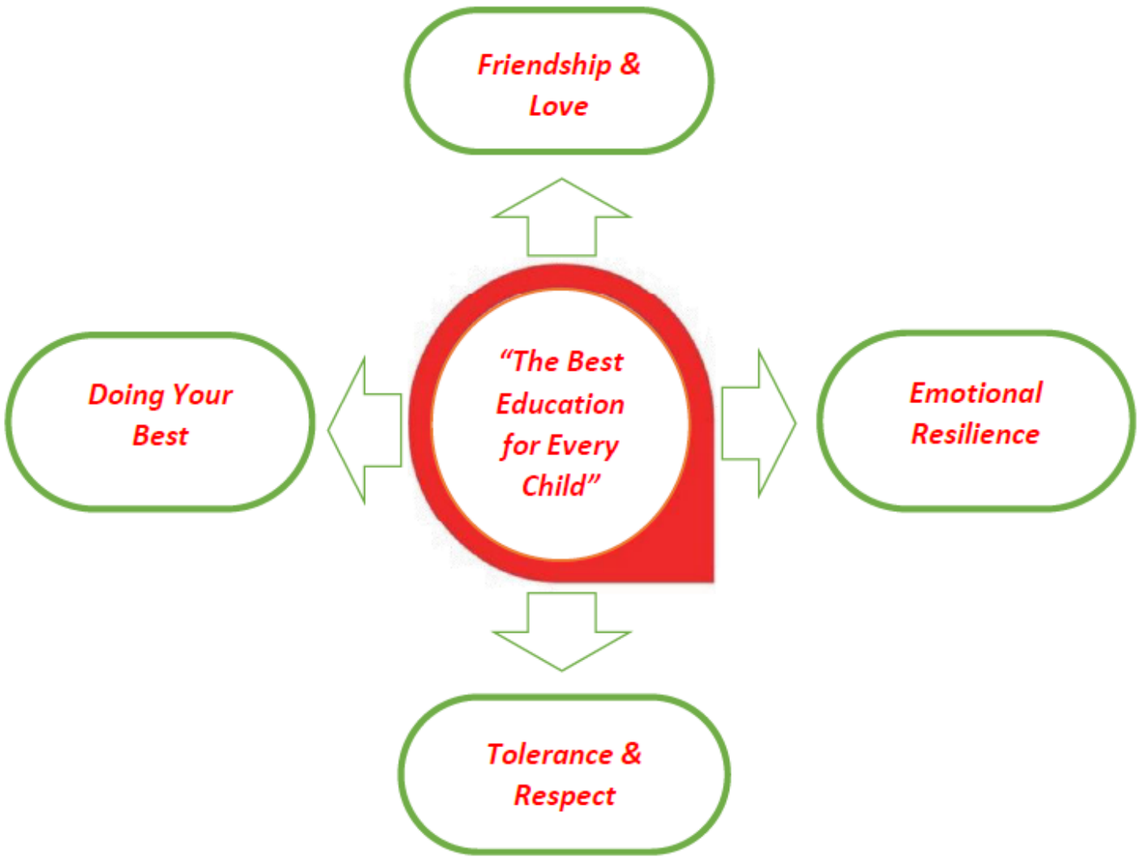
Oak Tree School



Maths

Long Term Planning

Maths Faculty

Head of Faculty: Mike Abbott

Date of last review: June 2020

Maths Schedule OTS Foundation Stage (KS2 & 3)

Half-Term block	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Notes: Each Half-Term block represents approximately **24/28** Lessons (**45** minutes each) over 6-7 weeks. All objectives set out within this planning are taken from the White Rose Maths curriculum https://whiterosemaths.com/ . By completing the small step objectives set out in this planning all children will be able to progress at their own speed in order for them to achieve success. End of topic assessments will be used to judge understanding of each topic https://whiterosemaths.com/resources/assessment/primary-assessment/end-of-block-assessments/ .					
Step 1	**Title: Number** **Context**: Place value, addition and subtraction. **Banding**: 1 - 11 **Progression Area: Place value within 10 and Addition and subtraction to 10.**	Title: Number, Geometry Context: Place value, Shape. Banding: 1 - 11 Progression Area: Naming basic shapes and Place Value to 20.	**Title**: Number **Context**: Addition and subtraction, Place value. **Banding**: 1 - 11 **Progression Area**: Addition and subtraction to 20, Place value within 50 and counting in 2,5 and 10s.	**Title**: Measurement. **Context**: Measurement **Banding**: 1 - 9 **Progression Area**: Intro to Length, Height , Weight and Volume.	**Title**: Number, Geometry **Context**: Multiplication and division, Intro fractions, Geometry. **Banding**: 1 - 11 **Progression Area**: Multiples of 2,5 & 10, basic fractions, Position and direction.	**Title**: Number, Measurement. **Context**: Money and Time. **Banding**: 1 - 11, 1 - 9 **Progression Area**: denomination of coins and notes, Chronological order.
Step 2	**Title**: Number, **Context**: Place Value, Addition and subtraction. **Banding**: 1 - 11 **Progression Area**: Place value to 100, Count in 2,3 &5. A&S to 100 (=,-,+).	**Title**: Measurement, Number **Context**: Money, Multiplication and Division. **Banding**: 1 - 9, 1 - 11 **Progression Area**: M&D around 2,5 & 10s , Intro to £ and pence.	**Title**: Number, Statistics, Geometry. **Context**: M&D, Intro statistics, Properties of shape. **Banding**: 1 -- 11, 2 - 11, 1 - 11 **Progression Area**: Write using (X,/,=) 2,5&10, tally charts , 2d,3d shapes.	**Title**: Number, Measurement. **Context**: Fractions, Length and Height. **Banding**: 1 - 11, 1 - 9 **Progression Area**: Identify 1/2,1/3,1/4, identify correct measures cm, mm etc..	**Title**: Geometry, Measurement. **Context**: Position and direction, Time. **Banding**: 1 - 11, 1 - 9 **Progression Area**: Identify terminology for direction. Tell time, hours & min.	**Title**: Measurement. **Context**: Mass, Capacity and Temperature. **Banding**: 1 - 9 **Progression Area**: Use appropriate (kg, g), (Oc), (litres, ml) etc..
Step 3	Title: Number Context: Place value, A&S Banding: 1 - 11 Progression Area: Count 4,8,50, within 1000, Estimation and use of inverse operation.	**Title: Number** Context: A&S, M&D Banding: 1 - 11 Progression Area: 3 digit numbers, 3, 4&8 tables.	**Title: Number , Measurement, statistics** Context: M&D, Money, Further stats. Banding: 1 - 11, 1 - 9, 2 - 11 Progression Area: Missing numbers, laws,. Tally, bar charts and pictograms.	**Title: Measurement, Number** Context: Length and Perimeter. Fractions Banding: 1 - 9, 1 - 11 Progression Area: Measure 2 d shapes. Count in fractions, recognise fractions.	**Title: Number, Measurement** Context: Fractions, Time. Banding:1 - 11, 1 - 9 Progression Area: A&S fractions same denominator. Identify duration of events.	**Title: Geometry, Measurement.** Context: Properties of Shape, Mass and capacity. Banding: 1 - 11, 1 - 9 Progression Area: Draw 2D shapes, make 3D shapes. (kg, g) (l,ml) further.
Step 4	Title: Number Context: Place value Banding: 1 - 11 Progression Area: Roman numerals, within 10,000, Negative numbers.	Title: Number Context: A&S Banding: 1 - 11 Progression Area: 4 digit numbers, Estimation, Checking strategies.	Title: Number Context: A&S Banding: 1 - 11 Progression Area: 4 digit numbers, Estimation, Checking strategies.	Title: Measurement Context: Length and Perimeter Banding: 1 - 9 Progression Area: Measuring Kilometres, perimeter on a grid.	Title: Measurement Context: Length and Perimeter Banding: 1 - 9 Progression Area: perimeter or rectangles, rectilinear shapes.	Title: Number Context: M&D Banding: 1 - 11 Progression Area: 6-12 tables, 2&£ digits by 1, Problem solving.
Step 5	Title: Number Context: Place value, A&S Banding: 1 - 11 Progression Area: Numbers to 100,000, Roman , 4 digits, multi step, inverse.	Title: Statistics, Number, Measurement Context: Line graphs, M&D, Perimeter & Area. Banding: 2 - 11, 1 - 11, 1 - 9 Progression Area: Draw line graphs, Factors, square, Primes, Compound & irregular shapes.	Title: Number Context: M&D, Fractions Banding: 1 - 11 Progression Area: 4 digits by 1 and 2, remainders, strategies. Equivalent, improper mixed, add, subtract.	Title: Number Context: Fractions, Decimals & Percentages. Banding: 1 - 11 Progression Area: mixed numbers, multiply, integers. 2 dp, Equivalent FDP, A&S and M&D.	Title: Number, Geometry Context: Decimals, Properties of shape. Banding: 1 - 11, 1 - 11 Progression Area: A&S , M&D by 10,100,1000. Measuring angles, polygons, reasoning, 3D shapes.	Title: Geometry, Measurement Context: Position and direction, Converting units, Volume. Banding: 1 - 11, 1 - 9 Progression Area: reasoning about, 3D shapes. Converting units inc time. Compare, estimate volume.

Maths Schedule OTS Foundation Stage (KS2 & 3)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Half-Term block	Notes: Each Half-Term block represents approximately **24/28** Lessons (**45** minutes each) over 6-7 weeks. Notes: Each Half-Term block represents approximately **24/28** Lessons (**45** minutes each) over 6-7 weeks. All objectives set out within this planning are taken from the White Rose Maths curriculum https://whiterosemaths.com/ . By completing the small step objectives set out in this planning all children will be able to progress at their own speed in order for them to achieve success. End of topic assessments will be used to judge understanding of each topic https://whiterosemaths.com/resources/assessment/primary-assessment/end-of-block-assessments/ .					
Step 6	Title: Number Context: Place value, A&S, M&D. Banding: Steps 1 - 11 Progression Area: numbers to ten million, factors, multiples, squares, primes, operations, whole numbers.	Title: Number, Geometry. Context: Fractions, Position and direction. Banding:1 - 11 Progression Area: Simply, mixed A&S, rules, fractions of an amount, Translations, quadrants, reflections.	Title: Number, Context: Decimals, percentages, Algebra. Banding: 1 - 11 Progression Area: 3 decimal places, integers, division, fractions, Intro to formulae, 1,2 step equations, find pairs.	Title: Measurement, Number Context: Converting units, Perimeter, area, volume. Ratio Banding: 1 - 9, 1 - 11 Progression Area: Miles, kilometres, metric units., Area triangle, perimeter, volume cube, cuboid. Intro ratio.	Title: Geometry Context: Property of Shape. Banding: 1 - 6 Progression Area: Problem solving, measure, Angles in a triangle, quadrilaterals, polygons, draw shapes, nets, 3D.	Title: Statistics Context: graphs, circles, data. Banding: 2 - 11 Progression Area: Investigate , problem solving, line graphs, pie charts, (mean, mode, median)
Step 7	**Title**: Number **Context**: Algebraic thinking. **Banding**: 1 - 11 **Progression Area**: Sequences, Understand and use algebraic notation, Equality and equivalence.	**Title**: Number **Context**: Place value and Proportion. **Banding**: 1 - 11 **Progression Area**: Ordering integers and decimals, FDP equivalence.	**Title**: Number **Context**: Applications of number. **Banding**: 1 - 11 **Progression Area**: Solving problems with A&S and M&D. Fractions & decimals of amounts.	**Title**: Number **Context**: Directed number, Fractional thinking. **Banding**: 1 - 11 **Progression Area**: Operations and equations with directed number. A&S of fractions.	**Title**: Geometry **Context**: Lines and angles. **Banding**: 1 - 11 **Progression Area**: Constructing measuring and using geometric notation. Develop geometric reasoning..	**Title**: Number **Context**: Reasoning with number **Banding**: 1 - 11 **Progression Area**: Develop number sense, Sets and probability, Prime numbers and proof.
Step 8	**Title:** Number **Context:** Proportional reasoning **Banding: 1 - 11** **Progression Area:** Ratio and scale, multiplicative change, multiplying and dividing fractions	**Title:** Geometry, Statistics **Context:** Representation **Banding: 1 - 11, 2 - 11** **Progression Area:** working with the Cartesian plane, representing data and probability	**Title:** Number **Context:** Algebraic techniques **Banding: 1 - 11** **Progression Area:** Brackets, equations, inequalities, sequences and indices	**Title:** Number **Context:** Developing number **Banding: 1 - 11** **Progression Area:** Fractions, percentages, standard index form and number sense	**Title:** Geometry **Context:** Developing geometry **Banding: 1 - 11** **Progression Area:** Angles in parallel lines and polygons, area of a trapezia and circles, lines of symmetry and reflection.	**Title:** Statistics **Context:** Reasoning with data **Banding: 2 - 11** **Progression Area:** the data handling cycle, measures of location and dispersion.
Step 9	**Title:** Number **Context:** Reasoning with algebra **Banding: 1 - 11** **Progression Area:** Strait line graphs, forming and solving equations and inequalities, and testing conjectures.	**Title:** Geometry **Context:** Constructing in 2 and 3 dimensions **Banding: 1 - 11** **Progression Area:** Three dimensional shapes, constructions and congruency.	**Title:** Number **Context:** Reasoning with number **Banding: 1 - 11** **Progression Area:** Numbers, using percentages, mathematics and money.	**Title:** Geometry **Context:** Reasoning with geometry **Banding: 1 - 11** **Progression Area:** Deduction, Pythagoras' theorem, rotation and translation.	**Title:** Number, Geometry, Measurement **Context:** Reasoning with proportion **Banding: 1 - 11, 1 - 11, 1 - 9** **Progression Area:** Enlargement and similarity, Solving ratio and proportion problems, rates.	**Title:** Number, Geometry, Statistics **Context:** Representation **Banding: 1 - 11, 1 - 11, 2 - 11** **Progression Area:** Solving problems using graphs, tables and algebra.

Maths Schedule OTS Options Stage (KS4)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Half-Term block	Notes: Each Half-Term block represents approximately **24/28** Lessons (**45** minutes each) over 6-7 weeks. As with the KS2 & 3 curriculum tutors will follow the White Rose curriculum https://whiterosemaths.com/resources/schemes-of-learning/secondary-sols/ . By completing the small step objectives set out in this planning all children will be able to progress at their own speed in order for them to achieve success. End of topic assessments will be used to judge understanding of each topic https://whiterosemaths.com/resources/assessment/secondary-assessment/end-of-block-assessments-secondary/ . Children will also have the chance to complete past papers when nearing their exams to help them \\dionysus\Education\Oak Tree\Staff\CURRICULUM PLANNING\2020 agreed planning formats\Maths Planning 2020\Maths Resources\Secondary .					
GCSE Schedule	**Title**: Geometry **Context**: Similarity **Banding**: 1 - 11 **Progression Area**: Building an understanding of: the difference between congruence and similarity, enlargement and trigonometry.	**Title**: Number **Context**: Developing Algebra **Banding**: 1 - 11 **Progression Area**: Representing solutions of equations and inequalities. Solving simultaneous equations. Factorising and solving quadratics.	**Title**: Geometry **Context**: Geometry **Banding**: 1 - 11 **Progression Area**: Working with circles and introduction to circle theorem. Understanding vectors and translations. Understand the use of bearings.	**Title**: Number, Statistics **Context**: Proportions and Proportional change **Banding**: 1 - 11, 2 - 11 **Progression Area**: To use fractions in and from ratios. Converting FDP, calculate compound interest and depreciation. Working with probability using frequency trees, table and venn diagrams.	**Title**: Statistics **Context**: Delving into data **Banding**: 2 - 11 **Progression Area**: Understanding: sampling and including the possible limitations, correlations, how to use a line of best fit and how to use statistical diagrams to compare distributions.	**Title**: Number **Context**: Using number **Banding**: 1 - 11 **Progression Area**: continuing to build on previous skills working with: Non-calculator methods, types of number and sequences, indices and roots.
	Title: Geometry **Context**: Graphs **Banding**: 1 - 11 **Progression Area**: Understanding how to: find and use equations for strait line graphs, plot quadratic and cubic graphs, understand and find roots, constructor and interpret various graphs.	**Title**: Number **Context**: Algebra **Banding**: 1 - 11 **Progression Area**: To be able to: expand single brackets and binomials, factorise, single brackets and quadratics, solve quadratic equations, simplify and rearrange formulas, work out the volume of a pyramid, and to solve problems using the kinematics formulae.	**Title**: Geometry, Number **Context**: Pythagoras' theorem, simplification of complex expressions and finding the n^{th} term rule **Banding**: 1 - 11, 1 - 11 **Progression Area**: Review: scale and enlargement, angle facts, Pythagoras' theorem, simplification of complex expressions and finding the n^{th} term rule. Work with: direct and inverse proportion, complex indices.	**Title**: Geometry, Number, statistics **Context**: Handling data, venn diagrams, loci problems. **Banding**: 1 -- 11, 1 - 11, 2 - 11 **Progression Area**: To be able to: perform and standard construction, solve loci problems, work with organised lists, sample spaces and probability, complete and use venn diagrams, use data to compare distributions, illustrate equivalence, use correct language of angles rule and conditions for congruent triangles.	**Title**: Revision **Context**: Revision **Banding**: **Progression Area**: This last half term in the run up to the final examinations, teachers to work with students on past papers and topics that need further attention.	**Title**: EXAMs **Context**: **Banding**: **Progression Area**: