Year 5 Maths- Medium Term Planning

Lesson 1 -	**Lessons in black are key lessons that have to be taught**
Lesson 2 -	**Lessons in brown are lessons that can be combined into one or another key lesson**
Lesson 4 -	**Lessons in grey are lessons that can be taught if time allows to consolidate, these resources can be used to support the delivery of white days/journaling**

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Year 5 Lesson Breakdown

Vocabulary

	Reception / EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
Place Value	number, digit, more, fewer, count on, count back, zero, teen numbers	Part- part Whole, ones, tens, place, order, compare, greater than (>), less than (<), equal to (=), odd, even	hundreds, partition, value, number line, estimate, between, before, after, increase, decrease	thousands, numeral, rounding, nearest 10, nearest 100, estimation	ten thousand, hundred thousand, negative numbers, interval, midpoint	millions, place holder, decimal point, tenths, hundredths, thousandths, number system, ascending, descending,

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Year 5 Lesson Breakdown

Number and Place Value: Numbers to 1 000 000

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 1 – Numbers to 1 000 000	Lesson 1 – Reading and Writing Numbers to 100 000	To read and represent numbers to 100 000.
	Lesson 2 – Reading and Writing Numbers to 1 000 000	To read and represent numbers to 1 000 000.
	Lesson 3 – Reading and Writing Numbers to 1 000 000	To read and represent numbers to 1 000 000 using number discs.
	Lesson 4 – Comparing Numbers to 1 000 000	To compare numbers to 1 000 000 using place value.
	Lesson 5 – Comparing Numbers to 1 000 000	To compare numbers to 1 000 000 using place value.
	Lesson 6 – Comparing Numbers to 1 000 000	To compare numbers to 1 000 000 using pictorial representations and proportionality.
	Lesson 7 – Comparing Numbers to 1 000 000	To compare numbers to 1 000 000 from pictorial representations, using lists and number lines.
	Lesson 10 – Rounding Numbers to the Nearest 10 000	To round numbers to the nearest 10 000 using number lines and bar graphs.
	Lesson 11 – Rounding Numbers to the Nearest 100 000	To round numbers to the nearest 100 000 using number lines and bar graphs.
	Lesson 12 – Rounding Numbers	To round numbers to the nearest 100, 1000, 10 000 and 100 000 using number lines.

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Year 5 Lesson Breakdown

Vocabulary

	Reception / EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
Addition & Subtraction	add, plus, altogether, take away, minus, fewer, left over, how many left, total, same as, equal, part-part whole,	sum, more than, less than, how many more, how much more, how many fewer, difference, missing number, inverse (in simple context), equation, altogether, subtract, number bond,	column addition, column subtraction, part-part whole, related facts, regroup, rename, tens boundary, equals, bar model	method, multi-step problems, two-step problems, exchange (for subtraction) minuend, Inverse for checking, estimation, difference	Long addition, Compensation, difference in value	operation, more efficient decimal, Equivalence

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Year 5 Lesson Breakdown

Calculations: Addition and Subtraction

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 2 – Whole Numbers: Addition and Subtraction	Lesson 1 – Counting On to Add	To add using the 'counting on' strategy with concrete materials and number lines.
	Lesson 2 – Adding within 1 000 000	To add numbers within 1 000 000 using rounding.
	Lesson 3 – Adding within 1 000 000	To add numbers within 1 000 000 using the column method of addition.
	Lesson 4 – Adding within 1 000 000	To consolidate and refine addition skills and place-value knowledge to solve addition problems.
	Lesson 5 – Counting Backwards to Subtract	To subtract using the 'counting backwards' strategy with concrete materials.
	Lesson 6 – Subtracting within 1 000 000	To subtract using the column method and number discs using numbers to 1 000 000.
	Lesson 7 – Subtracting within 1 000 000	To subtract using the column method and number discs using numbers to 1 000 000.
	Lesson 8 – Subtracting within 1 000 000	To subtract numbers to 1 000 000 using the column method and number discs using numbers to 1 000 000.
	Lesson 9 – Adding and Subtracting within 1 000 000	To use addition and subtraction to solve comparison problems with numbers to 1 000 000.
	Lesson 10 – Adding and Subtracting within 1 000 000	To consolidate and refine addition and subtraction skills and place-value knowledge to solve problems.

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Year 5 Lesson Breakdown

Vocabulary

	Reception / EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
Multiplication & Division	group, lots of, share, equally, double, half	array, row, column, multiply, divide, equal groups, double, halve	repeated addition, repeated subtraction, commutative, inverse, grouping, multiplication, division	product, divisible, chunking, partition (in division)	factor, multiple, factor pair, divisible by, quotient,	square number, cube number, squared, cubed, common factor, common multiple, composite, prime number

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Year 5 Lesson Breakdown

Calculations: Multiplication and Division

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 3 - Whole Numbers: Multiplication and Division	Lesson 1 - Finding Multiples	To consolidate and review multiplication; to find the result of multiplying by a number.
	Lesson 2 - Finding Factors	To consolidate and review multiplication; to find the numbers we can multiply by to get a number.
	Lesson 3 - Finding Common Factors	To define and find common factors of numbers to 100.
	Lesson 4 - Finding Prime Numbers	To identify and name the prime numbers; to recognise prime numbers as numbers that only have 2 factors.
	Lesson 5 - Prime Numbers and Composite Numbers	To define and determine prime numbers and composite numbers.
	Lesson 6 - Finding Square and Cube Numbers	To create and determine square and cubed numbers.
	Lesson 7 - Multiplying by 10, 100 and 1000	To multiply 1- and 2-digit numbers by 10, 100 and 1000.
	Lesson 8 - Multiplying 2-Digit and 3-Digit Numbers by a Single Digit	To multiply 2- and 3-digit numbers by a 1-digit number using multiple strategies.
	Lesson 9 - Multiplying 4-Digit Numbers	To multiply 4-digit numbers by 1-digit numbers.
	Lesson 10 - Multiplying 4-Digit Numbers	To multiply 4-digit numbers by 1-digit numbers with regrouping, using a variety of strategies.
	Lesson 11 - Multiplying 4-Digit Numbers	To multiply a 4-digit number by a 1-digit number, with regrouping from the ones, tens and hundreds, using multiple methods.
	Lesson 12 - Multiplying a 2-Digit Number by a 2-Digit Number	To multiply 2-digit numbers by 2-digit numbers using multiple methods.

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Year 5 Lesson Breakdown

Calculations: Multiplication and Division - Continued

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 3 - Whole Numbers: Multiplication and Division	Lesson 13 - Multiplying a 2-Digit Number by a 2-Digit Number	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.
	Lesson 14 - Multiplying a 3-Digit Number by a 2-Digit Number	To multiply a 3-digit number by a 2-digit number, with the grid method and column method as key strategies.
	Lesson 15 - Multiplying a 3-Digit Number by a 2-Digit Number	To multiply a 3-digit number by a 2-digit number with regrouping, using the column method as the key strategy.
	Lesson 16 - Dividing by 10, 100 and 1000	To find thousands, hundreds and tens in a 4-digit number using concrete materials.
	Lesson 17 - Dividing without Remainder	To divide 3- and 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods.
	Lesson 18 - Dividing without Remainder	To divide 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods.
	Lesson 19 - Dividing with Remainder	To divide 3-digit numbers by 1-digit numbers, using long division, short division and mental methods, that give rise to remainders.

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Year 5 Lesson Breakdown

Calculations: Word Problems

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 4 - Whole Numbers: Word Problems	Lesson 1 - Solving Word Problems using Multiplication and Division	To solve word problems involving multiple operations; to identify the operation needed to carry out the plan.
	Lesson 2 - Solving Word Problems Using Bar Models	To solve word problems involving multiplication and division using bar models as the main heuristic.
	Lesson 3 - Solving Multi-Step Word Problems	To solve word problems involving multiple operations, identifying key information and representing information using bar model diagrams.
	Lesson 4 - Solving Multi-Step Word Problems	To solve word problems involving multiple operations, using bar models as they key heuristic to represent key information.

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Year 5 Lesson Breakdown

Statistics: Graphs

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 5 - Graphs	Lesson 1 - Reading Tables	To read the INFORMATION presented in a table and interpret its MEANING.
	Lesson 2 - Reading Tables	To read and respond to INFORMATION presented in a table.
	Lesson 3 - Reading Tables	To read and respond to tables that have a variety of data sets.
	Lesson 4 - Reading Line Graphs	To read and interpret INFORMATION provided in a line graph where a single line represents the data.
	Lesson 5 - Reading Line Graphs	To read and interpret INFORMATION presented on a line graph where the data is represented by MORE than one line.
	Lesson 6 - Reading Line Graphs	To read and interpret INFORMATION presented on a line graph where the data is represented by MORE than one line.
	Lesson 7 - Reading Line Graphs	To read and interpret INFORMATION presented in a table and turn it into a line graph; to DETERMINE relationships between data sets.

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Year 5 Lesson Breakdown

Fractions, Decimals and Percentages: Fractions

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 6 - Fractions	**Lesson 1 - Dividing to Make Fractions**	To divide whole NUMBERS to create fractions; to create MIXED NUMBERS and IMPROPER fractions when dividing whole NUMBERS.
	Lesson 2 - Writing IMPROPER Fractions and Mixed NUMBERS	To write IMPROPER fractions and MIXED NUMBERS using a NUMBER line and pictorial METHODS.
	Lesson 3 - Finding Equivalent Fractions	To find equivalent fractions using pictorial METHODS.
	Lesson 4 - COMPARING and Ordering Fractions	To COMPARE and order fractions using the pictorial METHOD.
	Lesson 5 - COMPARING and Ordering IMPROPER Fractions	To COMPARE and order IMPROPER fractions using the pictorial METHOD.
	Lesson 6 - COMPARING and Ordering Mixed NUMBERS	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.
	Lesson 7 - Making NUMBER Pairs	To MAKE NUMBER pairs (NUMBER bonds) with fractions with different DENOMINATORS.
	Lesson 8 - Adding Fractions	To add unlike fractions by finding a COMMON DENOMINATOR using pictorial METHODS.
	Lesson 9 - Adding Fractions	To add unlike fractions by finding a COMMON DENOMINATOR using pictorial METHODS.
	Lesson 10 - Adding Fractions	To add together unlike fractions where the SUM is greater than 1, creating MIXED NUMBERS or IMPROPER fractions.
	Lesson 11 - Adding Fractions	To add unlike fractions which create IMPROPER fractions and MIXED NUMBERS that give rise to SIMPLIFICATION.
	Lesson 12 - Subtracting Fractions	To subtract fractions with different DENOMINATORS; to subtract fractions FROM WHOLE NUMBERS.
	Lesson 13 - Subtracting Fractions	To subtract fractions where the DENOMINATORS are not the SAME; to use bar MODELS as a key strategy for subtracting fractions.
	Lesson 14 - Subtracting Fractions	To subtract fractions and MIXED NUMBERS FROM MIXED NUMBERS with different DENOMINATORS.
	Lesson 15 - Multiplying Whole NUMBERS by Proper Fractions	To MULTIPLY fractions by whole NUMBERS creating other fractions, MIXED NUMBERS or IMPROPER fractions.

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Year 5 Lesson Breakdown

Fractions, Decimals and Percentages: Fractions - Continued

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 6 - Fractions	Lesson 16 - Multiplying Proper Fractions and Whole Numbers	To multiply fractions by whole numbers where the product is an improper fraction or mixed number.
	Lesson 17 - Multiplying Mixed Numbers and Whole Numbers	To multiply mixed numbers by whole numbers, creating larger mixed numbers.
	Lesson 18 - Multiplying Mixed Numbers and Whole Numbers	To multiply mixed numbers by whole numbers in multi-step word problems.

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Year 5 Lesson Breakdown

Fractions, Decimals and Percentages: Decimals

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 7 – DECIMALS	**Lesson 1 – Writing DECIMALS**	To write DECIMAL NUMBERS.
	Lesson 2 – Reading and Writing DECIMALS	To read and write DECIMALS.
	Lesson 3 – Reading and Writing DECIMALS	To read and write DECIMALS.
	Lesson 4 – COMPARING DECIMALS	To COMPARE tenths and hundredths written as DECIMALS.
	Lesson 5 – COMPARING DECIMALS	To order and COMPARE DECIMALS.
	Lesson 6 – COMPARING DECIMALS	To COMPARE and order DECIMALS of AMOUNTS.
	Lesson 7 – Writing Fractions as DECIMALS	To write fractions as DECIMALS.
	Lesson 8 – Adding and Subtracting DECIMALS	To add and subtract AMOUNTS in DECIMALS.
	Lesson 9 – Adding and Subtracting DECIMALS	To add and subtract DECIMALS; to add and subtract AMOUNTS in pounds and pence.
	Lesson 10 – Adding and Subtracting DECIMALS	To add and subtract AMOUNTS in pounds and pence.
	Lesson 11 – Adding and Subtracting DECIMALS	To add and subtract DECIMALS; to add and subtract AMOUNTS in pounds and pence.
	Lesson 12 – Adding and Subtracting DECIMALS	To add and subtract DECIMALS to find the SMALLEST possible SUM and difference.
	Lesson 13 – Adding and Subtracting DECIMALS	To add and subtract DECIMALS; to find NUMBER pairs that add up to 1.
	Lesson 14 – Adding and Subtracting DECIMALS	To add and subtract the PERIMETER of an object using DECIMALS.
	Lesson 15 – Rounding DECIMALS	To round DECIMALS to the nearest whole NUMBER; to round NUMBERS to nearest tenth.

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Year 5 Lesson Breakdown

Fractions, Decimals and Percentages: Percentage

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 8 - Percentage	**Lesson 1 - Writing Percentages**	To convert fractions with a DENOMINATOR of 100 to DECIMALS and percentages.
	Lesson 2 - Equivalent Fractions and DECIMALS	To convert SIMPLE fractions into percentages and DECIMALS.
	Lesson 3 - COMPARING Proportions Using Percentages	To convert fractions into percentages.

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Year 5 Lesson Breakdown

Geometry - Properties of Shapes: Geometry

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 9 - GEOMETRY	Lesson 1 - Types of Angles	To know the NAMES and qualities of acute, right, obtuse and reflex angles.
	Lesson 2 - Measuring Angles	To MEASURE angles using a protractor.
	Lesson 3 - Measuring Angles at a Point	To draw, MEASURE and add angles using a protractor.
	Lesson 4 - Finding Angles at a Point on a Straight Line	To MEASURE angles using a protractor; to identify two angles which add up to 180 degrees on a straight line.
	Lesson 5 - Finding Angles Around a Point	To investigate angles that, when COMBINED, MAKE 360 degrees.
	Lesson 6 - Drawing Lines and Acute Angles	To draw lines and acute angles using a protractor.
	Lesson 7 - Drawing Lines and Obtuse Angles	To draw lines and obtuse angles with a high level of accuracy.
	Lesson 8 - Rectangles and Squares	To describe the sides and angles of both rectangles and squares.
	Lesson 9 - Angles Inside Quadrilaterals	To investigate the angles of various quadrilaterals, including squares and rectangles.
	Lesson 10 - Solving PROBLEMS WITH Angles in Quadrilaterals	To solve PROBLEMS involving angles in quadrilaterals.
	Lesson 11 - Solving PROBLEMS Involving Parallel Lines and Diagonals	To solve PROBLEMS involving angles, parallel lines and diagonals
	Lesson 12 - Regular and Irregular Polygons	To investigate regular polygons.

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Year 5 Lesson Breakdown

Geometry - Position and Direction: Position and Movement

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 10 - Position and Movement	**Lesson 1 - Naming and Plotting Points**	To name and plot points.
	Lesson 2 - Describing Translations	To describe the position of a shape following a translation.
	Lesson 3 - Describing Reflections	To describe movements and reflecting shapes.
	Lesson 4 - Describing Reflections	To describe the position of a shape following a reflection.
	Lesson 5 - Describing Successive Reflections	To reflect a shape more than once.

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Year 5 Lesson Breakdown

Measurement: Measurements

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 11 – Measurements	**Lesson 1 – Converting Units of Length: Centimetres and Millimetres**	To convert between centimetres and millimetres.
	Lesson 2 – Converting Units of Length: Metres and Centimetres	To convert between centimetres and metres.
	Lesson 3 – Converting Units of Length: Kilometres and Metres	To convert between kilometres and metres.
	Lesson 4 – Converting Units of Mass: Kilograms and Grams	To convert between kilograms and grams.
	Lesson 5 – Converting Units of Volume: Litres and Millilitres	To convert between litres and millilitres.
	Lesson 6 – Converting Imperial and Metric Units of Measurement	To convert between common imperial and metric units of length, mass and volume.
	Lesson 7 – Solving Word Problems: Length, Mass and Volume	To solve word problems involving different units of length, mass and volume.
	Lesson 8 – Solving Word Problems: Time	To convert units of time.
	Lesson 9 – Reading the Temperature	To read the temperature on a thermometer.

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Year 5 Lesson Breakdown

Measurement: Area and Perimeter

Maths — No Problem! Book Reference	**Lesson Name**	**Lesson Objective**
Chapter 12 – Area and Perimeter	**Lesson 1 – Perimeter of Rectangles and Squares**	To find the PERIMETER of rectangles.
	Lesson 2 - Area of Rectangles and Squares	To find the area of rectangles.
	Lesson 3 – Perimeter of Composite Shapes	To find the PERIMETER of rectilinear shapes.
	Lesson 4 – Area of Composite Shapes	To find the area of rectilinear shapes.
	Lesson 5 – Estimating Area and Drawing to Scale	To be able to ESTIMATE the area of irregular shapes drawn on a grid.

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Year 5 Lesson Breakdown

Measurement: Volume

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 13 – Volume	Lesson 1 – Volume of Solids	To understand the volume of solids.
	Lesson 2 – Volume of Solids in Cubic Units	To find the volume of 3D shapes.
	Lesson 3 – Finding the Volume of Cuboids	To calculate the volume of cuboids.
	Lesson 4 – Finding the Volume of Liquids	To find the capacity of a container in metric units.
	Lesson 5 – Solving Word Problems Involving Volume	To apply knowledge of volume to solve problems.

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Year 5 Lesson Breakdown

Number and Place Value: Roman Numerals

Maths — No Problem! Book Reference	Lesson Name	Lesson Objective
Chapter 14 - Roman Numerals	Lesson 1 - Roman Numerals to 1000	To write Roman numerals to 1000.
	Lesson 2 - Years in Roman Numerals	To write numbers in their thousands in Roman numerals.

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