

KS4 Foundation Tier Maths	Topic	Key Words	Links to previous learning	Links to wider curriculum
AUTUMN 1	<p><u>Number 1</u> Properties of Numbers Prime Factorisation HCF and LCM with and without Venns Rounding to DP, SF and Approximating</p> <p><u>Calculations</u> Standard Form Directed Number BIDMAS with Negatives Calculating Indices Negative Numbers</p>	<p><u>Number 1</u> Prime, Prime Factor, Prime Factorisation, Product, Venn Diagram, HCF, LCM</p> <p><u>Calculations</u> Standard Form, Significant Figures Negative Number, Directed Number, Improper Fraction, Top Heavy Fraction, Mixed Number, Operation, Inverse, Long Multiplication, Short Division, Power, Indices Roots</p>	<p><u>Number 1</u> Multiples, Factors, Primes, HCF and LCM, Rounding to 10, 100, 1000 and Decimal Places</p> <p><u>Calculations</u> Multiplying and Dividing by Powers of 10, BIDMAS, Calculating by Addition, Subtraction, Division and Multiplication</p>	<p>English - Mathematical Vocabulary <u>Number 1</u> Autumn 1 - Science – cell division Autumn 1 - PSD – personal identity Autumn 2 - Science – Distance of planets Spring 2 - PE – training reps</p> <p><u>Calculations</u> Summer 1 - PSD – Personal Budgeting Summer 1 - Health and social care – Skills and qualifications Summer 1 - PSD – managing a budget Summer 2 - PSHE – qualifications needed</p>
AUTUMN 2	<p><u>Shape 1</u> Constructions Scale Drawings Bearings Enlargements</p> <p><u>Probability 1</u> Experimental Probability Theoretical Probability Probability Scales</p> <p><u>Algebra1</u> Expand Factorise Indices</p>	<p><u>Shape 1</u> Similar, Enlarge, Enlargement, Scaling, Scale Factor, Centre of Enlargement, Scale Drawing, Bearing, Plan, Elevation</p> <p><u>Probability 1</u> Probability, Theoretical Probability, Event, Outcome, Impossible, Unlikely, Evens Chance, Likely, Certain, Equally Likely, Mutually Exclusive, Exhaustive, Possibility Space, Variable</p> <p><u>Algebra 1</u> Term, Coefficient, Factor, factorise, Power, Indices, Formula, Formulae, Subject</p>	<p><u>Shape 1</u> Drawing and Measuring Angles, Direction, Scale Drawings</p> <p><u>Probability 1</u> Using Scales, Basic Probability, Knowledge of Powers and Roots, Negative Numbers</p> <p><u>Algebra 1</u> Simplifying expressions, substitution, function machines</p>	<p>English - Mathematical Vocabulary Technology – Accurate measuring</p> <p><u>Shape 1</u> Autumn 1 - Art – Enlargement of prep work Spring 1 - Construction – application of skills</p> <p><u>Algebraic 1</u> Spring 1 - Science – equations, calculations, reactions</p>

Oswaldtwistle School Foundation Tier Maths Long Term Plan

<p>SPRING 1</p>	<p>FDP 1 Exploring FDP and Ordering Terminating and Recurring Fractions</p> <p>Proportion 1 Ratio and Proportion Best Buys Speed, Distance and Time Number Sequences</p> <p>Sequences Finding nth term Arithmetic sequences Linear sequences Fibonacci Quadratic Sequences</p>	<p>FDP 1 Fraction, Mixed Number, Improper Fraction, Proper Fraction, Top Heavy Fraction, Percentage, Decimal, Terminating, Recurring, Simplify, Cancel</p> <p>Proportion 1 Ratio, Proportion, Multiplier, Speed, Units, Compound Units</p> <p>Sequences Sequence, Linear, Term, Difference, Term-to-Term Rule, Position-to-Term Rule, Pattern, Sequence, Linear, Term, Term-to-Term Rule, Ascending, Descending, Sequence, Linear, Term, Difference, Term-to-Term Rule, Position-to-Term Rule, Ascending, Descending, Term, nth term, Generate, Linear, Quadratic, First (second) Difference, Fibonacci Number, Fibonacci Sequence,</p>	<p>FDP 1 Equivalents between Fractions, Decimals and Percentages, Ordering whole numbers, negatives and Decimals</p> <p>Proportion 1 Simplify ratio, Divide a ratio into a given amount,</p> <p>Sequences Term-to-Term Rule, Position-to-Term Rule,</p>	<p>English - Mathematical Vocabulary Proportion1 Autumn 2 - Home Cooking – reading recipes and meal planning</p>
<p>SPRING 2</p>	<p>Angles Investigating Angles in Polygons Investigating Angles in Parallel Lines Problem Solving with Angles</p> <p>FDP 2 Adding, subtracting, multiplying and dividing with fractions Mixed numbers Improper fractions Percentages Percentage multipliers</p> <p>Algebra 2 Solving Equations Solving Inequalities</p>	<p>Angles Angles, Degrees, Right Angle, Acute, Obtuse, Reflex, Protractor, Vertically Opposite, Parallel, Alternate, Corresponding and Interior Angles, Exterior Angle, Regular Polygon</p> <p>FDP 2 Mixed Number, Equivalent Fraction, Simplify, Cancel, Lowest Terms, Proper Fraction, Improper Fraction, Top Heavy Fraction, Numerator, Denominator, Percent, Percentage, Multiplier, Increase, Decrease, Mixed Number, Simplify, Cancel, Lowest Term, Percent, Percentage, Percentage Change,</p>	<p>Angles Basic Angle facts, Angles around a Point and on a Straight Line,</p> <p>FDP 2 Common Denominators, Mixed Numbers and Improper Fractions, Calculating 10%, 5%, 25% and 50%,</p> <p>Algebra 2 Solving Simple Equations, Collecting Like Terms, Expanding Brackets</p>	<p>English - Mathematical Vocabulary Angles Autumn 1 - Art – creating a personal response Autumn 2 - Art – creating a personal response</p>

Oswaldtwistle School Foundation Tier Maths Long Term Plan

		<p>Original Amount, Multiplier, Simple Interest, Exact</p> <p><u>Algebra 2</u></p> <p>Algebra, Algebraic, Unknown, Equation, Operation, Solve, Solution, Brackets, Symbol, Substitute, Inequality</p>		
SUMMER 1	<p><u>Shape 2</u></p> <p>Area and Perimeter Area and Circumference (Circles) Volume of 3D Shapes Surface Area of 3D Shapes</p> <p><u>Algebra 3</u></p> <p>Linear Graphs Quadratic functions Distance time graphs Gradient Y-intercept</p>	<p><u>Shape 2</u></p> <p>Circle, centre, Radius, Diameter, Chord, Circumference, Pi, Prism, Cross Section, Cylinder, Polygon, Solid</p> <p><u>Algebra 3</u></p> <p>Coordinates, Axis, Axes, x-axis, y-axis, Origin, Quadrant, Plot, Equation (of a graph), Function, Formula, Linear, Coordinate Plane, Gradient, y-intercept, Substitute, Quadratic, Model, Kinematic, Speed, Distance, Function, Equation, Quadratic, Cubic, Reciprocal, Gradient, y-intercept, x-intercept, Root, Sketch, Plot, Kinematic, Speed, Distance, Time, Acceleration, Deceleration, Linear, Non-Linear, Parabola, Asymptote, Rate of Change</p>	<p><u>Shape 2</u></p> <p>Knowledge of formulae for area and perimeter for all 2D shapes, Units of measure, Names 2D and 3D shapes</p> <p><u>Algebra 3</u></p> <p>Coordinates, Substitution</p>	<p>English - Mathematical Vocabulary</p> <p><u>Shape 2</u></p> <p>Autumn 1 - Travel and Tourism – graphs, charts and collecting data Autumn 2 - Construction – wood joints Spring 1 - PE – methods of measurement</p> <p><u>Algebra 3</u></p> <p>Summer 2 - Science – Making Compounds</p>

Oswaldtwistle School Foundation Tier Maths Long Term Plan

<p>SUMMER 2</p>	<p style="text-align: center;"><u>Probability 2</u> Measuring Data Presenting Data <u>Statistics 1</u> Frequency Tables Bar Charts Pie Charts Histograms Scatter Graphs <u>Statistics 2</u> Mean, Median, Mode and Range Averages from a frequency table Estimated mean from frequency tables Comparing sets of data</p>	<p style="text-align: center;"><u>Probability 2</u> Outcome, Event, Experiment, Combined Experiment, Frequency Tree, Enumerate, Set, Venn Diagram, Sample Space, Equally Likely Outcomes, Theoretical Probability, Random, Bias, Fairness <u>Statistics 1</u> Relative Frequency Data, Categorical Data, Discrete Data, Continuous Data, Grouped Data, Frequency Table, Frequency, Histogram, Scale, Graph, Axis, Axes, Scatter Graph (Scatter Diagram, Scattergram, Scatter Plot), Bivariate Data, (Linear) Positive and Negative Correlation, Measure, Average, Spread, Consistency, <u>Statistics 2</u> Mean, Median, Mode, Range, Statistics, Approximate, Round, Calculate an Estimate, Grouped Frequency, Midpoint</p>	<p style="text-align: center;"><u>Statistics 1</u> Probabilities add up to 1, List Outcomes, Understanding of probability Vocabulary <u>Presenting Data</u> Knowledge of graphs, Tables and Charts, Read and Represent Data, Ordering Numbers, X and Y Axis <u>Statistics 2</u> Addition, division, frequency tables</p>	<p>English - Mathematical Vocabulary <u>Statistics 1</u> Autumn 2 - PSD – healthy living Spring 2 - PE – Training for fitness Spring 2 - Citizenship – Measuring data <u>Statistics 2</u> Summer 1 - English – Analysing text – use of statistics</p>
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