



LMPS Maths Termly Overview 2020 - 2021

YEAR 3

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value.

Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Autumn Term	Spring Term	Summer Term
<p><u>Times table focus this term:</u> Recall multiples of 3 up to 12x3 in any order, including missing numbers and related division facts with growing fluency.</p> <p>Count in multiples of 4 to 12x4 in order from 0 with growing fluency.</p> <p>Introduce (relating to x4) and begin to count in multiples of 8 from 0 to 12x8.</p>	<p><u>Times table focus this term:</u> Recall multiples of 3 up to 12x3 in any order, including missing numbers and related division facts fluently.</p> <p>Count in multiples of 4 to 12x4 in order from 0 with fluently.</p> <p>Count in multiples of 8 to 12x8 in order from 0 with growing fluency.</p> <p>Recall multiples of 4 up to 12x4 in any order, including missing numbers and related division facts with growing fluency.</p> <p>Count in multiples of 8 to 12x8 in order from 0 fluently.</p>	<p><u>Times table focus this term:</u> Recall multiples of 4 up to 12x4 in any order, including missing numbers and related division facts fluently.</p> <p>Recall multiples of 8 up to 12x8 in any order, including missing numbers and related division facts with fluency.</p>

[Year 2 conceptual prerequisites \(see teaching guide for strands and teaching guidance\)](#)

[Children must be confident in the following:](#)

- Know that 10 ones are equivalent to 1 ten, and that 40 (for example) can be composed from 40 ones or 4 tens. Know how many tens there are in multiples of 10 up to 100.
- Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.



- Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.
- Count in multiples of 2, 5 and 10.
- Add and subtract across 10, for example: $8 + 5 = 13$; $13 - 5 = 8$
- Calculate products within the 2, 5 and 10 multiplication tables.
- Automatically recall addition and subtraction facts within 10, and across 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten.
- Automatically recall number bonds to 9 and to 10. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred.
- Automatically recall addition and subtraction facts within 10 and across 10. Recognise the place value of each digit in two- and three-digit numbers. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred.
- Have experience with the commutative property of addition, for example, have recognised that $3 + 2$ and $2 + 3$ have the same sum. Be able to write an equation in different ways, for example $2 + 3 = 5$ and $5 - 3 = 2$. Write equations to represent addition and subtraction contexts.
- Recognise repeated addition contexts and represent them with multiplication equations. Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).
- Reason about the location of whole numbers in the linear number system.
- Automatically recall addition and subtraction facts within 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten, and that these units can be added and subtracted.
- Recognise standard and non-standard examples of 2D shapes presented in different orientations. Identify similar shapes.
- Compose 2D shapes from smaller shapes to match an exemplar, rotating and turning over shapes to place them in specific orientations.

Y3 Unit 1. Place value within 1,000 (11 Lessons)

Prerequisite strands to focus on:

- 3NPV-1 Equivalence of 10 hundreds and 1 thousand
- 3NPV-2 Place value in three-digit numbers
- 3NPV-3 Three-digit numbers in the linear number system

Number - number and place value

- count from 0 in multiples of 4, 8, 50 and 100; 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
- identify, represent and estimate numbers using different representations

Y3 Unit 5. Multiplication and division (2) (14 Lessons)

Prerequisite strands to focus on:

- 3NF-2 Recall of multiplication tables
- 3MD-1 Multiplication and division structures

Number - multiplication and division

- 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

Y3 Unit 10. Fractions (2) (9 Lessons)

Prerequisite strands to focus on:

- 3F-1 Use and understand fraction notation
- 3F-2 Find unit fractions of quantities
- 3F-3 Fractions within 1 in the linear number system
- 3F-4 Add and subtract fractions within 1

Number – fractions

- recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole (for example, $5/7 + 1/7 = 6/7$)



<ul style="list-style-type: none"> - read and write numbers up to 1000 in numerals and in words - solve number problems and practical problems involving these ideas <p>Y3 Unit 2. Addition and subtraction (1) (10 Lessons) Prerequisite strands to focus on: 3NF–1 Fluently add and subtract within and across 10 3NF–3 Scaling number facts by 10 3AS–1 Calculate complements to 100 3AS–2 Columnar addition and subtraction 3AS–3 Manipulate the additive relationship Number - addition and subtraction</p> <ul style="list-style-type: none"> - add and subtract numbers mentally, including - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds <p>Y3 Unit 3. Addition and subtraction (2) (9 Lessons) Prerequisite strands to focus on: 3NF–1 Fluently add and subtract within and across 10 3NF–3 Scaling number facts by 10 3AS–1 Calculate complements to 100 3AS–2 Columnar addition and subtraction 3AS–3 Manipulate the additive relationship Number - addition and subtraction</p> <ul style="list-style-type: none"> - add and subtract numbers mentally, including 	<p>correspondence problems in which n objects are connected to m objects</p> <ul style="list-style-type: none"> - solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p>Y3 Unit 6. Money (5 Lessons) Measurement</p> <ul style="list-style-type: none"> - add and subtract amounts of money to give change, using both £ and p in practical contexts <p>Y2 Unit 7. Statistics (7 Lessons) Statistics</p> <ul style="list-style-type: none"> - interpret and construct simple pictograms, tally charts, block diagrams and simple tables - ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity - ask and answer questions about totalling and comparing categorical data <ul style="list-style-type: none"> • <i>Ensure that you go through the Unit Starter – go through vocabulary, structures and representations</i> • <i>Teach all lessons in the Unit (7 lessons)</i> • <i>Complete the End of Unit Check.</i> • <i>Then move onto Y3 Unit 7 but only teach lessons 3 – 5 & then complete the End of Unit Check for this Unit.</i> <p>Y3 Unit 7. Statistics (only teach 4 lessons – see above)</p>	<ul style="list-style-type: none"> - compare and order unit fractions, and fractions with the same denominators - solve problems that involve all of the above <p>Y3 Unit 11. Time (11 Lessons) Measurement</p> <ul style="list-style-type: none"> - 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] <p>Y2 Unit 11. Position and direction (4 Lessons) Geometry - position and direction</p> <ul style="list-style-type: none"> - order and arrange combinations of mathematical objects in patterns and sequences - use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)
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<ul style="list-style-type: none"> - 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 - a three-digit number and hundreds <p>Y3 Unit 4. Multiplication and division (1) (15 Lessons) Prerequisite strands to focus on: 3NF–2 Recall of multiplication tables 3MD–1 Multiplication and division structures Number - multiplication and division</p> <ul style="list-style-type: none"> - recall and use multiplication and division facts for the 3, 4 and 8 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 	<p>Statistics</p> <ul style="list-style-type: none"> - 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 <p>Y2 Unit 8. Length (5 lessons) Number - addition and subtraction</p> <ul style="list-style-type: none"> - solve problems with addition and subtraction: <p>Measurement</p> <ul style="list-style-type: none"> - choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels - compare and order lengths, mass, volume/capacity and record the results using >, < and = <p>Number - addition and subtraction</p> <ul style="list-style-type: none"> - using concrete objects and pictorial representations, including those involving numbers, quantities and measures <ul style="list-style-type: none"> • <i>Ensure that you go through the Unit Starter – go through vocabulary, structures and representations</i> • <i>Teach all lessons in the Unit (5 lessons)</i> • <i>Complete the End of Unit Check.</i> <p>Y3 Unit 8. Length (11 Lessons)</p>	<ul style="list-style-type: none"> • <i>Ensure that you go through the Unit Starter – go through vocabulary, structures and representations</i> • <i>Teach all lessons in the Unit (4 lessons)</i> • <i>Complete the End of Unit Check.</i> • <i>Then move onto Y3 Unit 12 below.</i> <p>Y3 Unit 12. Angles and properties of shapes (9 Lessons) Prerequisite strands to focus on: 3G–1 Recognise right angles 3G–2 Draw polygons and identify parallel and perpendicular sides Geometry - properties of shapes</p> <ul style="list-style-type: none"> - draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations; and describe them - 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 <p>Y2 Unit 14. Weight, volume and temperature (10 Lessons) Measurement</p> <ul style="list-style-type: none"> - choose and use appropriate standard units to estimate and measure length/height in any
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	<p>Measurement</p> <ul style="list-style-type: none"> - measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) - measure the perimeter of simple 2-D shapes <p>Y3 Unit 9. Fractions (1) (11 Lessons)</p> <p>Prerequisite strands to focus on:</p> <p>3F-1 Use and understand fraction notation</p> <p>3F-2 Find unit fractions of quantities</p> <p>3F-3 Fractions within 1 in the linear number system</p> <p>Number - fractions</p> <ul style="list-style-type: none"> - 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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators - recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators - compare and order unit fractions, and fractions with the same denominators - solve problems that involve all of the above 	<p>direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <ul style="list-style-type: none"> - compare and order lengths, mass, volume/capacity and record the results using >, < and = <ul style="list-style-type: none"> • <i>Ensure that you go through the Unit Starter – go through vocabulary, structures and representations</i> • <i>Teach all lessons in the Unit (10 lessons)</i> • <i>Complete the End of Unit Check.</i> • <i>Then move onto Y3 Unit 13 below.</i> <p>Y3 Unit 13. Mass (6 Lessons)</p> <p>Measurement</p> <ul style="list-style-type: none"> - measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) <p>Y3 Unit 14. Capacity (6 Lessons)</p> <p>Measurement</p> <ul style="list-style-type: none"> - measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
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