XII Apostles RCPS – Maths Outcomes Document

Year Group	Topic	Outcomes	Key Vocabulary
Reception	Maths curriculum delivered through the **Mastery in Number programme** and supplemented by units in shape, space and measure through **White Rose**	**Number** • Have a deep understanding of number to 10, including the composition of each number; • Subitise (recognise quantities without counting) up to 5; • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **Numerical Patterns** • Verbally count beyond 20, recognising the pattern of the counting system; • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**Count, how many altogether, add, pattern, more than, fewer than, full, empty, first, next, heavier, longer**

Year Group	Topic	Outcomes	Key Vocabulary
Year 1	**Number: Place Value (within 10)**	• Count to and across 100 from any number • Count, read and write numbers to 100 in numerals • Read and write mathematical symbols: +, - and = • Identify "one more" and "one less" • Use number bonds and subtraction facts within 20 • Add and subtract 1-digit and 2-digit numbers to 20, including zero	equal to, more than, less than (fewer), most, least (Numbers 0-10)
	Number: Addition and Subtraction (within 10)		add (+), subtract(–) and equals (=) signs
	Geometry: Shape		2-D shape, rectangles squares,

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		• Recognise, find and name a half • Recognise, find and name a quarter • Measure, begin to record and use words related to length long, short, small, tall • Measure, begin to record and use words related to mass heavy light • Measure, begin to record and use words related to volume • Measure, begin to record and use words related to time minute, second, hour, week, month, year • Recognise and use language relating to dates days of the week, months of the year • Tell the time to the half-hour, including drawing clocks • Recognise and know the value of all coins and notes • Use language to sequence events in chronological order first, second, third, fourth, last • Recognise and name common 2-D shapes circle, square, triangle, rectangle • Recognise and name common 3-D shapes cube, cuboid, cylinder, pyramid, sphere • Know and use the words add, subtract, equals	circles and triangles 3-D shapes
	Number: Place Value (within 20)		equal to, more than, less than (fewer), most, least (Numbers 11-20)
	Number: Addition and Subtraction (within 20)		addition (+), subtraction (–) and equals (=) signs
	Number: Place Value (within 50)		equal to, more than, less than (fewer), most, least (Numerals to 50)
	Measurement: Length and Height		Length, height, longer, shorter, taller, measure
	Measurement: Mass and Volume		Heavier, lighter, mass, weight, measure
	Number: Multiplication and Division		Pairs, groups, array, altogether, equal groups, sharing
	Number: Fractions		Whole, half, equal, halves, quarter
	Geometry: Position and Direction		left and right, top, middle and bottom Further vocabulary: on top of, in front of, above, between, around, near, close and far, up and down.
	Number: Place Value (within 100)		Part, whole, greater than, less than
	Measurement: Money		Pence, pounds, coins, notes, money
	Measurement: Time		Day, week, year, month, hour, minute, second

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Year 2	**Number: Place Value**	• Read scales in divisions of ones, twos, fives and tens • Partition any 2-digit number into different combinations of tens and ones. Explain their thinking verbally, in pictures or using apparatus • Use words tens, ones, partition • Add and subtract any 2-digit numbers using efficient strategy. Explain their thinking verbally, in pictures or using apparatus • Use words add, subtract, equals, increase, decrease, inverse • Recall all number bonds to and within 10 and use these to reason with and calculate bonds to within 20 recognising relationships • Recall multiplication and division facts for 2, 5, and 10 and use them to solve simple problems, demonstrating an understanding of commutativity • Use words multiply, divide, inverse, repeated addition, repeated subtraction, group, share, array • Identify 1/2, 1/3, 1/4, 2/4, 3/4 of a number or shape and know that they are part of a whole. Use half, quarter, numerator, denominator • Use different coins to make the same amount. Use pound and pence including notation • Read time on the clock to the nearest 15 minutes. Know and use minute, hour, second, half hour, quarter hour • Name and describe 2 D shapes (circle, square, rectangle, triangle, pentagon, Hexagon) including number of sides, vertices and lines of symmetry • Name and describe 3 D shapes (sphere, cube, cuboid, pyramid, cylinder, triangular Prism) including number of faces, edges and vertices	Tens, ones, partition, compare < > more than and less than
	Number: Addition and Subtraction		Bonds, calculation, addition subtraction, take away
	Geometry: Shape		Side, symmetry, vertical, vertices, faces, edge
	Measurement: Money		Value, total – able to read combinations of pounds and pence
	Number: Multiplication and Division		Multiply, divide, double, halve, odd and even
	Measurement: Length and Height		Centimetres (cm), Metres, (M), measure, units
	Measurement: Mass, Capacity and Temperature		Grams (g), Kilograms (KG), Degrees Celsius (oC)
	Number: Fractions		1/3 (thirds) ¾ (three-quarters) 2/4 (two-quarters), parts
	Measurement: Time		O'clock, half past, quarter past, quarter to, to and past the hour
	Statistics		Tally, groups, table, pictogram
	Geometry: Position and Direction		Clockwise, anticlockwise, half turn, quarter turn, three quarter turn
Year Group	**Topic**	**Outcomes**	**Key Vocabulary**

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Year Group	Topic	Outcomes	Key Vocabulary
Year 3	**Number: Place Value**	• Count in multiples of 4, 8, 50 and 100 • Compare and order numbers up to 1000 using highest lowest greater than less than • Add and subtract numbers mentally, including round numbers to HTU • Add and subtract using standard column method • Use words add, subtract, hundreds, tens, ones, column, exchange, equals • Estimate answers to calculations and use the inverse to check answers • Know 3×, 4× and 8× tables • Count up and down in tenths • Understand that tenths are Outcomes or quantities divided into ten equal parts • Compare and order simple fractions • Recognise and show equivalent fractions • Find and write fractions of a set of objects • Add and subtract fractions with common denominators (less than one) • Measure, compare and calculate measures using standard units • Measure the perimeter of simple 2-D shapes • Add and subtract money, including giving change • Tell and write the time from an analogue clock, including using Roman numerals • Estimate and read time to the nearest minute • Identify horizontal, vertical, parallel and perpendicular lines • Identify whether angles are greater or less than a right angle • Interpret and present data using bar charts, pictograms and tables	Hundreds, intervals, halfway, place value
	Number: Addition and Subtraction		Columns, increase, decrease, plus, minus, Exchange
	Number: Multiplication and Division A		Multiple, sharing grouping, multiplying and dividing
	Number: Multiplication and Division B		Multiple, sharing grouping, multiplying and dividing
	Measurement: Length and Perimeter		Perimeter, millimetres (mm), measurements
	Number: Fractions A		numerator, denominator, equivalent
	Measurement: Mass and Capacity		fifths, Mass, capacity, millilitres (ml), litres (L)
	Number: Fractions B		fifths, sixths, sevenths, eighths, nineths, tenths
	Measurement: Money		Change and all previous vocabulary
	Measurement: Time		12-hour time, 24-hour time, am, pm, digital
	Geometry: Shape		Angles, right angles, acute, obtuse, parallel perpendicular
	Statistics		Bar chart, vertical axis, horizontal axis,

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Year 4	**Number: Place Value**	• Count backwards through zero, including negative numbers • Recognise place value in four-digit numbers • Round any number to the nearest 10, 100 or 1000 • Know tables up to 12 × 12 • Use place value and number facts to carry out mental calculations • Use factor pairs and commutativity in mental calculations • Use short multiplication method • Recognise and use hundredths • Recognise and write decimal equivalents to ¼, ½ and ¾ • Divide one- or two-digit numbers by 10 and 100, using tenths and hundredths • Round decimals with one decimal place to the nearest whole number • Compare numbers up to two decimal places • Convert between different units of metric measurement, including money • Find the area of rectilinear shapes by counting squares • Solve problems converting units of time • Compare and classify shapes, including quadrilaterals and triangles • Complete a simple symmetric figure with respect to a specific line of symmetry. • Describe positions on a 2-D grid using co-ordinates • Describe translations using a given unit to the left/right and up/down • Interpret and present discrete and continuous data on appropriate graphs	Thousands, ascending, descending, rounding, roman numerals
	Number: Addition and Subtraction		Estimate, inverse, difference, sum
	Measurement: Area		Centimetres squared, (cm2), area
	Number: Multiplication and Division A		Multiple, sharing grouping, multiplying and dividing
	Number: Multiplication and Division B		Factors, factor pairs, placeholder, remainder,
	Measurement: Length and Perimeter		Kilometres, (KM), rectilinear shapes
	Number: Fractions		proper, numerator, denominator, equivalent
	Number: Decimals A		decimal, decimal point, tenth hundredth, 2 decimal places
	Number: Decimals B		decimal, decimal point, tenth hundredth, 2 decimal places
	Measurement: Money		Decimals and all previous vocabulary
	Measurement: Time		All previous vocabulary
	Geometry: Shape		polygon, triangles, quadrilaterals, scalene, equilateral, isosceles
	Statistics		Line graph, sum, difference, x axis, y axis
	Geometry: Position and Direction		x axis, y axis, coordinates, translate, translation

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Year 5	**Number: Place Value**	• Interpret negative numbers in context • Read Roman numerals to 1000, including years • Recognise and use square and cube numbers, and know the notation • Use rounding to check answers and determine accuracy • Identify multiples and factors, including finding factor pairs and common factors • Use vocabulary: prime numbers, prime factors and composite numbers • Know prime numbers up to 19 • Multiply and divide numbers by 10, 100 or 1000, including decimals • Use long multiplication for multiplying numbers of up to 4 digits by one or two digits • Divide numbers using standard written short division • Convert between mixed numbers and improper fractions • Compare and order fractions whose denominators are multiples of the same number • Identify, name and write equivalent fractions including tenths and hundredths • Add and subtract fractions with denominators that are multiples of the same number • Multiply proper fractions and mixed numbers by whole numbers with support • Read and write decimal numbers as fractions • Round decimals with 2 decimals places to whole number or to one decimal place • Read, write, order and compare numbers with up to 3 decimal places • Recognise % symbol and explain as a fraction with denominator 100 (parts out of 100) • Understand and use common approximate conversions between metric and imperial • Measure and calculate the perimeter of composite rectilinear shapes • Calculate the area of rectangles, and estimate the area of irregular shapes • Use the properties of rectangles to find missing lengths and angles • Distinguish between regular and irregular polygons • Identify 3-d shapes from 2-d representations • Know angles are measured in degrees and compare acute, obtuse and reflex angles • Draw and measure angles to the nearest degree • Identify angles at a point, in a turn and on a straight line • Describe and represent the result of a reflection or translation Complete, read and interpret information in tables, including timetables	Ten thousands, hundred thousands, rounding
	Number: Addition and Subtraction		All previous vocabulary
	Number: Multiplication and Division A		Product, prime numbers, prime factors, squared numbers, cubed numbers
	Number: Fractions A		Common denominator, tenth, hundredth, mixed number and improper
	Number: Multiplication and Division B		Estimate, remainder, short division
	Number: Fractions B		Common denominator, tenth, hundredth, mixed number and improper
	Number: Decimals and Percentages		Whole, decimal, fraction, percentage, convert
	Measurement: Perimeter and Area		Compound, rectilinear shape, area, m^2
	Statistics		Tables, timetables, columns, rows, time related vocabulary from previous years
	Geometry: Shape		Straight line angle, reflex, regular and irregular, nets
	Geometry: Position and Direction		translate, translation, reflect, reflection, symmetry
	Number: Decimals		Thousandths, 3 decimal places, decimal point
	Number: Negative Numbers		Negative, difference, minus, negative temperatures (°C)

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	Measurement: Converting Units		Converting, conversion, metric, imperial – vocabulary around units
	Measurement: Volume		Volume, capacity, Cubed, cm^3
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Year 6	**Number: Place Value**	• Demonstrate an understanding of place value, including decimals • Calculate mentally, using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation • Use formal methods to solve multi-step problems • Recognise the relationship between fractions, decimals and percentages and can express them as equivalent quantities • Calculate using fractions, decimals or percentages • Substitute values into a simple formula to solve problems • Convert between different units of metric measurement, including money • Calculate with measures • Use mathematical reasoning to find missing angles	Millions + all previous vocabulary
	Number: Addition and Subtraction		Order of operations + all previous vocabulary
	Number: Multiplication and Division		
	Number: Fractions		Simplifying - all previous vocabulary
	Number: Percentages		Per cent, percentage of an amount, calculating
	Number: Algebra		Formulae, value, algebra, equations
	Number: Fractions, Decimals and Percentages		Whole, decimal, fraction, percentage, convert
	Geometry: Shape		circumference, radius, diameter, nets
	Geometry: Angles		Vertically opposite – all previous vocabulary
	Geometry: Position and Direction		Rotation, translation, reflection, 4 quadrants
	Number: Ratio and Proportion		Ratio, scale factor, proportion, ratio symbol

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	Measurement: Converting Units		Converting, conversion, metric, imperial – vocabulary around units
	Measurement: Perimeter and Area		Formulae + all previous vocabulary
	Measurement: Volume		Volume, capacity, Cubed, cm^3