**Year 5 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**   * Read Roman numerals to 1000 (M) ad recognise years written as Roman numerals. * Identify the value of each digit in numbers up to 100,000 (hundred thousand, ten thousand, thousand, hundred, tens, ones) * Moving onto numbers up to 1 000 000 (one million, hundred thousand, ten thousand, thousand, hundred, tens, ones.) * Order and compare numbers to 100,000 including ordering numbers on a number line. Moving onto numbers up to 1,000000 * Read and write numbers up to 100,000 in words and figures. Moving onto numbers up to 1,000,000. * Count forwards and backwards in steps of powers of 10 (e.g.10, 100, 1000, 10 000,) for any given number up to 100,000 * Round any number up to 100 000 to the nearest 10, 100, 1000, 10 000. * Solve number problems and practical problems involving all   of the above.  Teach all of the objectives up to 100,000 and then move on to numbers up to 1 million – at least identify and represent up to 1 million. | | | **Addition and Subtraction**   * Add and subtract whole numbers with more than 4 digits, using formal written methods (columnar addition and subtraction). Including tricky questions such as repeated carrying or repeated exchanging E.g. 32,005 – 9,342 * Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. * Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. * Mental methods: What must be added to any 3 /4 digit number to make the next multiple of 100 or 1000? 4087 + \_\_\_\_ = 5000 * Add 3, 4 or 5 digit multiples of a hundred to any number up to 5 digits e.g. 15, 274 + 13,800. * Subtract 3 or 4 digit multiples of 100 from 3, 4 or 5 digit multiples of 100. E.g. 17,600 – 4800 = | | |  | **Multiplication and Division** (with some measure)   * Multiply and divide numbers mentally drawing upon known facts. * Multiply and divide whole numbers (and those involving decimals) by 10, 100, and 1000 * Multiply 2 and 3 digit numbers by a 1 digit number using written methods for multiplication using expanded method if necessary moving onto short multiplication. * Multiply numbers with up to 4 digits by a one digit number using formal written methods for multiplication. *(All ARE pupils need to be doing this confidently with challenging number sentences.)* * Multiply numbers with up to 4 digits by 2 digit numbers using formal written method long multiplication. * Divide numbers with up to 4 digits by 1 digit using the formal written method of short division initially without carrying and moving into carrying. *(All ARE pupils need to be doing this confidently with challenging number sentences.)* * Interpret remainders appropriately in contexts. * solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes * solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign * solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | | | | **Fractions: Decimals**   * . Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. * Recognise and write the decimal equivalent of any number of tenths or hundredths. * Find the effect of dividing a 1 or 2 digit number by 10 and 100; identifying the value of the digits in the answer as ones, tenths and hundredths * Round decimal with one decimal place to the nearest whole number. * Round decimals with two decimal places to the nearest whole number and to one decimal place * Compare numbers with the same number of decimal places up to 2 decimal places. * Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents * Read, write, order and compare numbers with up to three decimal places * Multiply and divide (whole numbers) and those involving decimals by 10, 100, and 1000 * Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) * Add and subtract decimal numbers up to 2 decimal places e.g. 5.67 – 3.07 = * Add and subtract decimals that are compliments of each other e.g. 0.64 + \_\_\_ = 1 * solve problems involving number up to three decimal places | | | |

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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 | |
| **Fractions**   * Compare and order fractions whose denominators are the same. * Compare and order fractions whose denominators are all multiples of the same number. * Recognise and show, using diagrams, families of common equivalent fractions. * Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. * Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 5 2 + 5 4 = 5 6 = 1 5 1 ] * Add and subtract fractions with the same denominator and denominators that are multiples of the same number. * Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. * Read and write decimal numbers as fractions [for example, 0.71 = 100 71 ] * Solve problems involving multiplication and division, including scaling by simple fractions and problem solving involving simple rates. * Recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal * Solve problems which require knowing percentage and decimal equivalents of 2 1 , 4 1 , 5 1 , 5 2 , 5 4 and those fractions with a denominator of a multiple of 10 or 25. | | | | **Number, place value, addition and subtraction.**   * Read and write numbers up to 1000 000 in figures and words. * Identify the value of each digit in numbers up to 1 000 000 (one million, hundred thousand, ten thousand, thousand, hundred, tens, ones.) * Order and compare numbers up to 1 000 000 including ordering numbers on a number line. * Count forwards and backwards in steps of powers of 10 (e.g.10, 100, 1000, 10 000,100 000) for any given number up to 1000,000 * Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000, 100 000. * Count backwards through zero to include negative numbers. * Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero. * Solve number problems and practical problems involving all of the above.   **Addition and subtraction mental methods:**   * Revise mental methods previously taught. * Teach adjustment method for near multiples. * Choose appropriate mental or written method. | |  | **Multiplication and Division**  **Recap objectives for written methods from the previous unit if needed.**   * Recognise and use factor pairs and commutativity in mental calculations. * Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. * Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. * Multiply 3 numbers together e.g. 4 x 5 x 12 * Establish whether a number up to 100 is a prime number and recall the prime numbers up to 19. | | **Geometry: Properties of shape**   * Compare and classify geometric shapes, including quadrilaterals and triangles based on their properties. * Identify 3-D shapes, including cubes and other cuboids, from 2-D representations * Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | Assessment Week? | Continue on with properties of shape. | | **Geometry: Position and direction**   * Describe positions on a 2-D grid as coordinates in the first quadrant * Describe movements between positions as translations of a given unit to the left/right and up/down * Plot specified points and draw sides to complete a given polygon, i*ncluding drawing pairs of axis in one quadrant. Read, write and use pairs of coordinates including using ICT tools.* |

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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 | |
| **Measurement**   * Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] * Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints * Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres * Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes * Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] * read, write and convert time between analogue and digital 12- and 24-hour clocks * solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days * Solve problems involving converting between units of time * Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | | | | **Statistics**   * Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs * Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. * Relate the graphical representation of data to represent change over time. | |  | **Geometry: Properties of shape** (angle)   * Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles * Draw given angles, and measure them in degrees (o ) * Identify angles at a point and one whole turn (total 360o ) * Identify angles at a point on a straight line and 2 1 a turn (total 180o ) * Identify other multiples of 90o * Use the properties of rectangles to deduce related facts and find missing lengths and angles * Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. | | | | | **Assessment Week?** | **Consolidation of objectives for Year 6** | | |