



Maths Medium Term Overview – Autumn Year 4 & 5

Year 4&5 – Autumn term		
Week & Focus	NC objectives to be covered. NB – Non-statutory guidance and small step changes in repeated objectives are in bold.	
	YEAR 4 OBJECTIVES	YEAR 5 OBJECTIVES
1 – Number & Place Value	- Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) - Identify, represent and estimate numbers using different representations (for example, $2345 = 1,000 + 1300 + 40 + 5 = 1 \text{ Th} + 12\text{H} + 4\text{T} + 5\text{O}$) - Order and compare numbers beyond 1000 - Find 1000 more or less than a given number	- Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (Use number in context, for example measurement. Extend and apply their understanding of the number system to the decimal numbers and fractions that they have met in previous years.) - Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (Relate the numbers to their position on a number line.)
2 – Number & Place Value	- Count backwards through zero to include negative numbers. - Count in multiples of 6, 7 and 1000 (continued throughout the year) - Solve number and practical problems that involve all of the above and with increasingly large positive numbers (continue across the academic year)	- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Use number in context, for example measurement. Count from any given number in <u>whole-number</u> steps extending beyond zero when counting backwards; relate the numbers to their position on a number line. - Recognise and describe linear number sequences, and find the term-to-term rule.



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		Solve number problems and practical problems related to the number and place value objectives taught so far.
3 - Addition	- Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate. Secure and consolidate 3-digit column addition using build it, draw it, write it approach as appropriate. Refer to pages 27-28 addition booklet. - Solve addition two-step problems in contexts, deciding which operations and methods to use and why (to be developed further in Spring term- consolidate one-step and begin two-step).	- Add numbers mentally with increasingly large numbers. Refer to mental calculation strategies booklet for guidance. - Add whole numbers with more than 4 digits, including using formal written methods (columnar addition) Refer to pgs 33-36 addition booklet. - Solve addition problems (focus on single step) in contexts deciding which operations and methods to use and why.
4 - Subtraction	- Subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Secure and consolidate 3-digit column subtraction using build it, draw it, write it approach as appropriate. Refer to pgs 35-36 subtraction booklet. - Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why (to be developed further in Spring term - consolidate one-step and begin two-step)	- Subtract numbers mentally with increasingly large numbers. Refer to mental calculation strategies booklet for guidance. - Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction) Refer to pgs 41-44 subtraction booklet. - Solve addition and subtraction problems (focus on single step) in contexts deciding which operations and methods to use and why.



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	Use inverse operations to check answers to a calculation.	Use inverse operation to check addition and subtraction.
5 - Multiplication	- Recall multiplication and division facts for multiplication tables up to 12×12 (Revision of 2, 5, 10 and 3, 4, 8. TEACH – 6 & 7 TIMES TABLES – MAY BE SPREAD OVER THE TERM) - Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; multiplying together 3 numbers - Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency. Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). - Multiply two-digit numbers by a one-digit number using formal written layout– secure and consolidate Y3 build it, draw it, write it (grid into expanded, to short as appropriate) Refer to pg 15 multiplication booklet. - Pupils solve simple problems in contexts, choosing the appropriate operation, working with increasingly harder numbers.	- Multiply numbers mentally drawing upon known facts. Rehearse multiplication facts and use these to derive division facts, to multiply multiples of 10 and 100. - Recognise and use square numbers and cube numbers and the notation for squared ⁽²⁾ and cubed ⁽³⁾ - Multiply numbers up to 4 digits by a one-digit number using a formal written method. Develop and refine written methods for multiplication. Secure and consolidate understanding of 2-digit and 3-digit by 1-digit short multiplication as appropriate before introducing 4-digit by 1-digit. (May need to re-visit expanded layouts (such as the grid method), moving towards a compact layout for HTU $\times$ U. (Short multiplication) Refer to pg 19 and top of pg 20 multiplication booklet. - Problem solving relating to the above objectives.



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6 - Division

- Recall multiplication and division facts for multiplication tables up to 12×12 (**Revision of 2, 5, 10 and 3, 4, 8. TEACH – 6 & 7 TIMES TABLES DIVISION FACTS – MAY BE SPREAD OVER THE TERM**)
 - Use place value, known and derived facts to multiply and divide mentally, including: dividing by 1.
 - Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency. Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$).
 - Practise to become fluent in the formal written method of short division with exact answers. **Dividing 2 digit by one-digit number – consolidate and secure understanding of place value scaling from Y3 for grouping 2 digit numbers on a place value grid then progress to ‘draw it’, ‘write it’ short division 2 digit by 1 digit. Refer to pgs 17-18 division booklet.**
 - Pupils solve simple problems in contexts, choosing the appropriate operation, working with increasingly harder numbers.
- Divide numbers mentally drawing upon known facts.
 - Divide numbers up to 4 digits by a **one-digit** number using the formal written method of short division. **Develop and refine written methods for division. Secure and consolidate understanding of 2-digit and 3-digit by 1-digit short division as appropriate before introducing 4-digit by 1-digit. Refer to pg 21 division booklet.**
 - Problem solving related to these objectives.



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7 - Fractions	- Recognise and show, using diagrams, families of common equivalent fractions. - Practise counting using simple fractions (include use of number line). - Add and subtract fractions with the same denominator. - Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	Continue to develop understanding of fractions as numbers, measures and operators by finding fractions of numbers and quantities. Counting forwards and backwards in simple fractions. - Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths - Compare and order fractions whose denominators are all multiples of the same number - Add and subtract fractions with the same denominator and denominators that are multiples of the same number - Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements >1 as a mixed number
8 – Fractions & Decimals	- Recognise and write decimal equivalents of any number of tenths or hundredths - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ - Practise counting using simple decimals (include use of number line)	- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. - Read and write numbers with up to 3 decimal places.



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	- Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths - Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	- Read and write decimal numbers as fractions. - Multiply & divide whole numbers and those involving decimals by 10, 100 and 1000. - Solve problems involving number up to 3 decimal places. To include addition and subtraction of numbers including decimals, with the same number of decimal places. – Refer to pgs 36-37 addition booklet and pgs 44-45 subtraction booklet.
9 - Length	- Convert between different units of measure [for example, kilometres to metres] - Estimate, compare and calculate different measures (for length) - Pupils build on their understanding of place value and decimal notation to record metric measures	- Convert between different units of metric measure (for example, km and m; cm and m; cm and mm) - Understand and use approximate equivalences between metric units and common imperial units such as inches. - Problem solving related to these.
10 – Area & Perimeter	- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - Find the area of rectilinear shapes by counting squares - Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit. They relate area to arrays and multiplication	- Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m (Revision of Y4 objective) - Measure and calculate the perimeter of composite rectilinear shapes in cm and m.



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		- Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) - Compare areas and perimeters. Children need to know that the relationship between area and perimeter is not a simple one. Increasing or decreasing area does not necessarily mean the perimeter increases or decreases respectively, or vice versa.
11 – Measurement – Time	- Convert between different units of measure related to time - Estimate, compare and calculate different measures (related to time) - Read, write and convert time between analogue and digital 12 hour clocks	- Convert between units of time (Revision from Y4) - Read, write and convert time between analogue and digital 12- and 24-hour clocks (Revision from Y4) - Solve problems involving converting between units of time.
12 – Y4 - Measurement – Time Y5 - Statistics	- 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	Complete, read and interpret information in tables including timetables (linked to previous week)
ADDITIONAL WEEKS FOR ASSESSMENT, REVISITING, CONSOLIDATION & THEMED WORK		



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