentally drawing upon known facts -divide numbers up to 4 digits by one-digit number using the formal written method of sort division and interpret remainders appropriately for the context -multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 **Autumn 2** **Spring 1** **Summer 1**	-multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication -divide numbers up to 4 digits by two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context -divide the numbers up to 4 digits by two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context -perform mental calculations, including with mixed operations and large numbers **Autumn 2**
Multiplication and division: Solve problems **KS1 expectations**: *Solve problems involving multiplication	-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	- 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	-solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes -solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates **Autumn 2**	-solve problems involving addition, subtraction, multiplication and division **Autumn 2**

	Spring 1	Spring 1	Spring 1	
and division using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts				
Multiplication and division: Combined operations **KS1 expectations – not covered**			-solve problems involving addition, subtraction, multiplication and division and a combination of these including understanding the meaning of the equals sign **Spring 1**	-use their knowledge of the order of operations to carry out calculations involving the four operations **Autumn 2**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	lots of, groups of, ×, times, multiply, multiplication, multiplied by, multiple of, product, once, twice, three times… ten times… times as (big, long, wide… and so on) repeated addition, array row, column, double, halve, share, share equally, one each, two each, three each…group in pairs, threes… tens, equal groups of, ÷, divide, division, divided by, divided into, left, left over, remainder	**All previous words – new words:** factor, quotient, divisible by, inverse	**Practise all previous taught words**	
Cross curricular activities carried out			**DT:** multiplying individual lengths to decide on totals	

Fractions, Decimals and Percentages

	Year 3	Year 4	Year 5	Year 6
Fractions: Recognise and write **KS1 expectations**: *Find, recognise and name ½ as two equal parts of an object shape or quantity Find, recognise and name ¼ as one of four equal parts of an object shape or quantity *Recognise, find, name, write fractions $^1/_3$ ¼ $^2/_4$ and ¾ of a length, shape, set of objects or quantity	Fractions: Recognise and write **KS1 expectations**: *Find, recognise and name ½ as two equal parts of an object shape or quantity Find, recognise and name ¼ as one of four equal parts of an object shape or quantity *Recognise, find, name, write fractions $^1/_3$ ¼ $^2/_4$ and ¾ of a length, shape, set of objects or quantity	-count up and down in tenths; recognise that tenths arise from the dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 -recognise, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions with small denominators **Spring 2**	-count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten **Spring 2**	-identify, name and write the equivalent fractions of a given fraction, represented visually, including tenths and hundredths -recognise mixed numbers and improper fractions and convert from one to the other and write mathematical statements >1 as a mixed number (for example $^2/_5 + ^4/_5 = ^6/_5 = 1^1/_5$) **Spring 2**
Fractions: Compare **KS1 expectations** – not covered	Fractions: Compare **KS1 expectations** – not covered	-recognise and show, using diagrams, equivalent fractions with small denominators -compare and order unit fraction, and fractions with the same denominators **Summer 1**	-recognise and show, using diagrams, families of common equivalent fractions **Spring 2**	-compare and order fractions whose denominators are all multiples of the same number **Spring 2**
Fractions: Calculations **KS1 expectations** – not covered	Fractions: Calculations **KS1 expectations** – not covered	-add and subtract fractions with the same denominator within one whole (for examples $^5/_7 + ^1/_7 = ^6/_7$) **Summer 1**	-add and subtract fractions with the same denominator **Spring 2**	-add and subtract fractions with the same denominator and the denominators and multiples of the same number -multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams **Spring 2**
Fractions: Solve problems **KS1 expectations** – not covered	Fractions: Solve problems **KS1 expectations** – not covered	-solve problems that involve all of the above **Spring 2** **Summer 1**	-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 **Spring 2**	
Decimals: Recognise and write **KS1 expectations** – not covered	Decimals: Recognise and write **KS1 expectations** – not covered		-recognise and write decimal equivalents of any number of tenths and hundredths **Autumn 1 – place value**	-recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents **Autumn 1 – place value**

			-recognise and write decimal equivalents for ¼ ½ ¾ **Spring 2/Summer 1**	-read and write decimal numbers as fractions (for example recognise 0.71 = $^{71}/_{100}$) **Spring 2**
Decimals: Compare **<u>KS1 expectations</u>** – not covered	Decimals: Compare **<u>KS1 expectations</u>** – not covered		-read decimals with one decimal place to the nearest whole number -compare numbers with the same number decimal places up to two decimal places **Autumn 1 – place value**	-round decimals with two decimal places to the nearest while number and to one decimal place -read, write, order and compare numbers with up to three decimal places **Autumn 1 – place value**
Decimals: Calculations and problems **<u>KS1 expectations</u>** – not covered	Decimals: Calculations and problems **<u>KS1 expectations</u>** – not covered		-find the effect of dividing one- or two-digit numbers by 10 or 100, identifying the value of the digits in the answer as ones, tenths or hundredths **Autumn 1 – place value (revisit Spring 2)**	-solve problems involving number up to three decimal places **Autumn 1 – place value (revisit Summer 1)**
Fractions, decimals and percentages **<u>KS1 expectations</u>** – not covered	Fractions, decimals and percentages **<u>KS1 expectations</u>** – not covered		-solve simple measure and money problems involving fractions and decimals to two decimal places **Spring 2 Summer 1**	-recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred' and write percentages as a fraction with a 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 **Spring 2/Summer 1**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	part, equal parts, fraction, one whole, one half, two halves, one quarter, two… three… four quarters, one third, two thirds, three thirds, one tenth	**All previous words – new words:** eighth, sixth, fifth, twentieth, proportion, in every, for every, decimal, decimal fraction, decimal point, decimal place, hundredth	**All previous words – new words:** proper/improper fraction, mixed number numerator, denominator, equivalent, reduced to, cancel, ninth, twelfth, percentage, per cent, %, thousandth	**Revise all previous language**
Cross curricular activities carried out				

Ratio and Proportion

	Year 3	Year 4	Year 5	Year 6
Ratio and Proportion **KS1 expectations** – not covered				-solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts -solve problems involving the calculation of percentages (for example of measures such as 15% of 360º) and use the percentages for comparisons -solve problems involving similar shapes where the scale factor is known or can be found -solve problems involving unequal sharing and grouping using the knowledge of fractions and multiples **Spring 2**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)				proportion, ratio, in every, for every, to every, as many as
Cross curricular activities carried out				**Science** **History** **DT**

Algebra

	Year 3	Year 4	Year 5	Year 6
Algebra **KS1 expectations**: *Solve one-step problems that invole addition and subtraction, using concrete objects and pictorial representations and missing number problems such as: 7 = ☐ - 9 *Recognise and ise the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	-solve problems including missing number/empty box problems	-solve problems including missing number/empty box problems	-solve problems including missing number/empty box problems	-use simple formulae -generate and describe linear number sequences -express missing number problems algebraically -find pairs of numbers that satisfy an equation with two unknowns -enumerate possibilities of combinations of two variables **Spring 2**
Topic vocabulary				
Cross curricular activities carried out	**Science** – How tall is General Sherman? **History** – Ordering dates on time lines (chronological).	**Science** **History** **DT**	**Science** **History** **DT**	**Science** **History** **DT**

Measurement

	Year 3	Year 4	Year 5	Year 6
Measurement: Using measures **KS1 expectations**: * Choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm) mass (kg/g) temperature (°C) capacity (l/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels *compare and order lengths, mass, volume, capacity and record results using <,> and =	-measure, compare, add and subtract lengths (m/cm/mm); mass (kg/g); volume/capacity (i/ml) **Spring 2** **Summer 2**	-convert between different units of measure (km-m, hour to minute) -estimate, compare and calculate different measures **Autumn 2** **Spring 1** **Summer 2**	-convert between different units of metric measure (e.g. km-m, cm-m, cm-mm, g-kg, l-ml) -understand and use the approximate equivalences between metric units and common imperial units such as inches, pounds and pints -use all four operations to solve problems involving measure (for example length, mass, volume, money) using decimal notation, including scaling **Summer 1** **Summer 2**	-solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate -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 up to three decimal places -convert between miles and km **Spring 2**
Topic vocabulary - measure (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	length, width, height, depth, long, short, tall, high, low, wide, narrow, deep, shallow, thick, thin, longer, shorter, taller, higher… and so on, longest, shortest, tallest, highest… and so on, far, further, furthest, near, close, distance apart/between, distance to… from…, kilometre (km), metre (m), centimetre (cm), mile, ruler, metre stick, tape measure	**All previous words – new words:** breadth, edge, perimeter, millimetre (mm)	**Revise all previous words**	**All previous words – new words:** circumference, yard, feet, foot, inches, inch
Topic vocabulary – mass and capacity	**Mass:** weigh, weighs, balances, heavy/light, heavier/lighter, heaviest/lightest, kilogram (kg), half-kilogram, gram (g), balance, scales, weight **Capacity:** capacity, full, half full, empty, holds, contains, litre (l), half-litre, millilitre (ml), container	**All previous words – new words:** big, bigger, small, smaller, pint, measuring cylinder	**All previous words – new words:** gallon, centilitre (cl),	**Revise all previous words**
Measurement: Money **KS1 expectations**: * Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	-add and subtract amounts of money to give change, using both £ and p in practical contexts -fluency practise given in speedy maths books **Spring 1** **Fluency: Aut/Spr/Sum**	-estimate and compare and calculate different measures, including money in £ and p -fluency practise given in speedy maths books **Summer 2** **Fluency: Aut/Spr/Sum**	-use all four operations to solve problems involving money -fluency practise given in speedy maths books **Summer 1** **Fluency: Aut/Spr/Sum**	-fluency practise given in speedy maths books **Autumn/Spring/Summer**

Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	money, coin, note, penny, pence, pound (£), price, cost, buy, bought, sell, sold, spend, spent, pay, change, dear, costs more, more/most, expensive, cheap, costs less, cheaper, less/least expensive, how much…? how many…? total, amount, value, worth	**Revise all words from Year 3**	**All previous words – new words:** discount, currency	**All previous words – new words:** profit, loss
Measurement: Time **KS1 expectations**: * Compare and sequence intervals of time *Tell and write rhe time to five minutes, including quarter past/to the hour and draw the hands on clock face to show these times *Know the number of minutes in an hour and the number of hours in a day	-tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks -estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; using vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight -know the number of seconds in a minute and the number of days in each month, year and leap year -compare durations of events (for example to calculate the time taken by particular events or tasks) **Summer 2**	-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 **Summer 2**	-solve problems involving converting between units of time **Summer 2**	-use, read, write and convert between standard units converting measurements of time from a similar unit of measure to a large unit of measure and vice versa **Summer2**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	time, days of the week: Monday, Tuesday…, months of the year: January, February…, seasons: spring, summer, autumn, winter, day, week, fortnight, month, year, century, weekend, birthday, holiday, calendar, date, morning, afternoon, evening, night, midnight, am, pm, bedtime, dinnertime, playtime, today, yesterday, tomorrow before, after, next, last, now, soon, early, late, earliest, latest, quick, quicker, quickest, quickly, fast, faster, fastest	**All previous words – new words:** leap year, millennium, date of birth, noon, timetable, arrive, depart, 24-hour clock, 12-hour clock	**Revise all previous words**	**All previous words – new words:** Greenwich Mean Time, British Summer Time, International Date Line

	slow, slower, slowest, slowly, old, older, oldest, new, newer, newest takes longer, takes less time, how long ago? how long will it be to…? how long will it take to…? hour, minute, second, o'clock, half past, quarter to, quarter past, clock, watch, hands, digital/analogue clock/watch, timer, how often? always, never, often, sometimes, usually, once, twice			
Measurement: Perimeter, area, volume **KS1 expectations** – not covered	-measure the perimeter of simple 2-D shapes **Spring 2**	-measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m -find the area of rectilinear shapes by counting squares **Autumn 2** **Spring 2**	-measure and calculate the perimeter of composite rectilinear shapes in cm and m -calculate and compare the areas of rectangles (including squares), and including using standard units square cm (cm^2) and squared m (m^2) and estimate the area of irregular shapes -estimate the volume (for example using 1cm^3 blocks to build cuboids) and the capacity **Autumn 2** **Summer 2**	-recognise that shapes with the same areas can have different perimeters and vice versa -recognise when it is possible to use formulae for area and volume of shapes -calculate the area of parallelograms and triangles -calculate, estimate and compare volume of cubes and cuboids using the standard units including cubic cm (cm^3) and cubic m (m^3) and extending to other units (e.g. mm^3, km^3) **Spring 2**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)		area, covers, surface, square, centimetre (cm2)	**All previous words – new words:** square metre (m2), square millimetre (mm2)	**Revise all previous words**
General topic vocabulary (to be used through all units)	measure, size, compare, measuring scale, division, guess, estimate, enough, not enough, too much, too little, too many, too few, nearly, roughly, about, close to, about the same as, approximately, just over, just under	**All previous words – new words:** measurement, unit, standard unit, metric unit, imperial unit	**Revise all previous words**	
Cross curricular activities carried out	**Science: Ourselves** heart rate – time and BPM, height, length (plants) **Geography**: Compass coordinates and single point coordination and direction language	**Science: Distances in space, heights for parachute drops** **History:** **DT: money containers** measuring sides to ensure fit	**Science:** Ourselves heart rate – time and BPM **History** **DT: shelters** measuring wood to construct shelters that fit together	**Science** **History** **DT: fairgrounds** measuring for construction

DT: packaging measuring edges to fit face shapes together			

Geometry

	Year 3	Year 4	Year 5	Year 6
Geometry: 2-D shapes **KS1 expectations**: *identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line *Identify 2-D shapes on the surface of 3-D shapes *Compare and sort common 2-D shapes and everyday objects	-draw 2-D shapes **Summer 2**	-compare and classify geometric shapes including quadrilaterals and triangles based on their properties and sizes -identify lines of symmetry in 2-D shapes presented in different orientations **Summer 2**	-distinguish between regular and irregular polygons based on the reasoning about the equal sides and angles -use the properties of rectangles to deduce related facts and find missing lengths and angles **Summer 1**	-draw 2-D shapes using given dimensions and angles -compare and classify geometric shapes based on their properties and sizes -illustrate and name parts of the circles, including radius, diameter and circumference and know that the diameter is twice the radius **Summer 1**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	shape, pattern, flat, curved, straight, round, hollow, solid, corner point, pointed, face, side, edge, end sort, make, build, draw, surface, right-angled, vertex, vertices, layer, diagram **2D shapes** circle, circular, semi-circle, triangle, triangular, square, rectangle, rectangular, star, pentagon, pentagonal, hexagon, hexagonal, octagon, octagonal, quadrilateral	**All previous words – new words:** construct, sketch, radius, diameter net, angle, base, square-based, regular, irregular, concave, convex, open, closed, 2D, two-dimensional, right angle triangle, equilateral triangle, isosceles triangle ,scalene triangle, oblong, heptagon, polygon	**All previous words – new words:** congruent, rhombus, kite, parallelogram, trapezium	**All previous words – new words:** circumference, concentric, arc, intersecting, intersection, plane, tangram
Geometry: 3-D shapes **KS1 expectations**: *Recognise and name common 3-D shapes *Compare and sort common 3-D shapes and everyday objects	-make 3-D shapes using modelling materials, recognise 3-D shapes in different orientations and describe them **Summer 2**		-identify 3-D shapes, including cubes and cuboids from 2-D representations **Summer 1**	-recognise, describe and build simple 3-D shapes, including making nets **Summer 1**
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year	cube, cuboid, pyramid, sphere, hemi-sphere, cone, cylinder, prism	**All previous words – new words:** 3D, three-dimensional, spherical, cylindrical, tetrahedron, polyhedron	**All previous words – new words:** octahedron	**All previous words – new words:** dodecahedron

Geometry: Angles and lines **KS1 expectations** – not covered	-recognise angles as a property of shape or a description of turn identify right angles and that two right angles make a half turn, three right angles make three quarters of a turn and 4 right angles make a full 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 **Summer 2**	-identify acute and obtuse angles and compare and order angles up to two right angles by size -identify lines of symmetry in 2-D shapes presented in different orientations -complete a simple symmetric figure with respect to a specific line of symmetry **Summer 2**	-know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles -draw given angles and measure them in degrees -identify: ❖ angles at a point and one whole turn (360°) ❖ angles at a point on a straight line and ½ a turn (180°) ❖ other multiples of 90° **Summer 1**	-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 and find the missing angles **Summer 1**
Geometry: Position and direction **KS1 expectations**: *Order and arrange combinations of mathematical objects in patterns and sequences *Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between roatation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		-describe positions on a 2-D grid as quadrants in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down -plot specifies points and draw sides to complete a given polygon **Summer 2**	-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 **Summer 2**	-describe positions in the full coordinate grid (all four quadrants) -draw and translate simple shapes on the coordinate plane and reflect them in the axes Autumn 2
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	**position, angles and lines:** over, under, underneath, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, before, after beside, next to, opposite, apart, between, middle, edge, centre, corner, direction, journey, route, map, plan, left, right, up, down, higher, lower, forwards, backwards, sideways, across, close, far, near,	**All previous words – new words:** origin, coordinates, north-east, north-west, south-east, south-west (NE, NW, SE, SW), rotate, degree, ruler, set square, angle measurer, compasses, parallel, perpendicular, x-axis, y-axis, quadrant	**All previous words – new words:** rotation, acute, obtuse, protractor, bisect, identify, convert, reflex	

	along, through, to, from, towards, away from, ascend, descend, grid row, column, clockwise, anti-clockwise, compass point, north, south, east, west (N, S, E, W), horizontal, vertical, diagonal, movement, slide, roll, whole turn, half turn, quarter turn, angle, …is a greater/smaller angle than, right angle, straight line, stretch, bend			
Cross curricular activities carried out	DT: packaging 2D nets, 3D shapes, faces, edges etc.	Science History DT: money containers faces for shape construction	Science History DT: Shelters faces, shapes, edges	Science History DT: Fairgrounds shapes, faces, nets

Statistics

	Year 3	Year 4	Year 5	Year 6
Statistics: Present and interpret KS1 expectations: *Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	-interpret and present data using bar charts, pictograms and tables Spring 2	-interpret and present discrete and continuous data using the appropriate graphical methods, including bar charts and time graphs Summer 2	-complete, read and interpret information in tables, including timetables Autumn 2	-interpret and construct pie charts and line graphs and use these to solve problems Summer 2
Statistics: Solve problems KS1 expectations: *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	-solve one and two-step questions (e.g. 'How many more?' and 'How many fewer?') using information presented in scaled bar charts, pictograms and tables Spring 2	-solve comparison, sum and different problems using information presented in bar charts, pictograms, tables and other graphs Summer 2	-solve comparison, sum and difference problems using information presented in a line graph Autumn 2	-calculate and interpret the mean as an average Summer 2
Topic vocabulary (Year 3 show KS1 words and highlighted words = new. Subsequent year groups show new vocab only)	count, tally, sort, vote, graph, block graph, pictogram, represent, group, set, list, chart, bar chart, table, frequency table, Carroll diagram, Venn diagram, label, title, axis, axes diagram, most popular, most common, least popular, least common	All previous words – new words: survey, questionnaire, data, tally chart	All previous words – new words: database, line graph, bar line chart, mode, range, maximum/minimum value Probability: fair, unfair, likely, unlikely, likelihood, certain, uncertain, probable, possible,	All previous words – new words: mean, average, median, statistics, distribution, define, interrogate (data), question, prove Probability: equal chance, even chance, fifty-fifty chance, biased, random

			impossible, chance, good chance, poor chance, no chance, risk, doubt	
Cross curricular activities carried out	**Science** – ourselves – heart rate graphing **History** –	**Science** **History** **DT**	**Science:** Heart rate – line graphs, tally charts, food chains (branching database) **History** **DT**	**Science** **History** **DT**