Stimpson Avenue Academy
Maths Curriculum Overview

East Midlands Academy Trust

Number	Calculations	Fractions/Decimals/Percentages/Ratio	Measurement	Time	Geometry	Position	Statistics	Fraction Calculations	Algebra

	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Autumn	Number 1	Number 1	Number 1	Number 1	Number 1	Number 1
	Calculation 1	Calculation 1	Calculation 1	Calculation 1	Calculation 1	Calculation 1
	Geometry 1 / Position 1			Measurement 1	Number 2	
	Number 2	Measurement 1	Measurement 1	Time 1	Statistics 1	Number 2
		Calculation 2	Calculation 2	Calculation 2	Calculation 2	FDPR 1
	Calculation 2	Statistics 1				Algebra 1
	Geometry 2	Position 1			Geometry 1	Geometry 1
						Position 1
Spring	Position 2	Geometry 1	Time 1	FDPR 1	Measurement 1	FDPR 1
	Time 1				Time 1	Fraction Calculations
	Number 3	Assessments			FDPR 1	Assessments
	Calculation 3	Measurement 2	Calculation 3	Statistics 2		Fraction Calculations
						Algebra 2
	Measurement 1	Time 1	Fractions 1	FDPR 2	FDPR 1	Geometry 2
	Calculation 4				Measurement 2	Measurement 2
	Assessments	Fractions 1	Assessments	Assessments	Assessments	
	Calculation 4		Fractions 1	FDPR 2	Measurement 2	
	Fractions 1		Geometry 1		Number 3	Statistics 1
Summer	Fractions 1	Measurement 3	Geometry 1	Measurement 2	Number 4	NC Test Preparation
	Geometry 3	Measurement 4	Statistics 1	Geometry 1	Position 1	
	Measurement 2	Measurement 5			Geometry 2	
	Number 4	NC Test Preparation	Fractions 2	Geometry 2		
					FDPR 2	NC Test Administration
		NC Test Administration		Position 1		
	Calculation 5		Geometry 1	Measurement 3	Fraction Calculations	Secondary Transition Scheme
	Calculation 5	Number 2	Geometry 1	Measurement 3	Fraction Calculations	Secondary Transition Scheme
			Measurement 2		Number 5	
	Measurement 3	Calculation 3		Time 2		
	Assessments		Assessments	Assessments	Assessments	
	Calculation 6	Statistics 2 / Geometry 2	Measurement 2	Statistics 3	Consolidation	
	Fractions 2	Consolidation	Consolidation	Consolidation		

	Consolidation					

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Year 1			Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2	Key Vertical Maths Links	Horizontal/ Diagonal Links
Number	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number								**EYFS Maths** - Recognise some numerals of personal significance - Count actions or objects which cannot be moved - Count an irregular arrangement of up to ten objects - Estimate how many objects they can see and check by counting them - Use the language of 'more' and 'fewer' to compare two sets of objects - Record, using marks that they can interpret and explain - Begin to identify own mathematical problems based on own interests and fascinations - Count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number	
	Given a number, identify 1 more and 1 less									
	Count in multiples of 2s and 5s									
	Use the language of: equal to, more than, less than (fewer), most, least									
	Identify and represent numbers using objects and pictorial representations including the number line									
	Count, read and write numbers to 20 in numerals and words									
	Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations. (Non-Statutory Guidance)									
Calculation	Represent and use number bonds and related subtraction facts within 20								**EYFS Numbers** - Say the number that is one more than a given number - Find the total number of items in two groups by counting all of them - In practical activities and discussion, begin to use the vocabulary involved in adding and subtracting - Use quantities and objects, add and subtract two single-digit numbers and count on or back to find the answer	
	Add and subtract one-digit numbers to 20, including 0									
	Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs									
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 3 = ? − 7									
	Count in multiples of 2s, 5s and 10s									
	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									
Fractions	Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity								**EYFS Numbers** - Solve problems, including doubling, halving and sharing	
	Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity									
Measures	Compare, describe and solve practical problems for	lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]							**EYFS Shape Space and Measures** - Order two or three items by length or height - Order two items by weight or capacity - Begin to use everyday language related to money - Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems	
		mass/weight [for example, heavy/light, heavier than, lighter than]								
		capacity/volume [for example, full/empty, more than, less than, half, half full, quarter]								
	Recognise and know the value of different denominations of coins and notes									

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Year 1		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
Time	Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]							**EYFS Shape, Space and Measures** - Use everyday language related to time - Order and sequence familiar events - Measure short periods of time in simple ways	
	Recognise and use language relating to dates, including days of the week, weeks, months and years								
	Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]								
	Measure and begin to record time (hours, minutes, seconds)								
	Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times								
Geometry	Recognise and name 2-D shapes [for example, rectangles (including squares), circles and triangles]							**EYFS Shape, Space and Measures** - Begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes - Select a particular named shape - Use familiar objects and common shapes to create and recreate patterns and build models - Recognise, create and describe patterns - Explore characteristics of everyday objects and shapes and use mathematical language to describe them	
	Recognise and name 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]								
Position	Describe position, direction and movement, including whole, half, quarter and three-quarter turns							**EYFS Shape, Space and Measures** - Describe their relative position such as 'behind' or 'next to'	

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Year 2		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
Number	Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward							**Year 1 Number** - Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Given a number, identify 1 more and 1 less - Count in multiples of 2s and 5s - Use the language of equal to, more than, less than (fewer), most, least - Identify and represent numbers using objects and pictorial representations including the number line - Count, read and write numbers to 20 in numerals and words	
	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 (10s, 1s)								
	Use place value and number facts to solve problems								
Calculation	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100							**Year 1 Calculations** - Represent and use number bonds and related subtraction facts within 20 - Add and subtract one-digit numbers to 20, including 0 - Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs - Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 3 = ? – 7 - Count in multiples of 2s, 5s and 10s - 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	
	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding 3 one-digit numbers, a two-digit number and 1s, a two-digit number and 10s, 2 two-digit numbers								
	Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot								
	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems								
	Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures								
	Solve problems with addition and subtraction applying their increasing knowledge of mental and written methods								
	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers								
	Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot								
	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs								
	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts								
Fractions	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity							**Year 1 Number** - Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity - Recognise, find and name a quarter as 1 of 4 equal parts	
	Recognise the equivalence of 2/4 and 1/2								

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Year 2			Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2	Key Vertical Maths Links	Horizontal/ Diagonal Links
	Write simple fractions, for example 1/2 of 6 = 3								of an object, shape or quantity	
Measures	Compare and order and record the results using >, < and =	Length/height							**Year 1 Measures** - Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - mass/weight [for example, heavy/light, heavier than, lighter than] - capacity/volume [for example, full/empty, more than, less than, half, half full, quarter] - Measure and begin to record lengths and heights, mass and weight, capacity and volume - Recognise and know the value of different denominations of coins and notes	
		mass								
		volume/capacity								
		temperature								
	Choose and use appropriate standard units to estimate and measure	length/height in any direction (m/cm) to the nearest appropriate unit, using rulers.								
		mass (kg/g) to the nearest appropriate unit, using scales.								
		capacity (litres/ml) to the nearest appropriate unit, using measuring vessels								
		temperature (°C); to the nearest appropriate unit, using thermometers								
	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value									
	Find different combinations of coins 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									
Time	Compare and sequence intervals of time								**Year 1 Time** - Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] - Recognise and use language relating to dates, including days of the week, weeks, months and years - Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] - Measure and begin to record time (hours, minutes, seconds) - Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	
	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									
Geometry	Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line								**Year 1 Geometry** - Recognise and name 2-D shapes [for example, rectangles (including squares), circles and triangles] - Recognise and name 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	
	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces									
	Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]									
	Compare and sort common	2-D shapes and everyday objects								
		3-D shapes and everyday objects								
Position	Order and arrange combinations of mathematical objects in patterns and sequences								**Year 1 Position** - Describe position, direction and movement, including whole, 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)									
Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and tables								**Year 1 Number** - Count to and across 100, forwards and backwards,	

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Year 2		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity							beginning with 0 or 1, or from any given number - Given a number, identify 1 more and 1 less - Identify and represent numbers using objects and pictorial representations including the number line	
	Ask-and-answer questions about totalling and comparing categorical data								

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Year 3		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/Diagonal Links
		1	2	1	2	1	2		
Number	Find 10 or 100 more or less than a given number							**Year 2 Number** - Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and 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 (10s, 1s) - 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 1,000								
	Identify, represent and estimate numbers using different representations								
	Read and write numbers up to 1,000 in numerals and in words								
	Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)								
	Solve number problems and practical problems involving these ideas (number and Place Value)								
Calculation	Add and subtract numbers mentally, including a three-digit number and 1s, a three-digit number and 10s, a three-digit number and 100s							**Year 2 Calculation** - Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 - Add and subtract numbers using concrete objects, pictorial representations, and mentally, including, adding 3 one-digit numbers, a two-digit number and 1s, a two-digit number and 10s, 2 two-digit numbers - Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems - Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures	
	Add and subtract numbers with up to 3 digits, using a variety of methods								
	Estimate the answer to a calculation and use inverse operations to check answers								
	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction								
	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables								
	Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot								
	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 a variety of written methods								
	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts								
	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								
Fractions	Count up and down in tenths							**Year 2 Fractions** - Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity - Recognise the equivalence of 2/4 and 1/2 - Write simple fractions, for example 1/2 of 6 = 3	
	Recognise and use fractions as numbers: 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, find and write fractions of a discrete set of objects: 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 with small denominators								
	Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]								

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Year 3

			Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2	Key Vertical Maths Links	Horizontal/Diagonal Links
	Solve problems that involve the above									
Measures	Solve problems that involve the above	lengths (m/cm/mm)							**Year 2 Measures** - Compare and order and record the results using >, < and = lengths, mass, capacity and temperature - Compare and order and record the results using >, < and = - Choose and use appropriate standard units to estimate and measure length/height (m/cm), mass (kg/g), capacity (l/ml) and temperature (°C) to the nearest appropriate unit - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value - Find different combinations of coins 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	
		mass (kg/g)								
		capacity (l/ml)								
	Measure, add and subtract	lengths (m/cm/mm)								
		mass (kg/g)								
		capacity (l/ml)								
	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction									
	Measure the perimeter of simple 2-D shapes									
	Add and subtract amounts of money to give change, using both £ and p in practical contexts									
Time	Compare durations of events [for example, to calculate the time taken by particular events or tasks]								**Year 2 Time** - Compare and sequence intervals of time - 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	
	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight									
	Tell and write the time from an analogue clock, including using 12-hour clocks, 24-hour clocks and using Roman Numerals from I to XII									
	Know the number of seconds in a minute and the number of days in each month, year and leap year									
Geometry	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines								**Year 2 Geometry** - Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces - Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] - Compare and sort common 2-D and 3-D Shapes and everyday objects	
	Draw 2-D shapes									
	Make 3-D shapes using modelling materials; recognise 3-D 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 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle									
Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs								**Year 2 Statistics** - Interpret and construct simple pictograms, tally charts, block diagrams and 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	
	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs									

Stimpson Avenue Academy - Maths Curriculum

Year 4

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
Number	Count backwards through 0 to include negative numbers							**Year 3 Number** - Find 10 or 100 more or less than a given number - Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number - Count up and down in tenths (From Fractions) - Compare and order numbers up to 1,000 - Identify, represent and estimate numbers using different representations - Read and write numbers up to 1,000 in numerals and in words - Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) - recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 - Solve number problems and practical problems involving these ideas (number and Place Value)	
	Find 1,000 more or less than a given number								
	Order and compare numbers beyond 1,000								
	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 0 and place value								
	Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)								
	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 (From Fractions)								
	Round any number to the nearest 10, 100 or 1,000								
	Recognise and use factor pairs and commutativity in mental calculations								
Calculation	Add and subtract numbers with up to 4 digits using a variety of methods							**Year 3 Calculations** - Add and subtract numbers mentally, including; a three-digit number and 1s, a three-digit number and 10s, a three-digit number and 100s - Add and subtract numbers with up to 3 digits, using a variety of methods - Estimate the answer to a calculation and use inverse operations to check answers - Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction - Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables - Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot - 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 a variety of written methods	
	Estimate and use inverse operations to check answers to a calculation								
	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why								
	Count in multiples of 6, 7, 9, 25 and 1,000								
	Recall multiplication and division facts for multiplication tables up to 12 × 12								
	Use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers								
	Multiply two-digit and three-digit numbers by a one-digit number using a variety of methods								
	Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects								
Fractions	Count up and down in hundredths							**Year 3 Fractions** - Count up and down in tenths - Recognise and use fractions as numbers: 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 - Compare and order unit fractions, and fractions with the same denominators - Recognise and show, using diagrams, equivalent fractions with small denominators - Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]	
	recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10								
	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								
	Recognise and show, using diagrams, families of common equivalent fractions								
	Compare numbers with the same number of decimal places up to 2 decimal places								
	Recognise and write decimal equivalents of any number of tenths or hundreds								
	Recognise and write decimal equivalents to 1/4 , 1/2 , 3/4								
	Add and subtract fractions with the same denominator								
	Round decimals with 1 decimal place to the nearest whole number								

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Year 4

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
	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								
Measures	Estimate and compare different measures							**Year 3 Measures** - Compare lengths (m/cm/mm), Mass (kg/g), capacity (l/ml) - Measure, add and subtract lengths (m/cm/mm), mass (kg/g) and Capacity (l/ml) - Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction - Measure the perimeter of simple 2-D shapes	
	Calculate different measures								
	Convert between different units of measure [for example, kilometre to metre; hour to minute]								
	Solve simple measure and money problems involving fractions and decimals to 2 decimal places								
	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres								
	Find the area of rectilinear shapes by counting squares								
	Estimate, compare and calculate different measures, including money in pounds and pence								
Time	Read, write and convert time between analogue and digital 12-hour and 24-hour clocks							**Year 3 Time** - Tell and write the time from an analogue clock, including using 12-hour clocks, 24-hour clocks and using Roman Numerals from I to XII - Know the number of seconds in a minute and the number of days in each month, year and leap year	
	Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days								
Geometry	Identify lines of symmetry in 2-D shapes presented in different orientations							**Year 3 Geometry** - Identify horizontal and vertical lines and pairs of perpendicular and parallel lines - Draw 2-D shapes - Make 3-D shapes using modelling materials; recognise 3-D 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 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle	
	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 2 right angles by size								
Position	Complete a simple symmetric figure with respect to a specific line of symmetry							**Year 2 Position** - 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)	
	Describe positions on a 2-D 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								
Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs							**Year 3 Statistics** - Interpret and present data using bar charts, pictograms and tables - Solve one-step and two-step questions [for example 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	
	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs								

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Year 5

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
Number	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0							**Year 4 Number** - Count backwards through 0 to include negative numbers - Order and compare numbers beyond 1,000 - Find 1,000 more or less than a given number - Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) - recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 - Round any number to the nearest 10, 100 or 1,000 - Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value - Recognise and use factor pairs and commutativity in mental calculations - Identify, represent and estimate numbers using different representations	
	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								
	Read, write, order and compare numbers with up to 3 decimal places								
	Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals								
	Determine the value of each digit in numbers up to 1,000,000								
	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents								
	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000								
	Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000								
	Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place								
	Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 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})								
	Solve number problems and practical problems that involve all of the above								
Calculation	Add and subtract numbers mentally with increasingly large numbers							**Year 4 Calculations** - Add and subtract numbers with up to 4 digits using a variety of methods - Estimate and use inverse operations to check answers to a calculation - Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why - Count in multiples of 6, 7, 9, 25 and 1,000 - Recall multiplication and division facts for multiplication tables up to 12 × 12 - Use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers - Multiply two-digit and three-digit numbers by a one-digit number using a variety of methods	
	Add and subtract whole numbers with more than 4 digits using a range of methods and a Concrete/Pictorial/Abstract approach								
	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.								
	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why								
	Multiply and divide numbers mentally, drawing upon known facts								
	Multiply numbers up to 4 digits by a one- or two-digit number using a range of methods								
	Divide numbers up to 4 digits by a one-digit number using a range of methods and interpret remainders appropriately for the context								
	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign								
	Solve problems involving number up to 3 decimal places								
Fractions	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 & 1/5]							**Year 4 Fractions and Decimals** - Count up and down in hundredths - Compare numbers with the same number of decimal places up to 2 decimal places - Recognise and show, using diagrams, families of common equivalent fractions - recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 - Recognise and write decimal equivalents to 1/4 , 1/2 , ¾ - Add and subtract fractions with the same denominator	
	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents								
	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction								
	Compare and order fractions whose denominators are all multiples of the same number								
	Read and write decimal numbers as fractions [for example, 0.71 = 71/100]								
	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths								

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Year 5

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
	Solve problems which require knowing percentage 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							- Round decimals with 1 decimal place to the nearest whole number	
Fractions	Add and subtract fractions with the same denominator, and denominators that are multiples of the same number							**Year 4 Fractions** - Add and subtract fractions with the same denominator, and denominators that are multiples of the same number - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
Fractions	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams								
Fractions	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates								
Measures	Compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes							**Year 5 Measures** - Estimate and compare different measures - Convert between different units of measure [for example, kilometre to metre; hour to minute] - Solve simple measure and money problems involving fractions and decimals to 2 decimal places - Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - Find the area of rectilinear shapes by counting squares	
Measures	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]								
Measures	Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]								
Measures	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints								
Measures	Use all four operations to solve problems involving measure [length, mass, volume, money] using decimal notation, including scaling								
Measures	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres								
Measures	Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes								
Measures	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]								
Measures	Estimate, compare and calculate different measures, including money in pounds and pence								
Time	Complete, read and interpret information in tables, including timetables							**Year 4 Time** - Read, write and convert time between analogue and digital 12-hour and 24-hour clocks - Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days	
Time	Solve problems involving converting between units of time								
Geometry	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles							**Year 4 Geometry** - Identify lines of symmetry in 2-D shapes presented in different orientations - 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 2 right angles by size	
Geometry	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations								
Geometry	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles								
Geometry	Draw given angles, and measure them in degrees (°)								
Geometry	Identify: • angles at a point and 1 whole turn (total 360°), • angles at a point on a straight line and half a turn (total 180°) • other multiples of 90°								
Position	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							**Year 4 Position** - Complete a simple symmetric figure with respect to a specific line of symmetry - Describe positions on a 2-D 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	
Statistics	Solve comparison, sum and difference problems using information presented in a line graph							**Year 4 Statistics**	

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Year 5		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs (reinforced from Yr4)							- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	

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Year 6

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
Number	Use negative numbers in context, and calculate intervals across 0							**Year 5 Number** - Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 - Read, write, order and compare numbers to at least 1,000,000 - Read, write, order and compare numbers with up to 3 decimal places - Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 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)	
	order and compare numbers up to 10,000,000								
	Read and write numbers up to 10,000,000								
	Determine the value of each digit in numbers up to 10,000,000								
	Identify the value of each digit in numbers given to 3 decimal places								
	Round any whole number to a required degree of accuracy								
	Identify common factors, common multiples and prime numbers								
	Solve number and practical problems that involve all of the above								
Calculation	Perform mental calculations, including with mixed operations and large numbers							**Year 5 Calculation** - Add and subtract whole numbers with more than 4 digits using a range of methods and a Concrete/Pictorial/Abstract approach - Multiply numbers up to 4 digits by a one- or two-digit number using a range of methods - Divide numbers up to 4 digits by a one-digit number using a range of methods and interpret remainders appropriately for the context - Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals - Solve problems involving number up to 3 decimal places sign - Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy - Add and subtract numbers mentally with increasingly large numbers	
	Use their knowledge of the order of operations to carry out calculations involving the 4 operations								
	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.								
	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why								
	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication								
	Multiply one-digit numbers with up to 2 decimal places by whole numbers								
	Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context								
	Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context								
	Use written division methods in cases where the has up to 2 decimal places								
	Solve problems involving addition, subtraction, multiplication and division								
Fractions, Decimals, Percentages and Ratio	Compare and order fractions, including fractions >1							**Year 5 Fractions, Decimals and Percentages** - Compare and order fractions whose denominators are all multiples of the same number - Read and write decimal numbers as fractions [for example, 0.71 = 71/100] - Solve problems which require knowing percentage 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 - Add and subtract fractions with the same denominator, and denominators that are multiples of the same number - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination								
	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts								
	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]								
	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 [for example, 1/4 × 1/2 = 1/8]								
	Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]								

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Year 6

		Aut		Spr		Sum		Key Vertical Maths Links	Horizontal/ Diagonal Links
		1	2	1	2	1	2		
F D P R	Solve problems - involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison - involving unequal sharing and grouping using knowledge of fractions and multiples - involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts - involving similar shapes where the scale factor is known or can be found							**Year 5 Fractions, Decimals and Percentages** - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Measures	Estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]							**Year 5 Measures** - Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] - Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints - Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres - Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes - Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	
	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places								
	Convert between miles and kilometres								
	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 formulae for area and volume of shapes								
	Calculate the volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]								
Geometry	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius							**Year 5 Geometry** - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. - 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 1 whole turn (total 360°), angles at a point on a straight line and half a turn (total 180°), other multiples of 90°	
	Describe simple 3-D shapes								
	Draw 2-D shapes using given dimensions and angles								
	Recognise and build simple 3-D shapes, including making nets								
	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, and find missing angles								
Position	Describe positions on the full coordinate grid (all 4 quadrants)							**Year 5 Position** - 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	
	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes								
Statistics	Interpret and construct pie charts and line graphs and use these to solve problems							**Year 5 Statistics** - Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	
	Calculate and interpret the mean as an average								
Algebra	Express missing number problems algebraically							**Year 5 Number** - Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. - Use the properties of rectangles to deduce related facts and find missing lengths and angles.	
	Enumerate possibilities of combinations of 2 variables								
	Find pairs of numbers that satisfy an equation with 2 unknowns								
	Use simple formulae								
	Generate and describe linear number sequences								