Maths – Year 5

Honesty	Love	Forgiveness	Respect	Cultural Capital Opportunities		
				Cake sales / managing a budget Fundraising for end of year budget Creating data forms using information from P.E lessons (bleep test) Using maths in DT / Art		
	Aspirations Which jobs could this concept be applied to? Which areas of maths do we need for jobs which we would like to have?	**Bringing Learning To Life** Ratio – cooking Pie charts – using data from P.E Using real life context in learning Money Timetables – transition for high school	**Emotional Well-Being**	**Resilience** Knowing that not every concept will be learned quickly or easily To attempt a problem through more than one strategy will help to understand the problem.	**Valuing Our Diversity** Everyone has a different skill / interest in different areas of maths.	**Respect and Responsibility** In order to gain success in life we need to have simple maths skills. To be responsible for money and information which is shared.

What will they learn?		In what order?			
Key Concepts	Key Skills	Autumn	Spring	Summer	End points

To know and use numbers To add and subtract To multiply and divide To use fractions To understand the properties of shape To describe position, direction and movement To use measures To use statistics To use algebra	**To know and use numbers :** **Daily diet of :** **Representing** **Comparing** **Place value** **Solving problems** **Complexity** **Methods** **Checking** **Using number facts**	• Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. • Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Read and write decimal numbers as fractions • Read, write, order and compare numbers with up to three decimal places. • Recognise and use thousandths and relate	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Solve problems involving number up to three decimal places.	• Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. • Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) • 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.	

		them to tenths, hundredths and decimal equivalents. • Round decimals with two decimal places to the nearest whole number and to one decimal place. • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. •			
	Multiplication and division	• Multiply and divide numbers mentally drawing upon known facts. • Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. • Divide numbers up to 4 digits by a one digit	• Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. • Divide numbers up to 4 digits by a one digit number using the formal written method of short	• Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. • Divide numbers up to 4 digits by a one digit number using the formal written method of short	

		number using the formal written method of short division and interpret remainders appropriately for the context. • Multiply and divide whole numbers by 10, 100 and 1000.	division and interpret remainders appropriately for the context. •	division and interpret remainders appropriately for the context.	
	To add and subtract	• Add and subtract whole numbers with more than 4 digits, including using formal written methods • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	• Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	<u>Summer:</u>
	To use fractions	• Compare and order fractions whose denominators are multiples of the same number.	• Recognise mixed numbers and improper fractions and convert from one form to the other and write	• Multiply proper fractions and mixed numbers by whole numbers, supported by	

		• Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Compare and order fractions with denominators where all multiples are the same number. • Identify, name and write equivalent fractions of a given fraction, including tenths and hundredths. •	mathematical statements >1 as a mixed number [for example 2 5 + 4 5 = 6 5 = 1 1 5] • Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	materials and diagrams.	
	To describe position, direction and movement		•	• Use a given scale or graph to translate, rotate or reflect a shape. • 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.	

	To use measures	• Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Use all four operations to solve problems involving measure. • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • Recognise and estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and	• Measure and calculate the perimeter of composite rectilinear shapes in cm and m. • Calculate and compare the area of rectangles (including squares), and including using standard units, cm2, m2 estimate the area of irregular shapes. • Use all four operations to solve problems involving measure.	• Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • Solve problems involving converting between units of time.	

		capacity (e.g. using water)			
	To use statistics	•	• Solve comparison, sum and difference problems using information presented in a line graph.	• Complete, read and interpret information in tables including timetables.	
	To understand the properties of shape	• Identify 3D shapes, including cubes and other cuboids, from 2D representations. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Use the properties of rectangles to deduce related facts and find missing lengths and angles.	• Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (o) • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	• Identify: angles at a point and one whole turn (total 360o), angles at a point on a straight line and ½ a turn (total 180o) other multiples of 90o • 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.	

		• Investigate the diagonals of quadrilaterals (where they intersect and bisect)	• Use a **protractor** to draw given angles, and measure them in degrees. • **Identify:** - angles at a point and one whole turn (360°) - angles at a point on a straight line and ½ a turn (total 180°) - Other multiples of 90.		