

Year 4 Mathematics Medium Term Planning Autumn

Mental Maths objectives to be covered:

Number - Number and place value

Read and write whole numbers to 10,000 and beyond.

Count in multiples of 6, 7, 9, 25 and 1000.

Order and compare numbers beyond 1000; using the greater than and less than symbols.

Round any number to the nearest 10, 100.

Count backwards through 0 to include negative numbers.

Find the effect of multiplying and dividing a one- or two-digit number by 10, identifying the value of the digits in the answer as hundreds, tens, ones, tenths and hundredths etc.

Number – Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Add and subtract mentally pairs of 2-digit whole numbers.

Add and subtract 1, 10 and 100 to any whole number.

Number – Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12 × 12.

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiplying together three numbers.

Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number – Fractions:

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

Measurement:

Convert between different units of measure [for example, kilometre to metre; hour to minute].

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Convert from hours to minutes; minutes to seconds; years to months; weeks to days. . - **Needs to be practised daily to be secure for the second half of the Autumn term. Review chn's understanding early on so that individuals gaps can be addressed.**

Geometry – Properties of shape:

Calculate perimeter of regular shapes

Things to remember:

It is important to consistently use the appropriate vocabulary and insist that the children do the same (see 'Talk and Tasks' document).

Learning of times tables should be prioritised and reflected in the children's 'Maths Mountains' results.

The plans should be adjusted at least half-terminly based on teacher assessments and analyses. The plans may also need adjusting due to changes in the number of weeks in a term or half term.

Cross-curricular links between mathematics and other subjects should be explored wherever relevant.

Objectives in **bold** are KPIs. **Highlighted** objectives will be assessed during the term (may be part). Objectives in *italics* are taken from the previous or next year.

Problem-solving and reasoning should be integrated into all activities.
 Opportunities to explain and justify opinions and make explanations should be incorporated into planning.
 Children should be challenged and extended through the problems they are given to solve.
 Use a range of models and images to support conceptual understanding.

Week	Date	Strand	Curriculum objectives derived from the 2014 Curriculum	Resources
		Numbers to 10,000 (3 weeks)	<ul style="list-style-type: none"> Counts in multiples of 6, 7, 9, 25 and 1000. Orders and compares numbers beyond 1,000. Recognise the place value of each digit in four-digit number (thousands, hundreds, tens, and ones). Identify, represent and estimate numbers using different representations. Find 1000 more or less than a given number. Round any number to the nearest 10, 100 or 1000. Count backwards through zero to include negative numbers. 	100-square 2; 3 and 5 digit cards Base 10 materials Feely bag Markers Number lines (in thousands) Number lines (increments marked) Number lines (marked and blank) Number lines in hundreds; twenty-fives and fifties Place-value cards Place-value charts Place-value discs Sugar paper Travel advertisements
		Addition and Subtraction within 10,000 (3 ½ weeks)	<ul style="list-style-type: none"> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. Round any number to the nearest 10, 100 or 1000. 	2–8 digit cards Base 10 materials Place-value charts Place-value discs
		Multiplication and Division (3 ½ weeks)	<ul style="list-style-type: none"> Recall multiplication and division facts for multiplication tables up to 12×12. Recognise and use commutativity in mental calculations. Use place value, known and derived facts to multiply and divide mentally. Solve problems involving multiplying and adding. 	6 times table and division cards 6; 7; 8 and 9 times tables cards 6–90 square Blank number line (increments marked) Coins and notes Counters Cups Dot cards (nines; sevens) Linking cubes Objects for counting/counters
		Further Multiplication and Division (3 ½ week)	<ul style="list-style-type: none"> Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Recall multiplication and division facts for multiplication tables up to 12×12. Multiply two-digit and three-digit numbers by a one-digit number using an informal written layout progressing to formal written layout. 	Base 10 materials Counters Laminated part-whole diagrams Place-value charts Place-value discs Plates £1 coins and counters

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Year 4 Mathematics Medium Term Planning Spring

Mental Maths objectives to be covered:

Number - Number and place value:

Count on and back in multiples of 6, 7, 9, 25 and 1000.

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).

Order and compare numbers beyond 1000; using the greater than and less than signs.

Round any number to the nearest 10, 100 or 1000 including decimals to the nearest whole number.

Find the effect of multiplying and dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as thousands, hundreds, tens ones, tenths and hundredths.

Number – Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Add and subtract mentally pairs of 2-digit whole numbers.

Derive addition pairs that total 100; multiples of 50 that total 1000.

Number – Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12×12 (2/3/4/5/6/8).

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiply together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Understand the distributive law to multiply a 2-digit number by a 1-digit number ($39 \times 7 = 30 \times 7 + 9 \times 7$) and the associative law ($(2 \times 3) \times 4 = 2 \times (3 \times 4)$).

Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number - fractions:

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

Measurement:

Read Roman numerals to 100 (I to C).

Convert between different units of measure [for example, kilometre to metre; hour to minute].

Geometry – Properties of shape:

Calculate perimeter of regular shapes.

Things to remember:

It is important to consistently use the appropriate vocabulary and insist that the children do the same (see 'Talk and Tasks' document).

Learning of times tables should be prioritised and reflected in the children's 'Maths Mountains' results.

The plans should be adjusted at least half-termly based on teacher assessments and analyses. The plans may also need adjusting due to changes in the number of weeks in a term or half term.

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Week	Date	Strand	Curriculum objectives derived from the 2014 Curriculum	Resources
		Fractions (2 ½ weeks)	<ul style="list-style-type: none"> Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and by dividing tenths by 10. 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. Recognise and show, using diagrams, families of common equivalent fractions. Add and subtract fractions with the same denominator. 	0; 1; 3; 5 and 8 digit cards Blank 100-square Blank number line (increments marked) Fraction cards Six-sided dice
		Time (1 ½ weeks)	<ul style="list-style-type: none"> Read, write and convert time between analogue and digital 12-hour and 24-hour clocks. Convert between different units of measure. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 	Blank number lines Time number lines for 12-hour and 24-hour clocks
		Graphs (1 ½ week)	<ul style="list-style-type: none"> Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	Laptop/tablet with spreadsheet software Markers Newspapers Sugar paper
		Decimals (3 ½ weeks)	<ul style="list-style-type: none"> Recognise and write decimal equivalents 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. Compare numbers with the same number of decimal places up to two decimal places. Round decimals with 1 decimal place to the nearest whole number. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. Solve simple measure and money problems involving fractions and decimals to 2 decimal points. 	0–9 digit cards Base 10 materials Card strips Card strips divided into hundredths Card strips divided into tenths Decimal place-value charts Laminated card strips Laminated number lines (10 increments) Laminated number lines (various increments) Objects to measure Place-value discs Rulers (cm) Six-sided dice Square cards Square cards divided into hundredths Square cards divided into tenths Ten frames
		Money (1 ½ weeks)	<ul style="list-style-type: none"> Estimate, compare and calculate different measures, including money in pounds and pence. 	Bar model strips Card strips Card strips divided into tenths Coins and notes Laminated number lines (10 increments) Pennies Place-value charts £2; £1; 10p coins

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Year 4 Mathematics Medium Term Planning Summer

Mental Maths objectives to be covered:

Number - Number and place value:

Count in multiples of 6, 7, 9, 25 and 1000.

Find 1000 more or less than a given number.

Count backwards through zero to include negative numbers.

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000.

Round any number to the nearest 10, 100 or 1000, including decimals to the nearest whole number.

Read Roman numerals to 100 (I to C)

Find the effect of multiplying and dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as thousands, hundreds, tens ones, tenths and hundredths

Number – Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Number – Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12 x 12.

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiplying together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Understand the distributive law to multiply a 2-digit number by a 1-digit number ($39 \times 7 = 30 \times 7 + 9 \times 7$) and the associative law ($(2 \times 3) \times 4 = 2 \times (3 \times 4)$).

Identify the doubles of 2 digit numbers and multiples of 100 to 5000; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number - fractions:

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

Measurement:

Convert between different units of measure [for example, kilometre to metre; hour to minute].

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Convert from hours to minutes; minutes to seconds; years to months; weeks to days

Geometry – Properties of shape:

Calculate perimeter of regular shapes.

Things to remember:

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		Mass, Volume, Length (2 ½ weeks)	<ul style="list-style-type: none"> Convert between different units of measure [for example, kilometre to metre]. Estimate, compare and calculate different measures. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. 	Card strips Card strips divided into tenths Everyday examples of capacity Height chart Laminated number lines (10 increments) Measuring beakers Measuring jugs Pre-measured items to weigh Rulers (cm and mm) Various measuring beakers (scales marked) Weighing scales (dials) Weighing scales (digital)
		Area of Figures (1 week)	<ul style="list-style-type: none"> Find the area of rectilinear shapes by counting squares. 	Grid paper Right-angled triangle tiles (same size as square tiles) Small paper square tiles
		Geometry (2 weeks)	<ul style="list-style-type: none"> Identify acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry. 	Different paper triangles Laminated Carroll diagrams Paper shapes: square; rectangles; circle; right-angled triangle; isosceles triangle; pentagon Quadrilateral paper shapes Rulers (cm) Squared paper
		Position and Movement (1 week)	<ul style="list-style-type: none"> Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon. Describe movements between positions as translations of a given unit to the left/right and up/down. 	Paper right-angled triangles Paper shapes for translation onto square grid Square grids
		Roman Numerals (½ week)	<ul style="list-style-type: none"> Read Roman numerals to 100 (I to C). 	None

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