Curriculum Map- Maths Year 5

		Learning Objectives	Knowledge Expectations	Vocabulary Expectations	Links to prior/post learning
				Subject - Maths		
Y5	**Chapter 1- Numbers to 1 000 000**	To read and represent numbers to 100 000. To read and represent numbers to 1 000 000. To read and represent numbers to 1 000 000 using number discs. To compare numbers to 1 000 000 using place value. To compare numbers to 1 000 000 using place value. To compare numbers to 1 000 000 using pictorial representations and proportionality. To compare numbers to 1 000 000 from pictorial representations, using lists and number lines. To make and identify patterns in numbers using knowledge of place value. To make number patterns that decrease in multiples of 10 000 or 100 000.	To know that numbers can be represented using place value counters To know each number on the number line has a unique position To know each two-digit number can be partitioned into a 10s part and a ones part To know each three-digit number can be partitioned into a 100s part, 10s part and a ones part To know that each four-digit number can be partitioned into a 1000 part, 100s part, 10s part and 1s part To know that each five digit number can be portioned into a 10 000 part, 1 000 part, 100 part, 10 part and 1 part. To understand the 100s, 10s and ones structure of 3 digit numbers can be used to support addition To understand the 1000s, 100s, 10s and ones structure of 4 digit numbers can be used to support addition To understand the 10,000s, 1,000s, 100s, 10s and ones structure of 4	Number numeral zero one, two, three … twenty teens numbers, eleven, twelve … twenty twenty-one, twenty-two … one hundred, two hundred … one thousand … ten thousand, hundred thousand, million none how many …? count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens, threes, fours, eights, fifties, sixes, sevens, nines, twenty-fives and so on to hundreds, thousands equal to equivalent to is the same as more, less most, least tally many odd, even multiple of, factor of factor pair sequence continue predict few pattern pair, rule relationship, next, consecutive > greater than < less than ≥ greater than or equal to ≤ less than or equal to Roman numerals integer, positive, negative above/below zero, minus negative numbers formula divisibility square number prime number ascending/descending order Place value ones tens, hundreds digit one-, two- or three-digit number place, place value stands for, represents exchange the same	

Curriculum Map- Maths Year 5

| | | To round numbers to the nearest 10 000 using number lines and bar graphs.

To round numbers to the nearest 100 000 using number lines and bar graphs.

To round numbers to the nearest 100, 1000, 10 000 and 100 000 using number lines. | digit numbers can be used to support addition

To know that 0-9 can be used when writing one digit, two digit and three digit, four digit and five digit numbers

To know that numbers can be partitioned in different ways e.g. 53- 5 tens and 3 ones, 4 tens and 13 ones

To know that numbers can be represented in different ways and using different manipulatives

To know that counting in 50's follows a similar pattern to counting in 5s- make the number 10 times bigger

To know that counting in 100's follows a similar pattern to counting in 10s- make the number 10 times bigger

To know that number patterns can be continued

To know that when counting in 25's, you add 25 on each time

To know that counting in 1,000's follows a similar pattern to counting in 1's | number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more, one hundred more, one thousand more one less, ten less, one hundred less, one thousand less equal to compare order size first, second, third … twentieth twenty-first, twenty-second … last, last but one, before, after next between halfway between above, below Estimating guess how many ...? estimate nearly roughly close to approximate, approximately about the same as just over, just under exact, exactly too many, too few enough, not enough round, nearest, round to the nearest ten, hundred, thousand, ten thousand round up, round down | Year 6:

To create and identify numbers to 10 000 000; to write in numerals and words numbers to 10 000 000.

To construct and record numbers to 10 000 000; to recognise the value of digits to 10 000 000.

To recognise and construct numbers to 10 000 000 using an abacus; to recognise the value of digits in numbers to 10 000 000 and write numbers using numerals and words.

To compare numbers to 10 000 000 using place value.

To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits.

To round numbers to 10 000 000 to the nearest million, hundred thousand and ten thousand.

To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value. |

			To know there are 10 hundreds in one thousand	
			To know that numbers can be rounded up and down	
			To know that if there is a 5-9 digit in the place column, the number is rounded up to the nearest 10/100 e.g. 76 rounded to 80	
			To know that if there is a 0-4 digit in the place value column, the number is rounded down to the nearest 10/100 e.g. 72 rounded to 70	
			To know that numbers can be represented using place value charts	
			To understand the 100,000s, 10,000s, 1,000s, 100s, 10s and ones structure of 5 digit numbers can be used to support addition	
			To know that numbers can have the same digit but placed in different positions and represent different values	
			To know that numbers can increase and decrease	
			To know that numbers can be rounded to the nearest ten, hundred, thousand, ten thousand, hundred thousand	

Curriculum Map- Maths Year 5

Chapter 2- Whole numbers: Addition and Subtraction	To add using the 'counting on' strategy with concrete materials and number lines. To subtract using the 'counting backwards' strategy with concrete materials. To add numbers within 1 000 000 using rounding and concrete materials. To use addition and subtraction to solve comparison problems with numbers to 1 000 000. To add numbers within 1 000 000 using the column method of addition. To subtract using the column method, number bonds and number discs using numbers to 1 000 000. To add and subtract using number bonds as a key strategy using numbers within 1 000 000. To consolidate and refine addition skills and place-value knowledge to solve addition problems.	To know = means the same as To know + means that you are combining two or more numbers to find a total To know that – is the inverse of + To know that + is the inverse of - To know that you can find the total by counting on To know the total is combining two or more amounts To understand that the total will be the largest number. To know that addition can be done in any order To know - means that you are finding the difference between two amounts To know that you can find the difference by counting back To know that subtraction always starts with the whole number To understand that the answer will be fewer than the whole number To know that if there is more than 9 in a column that needs to be renamed e.g. 11 ones becomes 1 ten and 1 one	addition add, more, and make, sum, total altogether double near double half, halve one more, two more … ten more … one hundred more how many more to make …? How many more is … than …? How much more is …? Subtract take away how many are left/left over? how many have gone? One less, two less, ten less … one hundred less how many fewer is … than …? How much less is …? difference between equals is the same as number bonds/pairs/facts missing number tens boundary, hundreds boundary, ones boundary, tenths boundary inverse	Year 4: To find totals and sums. To add without renaming. To add with renaming (in the ones column). To add with renaming (in tens and ones). To add with renaming (in hundreds, tens and ones). To add using mental strategies (making tens, hundreds and thousands). To add using mental strategies. To find the difference. To subtract without renaming (column subtraction). To subtract with renaming (in tens and ones). To subtract with renaming (in hundreds, tens and ones). To subtract with renaming (in hundreds, tens and ones). To subtract with renaming. To subtract using mental strategies. To solve addition and subtraction word problems. To solve word problems (addition and subtraction). To solve multi-step word problems.

| | | To subtract numbers to 1 000 000 using concrete materials, the column method and number bonds. | To know that when adding multiples of 100, the ones digit and tens digit stays the same

To know that you will need to rename one ten into 10 ones when subtracting if the digit is smaller

To know that you will need to rename one hundred into 10 tens when subtracting if the digit is smaller

To know that you can add/subtract more than two numbers

To know when adding/subtracting more than two numbers, use number bond facts to help.

To know that the commutative law lets you swap numbers around for addition and still get the same answer

To know that when subtracting multiples of 100, the ones digit and tens digit stays the same

To know that when subtracting multiples of 10, the ones digit and the hundred digit stays the same

To know that number families can help to solve a problem e.g. 30+70=100, 100-30=70 | | Year 6:

To use multiple operations and create expressions from a picture; to use the order of operations to solve expressions.

 To create and solve expressions using the four operations. |

			To know to add the ones before tens when adding a two digit number	
			To know to add the ones, then tens and then hundreds when adding a 3 digit number	
			To know that you always start with adding the ones and then move along the columns to the left	
			To know that difference is the result of subtracting one number from another	
			To know that you can count on in different multiples e.g. 1,000, 10,000	
			To know that you can count back to subtract	
			To know that you can count back in different multiples e.g. 100,000, 10,000	
			To know that different strategies can be used to solve addition problems- mentally, written down, partitioning	
			To know that estimation is having a sensible guess	
			To know that estimation can help to solve calculations	

			To know that numbers can be renamed e.g. 47,726 = 30 000, 17 000, 726		
			To know you can check your answer by estimating		
	Chapter 3- **Whole numbers: Multiplication and Division**	To consolidate and review multiplication; to find the result of multiplying by a number. To consolidate and review multiplication; to find the numbers we can multiply by to get a number. To define and find common factors of numbers to 100. To identify and name the prime numbers; to recognise prime numbers as numbers that only have 2 factors. To define and determine prime numbers to 100. To create and determine square and cubed numbers. To multiply 1- and 2-digit numbers by 10, 100 and 1000.	To know that multiples are the product of times tables e.g. 6, 12, 18. 24 To know that factors are numbers that divide exactly into another numbers e.g. factors of 8 = 1, 2, 4, 8 To know that a **common factor** is a number that can be divided into two different numbers, without leaving a remainder. E.g. 3 is a common factor of 9 and 12 To know that a prime number is a number than is only divisible by 1 and itself e.g. 5, 7, 13 To know that prime numbers (other than 2) are odd numbers To know that a square number is number multiplies by itself e.g. 5x5 To know that a cubed number is a number multiplied by itself 3 times e.g. 5x5x5 To know that 12x1,000= 12 x 1 thousand = 12 thousands = 12,000 To know that numbers can be partitioned when multiplying e.g. 8 x 18 = 8x10 + 8x8 To know that numbers can be partitioned when multiplying into hundreds, tens and ones To know that numbers can be partitioned when multiplying into thousands, hundreds, tens and ones	multiplication multiply multiplied by multiple, factor groups of times product once, twice, three times … ten times repeated addition division dividing, divide, divided by, divided into left, left over, remainder grouping sharing, share, share equally one each, two each, three each … ten each group in pairs, threes … tens equal groups of doubling halving array row, column number patterns multiplication table multiplication fact, division fact, inverse square, squared cube, cubed	Year 4: To multiply by 6. To multiply by 7. To multiply by 9. To multiply by 9 (relational understanding). To multiply by 11. To multiply by 11. To multiply by 12. To divide by 6. To divide by 7. To divide by 9. To multiply and divide by 11 and 12. To divide with remainders. To solve word problems involving multiplication and division.

Curriculum Map- Maths Year 5

| | | To multiply 2- and 3-digit numbers by a 1-digit number using multiple strategies.

To multiply 4-digit numbers by 1-digit numbers.

To multiply 4-digit numbers by 1-digit numbers with regrouping, using a variety of strategies.

To multiply a 4-digit number by a 1-digit number, with regrouping from the ones, tens and hundreds, using multiple methods.

To multiply 2-digit numbers by 2-digit numbers using multiple methods.

To multiply a 2-digit number by a 2-digit number using multiple methods, including the grid method, number bonds and column method, with regrouping.

To multiply a 3-digit number by a 2-digit number, with the grid method and column method as key strategies.

To multiply a 3-digit number by a 2-digit number with | To know that numbers can be partitioned when multiplying 2 digit number by a 2 digit number e.g. 14x12= 14x10 and 14x2

To know that the grid method can be an effective method to solve multiplication problems

To know that numbers can be partitioned when dividing e.g. 930= 900 and 30

To know that you can use other known facts to help when dividing

To know that groups need to be equal and any amount left is called the remainder

To know that odd numbers can be shared into equal groups but there will be a remainder

To know when you multiply by 10 you make the number 10 times bigger

To know when you divide by 10, you make the number 10 times smaller | | To solve problems involving multiplication and division.

To solve multi-step problems (in the context of measures).

To solve problems involving multiplication and division (all possibilities).

To solve problems involving multiplication and division (multi-step).

To solve problems involving multiplication and division (scaling/comparison).

To multiply by 0 and 1.

To divide by 1.

To understand commutativity.

To multiply three numbers.

To multiply with multiples of 10

To multiply 2-digit numbers.

To multiply 2-digit numbers with renaming.

To multiply multiples of 100.

To multiply 3-digit numbers.

To multiply 3-digit numbers (renaming). |

		regrouping, using the column method as the key strategy To find thousands, hundreds and tens in a 4-digit number using concrete materials. To divide 3- and 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. To divide 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. To divide 3-digit numbers by 1-digit numbers, using long division, short division and mental methods, that give rise to remainders.		To multiply 3-digit numbers. To divide 2-digit numbers. To divide 3-digit numbers. To divide 2-digit numbers with remainders To divide 3-digit numbers. To divide 3-digit numbers with remainders To solve multiplication and division word problems. To solve multiplication and division word problems (multi-step) Year 6: To multiply numbers by multiples of 10; to use number bonds as a key strategy in multiplication. To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies. To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies. To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and

Curriculum Map- Maths Year 5

					pattern recognition as key strategies for multiplication.
					To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and the column method as key strategies.
	3-of2-digit2-digit2-digit				To estimate products of multiplying 3- and 4-digit numbers by a 2-digit numbers; to use knowledge of multiplication to create specific products.
					To divide 3-digit numbers by 2-digit numbers using a variety of strategies; to use number bonds, long division and bar models to facilitate division by 2-digit numbers.
					To divide 4-digit numbers by 2-digit numbers; to use number bonds and long division as the key strategies.
					To divide 4-digit numbers by 2-digit numbers using a variety of methods; to use number bonds, long and short division as key methods.
					To divide 3-digit numbers by 2-digit numbers giving rise to remainders; to use number bonds and long and short division as key strategies to solve division problems.
					To divide 4-digit numbers by 2-digit numbers giving rise to a remainder; to represent the remainder as part of a whole amount of money or decimal.

					To use the bar model heuristic to solve word problems involving multiplication and division. To solve word problems using division as the main strategy; to use pictorial representations to support word problems. To solve word problems involving multiple operations, including multiplication and division. To find common multiples in real-life situations; to use common multiples in tandem with knowledge of time. To use common multiples to solve problems; to organise mathematical thinking into tables and lists. To find the largest common factor of 3-digit numbers; to use multiplication and division to find largest common factors. To find common factors using concrete materials. To use prime numbers to create other numbers; to explore prime numbers above 100. To explore prime numbers using concrete materials; to identify prime numbers using multiplication or division
	Chapter 4- Whole Numbers:	To solve word problems involving multiple operations; to identify the operation needed to carry out the plan.	To know that some problems have more than one step To know that you need to make a plan to help to solve the word problem	addition add, more, and make, sum, total altogether double near double half, halve one more, two more … ten more … one hundred more how many more to make …? How many	Year 4: To solve multiplication and division word problems (multi-step)

Curriculum Map- Maths Year 5

	Word Problems	To solve word problems involving multiplication and division using bar models as the main heuristic. To solve word problems involving multiple operations, identifying key information and representing information using bar model diagrams. To solve word problems involving multiple operations, using bar models as they key heuristic to represent key information.	To know that pictorial representations can help to solve the word problem To know that bar models can be used to solve the word problem	more is … than …? How much more is …? Subtract take away how many are left/left over? how many have gone? One less, two less, ten less … one hundred less how many fewer is … than …? How much less is …? difference between equals is the same as number bonds/pairs/facts missing number tens boundary, hundreds boundary, ones boundary, tenths boundary inverse multiplication multiply multiplied by multiple, factor groups of times product once, twice, three times … ten times repeated addition division dividing, divide, divided by, divided into left, left over, remainder grouping sharing, share, share equally one each, two each, three each … ten each group in pairs, threes … tens equal groups of doubling halving array row, column number patterns multiplication table multiplication fact, division fact, inverse square, squared cube, cubed	To solve word problems involving multiplication and division. To solve problems involving multiplication and division. To solve multi-step problems (in the context of measures). To solve addition and subtraction word problems. To solve word problems (addition and subtraction). To solve multi-step word problems. Year 6: To use bar models to solve word problems involving the four operations. To use the bar model heuristic to solve word problems involving the four operations. To use the bar model heuristic to solve complex word problems involving time. To solve complex word problems using pictorial representation and the four operations. To create and solve word problems that apply the bar model heuristic and working backwards as the main strategies.

					To create and solve complex word problems using the four operations.
Chapter 5- **Graphs**	To read the information presented in a table and interpret its meaning. To read and respond to information presented in a table. To read and respond to tables that have a variety of data sets. To read and interpret information provided in a line graph where a single line represents the data. To read and interpret information presented on a line graph where the data is represented by more than one line. To read and interpret information presented on a line graph where the data is represented by more than one line. To read and interpret information presented in a	To know that graphs are used to show data To know the scales can be set in different intervals To know that graphs can be read to find out an amount To know that graphs/charts can give us information To know the names of different types of graphs/charts To know that drawings needs to be accurate when drawing a chart/graph To know that the scale has to stay the same on each graph/ chart To know that tables can be used to show data To know that line graphs can be used to show data To know that a line graph is a graph with points connected by lines to show how something changes in value To know that a line graph is created by plotting points and joining them with a straight line		count, tally, sort, vote survey, questionnaire, data, database graph, block graph, pictogram represent group, set, list, table, chart, bar chart, frequency table, bar line chart Carroll diagram, Venn diagram line graph label, title, axis, axes diagram most popular, most common least popular, least common maximum/minimum value outcome	Year 4: To draw and read picture graphs and bar graphs. To draw and read bar graphs. To draw and read line graphs. To draw and read a line graph. To draw and read line graphs (drawing focus) Year 6: To calculate the average (mean) of sets of values. To calculate the mean. To calculate the mean. To solve problems involving the mean; to use the mean and the number of values to calculate the total; to use given information to find unknown values. To show information on graphs; to transfer information from a table to a pie chart. To read and interpret pie charts.

		table and turn it into a line graph; to determine relationships between data sets.	To know there are two axes to represent two different types of data. To know the Y-axis is vertical (upwards). This is typically the axis that shows a measurement, it always starts at 0. It's important that all measurements are split equally down the axis To know the X-axis is the horizontal (across/flat) line that often represents the names, dates or times being measured in the line graph		To read and interpret pie charts; to use percentages in pie charts. To read and interpret pie charts; to use knowledge of angles to interpret pie charts. To read line graphs; to interpret the information in line graphs that show distance and time. To read and interpret line graphs; to answer questions about the information in line graphs.
	Chapter 6- **Fractions**	To divide whole numbers to create fractions; to create mixed numbers and improper fractions when dividing whole numbers. To write improper fractions and mixed numbers using a number line and pictorial methods. To find equivalent fractions using pictorial methods. To compare and order fractions using the pictorial method. To compare and order improper fractions using the pictorial method.	To know that when you divide fractions, simply flip the fractions so the denominator is now on the top and the numerator is now at the bottom. Then multiply the fractions together and simplify the answer To know that mixed number fractions can be recorded as improper fractions e.g. 3 2/3 = 5/3 To know that fractions can be equivalent- the numerator and denominator will be different but they are equal e.g. 4/5 = 8/10 To know that fractions can be compared and ordered using < and > To know that fractions with different denominators can be ordered To know that fractions can be converted so they have the same denominator To know that fractions with different denominators needs to be converted to the have the same denominator before	fraction, proper/improper fraction equivalent fraction mixed number numerator, denominator equivalent, reduced to, cancel equal part equal grouping equal sharing parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts sixths, sevenths, eighths, tenths … hundredths, thousandths decimal, decimal fraction, decimal point, decimal place, decimal equivalent proportion, in every, for every percentage, per cent, %	Year 4: To count in hundredths. To write mixed number fractions. To show mixed number fractions on a number line. To find equivalent fractions. To find equivalent fractions (further practise). To simplify mixed number fractions To simplify improper fractions. To add fractions. To add fractions (recording answers as a mixed number).

|				
		To compare mixed numbers using pictorial representations; to find common denominators where one fraction is already the common denominator for all fractions in the question. To make number pairs (number bonds) with fractions with different denominators. To add unlike fractions by finding a common denominator using pictorial methods. To add unlike fractions by finding a common denominator using pictorial methods. To add together unlike fractions where the sum is greater than 1, creating mixed numbers or improper fractions. To add unlike fractions which create improper fractions and mixed numbers that give rise to simplification. To subtract fractions with different denominators; to	they can be added e.g. 1/9+1/3= 1/9 +3/9 To know that fractions with different denominators needs to be converted to the have the same denominator before they can be subtracted e.g. ¾ - 1/8 = 6/8 – 1/8 = 5/8 To know that fractions can be multiplied by whole numbers e.g. 3 x 2/5 = 6/5 = 1 1/5 To know that fractions can be multiplied by mixed number fractions e.g. 5 x 1 2/3 = 5 + 10/3 = 5 + 3 1/3 = 8 1/3		To add fractions (simplest form). Year 6: To use concrete materials to simplify fractions; to recognise equivalence in fractions to 1 /4 To simplify fractions using division and common factors; to represent fractions using concrete materials and pictorial representations. To compare fractions and place them in order from smallest to largest. To compare and order fractions by finding common denominators. To compare and order fractions using common factors. Adding and subtracting fractions with different denominators; using pictorial representations to compare fractions and add/subtract. To add and subtract fractions of different denominators; to develop questions and word problems based on the information provided. To add and subtract fractions with different denominators. To add and subtract mixed numbers, including fractions with different denominators; to subtract from the whole and add the remainder back on.

		subtract fractions from whole numbers. To subtract fractions where the denominators are not the same; to use bar models as a key strategy for subtracting fractions. To subtract fractions and mixed numbers from mixed numbers with different denominators. To multiply fractions by whole numbers creating other fractions, mixed numbers or improper fractions. To multiply fractions by whole numbers where the product is an improper fraction or mixed number. To multiply mixed numbers by whole numbers, creating larger mixed numbers. To multiply mixed numbers by whole numbers in multi-step word problems.		To add and subtract fractions with different denominators; to add and subtract mixed numbers. To multiply fractions using pictorial representations and abstract methods. To determine if the commutative law applies to fractions; to multiply fractions using concrete materials and pictorial representations. To use concrete materials to understand and solve the multiplication of fractions; to simplify equations using pattern blocks. To divide a fraction by a whole number; to use pictorial representation to divide whole numbers into fractions. To divide fractions by whole numbers using concrete materials and pictorial representations; to divide fractions when the numerator and divisor are not easily divisible. To divide fractions by a whole number; to use pictorial representations to support division

	Chapter 7- Decimals	To write decimal numbers. To read and write decimals. To read and write decimals. To compare tenths and hundredths written as decimals. To order and compare decimals. To compare and order decimals of amounts. To write fractions as decimals. To add and subtract amounts in decimals. To add and subtract decimals; to add and subtract amounts in pounds and pence. To add and subtract amounts in pounds and pence. To add and subtract decimals; to add and subtract amounts in pounds and pence. To add and subtract decimals to find the smallest possible sum and difference.	To know that 1/10 is 1 of 10 equal parts To know that fractions can be represented as decimals To know that 1/10 is the same as 0.1 To know that 0.1 is 1 tenth To know that the. is the decimal point To know that you can have a whole number and a decimal e.g. 3.2 To know that 3.2 is three wholes and 2/10s To know we read 3.2 as three and two tenths To know that 1/100 is the same as 0.01 To know that 0.01 is 1 hundredth To know 1/100 is written as 0.01 as a decimal To know that 3.02 is three and 2 hundredths To know that we read 3.02 as three and 2 hundredths To know that 10/100 is the same as 1/10 To know that 124 hundredths is the same as 1.24 To know that place value frames can be used when ordering and comparing decimals To know that decimals can be rounded to the nearest whole or tenth To know that tenths less than 5 are rounded down e.g. 2.4 is rounded to 2 To know that tenths 5 or more are rounded up e.g. 2.6 is rounded to 3 To know when writing fractions as decimals you need to convert the denominator to 10 or 100	fraction, proper/improper fraction equivalent fraction mixed number numerator, denominator equivalent, reduced to, cancel equal part equal grouping equal sharing parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts sixths, sevenths, eighths, tenths … hundredths, thousandths decimal, decimal fraction, decimal point, decimal place, decimal equivalent proportion, in every, for every percentage, per cent, %	Year 4: To record tenths. To record in tenths. To record in tenths (in different ways). To write hundredths. To write hundredths. To write hundredths (in different ways). To record hundredths. To write decimal numbers. To compare and order decimal numbers. To compare and order decimal numbers. To compare and order decimal numbers. To create number sequences. To round decimal numbers. To round decimal numbers. To write fractions as decimal numbers. To divide whole numbers by 10. To divide whole numbers by 100.

		To add and subtract decimals; to find number pairs that add up to 1. To add and subtract the perimeter of an object using decimals. To round decimals to the nearest whole number; to round numbers to nearest tenth.	You must then multiply the numerator by the same number To know that whole numbers can be divided and the product can be shown as a decimal To know that 0.001 is 1 thousandth To know that 0.4 can be 4 tenths and 40 hundreths To know that decimals can be converted to fractions To know that decimals can be converted to fractions with the same denominator To know that fractions can be converted to decimals and they can be ordered To know that decimals can be added and subtracted To know that when adding decimals, we rename in the same way as adding whole numbers To know that when we are subtracting decimlas, we rename is the same way as subtracting whole numbers	Year 6: To read and write decimals to thousandths; to use concrete materials to represent decimals. To divide whole numbers by larger whole numbers; to use Base 10 materials to represent tenths, hundredths and thousandths. To divide whole numbers that give rise to decimals; to calculate decimal fraction equivalents using long division To convert fractions into decimals using bar models and long division. To write fractions as decimals; to use long division as the key strategy for turning fractions into decimals. To multiply decimals by whole numbers using partitioning or the worded method to help find the solution. To multiply whole numbers that include a decimal by other whole numbers; to use partitioning and the worded method as key strategies. To multiply decimals by whole numbers, including regrouping and renaming. To multiply decimals by whole numbers using a variety of methods; to

			To know that adding decimals can be linked to adding money To know the number bond knowledge can be applied to finding pairs of decimlas e.g. 1 and 9, 0.1 and 0.9 To know that decimlas can be rounded to the nearest tenth, hundreth or thousandth		use the heuristic 'making a list' to help solve a problem. To divide decimals using number bonds and number discs as the key strategies. To divide decimals using bar models, number bonds and long division as key strategies, including regrouping and renaming. To multiply decimals by a 2-digit whole number using number discs and the column method. To divide decimals by 2-digit numbers using number bonds and the worded method. To divide decimals by 2-digit whole numbers using number bonds and the worded method.
	Chapter 8- **Percentages**	To compare quantities; to compare fractions, decimals and percentages; to convert fractions to decimals and percentages. To convert values of an amount into percentages; to convert fractions into percentages. To convert values of an amount into percentages; to convert fractions into percentages.	To know there is 100% in a whole To know that fractions and decimals can be converted into percentages To know that % is the symbole for percent To know that 7/10 = 70/100 = 70%	fraction, proper/improper fraction equivalent fraction mixed number numerator, denominator equivalent, reduced to, cancel equal part equal grouping equal sharing parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts sixths, sevenths, eighths, tenths … hundredths, thousandths decimal, decimal fraction, decimal point, decimal	Year 6: To find the percentage of a whole number using division and multiplication; to use bar modelling as a pictorial approach to calculating percentage. To find the percentage of a quantity; to use bar model diagrams to support the division and multiplication of numbers towards the percentage. To find the percentage change in an amount over time; to calculate the percentage change where the number gives rise to a decimal.

					place, decimal equivalent proportion, in every, for every percentage, per cent, %	To use percentage, bar models and fractions to compare amounts.
Chapter 9- Geometry	To know the names and qualities of acute, right, obtuse and reflex angles. To measure angles using a protractor. To draw, measure and add angles using a protractor. To measure angles using a protractor; to identify two angles which add up to 180 degrees on a straight line. To investigate angles that, when combined, make 360 degrees. To draw angles using a protractor. To draw lines and angles with a high level of accuracy. To describe the sides and angles of both rectangles and squares. To investigate the angles of various quadrilaterals,	To know that perpendicular lines meet at a 90 degree angle To know that parallel lines are lines that are the same distance apart and never meet To know that parallel lines are lines travelling in the same direction To know that a vertical line is a line that goes up and down To know that a horozontial line is a line that goes from side to side To know that some 2d shapes have parallel lines To know that nets can make 3d shapes To know that an angle is a figure formed by two lines To know that when two lines join it creates an angle To know angles can be on the inside or outside of a shape To know that a right angle is exactly 90 degrees To know the names of different angles- right, actute, obtuse	Shape, pattern, flat, line curved, straight round hollow, solid sort make, build, construct, draw, sketch perimeter centre, radius, diameter surface angle, right-angled congruent base, square-based size bigger, larger, smaller symmetry, symmetrical, symmetrical pattern line symmetry reflect, reflection axis of symmetry, reflective symmetry pattern, repeating pattern match regular, irregular 2-D shape 2-D, two-dimensional corner, side point, pointed rectangle (including square), rectangular, oblong rectilinear circle, circular triangle, triangular equilateral triangle, isosceles triangle, scalene triangle pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal quadrilateral parallelogram, rhombus, trapezium, polygon right -angled parallel, perpendicular x-axis, y-axis, quadrant 3-D shape 3-D, three-dimensional face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere, spherical cone cylinder, cylindrical prism, triangular prism tetrahedron,	Year 4: To identify types of angles. To compare angles. To classify triangles. To classify quadrilaterals. To identify symmetrical figures. To draw lines of symmetry. To draw symmetrical figures. To make symmetrical figures. To complete symmetrical figures. To sort shapes. Year 6: To investigate opposite angles; to use prior knowledge of angles to solve problems involving angles. To solve problems involving angles using the bar model heuristic; to solve problems involving angles without protractors.

		including squares and rectangles. To solve problems involving angles in rectangles. To solve problems involving angles. To use our understanding of angles to solve problems. To investigate regular polygons.	To know that the type of angle is determined by how many degrees it is To know that the number of sides a shape has, determines the number of angles To know that an acute angle is less than 90 degrees To know that an obtuse angle is more than 90 degrees but less than 180 degrees To know that a straight line is 180 degrees To know that if a triangle has three sides of different lengths it is a scalene triangle To know that if a triangle has three sides the same length it is an equilateral triangle To know that if a triangle has two sides the same length, it is a isosleces triangle To know that quadrilaterals are polygons with 4 sides To know that it is possible to fold a square or rectangle in half To know that the two halves needs to be identical To know that shapes can have more than one line of symmetry	polyhedron octahedron diagonal translate, translation coordinate movement slide roll turn stretch, bend whole turn, half turn, quarter turn, three-quarter turn rotate, rotation angle, is a greater/smaller angle than degree right angle acute angle obtuse angle reflection straight line ruler, set square angle measurer, compass, protractor	To determine and show the sum of the angles inside a triangle. To investigate and determine angles in quadrilaterals. To use the knowledge of angles inside a triangle and a quadrilateral to solve problems involving angles in other shapes

			To know that in a symmetrical figure, one half is a reflection of the other half To know that shapes can be sorted in different ways To know that a reflex angel is more than two right angles To know that angles can be measured To know the symbol for degrees and know it is the unit for angles To know that angles can be added together To know angles on a straight line add up to 180 degrees To know that the angles in a circle are equal to 360 degrees To know that the sides of shapes can be measured To know that angles at a point add up to 360 degrees To know the difference between regular and not regular polygons To know that a regular polygon is a polygon with all sides of equal length and all angles equal		
	Chapter 10- **Position and Movement**	To name and plot points. To describe the position of a shape following a translation. To describe movements and reflecting shapes.	To know that you describe the position of an object To know that the x axis is horizontal To know that the y axis is vertical To know that points on the axis are called co-ordinates To know that co-ordinates can be plotted on the axis	Position and direction position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge centre corner direction journey, route left, right up, down, higher, lower forwards, backwards,	Year 4: To describe position. To describe position. To plot coordinates. To describe movements.

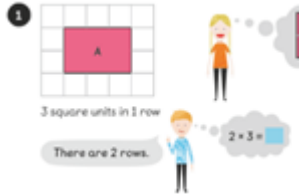|					
		To describe the movement of a 2-D shape when reflected. To reflect a shape more than once.	To know that polygons can be plotted on a graph To know that when a shape is moved up or down, it is called a translation To know that when a shape is translated, it only moves and it doesn't change in any other way To know that shapes can be reflected more than once	sideways across next to, close, near, far along through to, from, towards, away from clockwise, anticlockwise compass point north, south, east, west, N, S, E, W north-east, north-west, south-east, south-west, NE, NW, SE, SW horizontal, vertical,	To describe movements (coordinates). Year 6: To represent negative numbers on both vertical and horizontal number lines. To describe the positions of objects on a coordinate grid; to use x and y axes to determine the position of objects on a grid. To describe the position of points using coordinates on a grid. To draw polygons on a coordinate grid; to recognise polygons on a coordinate grid. To describe the translation of shapes on a coordinate grid.
	Chapter 11- Measurements	To convert units of length. To convert units of length, including centimetres and metres. To convert units of length. To solve problems by converting units of length. To convert units of mass.	To know that mass is the quantity of matter in an object To know that some objects are heavier/lighter than others To know that objects can be ordered based on their weight To know that scales can be used to measure the weight of an object To know that mass can be measure in g and kg To know 2 or more sets of objects can be compared using <>=	measure measurement size compare unit, standard unit metric unit, imperial unit measuring scale, division guess, estimate enough, not enough too much, too little, oo many, too few nearly, close to, about the same as, approximately roughly just over, just under Length millimetre, centimetre, metre, kilometre, mile length, height, width, depth, breadth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest,	Year 4: To record amounts of money. To record amounts of money. To compare total amounts of money. To round to the nearest pound (whole number). To solve money problems (addition and subtraction). To solve money problems (multiplication).

Curriculum Map- Maths Year 5

		To convert units of mass, including grams into kilograms. To convert units of mass. To convert units of mass, including kilograms and pounds. To convert units of time. To convert units of time from days into weeks and months. To convert units of time. To solve problems by converting units of time. To convert units of time. To read the temperature on a thermometer	To know that scales have markers to show the mass of an object To know that length is measured from end to end To know that length can be measured by different objects To know that rulers can be used to measure how long/ tall an object is To know that objects can be ordered from shortest to tallest To know that length can be measure in cm, m and km To know 2 or more sets of objects can be compared using <>= To know that the most effective way of measuring a line, is to make it straight To know there are 100cm in a metre To know there are 1,000m in a km To know that containers can be full, half full etc. To know that capacity is the amount something can hold To know containers can have the same/different capacity but different volumes To know that objects can be ordered based on their capacity	highest … and so on far, further, furthest, near, close distance apart … between … to … from edge, perimeter area, covers square centimetre (cm2), square metre (m2), square millimetre (mm2) ruler metre stick, tape measure Weight mass: big, bigger, small, smaller weight: heavy/light, heavier/lighter, heaviest/ lightest kilogram, half kilogram, gram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales Capacity and volume litre, half litre, millilitre capacity, volume full empty more than less than half full quarter full holds, contains container, measuring cylinder pint, gallon Temperature temperature degree centigrade Time time days of the week, Monday, Tuesday … months of the year (January, February …) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year, leap year, century, millennium birthday, holiday morning, afternoon, evening, night bedtime, dinner time, playtime today, yesterday, tomorrow before, after earlier, later next, first, last noon, midnight calendar, date, date of birth now, soon, early, late, earliest, latest quick, quicker,	To solve money problems (comparison). To estimate amounts of money To tell the time on a 24-hour clock. To convert between minutes and seconds. To convert between hours and minutes. To solve time problems. To convert between units of time. To solve word problems (duration). Year 6: To convert common measurements into metres, centimetres and millimetres. To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units. To convert metres into kilometres as units of measure. To convert units of mass from grams to kilograms using decimals and fractions.

			To know that volume is the space covered by an object	quickest, quickly 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 …? How often? always, never, often, sometimes usually once, twice hour, o'clock, half past, quarter past, quarter to 5, 10, 15 … minutes past a.m., p.m. clock, clock face, watch, hands digital/analogue clock/watch, timer hour hand, minute hand hours, minutes, seconds timetable, arrive, depart Roman numerals 12-hour clock time, 24-hour clock time	To convert units of time from minutes to hours; to represent time using 24-hour notation.
			To know that volume is measured in ml and l		
			To know 2 or more sets of objects can be compared using <>=		
			To know that scales have markers to show the volume		
			To know that 200g is the same as 0.2kg		
			To know that mass can be rounded to the nearest whole		
			To know that 1.2kg is the same as 1kg and 200g		
			To know that 3.5kg is the same as 3 ½ kg		
			To know that 100ml= 0.1l		
			To know that 10ml= 0.01l		
			To know that 152cm is the same as 1.52m		
			To know that 10cm= 0.1m		
			To know that 1cm = 0.01m		
			To know that 1.2m is the same as 1m and 20cm		
			To know that length can be rounded to the nearest whole		
			To know that 10mm= 1 cm		
			To know that 1000m= 1 km		
			To know that 100m = 0.1km		
			To know that 10m = 0.01km		

			To know that 1 inch is about 2.5cm To know that measurements can be recorded as decimals		
	Chapter 12- **Area and Perimeter**	To find the perimeter of shapes. To find shapes with a specific perimeter. To find the perimeter of different shapes. To use scale diagrams to find the perimeter of a shape. To measure the area of shapes by counting squares. To measure the area of squares. To measure the area of a shape. To measure area in square metres. To measure area in square metres. To find the area of shapes in square metres.	To know that figures can cover different surfaces To know that figures can look different but cover the same surface To know that figures can have the same area but different perimeters To know that area can be recorded as 4 units2 To know that area of rectangles can be measured by multiplying the length by the height To know the perimeter is the length of the outline of a shape To know that the perimeter of a square can be calculated by finding one side To know that the perimeter of a rectangle can be calculate by finding the length of one long side and one short side and adding/multiplying these	Meter, kilometre, perimeter, length, width, rectangle, rectilinear, dimensions, area	Year 4: To measure mass. To measure mass. To convert units of mass. To measure volume. To measure volume. To convert units of volume. To measure height To measure length. To convert units of length. To convert units of length. To measure perimeter in centimetres and millimetres. To solve problems in measurement (reading scales). Year 6:

		To make an estimation of area in kilometres.	To know that perimeter can be calculated using a ruler To know that shapes can have the same perimeter but look differently To know that shapes can be joined to form a new figure To know that scale diagrams can be used to find the perimeter To know that multiplication and addition can be used to find the perimeter To know that area is recorded as cm2 To know that figures can be split to find the area To know that figures can have the same area but look different		To find the area and perimeter of rectangles; to calculate perimeter using the known area and vice versa. To find and calculate the area of a parallelogram; to use concrete materials and prior understanding of area to construct a formula for the area. To use prior knowledge of area to determine and solve the area of a triangle; to use and apply the formula for the area of a rectangle to solve problems involving triangles. To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways. To use multiple methods to solve the area of a triangle. To find the area of a parallelogram using an understanding of triangles; to use concrete materials to find the area of a parallelogram.
	Chapter 13- **Volume**	To understand the volume of solids. To find the volume of 3-D shapes. To find the volume of solids. To find the capacity of a cuboid.	To know that volume is the amount of space a 3d shape takes up To know a cubic cm block takes up 1 cubic cm. This is written as 1 cm³. To know that you can work out the volume of a shape by multiplying **height × width × depth** To know If the shape is made of cubic cm blocks, you can count the cubes to find the shape's volume. To know that shapes can look different but have the same volume	square centimetre (cm2), cubic centimetre (cm3),	Year 6: To be able to find the volume of cubes and cuboids To be able to estimate the volume of cubes and cuboids, and calculate volume using a formula To be able to calculate, estimate and compare the volume of cubes and cuboids

		To find the capacity of rectangular boxes. To compare and convert units of volume. To convert units of volume (metric and imperial). To convert units of volume (metric and imperial). To solve word problems involving volume. Lesson To solve word problems involving volume	To know that volume can be compared To know that 1 pint is about 568ml		
	Chapter 14- **Roman Numerals**	To write Roman numerals to 1000. To write numbers in their thousands in Roman numerals.	To know that digits can be represented as roman numerals To know that the romans used letters to write numbers To know they used I for 1, V for 5 and X for 10 To know that I, V and X are used to make other numbers e.g. IV = 4 To know 50 is L and 100 is C To know D is 500 To know M is 1000 To know that you can write years in roman numerals	Roman numeral Number	Year 4: To write Roman numerals (to 20). To write Roman numerals to 100