The Maths Component Curriculum – Year 6

What do we want our children to know and remember? (Key objectives taken from the National Curriculum)

YEAR 6	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	**Number and place value** • [KEY] Read, write, order and compare numbers to 10,000,000 and determine the value of each digit • [KEY] Solve number and practical problem that involve large numbers, rounding and negative numbers	**Multiplication and division** • [KEY] Perform mental calculations including with mixed operations and large numbers. • [KEY] Use their knowledge of the order of operations to carry out calculations involving the four operations. • [KEY] Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • [KEY] Solve problems involving addition, subtraction, multiplication, division. • [KEY] 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.		**Test week**	**Fractions** • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Compare and order fractions including fractions greater than 1. • 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. • [KEY] Multiply one-digit numbers with up to two decimal places by whole numbers. • [KEY] Multiply simple pairs of proper fractions, writing the answers in its simplest form [for example, 1/4 x 1/2 = 1/8] • [KEY] Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] • [KEY] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.		**Ratio** • [KEY] Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
Autumn 2	**Algebra** • [KEY] Begin to use simple formulae • [KEY] Begin to find pairs of numbers that satisfy an equation with two unknowns. • Begin to generate and describe linear number sequences • Begin to express missing number problems algebraically • Begin to enumerate possibilities of combinations of two variables		**Measure** • [KEY] 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. • [KEY] Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. • 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]	Start with **shape and position** and continue after test week.	**Test week**	**Shape and position** • [KEY] Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. • Draw 2D shapes using given dimensions • [KEY] Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles.	**Statistics** • Being to interpret and construct pie charts and line graphs and use them to solve problems. • Being to calculate and interpret the mean as an average.

Note – statements are from the expected standard for greater depth standard please see the LAT framework.

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<td>Spring 1</td>
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Number and place value

- Use negative numbers in context, and calculate intervals across zero.
- Round any whole number to a required degree of accuracy

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Multiplication and division

- 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.
- Identify common factors, common multiples and prime numbers.

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Test week

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Fractions

- [KEY] Add and subtract fractions with different denominators and numbers, using the concept of equivalent fractions.
- [KEY] Use written division methods in cases where the answer has up to two decimal places.
- [KEY] Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example 3/8]
- [KEY] Solve problems which require answers to be rounded to specified degrees of accuracy.
- [KEY] Continue to divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]
- [KEY] Continue to recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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<td>Spring 2</td>
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Measure

- Recognise when it is possible to use formulae for area and volume of shapes
- Recognise that shapes with the same areas can have different perimeters and vice versa
- Calculate the area of parallelograms and triangles.
- Starters – convert between miles and kilometres.

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Test week

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Shape and position

- Recognise, describe and build simple 3D shapes, including making nets
- 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
- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

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Statistics

- Interpret and construct pie charts and line graphs and use them to solve problems.
- Calculate and interpret the mean as an average.

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Ratio

- 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 similar shapes where the scale factor is known or can be found
- Solve problems involving unequal

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Algebra

- [KEY] Use simple formulae
- [KEY] Find pairs of numbers that satisfy an equation with two unknowns.
- Generate and describe linear number sequences
- Express missing number problems algebraically
- Enumerate possibilities of combinations of two variables

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					sharing and grouping using knowledge of fractions and multiples.		
Summer 1	**Revision** Gap analysis will drive teaching requirements			**SATs week**	**Number and place value** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Multiplication and division** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	
Summer 2	**Fractions** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Measure** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Shape and position** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Statistics** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Algebra** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Ratio** • Revisit areas that have been previously taught (through investigations and projects if needed) – gap analysis to drive this.	**Year 7 prep**

YEAR 6	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1				**Test week**			
Autumn 2					**Test week**		
Spring 1				**Test week**			
Spring 2		**Test week**					
Summer 1	**Revision** Gap analysis will drive teaching requirements			**SATs week**			
Summer 2							

Note – statements are from the expected standard for greater depth standard please see the LAT framework.