

Oswaldtwistle School KS3 Maths Long Term Plan

KS3 Maths	Topic	Key Words	Links to previous learning	Links to wider curriculum
AUTUMN 1	<p><u>Unit 1: Number and the number system</u> Properties of numbers Factors and Multiples HCF and LCM Prime factorisation</p> <p><u>Unit 2: Calculating</u> Indices Addition/Subtraction Multiplication/Division BIDMAS</p>	<p><u>Number and the number system</u> Square and Cube Numbers, Powers, Roots, Triangular Square Numbers, Prime Numbers, Factors, Multiples, HCF, LCM</p> <p><u>Calculating</u> Addition, Subtraction, Sum, Total, Difference, Minus, Less, Column Addition, Operation, Multiply, Multiplication, Times, Product, Short Multiplication, Long Multiplication, Commutative, Divide, Division, Divisible, Divisor, Dividend, Quotient, Long Division, Short Division. Remainder, Operation</p>	<p><u>Number and the number system</u> Positive and Negative Numbers, Multiples, Factors, Primes, HCF and LCM</p> <p><u>Calculating</u> Multiplying and Dividing by Powers of 10, BIDMAS, Place Value, Calculating by Addition, Subtraction, Division and Multiplication</p>	<p>English - Mathematical Vocabulary</p> <p><u>Number and the number system</u> Autumn 1 – Science – Cell Division</p> <p><u>Calculating</u> Spring 1 – Humanities - Population Growth</p>
AUTUMN 2	<p><u>Unit 3: Checking, Approximating and Estimating</u> Rounding/Estimating Approximation Ordering integers and decimals Ordering fractions</p> <p><u>Unit 4: Visualising</u> Properties of shapes Constructions</p>	<p><u>Checking, Approximating and Estimating</u> Estimate, Approximate, Round, Decimal Place, Check, Solution, Answer, Accurate, Accuracy, Significant Figure, Cancel, Inverse, Operation Positive Number, Negative Number, Integer, Numerator Denominator</p> <p><u>Visualising</u> Edges, Faces, Vertex, Vertices, Plane, Parallel, Perpendicular, Regular Polygon, Rotational Symmetry</p>	<p><u>Checking, Approximating and Estimating</u> Place Value, rounding to 10, 100, 1000 and Decimal Places; Read, Write, Order and Compare Positive and Negative Numbers,</p> <p><u>Visualising</u> Drawing and Measuring Angles</p>	<p>English - Mathematical Vocabulary</p> <p><u>Visualising</u> Autumn 2 – Technology – Packaging Spring 1 – Art – Famous Buildings – Shape, proportion and scale drawings Spring 2 – Technology – Isometric Drawing Summer 1 – Outdoor Education - Bearings</p>

<p>SPRING 1</p>	<p><u>Unit 5: Algebraic Proficiency - Tinkering</u> Basic algebra Collecting like terms Expanding brackets Substitution Function machines <u>Unit 6: Exploring FDP</u> Convert between Fractions, Decimals and Percentages Fractions of amounts Percentages of amounts <u>Unit 7: Proportional Reasoning</u> Sharing in a ratio Simplifying ratio Direct proportion</p>	<p><u>Algebraic Proficiency - Tinkering</u> Algebra, Expression, Term, Formula, Formulae, Equation, Function, Variable, Mapping Diagram, Input, Output, Represent, Substitute, Evaluate, Like Terms, Simplify, Collect <u>Exploring FDP</u> Fraction, Mixed Number, Improper Fraction, Proper Fraction, Top Heavy Fraction, Percentage, Decimal, Terminating, Recurring, Simplify, Cancel <u>Proportional Reasoning</u> Ratio, Proportion, Compare, Comparison, Part, Simplify, Common Factor, Cancel, Lowest Terms, Unit</p>	<p><u>Algebraic Proficiency - Tinkering</u> Basic Understanding of Algebra EG: $7 + x = 10$, Inverse Operations, Knowledge of formulae, <u>Exploring FDP</u> Equivalents between Fractions, Decimals and Percentages, Ordering whole numbers, negatives and Decimals, Simplifying Ratios and Fractions <u>Proportional Reasoning</u> Proportion, Ratio, Quantity, Integer, Similar (Shapes), Enlargement, Scale Factor, Group, Share, Multiple Ratio, Compare, Comparison, Part, Simplify, Common Factor, Cancel, Lowest Terms, Unit Proportional, Multiplier, Speed, Unitary Method, Units, Compound Units</p>	<p>English - Mathematical Vocabulary <u>Proportional Reasoning</u> Spring 1 – Art – Famous Buildings – Shape, proportion and scale drawings Spring 2 – Arts Award – Drawing maps to scale</p>
<p>SPRING 2</p>	<p><u>Unit 8: Pattern Sniffing</u> Number sequences Nth term <u>Unit 9: Measuring Spaces</u> Metric units Converting between metric and imperial units Currency Conversions Using measuring instruments accurately <u>Unit 10: Angles</u> Types of angles Angles in Triangles Angles in special quadrilaterals Angles at a point Angles on a straight line Angles in parallel lines</p>	<p><u>Pattern Sniffing</u> Sequence, Linear, Term, Difference, Term-to-Term Rule, Position-to-Term Rule, Ascending, Descending <u>Measuring Spaces</u> Length, Distance, Mass, Weight, Volume, Capacity, Metres, Centimetres, Millimetres, Tonne, Kilogram, Gram, Milligram, Litre, Millilitres, Hour, Minute, Second, Inch, Foot, Yard, Pound, Ounce, Pint, Gallon, <u>Angles</u> Line Segment, Angles, Degrees, Right Angle, Acute Angle, Obtuse, Angle, Reflex Angle, Protractor, Vertically opposite, Geometry, Geometrical <u>Calculating with FDP</u> Mixed Number, Equivalent Fraction, Simplify, Cancel, Lowest Terms, Proper</p>	<p><u>Pattern Sniffing</u> Sequences and Patterns, Differences, Counting on and back, Time, Money, Basic <u>Measuring Spaces</u> Length, Distance, Mass, Weight, Volume, Capacity, Metres, Centimetres, Millimetres, Tonne, Kilogram, Gram, Milligram, Litre, Millilitres, Hour, Minute, Second, Inch, Foot, Yard, Pound, Ounce, Pint, Gallon, Line Segment <u>Angles</u> Acute, Obtuse and Reflex Angles, Angles in Triangles, Quadrilaterals, Around a Point and on a Straight Line <u>Calculating with FDP</u> Order FDPs, Common</p>	<p>English - Mathematical Vocabulary <u>Measuring Spaces</u> Spring 2 – Arts Award – Drawing maps to scale Autumn 1 – Humanities – Chronology Spring 1- Outdoor Education – Time Keeping Spring 2 – Outdoor Education – Average Speeds Autumn 2 – Nurture – Maps Spring 1 – Technology – Clock project</p>

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	<p><u>Unit 11: Calculating with FDP</u> Fractions of an amount Percentages of an amount Decimal multipliers Simple interest</p>	<p>Fraction, Improper Fraction, Top Heavy Fraction, Numerator, Denominator, Percent, Percentage, Multiplier, Increase, Decrease</p>	<p>Denominators, Mixed Numbers and Improper Fractions, Calculating 10%, 5%, 25% and 50%,</p>	
<p>SUMMER 1</p>	<p><u>Unit 12: Solving Equations</u> Function Machines Solving single step equations Solving 2 step equations Solving multi-step equations Rearranging formulae <u>Unit 13: Calculating Space</u> Area Perimeter Volume Parts of a circle</p>	<p><u>Solving Equations</u> Algebra, Algebraic, Algebraically, Unknown, Equation, Operation, Solve, Solution, Brackets, Symbol, Substitute <u>Calculating Space</u> Perimeter, Area, Volume, Surface Area, Capacity, Square, Rectangle, Parallelogram, Triangle, Trapezium, Polygon, Cube, Cuboid, Square mm, Square cm, Square m, Square km, Cubic Centimetre, Centimetre Cube, Formula, Formulae, Length, Breadth, Depth, Height, Width</p>	<p>Calculating 10%, 5%, 25% and 50%, Solving Simple one Step Equations, Collecting Like Terms, Expanding Brackets <u>Calculating Space</u> Knowledge of formulae for area and perimeter for all 2D shapes, Units of measure, Names 2D and 3D shapes</p>	<p>English - Mathematical Vocabulary <u>Solving Equations</u> Autumn 1 – PSHE - Finance Autumn 2 – Technology – Packaging Summer 2 - Science – Scientific Equations</p>

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<p>SUMMER 2</p>	<p><u>Unit 14: Mathematical Movement</u> Reflections Rotations Translations</p> <p><u>Unit 15: Measuring data</u> Mean, Median, Mode and Range Frequency Tables Estimated Mean</p> <p><u>Unit 16: Presenting data</u> Bar Charts Line Graphs Frequency Diagrams Pie Charts Scatter Graphs</p>	<p><u>Mathematical Movement</u> Coordinates, Axis, Axes, x-axis, y-axis, Origin, Quadrant, Translation, Reflection, Rotation, Transformation, Object, Image, Congruent, congruence, Mirror Line, Vector, Centre of Rotation</p> <p><u>Measuring data</u> Mean, Median, Mode, Range, Measure, Data, Statistics, Approximate, Round Data, Categorical Data, Discrete, Data,</p> <p><u>Presenting data</u> Pictogram, Symbol, Key, Frequency, Table, Frequency Table, Tally, Bar Chart, Time Graph, Time Series, Bar-Line Graph, Vertical, Line Chart, Scale, Graph, Axis, Axes, Line Graph, Pie Chart, Sector, Angle, Maximum, Minimum, Average, Spread, Consistency,</p>	<p><u>Mathematical Movement</u> Coordinates, symmetry</p> <p><u>Measuring data</u> Averages, simple graphs</p> <p><u>Presenting data</u> Knowledge of graphs, Tables and Charts, Read and Represent Data, Ordering Numbers, X and Y Axis</p>	<p>English - Mathematical Vocabulary</p> <p><u>Mathematical Movement</u> Spring1 – Art – Enlargements <u>Measuring data / Presenting data</u> Autumn 1 – English – Oliver Twist – Analysing data All Year – PSHE – Statistics/trends on various key topics Spring 1 – Humanities – Population Growth</p>
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