LaceyField Mastery Maths Medium Term Plan – Year 6

'Effective mastery curricula in mathematics are designed in relatively small carefully sequenced steps, which must each be mastered before pupils move to the next stage. Fundamental skills and knowledge are secured first.This often entails focusing on curriculum content in considerable depth at early stages.' (NCETM, 2014)

Pre SATS

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: place value	Number: place value	Number: place value	Number: Addition and subtraction	Number: Addition and subtraction	Number: Addition and subtraction	Number: Multiplication and division	Number: Multiplication and division	Number: Multiplication and division	Number: Fractions	Number: Fractions	Cyclical Consolidation
Spring	Number: Fractions	Number: Fractions	Number: Fractions	Number: Decimals and Percentages	Number: Decimals and Percentages	Number: Decimals and percentages	Number: Algebra	Number: Algebra	Measurement: Converting Units	Number: Ratio and proportion	Number: Ratio and proportion	Cyclical Consolidation
Summer	Revision	Revision	Revision	YEAR 6 SATS	Number investigations	Number investigations	Statistic Investigations	Statistic Investigations	Statistic Investigations	Number Investigations	Shape Investigations	Year 6/7 Transition

To be taught in an afternoon:

- Geometry position and direction
- Shape
- Time Autumn 2
- Measurement: perimeter, area and volume
- Statistics
- Angles

Quick maths essentials:

- Roman numerals
- Squared and cubed numbers
- Prime
- Common factors and multiples
- Properties of shape
- Basic arithmetic
- Write the number…
- Basic time
- Converting
- Symmetry

- Each unit has longer in order to go into greater depth. However, there is still enough time to revisit addition, subtraction, multiplication, division and fractions in summer term. Therefore, children are still receiving the cyclical approach
- Follow whiterose small steps for each unit
- In the summer term when you revisit, recap as necessary, build on previous skills, deepen knowledge
- Use NCETM spines, whiterose, I see reasoning, Classroom Secrets for resources/powerpoints
- Time is drip fed throughout the year in quick maths
- Quick maths is constantly used to revisit areas
- Ready to progress document is used to inform planning
- Bespoke plans have been adapted to support COVID recovery

Strand one - Number					
Number and place value objectives	**Addition/ subtraction objectives**	**Multiplication / division objectives**	**Fractions (including decimal and percentages)**	**Ratio and Proportion**	**Algebra**
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above.	perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition and subtraction use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers identify common factors, common multiples and prime numbers solve problems involving multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ x ½ = 1/8 divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6 associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places solve problems which require answers to be rounded to specified degrees of accuracy recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison solve problems involving similar shapes where the scale factor is known or can be found solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	use simple formulae generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables.

Strand 2 - Measure	Strand 3 - Geometry		Strand 4 - Statistics
Measurement objectives	**Properties of shapes objectives**	**Position and direction objectives**	**Statistics objectives**
solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places convert between miles and kilometres recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].	draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average.