



# Kingsland CE Primary School

## Maths Curriculum Year 3



### Yearly overview

The yearly overview provides suggested timings for each block of learning, which can be adapted to suit different term dates or other requirements.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number <b>Place value</b>			Number <b>Addition and subtraction</b>				Number <b>Multiplication and division A</b>				
Spring	Number <b>Multiplication and division B</b>			Measurement <b>Length and perimeter</b>			Number <b>Fractions A</b>		Measurement <b>Mass and capacity</b>			
Summer	Number <b>Fractions B</b>		Measurement <b>Money</b>	Measurement <b>Time</b>			Geometry <b>Shape</b>		Statistics		Consolidation	

## Autumn Term Weeks 1 – 3

### Place value

#### [Y3 Autumn Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p><a href="#">Composition and calculation: 100 and bridging 100   NCETM</a></p> <p><b>1.17 Composition and calculation: 100 and bridging 100</b> Explore the additive and multiplicative composition of 100; draw on known strategies and number facts to calculate across the 100 boundary.</p> <ul style="list-style-type: none"> <li><b>Teaching point 1:</b> There are ten tens in 100; there are 100 ones in 100. 100 can also be composed multiplicatively from 50, 25 or 20, units that are commonly used in graphing and measures.</li> <li><b>Teaching point 2:</b> Known addition facts can be used to calculate complements to 100.</li> <li><b>Teaching point 3:</b> Known strategies for addition and subtraction across the tens boundary can be combined with unitising to count and calculate across the hundreds boundary in multiples of ten.</li> <li><b>Teaching point 4:</b> Knowledge of two-digit numbers can be extended to count and calculate across the hundreds boundary from/to any two-digit number in ones or tens.</li> </ul>	<p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p>	<p>They use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, <math>146 = 100 + 40</math> and <math>6</math>, <math>146 = 130 + 16</math>).</p> <p>Using a variety of representations, including those related to measure, pupils continue to count in ones, tens and hundreds, so that they become fluent in the order and place value of numbers to 1000</p>	<p><a href="#">Which Scripts?</a></p> <p><a href="#">Coded hundred square</a></p>	<p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10.</p> <p>3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>3NPV-3 Reason about the location of any three digit number in the linear number system,</p>
<p><a href="#">Composition and calculation: three-digit numbers   NCETM</a></p> <p><b>1.18 Composition and calculation: three-digit numbers</b> Explore the composition of three-digit numbers; use place-value and partitioning knowledge to support additive calculation, and extend known additive strategies to three-digit numbers.</p> <ul style="list-style-type: none"> <li><b>Teaching point 1:</b> Three-digit numbers can be composed additively from hundreds, tens and ones; this structure can be used to support additive calculation.</li> <li><b>Teaching point 2:</b> Each number on the 0 to 1,000 number line has a unique position.</li> <li><b>Teaching point 3:</b> The smallest three-digit number is 100, and the largest three-digit number is 999; the relative size of two</li> </ul>	<p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>Compare and order numbers up to 1000</p> <p>Identify, represent and estimate numbers using different representations</p>	<p>They use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, <math>146 = 100 + 40</math> and <math>6</math>, <math>146 = 130 + 16</math>).</p> <p>Using a variety of representations, including those related to measure, pupils continue to count in ones, tens and hundreds, so that they become fluent in the</p>	<p><a href="#">Which Scripts?</a></p> <p><a href="#">Coded hundred square</a></p>	<p>3NPV-3 Reason about the location of any three digit number in the linear number system,</p>

<p>three-digit numbers can be determined by examining the hundreds digits, then the tens digits, and then the ones digits, as necessary.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 4:</b> Three-digit multiples of ten can be expressed multiplicatively and additively, in terms of tens or hundreds.</li> <li>• <b>Teaching point 5:</b> Known facts and strategies for addition and subtraction within and across ten, and within and across 100, can be used to support additive calculation within 1,000.</li> <li>• <b>Teaching point 6:</b> Familiar counting sequences can be extended up to 1,000</li> </ul>	<p>Read and write numbers up to 1000 in numerals and in words</p>	<p>order and place value of numbers to 1000</p>	<p>including identifying the previous and next multiple of 100 and 10.</p>
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## Autumn Term Weeks 4 – 8 (\*Flexible timings)

### Addition and Subtraction

#### Y3 Autumn Term Scheme of Learning.pdf

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p><a href="#">Securing mental strategies: calculation up to 999   NCETM</a></p> <p><b>1.19 Securing mental strategies: calculation up to 999</b></p> <p>Build on segments 1.15 and 1.16 to equip children with useful calculation strategies for bridging hundreds boundaries, and three-digit numbers; continue to use the partitioning structure to facilitate calculation.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> Known partitioning strategies for adding two-digit numbers within 100 can be extended to the mental addition of two-digit numbers that bridge 100, and addition of three-digit numbers.</li> <li>• <b>Teaching point 2:</b> Transforming addition calculations into equivalent calculations can support efficient mental strategies.</li> <li>• <b>Teaching point 3:</b> Subtraction calculations can be solved using a ‘finding the difference’ strategy; this can be thought of as ‘adding on’ to find a missing part.</li> </ul>	<p>Add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> <li>○ a three-digit number and ones</li> <li>○ a three-digit number and tens</li> <li>○ a three-digit number and hundreds</li> </ul> <p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>Estimate the answer to a calculation and use inverse operations to check answers</p>	<p>Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100.</p> <p>Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent</p>	<p><a href="#">Domino Square</a></p> <p><a href="#">Got It</a></p> <p><a href="#">Play to 37</a></p> <p><a href="#">Consecutive Numbers</a></p> <p><a href="#">Strike it Out</a></p> <p><a href="#">4 Dom</a></p>	<p>3NF-1</p> <p>Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p> <p>3NF-3</p> <p>Apply place-value knowledge to known additive and multiplicative</p>

<ul style="list-style-type: none"> <li>• <b>Teaching point 4:</b> The order of addition and subtraction steps in a multi-step calculation can be chosen or manipulated such as to simplify the arithmetic.</li> </ul>	<p>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>			<p>number facts (scaling facts by 10).</p> <p>3AS-1 Calculate complements to 100.</p>
<p><b>Algorithms: column addition   NCETM</b></p> <p><b>1.20 Algorithms: column addition</b> Introduce children to the column algorithm for addition calculations, applying the algorithm to a variety of aggregation and augmentation contexts for two-digit and three-digit numbers; explore regrouping (column total is ten or greater) in detail.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> Any numbers can be added together using an algorithm called '<i>column addition</i>'.</li> <li>• <b>Teaching point 2:</b> The digits of the addends must be aligned correctly before the algorithm is applied.</li> <li>• <b>Teaching point 3:</b> In column addition, the digits of the addends are added working from the least significant digit (on the right) to the most significant digit (on the left).</li> <li>• <b>Teaching point 4:</b> If any column sums to ten or greater, we must '<i>regroup</i>'.</li> <li>• <b>Teaching point 5:</b> The numbers within each column should be added in the most efficient order.</li> </ul>	<p>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 objects</p> <p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>Estimate the answer to a calculation and use inverse operations to check answers</p>	<p>Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100.</p> <p>Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent</p>	<p><a href="#">Buying a Balloon</a></p> <p><a href="#">Super Shapes</a></p> <p><a href="#">A Mixed-up Clock</a></p> <p><a href="#">Finding Fifteen</a></p> <p><a href="#">Dice in a Corner</a></p> <p><a href="#">Build it up</a></p>	<p>3AS-2</p> <p>Add and subtract up to three-digit numbers using columnar methods.</p> <p>3AS-3</p> <p>Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the</p>
<p><b>Algorithms: column subtraction   NCETM</b></p> <p><b>1.21 Algorithms: column subtraction</b> Introduce children to the column algorithm for subtraction calculations, applying the algorithm to a variety of partitioning, reduction and difference contexts for two-digit and three-digit numbers; explore exchange (insufficient quantity to subtract from in a column) in detail.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> One number can be subtracted from another using an algorithm called '<i>column subtraction</i>'; the digits of the</li> </ul>	<p>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 objects</p>	<p>Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100.</p> <p>Pupils use their understanding of place value and partitioning, and</p>	<p><a href="#">Buying a Balloon</a></p> <p><a href="#">Super Shapes</a></p> <p><a href="#">A Mixed-up Clock</a></p> <p><a href="#">Finding Fifteen</a></p>	<p>part-part-whole structure. Understand and use the commutative property of addition, and understand the related</p>

<p>minuend and subtrahend must be aligned correctly; the algorithm is applied working from the least significant digit (on the right) to the most significant digit (on the left).</p> <ul style="list-style-type: none"> <li><b>Teaching point 2:</b> If there is an insufficient number of any unit to subtract from in a given column, we must exchange from the column to the left.</li> </ul>	<p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>Estimate the answer to a calculation and use inverse operations to check answers</p>	<p>practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent</p>	<p><a href="#">Dice in a Corner</a></p> <p><a href="#">Build it up</a></p>	<p>property for subtraction.</p>
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## Autumn Term Weeks 9 – 12

### Multiplication and Division A

#### [Y3 Autumn Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p><i>The conceptual foundations for multiplication and division are introduced in Year 2, to and you may wish to review the key concepts of unitising, repeated addition, and equal grouping in segments 2.2-2.6 before starting the Year 3 Spine 2 segment.</i></p> <p><i>Segment 2.7-2.9 focus on developing conceptual understanding of the times tables. It is also crucial, and regular practice should be undertaken outside the main maths lesson to achieve this. Spine two segments have been distributed throughout the year, to allow children to achieve fluency in each set of times table facts before moving on, and to prepare for the next set of times tables by practising skip counting in the relevant multiples. Note that, for each set up, corresponding division facts and calculations are embedded within each segment.</i></p>				
<p><a href="#">Times tables: 2, 4 and 8, and the relationship between them   NCETM</a></p> <p><b>2.7 Times tables: 2, 4 and 8, and the relationship between them</b> Build up the four/eight times table; using different structures/interpretations of multiplication and division, solve problems related to these tables; explore connections between the two, four and eight times tables.</p> <ul style="list-style-type: none"> <li><b>Teaching point 1:</b> Counting in multiples of four can be represented by the four times table. Adjacent multiples of four have a difference of four. Facts from the four times table can be used to solve multiplication and division problems with different structures.</li> </ul>	<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>Write and calculate mathematical statements for multiplication and division</p>	<p>Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100.</p> <p>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables.</p> <p>Pupils develop efficient mental methods, for example, using commutativity and associativity</p>	<p><a href="#">Ordering cards</a></p> <p><a href="#">Music to my Ears</a></p> <p><a href="#">Which symbol?</a></p>	<p>3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication</p>

<ul style="list-style-type: none"> <li>• <b>Teaching point 2:</b> Products in the four times table are double the products in the two times table; products in the two times table are half of the products in the four times table.</li> <li>• <b>Teaching point 3:</b> Counting in multiples of eight can be represented by the eight times table. Adjacent multiples of eight have a difference of eight. Facts from the eight times table can be used to solve multiplication and division problems with different structures.</li> <li>• <b>Teaching point 4:</b> Products in the eight times table are double the products in the four times table; products in the four times table are half of the products in the eight times table. Products that are in the two, four and eight times tables share the same factors.</li> <li>• <b>Teaching point 5:</b> Divisibility rules can be used to find out whether a given number is divisible (to give a whole number) by two, four or eight.</li> </ul>	<p>using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</p> <p>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>	<p>(for example, <math>4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12 = 240</math>) and multiplication and division facts (for example, using <math>3 \times 2 = 6</math>, <math>6 \div 3 = 2</math> and <math>2 = 6 \div 3</math>) to derive related facts (for example, <math>30 \times 2 = 60</math>, <math>60 \div 3 = 20</math> and <math>20 = 60 \div 3</math>).</p> <p>Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division.</p> <p>Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).</p>		<p>tables as multiples of the corresponding number.</p> <p>3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p> <p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>
<p><b><u><a href="#">Times tables: 3, 6 and 9, and the relationship between them   NCETM</a></u></b></p> <p><b>2.8 Times tables 3, 6 and 9, and the relationship between them</b> Build up the three/six/nine times table; using different structures/interpretations of multiplication and division, solve problems related to these tables; explore connections between the three, six and nine times tables.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> Counting in multiples of three can be represented by the three times table. Adjacent multiples of three have a difference of three. Facts from the three times table can be used to solve multiplication and division problems with different structures.</li> <li>• <b>Teaching point 2:</b> Counting in multiples of six can be represented by the six times table. Adjacent multiples of six have a difference of six. Facts from the six times table can be used to solve multiplication and division problems with different structures.</li> <li>• <b>Teaching point 3:</b> Products in the six times table are double the products in the three times table; products in the three times table are half of the products in the six times table.</li> <li>• <b>Teaching point 4:</b> Counting in multiples of nine can be represented by the nine times table. Adjacent multiples of nine</li> </ul>			<p><a href="#">Journeys in Numberland</a></p> <p><a href="#">Follow the numbers</a></p> <p><a href="#">A Square of Numbers</a></p> <p><a href="#">What's in the Box?</a></p> <p><a href="#">What Do you Need?</a></p> <p><a href="#">How do you do it?</a></p> <p><a href="#">This Pied Piper of Hamelin</a></p>	

<p>have a difference of nine. Facts from the nine times table can be used to solve multiplication and division problems with different structures.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 5:</b> Products in the nine times table are triple the products in the three times table. Products that are in the three, six and nine times tables share the same factors.</li> <li>• <b>Teaching point 6:</b> Divisibility rules can be used to find out whether a given number is divisible (to give a whole number) by three, six or nine.</li> </ul>			
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*Segment 2.9 could be sequenced at the **end** of the year so the children have plenty of opportunity to build in individual times tables before reviewing patterns across times tables.*

<p><b><u>Times tables: 7 and patterns within/across times tables   NCETM</u></b></p> <p><b>2.9 Times tables: 7 and patterns within/across times tables</b> Build up the seven times table and solve associated multiplication and division problems; explore times table patterns including generalising about the product in terms of odd/even factors, reviewing divisibility rules, and exploring square numbers.</p> <p><b>Teaching point 1:</b> Counting in multiples of seven can be represented by the seven times table. Adjacent multiples of seven have a difference of seven. Facts from the seven times table can be used to solve multiplication and division problems with different structures.</p> <p><b>Teaching point 2:</b> When both factors are odd numbers, the product is an odd number; when one factor is an odd number and the other is an even number, the product is an even number; when both factors are even numbers, the product is an even number.</p> <p><b>Teaching point 3:</b> When both factors have the same value, the product is called a square number; square numbers can be represented by objects arranged in square arrays.</p> <p><b>Teaching point 4:</b> Divisibility rules can be used to find out whether a given number is divisible (to give a whole number) by particular divisors</p>	<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>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</p> <p>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>	<p>Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100.</p> <p>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables.</p> <p>Pupils develop efficient mental methods, for example, using commutativity and associativity (for example, <math>4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12 = 240</math>) and multiplication and division facts (for example, using <math>3 \times 2 = 6</math>, <math>6 \div 3 = 2</math> and <math>2 = 6 \div 3</math>) to derive related facts (for example, <math>30 \times 2 = 60</math>, <math>60 \div 3 = 20</math> and <math>20 = 60 \div 3</math>).</p> <p>Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division.</p>	<p>3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.</p> <p>3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p>
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		<p>Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).</p>	<p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>
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**End of term assessment**

## Spring Term Weeks 1 – 3

### Multiplication and Division B

[Y3 Spring Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p>N/A</p> <p>This White Rose unit focuses on formal algorithms for multiplication and Division.</p> <p>Throughout this unit, children should:</p> <ul style="list-style-type: none"> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables.</li> <li>Pupils develop efficient mental methods, for example, using commutativity and associativity (for example, <math>4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12 = 240</math>) and multiplication and division facts (for example, using <math>3 \times 2 = 6</math>, <math>6 \div 3 = 2</math> and <math>2 = 6 \div 3</math>) to derive related facts (for example, <math>30 \times 2 = 60</math>, <math>60 \div 3 = 20</math> and <math>20 = 60 \div 3</math>).</li> </ul>	<p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods</p> <p>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>	<p>Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division.</p> <p>Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).</p>		<p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p> <p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>

## Spring Term Weeks 4 – 6

### Measurement – Length and Perimeter

[Y3 Spring Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	<p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>Measure the perimeter of simple 2-D shapes</p>	<p>Pupils 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).</p> <p>The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or five times as high) and this connects to multiplication.</p>		<p>3NPV-4</p> <p>Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>

## Spring Term Weeks 7 – 9

### Fractions A

[Y3 Spring Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p><a href="#">Preparing for fractions: the part-whole relationship   NCETM</a></p> <p><b>3.1 Preparing for fractions: the part-whole relationship</b></p> <p>Identify parts and wholes of areas, lengths and sets. Identify equal and unequal parts; make judgements about the relative size of a</p>	<p>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</p>	<p>Pupils connect tenths to place value, decimal measures and to division by 10.</p>	<p><a href="#">Fraction Match</a></p>	<p>3F-1</p> <p>Interpret and write proper fractions to represent 1 or</p>

<p>part to a whole. Find the whole when the size of a part and number of equal parts is known.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> Any element of a whole is a part; if a whole is defined, then a part of this whole can be defined.</li> <li>• <b>Teaching point 2:</b> A whole can be divided into equal parts or unequal parts.</li> <li>• <b>Teaching point 3:</b> The relative size of parts can be compared.</li> <li>• <b>Teaching point 4:</b> If one of the equal parts and the number of equal parts are known, these can be used to construct the whole.</li> </ul>	<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p>	<p>They begin to understand unit and non-unit fractions as numbers on the number line, and deduce relations between them, such as size and equivalence. They should go beyond the [0, 1] interval, including relating this to measure.</p> <p>Pupils understand the relation between unit fractions as operators (fractions of), and division by integers.</p>		<p>several parts of a whole that is divided into equal parts.</p> <p>3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency).</p>
<p><a href="#">Unit fractions: identifying, representing and comparing   NCETM</a></p> <p><b>3.2 Unit fractions: identifying, representing and comparing</b> Learn to name and write unit fractions. Recognise and show unit fractions of areas, lengths and quantities. Relate numerators and denominators to parts and wholes; explore how the greater the denominators, the smaller the unit fraction.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> A whole can be divided into any number of equal parts.</li> <li>• <b>Teaching point 2:</b> Fraction notation can be used to describe an equal part of the whole. One equal part of a whole is called a unit fraction. Each unit fraction has a name.</li> <li>• <b>Teaching point 3:</b> Fractional notation can be applied to represent one part of a whole in different contexts.</li> <li>• <b>Teaching point 4:</b> Equal parts do not need to look the same.</li> <li>• <b>Teaching point 5:</b> Unit fractions can be compared and ordered by looking at the denominator. The greater the denominator, the smaller the fraction.</li> <li>• <b>Teaching point 6:</b> If the size of a unit fraction is known, the size of the whole can be worked out by repeated addition of that unit fraction.</li> </ul>	<p>Recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>Add and subtract fractions with the same denominator within one whole [for example, <math>5/7 + 1/7 = 6/7</math>]</p> <p>Compare and order unit fractions, and fractions with the same denominators</p> <p>Solve problems that involve all of the above.</p>	<p>They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity.</p> <p>Pupils practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency.</p>	<p><a href="#">Matching fractions</a></p>	<p>3F–3 Reason about the location of any fraction within 1 in the linear number system.</p> <p>3F–4 Add and subtract fractions with the same denominator, within 1.</p>
<p><a href="#">Non-unit fractions: identifying, representing and comparing   NCETM</a></p> <p><b>3.3 Non-unit fractions identifying, representing and comparing</b> Learn to name and write non-unit fractions, recognising them as</p>	<p>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</p>	<p>Pupils connect tenths to place value, decimal measures and to division by 10.</p> <p>They begin to understand unit and non-unit fractions as numbers on</p>	<p><a href="#">Number Differences</a></p> <p><a href="#">Take three numbers</a></p>	<p>3F–1 Interpret and write proper fractions to represent 1 or several parts</p>

<p>multiples of unit fractions. Learn that fractions are numbers that can be positioned on a number line. Compare and order fractions with the same denominator or same numerator.</p> <p><b>Non-unit fractions</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> All non-unit fractions are made up of more than one of the same unit fraction.</li> <li>• <b>Teaching point 2:</b> Non-unit fractions are written using the same convention as unit fractions. A non-unit fraction has a numerator greater than one.</li> <li>• <b>Teaching point 3:</b> When the numerator and the denominator in a fraction are the same, the fraction is equivalent to one whole.</li> </ul> <p><b>Fractions as numbers</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching point 4:</b> All unit and non-unit fractions are numbers that can be placed on a number line.</li> <li>• <b>Teaching point 5:</b> Repeated addition of a unit fraction results in a non-unit fraction.</li> <li>• <b>Teaching point 6:</b> When the numerator and the denominator are the same, the value of the fraction is one.</li> </ul> <p><b>Comparing fractions</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching point 7:</b> Non-unit fractions with the same denominator can be compared. If the denominators are the same, then the greater the numerator, the greater the fraction.</li> <li>• <b>Teaching point 8:</b> Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction.</li> </ul>	<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>Add and subtract fractions with the same denominator within one whole [for example, <math>5/7 + 1/7 = 6/7</math>]</p> <p>Compare and order unit fractions, and fractions with the same denominators</p> <p>Solve problems that involve all of the above.</p>	<p>the number line, and deduce relations between them, such as size and equivalence. They should go beyond the <math>[0, 1]</math> interval, including relating this to measure.</p> <p>Pupils understand the relation between unit fractions as operators (fractions of), and division by integers.</p> <p>They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity.</p> <p>Pupils practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency.</p>	<p><a href="#">Magic Vs</a></p>	<p>of a whole that is divided into equal parts.</p> <p>3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency).</p> <p>3F–3 Reason about the location of any fraction within 1 in the linear number system.</p> <p>3F–4 Add and subtract fractions with the same denominator, within 1.</p>
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## Spring Term Weeks 10 – 12

### Measurement – Mass and Capacity

[Y3 Spring Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	<p>Pupils 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).</p> <p>The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or five times as high) and this connects to multiplication.</p>		<p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>

**End of term assessment**

## Summer Term Weeks 1 – 3

### Fractions B

#### Y3 Summer Term Scheme of Learning.pdf

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
<p><a href="#">Adding and subtracting within one whole   NCETM</a></p> <p><b>3.4 Adding and subtracting within one whole</b> Learn to name and write unit fractions. Recognise and show unit fractions of areas, lengths and quantities. Relate numerators and denominators to parts and wholes; explore how the greater the denominators, the smaller the unit fraction.</p> <ul style="list-style-type: none"> <li>• <b>Teaching point 1:</b> When adding fractions with the same denominators, just add the numerators.</li> <li>• <b>Teaching point 2:</b> When subtracting fractions with the same denominators, just subtract the numerators.</li> <li>• <b>Teaching point 3:</b> Addition and subtraction of fractions are the inverse of each other, just as they are for whole numbers.</li> <li>• <b>Teaching point 4:</b> To subtract from one whole, first convert the whole to a fraction where the denominator and numerator are the same</li> </ul>	<p>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</p> <p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>Recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>Add and subtract fractions with the same denominator within one whole [for example, <math>5/7 + 1/7 = 6/7</math>]</p> <p>Compare and order unit fractions, and fractions with the same denominators</p> <p>Solve problems that involve all of the above.</p>	<p>Pupils connect tenths to place value, decimal measures and to division by 10.</p> <p>They begin to understand unit and non-unit fractions as numbers on the number line, and deduce relations between them, such as size and equivalence. They should go beyond the [0, 1] interval, including relating this to measure.</p> <p>Pupils understand the relation between unit fractions as operators (fractions of), and division by integers.</p> <p>They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity.</p> <p>Pupils practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency.</p>	<p><a href="#">Number Differences</a></p> <p><a href="#">Take three numbers</a></p> <p><a href="#">Magic Vs</a></p>	<p>3F–4</p> <p>Add and subtract fractions with the same denominator, within 1.</p>

## Summer Term Weeks 3 – 4

### Measurement – Money

[Y3 Summer Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	Add and subtract amounts of money to give change, using both £ and p in practical contexts	Pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record £ and p separately. The decimal recording of money is introduced formally in year 4.	<a href="#">How Much Did it Cost?</a>	

## Summer Term Week 5 – 7

### Measurement – Time

[Y3 Summer Term Scheme of Learning.pdf](#)

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	<p>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</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year</p>	Pupils use both analogue and digital 12-hour clocks and record their times. In this way they become fluent in and prepared for using digital 24-hour clocks in year 4.	<a href="#">Watch the clock</a>  <a href="#">Wonky Watches</a>  <a href="#">5 on the clock</a>  <a href="#">How many Times?</a>  <a href="#">The time is ...</a>  <a href="#">Clocks</a>	

	Compare durations of events [for example to calculate the time taken by particular events or tasks].		<a href="#">Two Clocks</a> <a href="#">Approaching Midnight</a>	
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## Summer Term Weeks 8 – 9

### Geometry – Shape

#### Y3 Summer Term Scheme of Learning.pdf

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	<p>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>Recognise angles as a property of shape or a description of a turn</p> <p>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</p> <p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</p>	<p>Pupils' knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygons and polyhedra. Pupils extend their use of the properties of shapes. They should be able to describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle.</p> <p>Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts.</p>	<p><a href="#">Overlapping Again</a></p> <p><a href="#">Board Block Challenge</a></p> <p><a href="#">Building Blocks</a></p> <p><a href="#">A Puzzling Cube</a></p> <p><a href="#">Move those Halves</a></p> <p><a href="#">Overlaps</a></p> <p><a href="#">Triple Cubes</a></p> <p><a href="#">Square Corners</a></p> <p><a href="#">The Third Dimension</a></p> <p><a href="#">Inky Cube</a></p>	<p>3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.</p> <p>3G–2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.</p>

			<a href="#">Arranging cubes</a> <a href="#">National Flags</a>	
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## Summer Term Weeks 10 – 11

### Statistics

#### Y3 Summer Term Scheme of Learning.pdf

NCETM links	National Curriculum	National Curriculum non-statutory guidance	NRich Problem Solving	Ready to Progress
N/A	<p>Interpret and present data using bar charts, pictograms and tables</p> <p>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>	<p>Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy.</p> <p>They continue to interpret data presented in many contexts.</p>		<p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>

**End of term assessment**

## Resources:

White Rose - [My Account - Resources](#)

NCETM TfM Assessment Questions [01-Yr3\\_Front cover-ccp.indd](#)

DfE Ready to progress criteria - [Mathematics guidance: key stages 1 and 2 \(covers years 1 to 6\)](#)

NCETM Ready to Progress slides - [Exemplification of ready-to-progress criteria | NCETM](#)