Mathematics Mastery

Year 3 'Programme of Study - *'Term per page overview' 2017-2018 FINAL*

Term		National Curriculum requirements
Autumn 1	**1. Number sense and exploring calculation strategies (3 weeks)**	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • recognise the place value of each digit (tens, ones), compare and order numbers up to 100 • find 10 more or less than a given number • read and write numbers up to 100 in numerals and in words • solve number problems and practical problems involving these ideas • identify, represent and estimate numbers using different representations, including the number line • add and subtract amounts of money to give change, using both £ and p in practical contexts
	2. Place value (2 weeks)	• identify, represent and estimate numbers using different representations • find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas • count from 0 in multiples of 50 and 100
	3. Graphs (1 week)	• interpret and present data using bar charts, pictograms and tables • 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
	4. Addition and subtraction (3 weeks)	• add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
	5. Length and perimeter (2 weeks)	• measure, compare, add and subtract: lengths (m/cm/mm) • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • measure the perimeter of simple 2-D shapes • continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed … and simple equivalents of mixed units (for example, 5m = 500cm)

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Spring	**6. Multiplication and division (2 weeks)**	• recall and use multiplication and division facts for the 3 and 4 multiplication tables • count from zero in multiples of 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
	7. Deriving multiplication and division facts (3 weeks)	• recall and use multiplication and division facts for the 3 and 4 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • 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 •
	8. Time (2 weeks)	• 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]
	9. Fractions (3 weeks)	• recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • 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 • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same denominator within one whole *[for example,* $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$ *]* • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all of the above

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Summer	**10. Angles and shape** **(3 weeks)**	• recognise angles as a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines • draw 2-D shapes and make 3-D shapes using modelling materials • recognise 3-D shapes in different orientations and describe them • measure the perimeter of simple 2-D shapes
	11. Measures (3 weeks)	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm)
	12. Securing multiplication & division **(1 week)**	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • recall and use multiplication and division facts for the 8 multiplication tables • count from zero in multiples of 8
	13. Exploring calculation strategies and place value (2 weeks)	• add and subtract numbers mentally • find 1000 more or less than a given number; recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) (Y4) • order and compare numbers beyond 1000 (Y4) • round any number to the nearest 10, 100 or 1000 (Y4)