**Year 3 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*** Recognise the place value of each digit in a 3 digit number.
* Identify, represent and estimate numbers using different representations
* Partition numbers in different ways E.g. 146 = 100 + 40 + 6 and 146 = 130 + 16
* Compare and order numbers up to 1000 using < > =
* Size order numbers on a number lines. 0 -100, 0-1000.
* Read and write numbers to 1000 in numerals and words.
* Count in steps of 2, 3, 5, and 10 from any given number forwards and backwards. (MMM)
* Count from 0 in multiples of 4, 8, 50 and 100. (lesson)
* Solve number problems and practical problems involving place value.

Can move onto addition and subtraction earlier of finished!  | **Addition and Subtraction** * Recall and use the addition and subtraction facts to 20 and use this to derive related facts up to 100. (Assess, teach if needed, move into MMM.)
* Add and subtract mentally:
* A three digit number and ones. Initially without crossing tens E.g. 324 + 5 = 329 and then moving onto 324 + 9 = 333.
* A three digit number and tens. Initially within hundreds E.g. 324 + 60 = 384 and then crossing hundreds 456 + 70 = 524.
* A three digit number and hundreds. Initially without crossing thousands, moving to crossing.
* Estimate the answer to a calculation and use the inverse operation to check answers. Introduce with small numbers before using it with 3 digit numbers.
* Add and subtract numbers with up to 3 digits, using partitioning. Introducing carrying and exchanging.
* Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.
 |  |  **Multiplication and Division** * Recognise odd and even numbers
* Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs, for example using the 2, 5 and 10 times tables. Pupils relate multiplication to repeated groups and division to sharing and can show understanding using resources.
* Recall and use multiplication and division facts for 2,5,10, 3, 4, and 8 times tables.
* Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know. *Pupils should be able to use different representations, groups of, arrays, and repeated addition for multiplication and subtraction for division using a number line (with single jumps at this time.)*
 | **Fractions*** Recognise, find, name and write fractions$\frac{1}{3}$, $\frac{1}{4}$ , $\frac{2}{4}$ / $\frac{1}{2}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. (To be done practically.)
* Count up and down in halves and $\frac{2}{4}$
* Recognise, find and write fractions of shapes both simple unit and non- unit fractions. (Teach in the context of $\frac{3}{4}$ is 3 out of every 4.)
* Recognise, find and write fractions of discrete sets of objects both simple unit and non- unit fractions. (Teach in the context of $\frac{3}{4}$ is 3 out of every 4.)
* Compare and order unit fractions, and fractions with the same denominators, including on a number line.
* Add and subtract fractions with the same denominator within one whole, for example, $\frac{5}{7}$ + $\frac{1}{7}$ = $\frac{6}{7}$. (ensure chn understand why you do not add the denominator.)
* Recognise and show, using diagrams, equivalent fractions with small denominators. (Can be done very simply and practically.)
* Solve problems involving all of the above.
 | **Geometry – property of shapes.** * Describe the properties of 2D and 3D shapes using accurate terminology.
* Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them.
* Measure the perimeter of simple 2D shapes.
* Identify horizontal lines and vertical lines and pairs of perpendicular and parallel lines.
* Identify symmetrical and non-symmetrical polygons.
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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 |
| **Addition and subtraction*** Add and subtract numbers with up to 3 digits, using partitioning. Introducing carrying and exchanging. (All ARE pupils need to do this confidently.)
* If appropriate move pupils onto formal compact addition and subtraction.
* Estimate the answer to a calculation and use the inverse operation to check answers. Introduce with small numbers before using it with 3 digit numbers.
* Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.
 | **Multiplication and Division***All within multiplication tables which pupils need to recall fluently 2,5,10, 3, 4, and 8.* * Pupils use efficient mental methods, for example, commutativity and associativity (for example, 4 x 12 x 5 = 4 x 5 x 12 = 20 x 12 = 240) (can *be taught through derivation board.)*
* Write and calculate mathematical statements for multiplication and division using number lines with single jumps for repeated addition for multiplication or repeated division for subtraction.
* Write and calculate division sentences which include remainders within the multiplication tables that they know.
* Write and calculate mathematical statements for multiplication, including for two-digit numbers times one-digit numbers, using mental methods (number lines) and progressing to formal written methods (expanded multiplication if appropriate)

*(All ARE pupils to use number lines to multiply numbers such as 17 x 8 and 32 x 4.)* * solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
 | **Geometry – properties of shapes*** Recognise angles as a property of turn.
* Identify right angles, recognise that two right angles make a half-turn, three make a three quarter turn and four make a complete turn.
* Identify whether angles are greater or less than a right angle.
 |  | **Fractions*** Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators using bar models.
* Count up and down in tenths.
* Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
* Solve problems involving all of the fraction objectives previously taught.

Pick up on any fraction objectives missed or not fully understood from previous unit.  | Assessment Week?  | **Measures*** Know confidently which unit relates to which measure E.g. grams and kilograms measure mass.
* Measure and compare: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) using the appropriate tools E.g. measuring cylinders and scales.
* Make measurements using mixed units E.g. 1Kg and 200g (pupils do not need to be able to convert between units of measure at this time.)
* The comparison of measures should include simple scaling questions E.g. a measure is twice as long or five times as high.)
* Add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Complete above objectives practically initially. * Problem solving with all four operations within a measurement context.
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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 |
| **Measures – Time** * Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
* Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o’clock, a.m./p.m., morning, afternoon, noon and midnight
* Know the number of seconds in a minute and the number of days in each month, year and leap year
* Compare durations of events [for example to calculate the time taken by particular events or tasks].
 | **Statistics*** Interpret and present data using bar charts, pictograms and tables. Including simple scaes for example, 2, 5 and 10 units per cm in pictograms and bra charts.
* *(This could be completed as part of an investigation.)*
* Solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables.
 | **Measures – Money** * Add and subtract amounts of money to give change, using both £ and p in practical contexts
 |  | **Four operations/ Fractions additional problem solving.** * Single step problems involving all four operations – pupils can identify which operation to use.
* Over teaching of tricky language, E.g. how many more, how many fewer, what is the total/ sum, what is the difference?
* Two step and multi-step questions involving mixed operations and embedded within contexts E.g. measures. Should be supported with practical resources and heuristics.
 | **Assessment Week?**  | Consolidation of written methods and fractions. Pick up on any objects or units that need further teaching.  |