**Year 6 2018-19 Overview Maths**

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| **Autumn Term** |
| Week 1  | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| 3rd Sep – 7th Sep | 10th Sep – 14 Sep | 17th - 21st Sep | 24th – 28th Sep | 1st – 5th Oct | 8th– 12th Oct | 15th - 19th oct | Half term | 29th Oct – 2nd Nov | 5th – 9th Nov | 12th – 16th Nov | 19th – 23rd  Nov | 26th – 30th Nov  | 3rd – 7th Dec | 10th - 14th Dec | 17th – 21st Dec  |
|  | **Number and Place Value****Number and Place value; decimal number (2 weeks)** * Read and write numbers up to 10 000 000 in figures and words.
* Determine the value of each digit in numbers up to 10 000 000.
* Order and compare numbers up to 10 000 000 including on a number line.
* Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000, 100 000.
* Round decimals with 2 and 3 decimal places up to the nearest whole number and 1 or 2 decimal place.
* Round any whole number (with up to 8 digits) to a required degree of accuracy.
* Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero. Use negative numbers in context, and calculate intervals across zero.
* Solve number problems and practical problems involving all of the above.
* Identify the value of each digit to 3 decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to 3 decimal places.
* Calculate and interpret the mean as an average.
 | **Multiplication and division; fractions (3 weeks)*** Multiply one digit numbers with up to 2 decimal places by whole numbers.
* Divide numbers up to 4 digits by a one digit number using short division and **interpret the remainders appropriately in a context**.
* Use written methods for division in cases where the answer has two decimal places.
* Solve problems which require answers to be rounded to degrees of accuracy.
* Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication *(small steps progression)* or chunking.
* 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 including rounding to multiples of 10, 20 and 50 *(links can be made to decimal remainders.)*
* Solve problems involving addition, subtraction, multiplication and division *(including mental, jottings, written methods)*
* Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
* Identify common factors, common multiples and prime numbers.
 | **Fractions; Percentages** |  | **Fractions; percentages 3 weeks*** 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 proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
* Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4}$× $\frac{1}{2}$ = $\frac{1}{8}$]
* Divide proper fractions by whole numbers [for example, $\frac{1}{3}$ ÷ 2 = $\frac{1}{6}$ ]
* Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ]
* Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
* Solve problems which require knowing percentage and decimal equivalents of ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ ) and those with a denominator of a multiple of 10 or 25.
* Solve problems involving the calculations of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison
 | Calshot | **Measurement (3 weeks)*** 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 (cm3 ) and cubic metres (m3 ), and extending to other units [for example, mm3 and km3 ].
* Read Roman numerals to 1000 (M) and recognise years written as Roman numerals.
 | **Multi-Step problem solving** - Test style questions (these should be embedded within every unit in addition to this.) * Use their knowledge of the order of operations to carry out calculations involving the four operations *(BODMAS)*
* Approaches to problem solving – finding the way into the question.
* Multi-step problem solving involving all of the objectives previously taught.
* Solve addition and subtraction multi-step problems in contexts *(money, measures etc),* deciding which operations and methods to use and why.
* Solve problems involving addition, subtraction, multiplication and division *(including mental, jottings, written methods)*
* Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
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| **Spring Term** |
| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| Mon 7th – 11th Jan  | 14th – 18th Jan | 21th – 25th Jan | 28th Jan – 1st Feb | 4th – 8th Feb | 11th Feb – 15th Feb | Half term | 25th Feb– 1st March | 4th – 8th March | 11th - 15th March | 18th – 22nd March | 25th – 29th March | 1st – 5th Apri |
| **Ratio and proportion**. * 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 sharing and grouping using knowledge of fractions and multiples.
 | **Geometry: Properties of shape; Geometry; Position and direction****3 weeks** * 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.
 | **Algebra; 2 weeks** * 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.

. |  | **Statistics 1 week*** Solve comparison, sum and difference problems using information presented in a line graph
* Complete, read and interpret information in tables, including timetables
* Interpret and construct pie charts and line graphs and use these to solve problems
* Calculate and interpret the mean as an average. (revise)
 | **Revision** | **Mock Week** |  | **Areas not taught within the units to be covered in MMM and revision** * Perform mental calculations, including with mixed operations and large numbers *(up to 7 digits – difference between 383,000 and 99,500)* using a range of strategies
* Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals
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| **Summer Term** |
| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 |  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
| 23rd (Tues) – 26th April | 29th – 3rd May | 6th - 10th May | 13th – 17th May | 20th – 24th May | Half Term  | 3rd – 7th June | 10h – 14th June | 17th – 21st June | 24th – 28th June | 1st – 5th July  | 8th – 12th July | 15th – 19th July |
|  | SATS week  |  |  |  |  |  |