Name:	Year group joined/date:	SEND/EI
PP: Yes/No		

MATHS		
	Year 6 Expected	**Year 6 Greater Depth**
Number	Read, write compare and order numbers to at least 10 000 000 Demonstrate an understanding of place value, including large numbers and decimals.	Read, write compare and order numbers to at least 10 000 000 in context - House prices, rich list
	Use negative numbers in context and calculates intervals across zero	
	Use prior knowledge to solve multistep problems	
	Round any whole number to a required degree of accuracy	Round numbers to an appropriate degree of accuracy to a number of decimal places or significant figures
	use formal methods to solve multi-step problems (e.g. find the change from £20 for three items that cost £1.24, £7.92 and £2.55)	
	Identify the value of each digit in numbers with up to 3 decimal places. Multiply and divide by 10, 100 and 1000 where the answer is up to 3 decimal places	Understand and use place value for decimals
Calculations	Identify common factors and common multiples. Identify the prime numbers.	Reason about common factors, multiples and prime numbers.
	Multiply 4 digit numbers by 2 digit numbers using long multiplication. Divide up to 4 digit numbers by 2 digit numbers using long division interpreting remainders as whole numbers and fractions.	Find missing numbers in multiplication and division calculations involving remainders.
	Calculate mentally, using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation.	
	Recognise and recall factors of numbers up to 100 and corresponding multiples of 100	
	Know by heart all the squares of numbers up to 12 x 12	Know by heart all square roots of numbers up to 12 x 12
	Know by heart all the cube numbers up to 12 x 12 x 12	Know by heart all cubed roots of numbers up to 12x12x12
	Use knowledge of place value and x facts to 12 x 12 to derive related multiplication and division facts involving decimals 0.6 x 8 = 4.8	
		Know by heart tests of divisibility for multiples of 2, 3, 4, 5, 6, 9 and 10
	Use common factors to simplify fractions. Multiply simple pairs of proper fractions and write answer in simplest form and divide proper fractions by whole numbers.	Use common factors to simplify fractions. Multiply simple pairs of proper fractions and write answer in simplest form and divide proper fractions by whole numbers. All in context.
	Use prior knowledge of rounding to solve problems involving decimals	Use rounding to reason and solve problems: Mary and 5 friends went out for lunch. They divided the bill and each paid £x. What could the total bill have been?
	Add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions	

	Compare and order fractions including fractions > < and = 1	Order positive and negative integers, decimals and fractions using ≥ ≤ ≠
	Recognise the relationship between fractions, decimals and percentages and can express them as equivalent quantities	Work interchangeably with corresponding decimals and fractions
	Calculate using fractions, decimals or percentages (e.g. knowing that 7 divided by 21 is the same as 7/21 and this equal to 1/3)	
	Use written division and multiplication methods where an answer has up to 2 dp and solve problems which have to be rounded to any degree of accuracy	
Measurement	Use, read, write and convert between standard units (including miles and kilometres), using decimal notation up to 3 decimal places.	
	Recognise that shapes with the same area can have different perimeters. Recognise when it is possible to use formulae to find area and volume. Calculate the area of parallelograms and triangles	Calculate the area of composite shapes, containing parallelograms and triangles
	Solve problems involving the calculation and conversion of units of measure	
	Calculate, estimate and compare volume of cubes and cuboids using standard units	
	Calculate with measures.	
Geometry	Compare and classify geometric shapes based on properties.	
	Find unknown angles in triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a point – on a straight line, vertically opposite and find missing angles.	
	Draw 2D shapes using given dimensions and angles Recognise, describe and build 3D shapes including making nets	
	Substitute values into a simple formula to solve problems (e.g. perimeter of a rectangle or area of a triangle)	
Statistics	Interpret and construct pie charts and line graphs, using them to solve problems	Use a scatter graph to explain the correlation between two sets of results. Design, trial and refine methods of collection if necessary. Design and use a grouped frequency table.
	Calculate and interpret the mean, average and range.	
Position and direction	Describe how coordinates move using appropriate language e.g. half and quarter turns	Plot coordinates which satisfy a rule and describe what happens to the resulting graph
	Identify, describe and represent the position of a shape following a reflection or translation. Know that the shape has not changed	Reflect shapes on graph paper given the equation of the mirror line
	Fully describe the rotation of a shape	
Ratio	Solve problems involving the relative sizes of 2 quantities where missing values can be found using integer multiplication and division facts	

	Solve problems involving the calculation of percentages such as 15% of 360 and the use of percentages for comparison	Solve problems involving the calculation of a percentage of a proportion - Mary won the lottery. She was one of 6 winners, who would share 38% of the total. What would she get?
	Solve problems involving similar shapes where the scale factor is known or can be found	Confidently solve ratio and proportion problems applying the Expected skills, including dividing quantity into 2 or more parts in a given ratio
	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	
algebra	Express missing number problems algebraically	
	Use simple formulae expressed in words	
	Generate and describe linear number sequences	
	Generate and describe linear number sequences	
	Enumerate all possibilities of combinations of two variables	