Anton Junior School medium Term Planning

YEAR 5		
Weeks	**Domain**	**Y5 NC Objectives**
	AUTUMN TERM	
Week 1 & 2	Number & Place Value	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. • Yr 4: Identify, represent and estimate numbers using different representations including number-lines • Count forwards or backwards in steps of powers of 10 for any given number upto 1,000,000 • Round any number up to 1,000,000 to the nearest 10,100,1000, 10,000 and 100,000 (represent on a number line) • Solve number and practical problems that relate to all of the above
Week 3 & 4	Addition and Subtraction	• Add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction). • Add and subtract mentally with increasingly large numbers e.g. 12,462– 2300 = 10,612 • 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.

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Week 5 & 6	Multiplication and division	• Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. • Use knowledge of multiples to estimate division calculations e.g. 1075 ÷ 25 ≈ 40 (since 4 x 25 = 100). • Understand division as grouping, moving on from sharing, to make efficient use of multiplication facts when dividing. • Represent division calculations (not the solution) as number-lines and bar models support conceptual understanding before solving.
Week 7	All Four Operations	• Use all four operations to solve problems involving measure using decimal notation including scaling • Use all four operations to solve problems involving measure (length, mass, volume, money) using decimal notation including scaling. • Use any combination of operations to solve problems , including understanding the meaning of the equals sign (=) •
Week 8 & 9	Fractions	• Identify, name, and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Add and subtract fractions with the same denominator • Compare and order fractions whose denominators are all multiples of the same number • Recognise mixed numbers and improper fractions and convert from one form to another. Write mathematical statements >1 as a mixed number e.g. 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

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Week 10	FDP	• Read and write decimal numbers as fractions (for example 0.71 = 71/100) • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Round decimals with two decimal places to the nearest whole number and to one decimal place
Week 11	Measurement (Time) And Statistics	• Y4: Read, write and convert time between analogue and digital 12 and 24hr clocks • Complete, read and interpret information in tables, including time tables • Solve problems involving converting between units of time.
Week 12	Geometry	• 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 • Identify angles at a point and one whole turn (360^o), at a point on a straight line and half a turn (180^o) and other multiples of 90^o. Know that there are four right angles in a complete turn and two right angles in half a turn. • Identify, describe, and represent the position of a shape following a reflection or a translation, using the appropriate language and know that the shape has not changed, and internal angles are preserved
Week 1 & 2	FDP	• Know that 1/10 = 0.1 and 1/100 = 0.01 • Recognise the percent symbol (%) and understand that percent relates to the number of parts per 100, write percentages as a fraction with the denominator 100 and as a decimal fraction • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 • Identify, name, and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • Read and write decimal numbers as fractions (e.g. 0.71 = 71/100) • Recognise and use thousandths and relate them to tenths, hundredths, and decimal equivalents • Round decimals with two decimal places to the nearest whole number and to one decimal place.

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Week 3	Geometry (WR Su)	• 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 (°) • Use the properties of rectangles to deduce related facts and find missing lengths and angles
Week 4 & 5	Subtraction and addition And FDP	• Add and subtract whole numbers with more than 4 digits, using formal written methods. • Add and subtract mentally with increasingly large numbers e.g.12,462 – 2300 = 10,612 • 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. • Solve problems involving number up to three decimal places.
Week 6	Statistics with negative numbers	• Interpret negative numbers in context, count forwards and backwards with positive and negative numbers through zero (link number-line to a thermometer) • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables
Week 7	Measurement (Converting/Volume)	• Convert between units of metric measure (for example, kilometer and meter, centimeter and meter, centimeter and millimeter, gram and kilogram, litre and milliliter). • Understand and use equivalences between metric units and common imperial units such as inches, pounds, and pints. • Estimate volume (e.g. using 1cm3 blocks to build cubes and cuboids) and capacity (e.g. using water) • Multiply three numbers together, understanding that this can be done in any order and link this to the volume of cubes and cuboids. • Solve problems involving capacity, including reading a range of scales.

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Week 8	Measurement and Geometry	• Measure and calculate the perimeter of composite rectilinear shapes in centimeters and meters • Calculate and compare the area of rectangles (including squares) and including using standard units, square centimeters and square meters and estimate the area of irregular shapes • Identify 3-D shapes, including cubes and other cuboids, from 2-D representations (nets)
Week 9	Fractions	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5, including those with a denominator of a multiple of 10 of 25. • Read, write, order and compare numbers with up to three decimal places • Solve problems involving number up to three decimal places

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Week 10 & 11	Addition and Subtraction	• Add and subtract mentally with increasingly large numbers. • Develop independence and fluency with identifying calculations that can be done mentally. Strategies include 'nearly numbers', near-doubles',place-value, key facts and derived facts, part-whole reasoning and so on. • Add and subtract whole numbers with more than 4 digits, including using formal written methods. • 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. • Add and subtract fractions with the same denominator beyond one and multiples of the same number. Use diagrams such as bar models to show part-part-whole relationships • Solve problems involving number up to three decimal places.
Week 12	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 two digit numbers • Divide numbers up to 4-digits by a one- digit number, using the formal written method of short division and interpreting remainders appropriately for the context
Week 1	Place Value	• Read Roman numerals to 1000 (M) and recognize years written in Roman numerals

Week 2 & 3	Addition and subtraction	• Add and subtract whole numbers with more than 4 digits, including using formal written methods • Add and subtract mentally with increasingly large numbers (e.g. 12,462 –2,300 = 10,612) • Use rounding to check answers and determine, in the context of a problem, levels of accuracy • Solve addition and subtraction multi-step problems in contexts deciding which operations to use and why • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables.

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Week 4 & 5	Multiplication and division	• Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Identify multiples and factors, including all factor pairs of a number and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Construct arrays to show that prime numbers (p) have exactly one array (1 x p) • Recognise and use square numbers and cube numbers and the notation for (2) and (3). Construct arrays for square numbers to show that square numbers have an odd number of factors since one is repeated (e.g. 16 can be constructed as 1 x 16; 2 x 8 and 4 x 4 ~ factors are 1,2,4,8,16) • Solve problems involving all four operations including using their knowledge of factors and multiples, squares and cubes.
Week 6 & 7	FDP	• Compare and order, add and subtract fractions whose denominators are all multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements >1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Recognise the per cent symbol (%) and understand that it relates to the 'number of parts per 100' • Write percentages as a fraction with 100 as the denominator and as a decimal • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25

		• Solve problems involving simple percentages (multiples of 10%, include 1% and 50% ~ link to division by 10, 100 and 2)
Week 8	All Four Operations	• TBC

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Week 9 & 10	Geometry	• Plot points on a coordinate grid in the first quadrant • 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. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Know angles are measured in degrees: estimate and compare acute, obtuse, and reflex angles • Draw given angles and measure them in degrees • Identify angles at a point and one whole turn (360^o) • Identify angles at a point on a straight line and ½ a turn (180^o) • Identify other multiples of 90^o and link to fractions of a whole turn • Use the properties of rectangles to deduce related facts and find missing lengths and angles
Week 11 & 12	Consolidation Weeks	
End of Year		