

Elmtree Maths Overview - Year 2

Autumn Term

Weeks/Lessons Approximately	Area of Focus	National Curriculum	Suggested Small Steps (can be used to construct LO and SC)	Key Vocabulary – <i>In addition to the Year 1 Vocabulary</i>
Weeks 1-5 (approximately)	Place Value	<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <ul style="list-style-type: none"> <input type="checkbox"/> recognise the place value of each digit in a two-digit number (tens, ones) <input type="checkbox"/> identify, represent and estimate numbers using different representations, including the number line <input type="checkbox"/> compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs <input type="checkbox"/> read and write numbers to at least 100 in numerals and in words <input type="checkbox"/> use place value and number facts to solve problems 	<p>Numbers to 20 Count objects to 100 by making 10's.</p> <p>Recognise tens and ones. Use a place value chart. Partition numbers to 100. Flexibly partition numbers to 100. Write numbers to 100 in expanded form. Write numbers to 100 in words.</p> <p>10s on the number line to 100. 10s and 1s on the number line to 100. Estimate numbers on a number line. – return Summer 1</p> <p>Compare objects Compare numbers order objects and numbers Count in 2s, 5s and 10s Count in 3s.</p>	<p><i>Number, Zero, one, two, three, to twenty, and beyond, None, Count (on/up/to/from/down)</i> <i>Before, after, More, less, many, few, fewer, least, fewest, smallest, greater, lesser Equal to, the same as Odd, even Pair Units, ones, tens Ten more/less, Digit, Numeral, Figure(s) Compare, Size Value Between, halfway between Above, below,</i></p> <p>Number to one hundred Hundreds Partition, recombine Hundred more/less</p>

<p>Weeks 5-9 (approximately)</p>	<p>Addition and Subtraction</p>	<p>use place value and number facts to solve problems solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> □ using concrete objects and pictorial representations, including those involving numbers, quantities and measures □ applying their increasing knowledge of mental and written methods □ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 □ add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> □ a two-digit number and ones □ a two-digit number and tens □ two two-digit numbers □ adding three one-digit numbers □ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot □ recognise and use the inverse relationship between addition and subtraction and use 	<p>Bonds to 10. Fact families - addition and subtraction bonds within 20 Related facts Bonds to 100 (tens)</p> <p>Add and subtract 1s Add three 1-digit numbers Add to the next 10</p> <p>Add across a 10 Subtract across 10 Subtract from a 10 Subtract a 1-digit number from a 2-digit number (across a 10 10 more, 10 less Add and subtract 10s</p> <p>Add two 2-digit numbers (not across a 10) Subtract two 2-digit numbers (not across a 10) Mixed addition and subtraction (not across 10)</p> <p>Add two 2-digit numbers (across a 10) Subtract two 2-digit numbers (across a 10)</p>	<p><i>Number bonds, number line Add, more, plus, make, sum, total, altogether Inverse Double Half, halve, Equals, is the same as (including equals sign) Difference between How many more to make...? How many more is...than...? How much more is...? Subtract, take away, minus How many fewer is...than...? How much less is...?</i></p>
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		<p>this to check calculations and solve missing number problems.</p>	<p>Mixed addition and subtraction Compare number sentences Missing number problems – Moved to Spring term in the hope children will be more confident in the concept.</p>	
<p>Weeks 10-11 (approximately)</p>	<p>Geometry – Shape 2D and 3d</p>	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <ul style="list-style-type: none"> □ identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces □ identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] □ compare and sort common 2-D and 3-D shapes and everyday objects. 	<p>Recognise 2-D and 3-D shapes Sort 2-D shapes Count sides on 2-D shapes Count vertices on 2-D shapes</p> <p>Count faces on 3-D shapes Count edges on 3-D shapes Count vertices on 3-D shapes</p> <p>Sort 3-D shapes</p> <p>Make patterns with 2-D and 3-D shapes Draw 2-D shapes Lines of symmetry on shapes(MOVED TO END OF YEAR)</p>	<p><i>Group, sort Cube, cuboids, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, straight, round Hollow, solid Corner (point, pointed) Face, side, edge Make</i></p> <p>Size Bigger, larger, smaller Symmetrical, line of symmetry Fold Match Mirror line, reflection Pattern, repeating Pattern, vertices</p>

Week 12-13	Measure – Length, height, Capacity, Position	<p>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</p> <p>□ compare and order lengths, mass, volume/capacity and record the results using >, < and =</p>	<p>Measure in centimetres Measure in metres Compare lengths and heights Order lengths and heights Four operations with lengths and heights</p> <p>Measure in grams Measure in kilograms Four operations with mass Compare mass</p> <p>Four operations with volume and capacity Measure in litres/ml Compare volume and capacity</p> <p>MOVED TO END OF YEAR- Temperature</p>	<p><i>Far, near, close, Metre, ruler, metre stick, Length, width, height, depth Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest Low, wide, narrow, deep, Weight, mass, heavy, light, lighter, lightest, heavier, heaviest, full/empty, more than, less than, half, half full, quarter, capacity, volume, half empty,</i></p> <p>Quarter past/to m/km, g/kg, ml/l Temperature (degrees) Rotation Clockwise, Anticlockwise Straight-line Ninety-degree turn, right angle</p>
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GDS Stretch and Challenge	<p>Mathematical fluency is secure in all areas and GDS pupils are able to reason and explain mathematical concepts and procedures from their expected year group curriculum and use them to solve a variety of problems The GDS pupil can independently make links between different areas of Maths to choose the most efficient method to solve a problem often identifying and manipulating patterns. When solving a problem with more than one possible answer, a GDS pupil will work methodically, accurately and logically to ensure that they have found all the answers.</p>
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Spring Term

Topics moved to consolidate learning in preparation for end of year judgements.

<p>Weeks 1-2 (approximately)</p>	<p>Money _Moved to later in Term</p>	<ul style="list-style-type: none"> □ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value □ find different combinations of coins that equal the same amounts of money □ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 	<p>Moved to end of spring week 7</p> <ul style="list-style-type: none"> 1Count money - pence Count money - pounds (notes and coins) Count money - pounds and pence Choose notes and coins Make the same amount Compare amounts of money Calculate with money Make a pound Find change Two-step problems 	<p><i>How much?, How many? Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as</i></p>
<p>Weeks 3-6 (4 weeks)</p>	<p>Multiplication and Division</p>	<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <ul style="list-style-type: none"> □ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs 	<p>Recognise equal groups Make equal groups Add equal groups Introduce the multiplication symbol Multiplication sentences</p> <p>Use arrays Make equal groups – grouping Make equal groups – sharing</p> <p>The 2 times-table Divide by 2 Doubling and halving</p>	<p><i>Once, twice, three times. Five times. Count in tens(forwards from/ backwards from) How many times? Lots of, groups of, Multiple of, times, multiply, multiply by Repeated addition Array, row, column Group in twos, threes, Etc Divided by, left, left over</i></p>

		<ul style="list-style-type: none"> □ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot □ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 	<p>Odd and even numbers</p> <p>The 10 times-table</p> <p>Divide by 10</p> <p>The 5 times-table</p> <p>Divide by 5</p> <p>The 5 and 10 times-tables</p>	
Weeks 7 (3 weeks)	Fractions	recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{2}{4}$ and $\frac{4}{3}$ of a length, shape, set of objects or quantity ♣ write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	<p><u>MONEY</u></p> <p><u>SPRING 2</u></p> <p>Introduction to parts and whole</p> <p>Equal and unequal parts</p> <p>Recognise a half</p> <p>Find a half</p> <p>Recognise a quarter</p> <p>Find a quarter</p> <p>Recognise a third</p> <p>Find a third</p> <p>Unit fractions</p> <p>Non-unit fractions</p> <p>Recognise the equivalence of a half and two quarters</p> <p>Recognise three-quarters</p> <p>Find three-quarters</p>	<p><i>Equal parts, four equal parts</i></p> <p><i>Two halves, A quarter, two quarters</i></p> <p>Three quarters, one third, a third</p> <p>Equivalence, Equivalent, unit, non-unit fraction</p>

			Count in fractions up to a whole	
Weeks 8 (2 week)	Time	<ul style="list-style-type: none"> <input type="checkbox"/> tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times <input type="checkbox"/> know the number of minutes in an hour and the number of hours in a day <p>compare and sequence intervals of time</p>	<p>O'clock and half past</p> <p>Tell time past the hour</p> <p>Tell time to the hour</p> <p>Quarter past and quarter to</p> <p>Tell the time to 5 minutes</p> <p>Minutes in an hour</p> <p>Hours in a day</p>	<p><i>Always, never, often, sometimes, usually Once, twice First, second, third, yesterday, tomorrow, morning, afternoon, evening, . Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, January, February, march, April, May, June, July, August, September, October, November, December.</i></p> <p><i>O'clock, half past. Hour hand, minute hand, seconds, slower, quicker, earlier, later,</i></p> <p>Quarter to, quarter past, 5 to, 5 past, 15 minutes, 30 minutes, 45 minutes.</p>
Weeks 9 (2 weeks)	Statistics	<p>interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <ul style="list-style-type: none"> <input type="checkbox"/> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <input type="checkbox"/> ask and answer questions about totalling and comparing categorical data 	<p>Make tally charts</p> <p>Tables</p> <p>Block diagrams</p> <p>Draw pictograms (1-1)</p> <p>Interpret pictograms (1-1)</p> <p>Draw pictograms (2, 5 and 10)</p> <p>Interpret pictograms (2, 5 and 10)</p>	<p>Count, tally, sort</p> <p>Vote</p> <p>Graph, block graph, pictogram</p> <p>Represent</p> <p>Group, set, list, table</p> <p>Label, title</p> <p>Most popular, most common, least popular, least common</p>
Weeks 10-11	Addition and Subtraction	solve problems with addition and subtraction:	<p>Add to the next 10</p> <p>Add across a 10</p> <p>Subtract across 10</p> <p>Subtract from a 10</p>	

		<ul style="list-style-type: none"> □ using concrete objects and pictorial representations, including those involving numbers, quantities and measures □ applying their increasing knowledge of mental and written methods □ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 □ add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> □ a two-digit number and ones □ a two-digit number and tens □ two two-digit numbers □ adding three one-digit numbers □ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot □ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. 	<p>Subtract a 1-digit number from a 2-digit number (across a 10 10 more, 10 less Add and subtract 10s Add two 2-digit numbers (not across a 10) Add two 2-digit numbers (across a 10) Subtract two 2-digit numbers (not across a 10) Subtract two 2-digit numbers (across a 10) Mixed addition and subtraction Compare number sentences Missing number problems</p>	
GDS Stretch	Mathematical fluency is secure in all areas and GDS pupils are able to reason and explain mathematical concepts and procedures from their expected year			

and Challenge group curriculum and use them to solve a variety of problems The GDS pupil can independently make links between different areas of Maths to choose the most efficient method to solve a problem often identifying and manipulating patterns. When solving a problem with more than one possible answer, a GDS pupil will work methodically, accurately and logically to ensure that they have found all the answers.

Summer Term

<p>Weeks 1 (2 lessons)</p>	<p>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 anticlockwise). 	<p>Language of position Describe movement Describe turns Describe movement and turns Shape patterns with turns</p>	<p>Rotation Clockwise, Anticlockwise Straight line Ninety degree turn, right angle</p>
<p>Weeks 2-3 (5 Lessons)</p>	<p>Length, Weight and Height</p>	<p>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</p> <ul style="list-style-type: none"> □ compare and order lengths, mass, volume/capacity and record the results using >, <, and = □ compare and sequence intervals of time 	<p>Measure in centimetres Measure in metres Compare lengths and heights Order lengths and heights Four operations with lengths and heights</p> <p>Compare mass Measure in grams Measure in kilograms Four operations with mass</p>	<p><i>Far, near, close, Metre, ruler, metre stick, Length, width, height, depth Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest Low, wide, narrow, deep,</i> Quarter past/to m/km, g/kg, ml/l Temperature (degrees)</p>

			<p>Compare volume and capacity</p> <p>Measure in millilitres</p> <p>Measure in litres</p> <p>Four operations with volume and capacity</p> <p>Temperature</p>	
Weeks 4-5 (2 lessons)	Statistics	<p>interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <ul style="list-style-type: none"> □ 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 	<p>Make tally charts</p> <p>Tables</p> <p>Block diagrams</p> <p>Draw pictograms (1-1)</p> <p>Interpret pictograms (1-1)</p> <p>Draw pictograms (2, 5 and 10)</p> <p>Interpret pictograms (2, 5 and 10)</p>	<p>Count, tally, sort</p> <p>Vote</p> <p>Graph, block graph, pictogram</p> <p>Represent</p> <p>Group, set, list, table</p> <p>Label, title</p> <p>Most popular, most common, least popular, least common</p>
Week 6 (3 lessons)	Time	<ul style="list-style-type: none"> □ tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times □ know the number of minutes in an hour and the number of hours in a day 	<p>O'clock and half past</p> <p>Quarter past and quarter to</p> <p>Tell time past the hour</p> <p>Tell time to the hour</p> <p>Tell the time to 5 minutes</p> <p>Minutes in an hour</p> <p>Hours in a day</p>	<p><i>Always, never, often, sometimes, usually Once, twice First, second, third, yesterday, tomorrow, morning, afternoon, evening, . Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, January, February, march, April, May, June, July, August, September, October, November, December.</i></p> <p><i>O'clock, half past. Hour hand, minute hand, seconds, slower, quicker, earlier, later,</i></p>

				Quarter to, quarter past, 5 to, 5 past, 15 minutes, 30 minutes, 45 minutes.
Week 7-8 (5 lessons) Week 1	Money	<p>recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</p> <ul style="list-style-type: none"> □ find different combinations of coins that equal the same amounts of money □ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 	<p>Count money - pence Count money - pounds (notes and coins) Count money - pounds and pence Choose notes and coins</p> <p>Make the same amount Compare amounts of money Calculate with money Make a pound Find change</p> <p>Two-step problems</p>	<p><i>How much?, How many? Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as</i></p>
Week 9-12 (10/13 lessons)	Addition and Subtraction Multiplication and Division	<p>use place value and number facts to solve problems</p> <p>solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> □ using concrete objects and pictorial representations, including those involving numbers, quantities and measures □ applying their increasing knowledge of mental and written methods 	<p>Fact families - addition and subtraction bonds within 20 Related facts Bonds to 100 (tens) Add and subtract 1s Add by making 10 Add three 1-digit numbers Add to the next 10 Add across a 10 Subtract across 10 Subtract from a 10</p>	<p><i>Once, twice, three times. Five times. Count in tens(forwards from/ backwards from) How many times? Lots of, groups of, Multiple of, times, multiply, multiply by Repeated addition Array, row, column Group in twos, threes, Etc Divided by, left, left Over</i></p> <p>Number bonds, number line Add, more, plus, make, sum, total, altogether Inverse</p>

- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
 - show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
 - recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

- calculate mathematical statements for multiplication and division within the multiplication

Subtract a 1-digit number from a 2-digit number (across a 10
10 more, 10 less
Add and subtract 10s
Add two 2-digit numbers (not across a 10)
Add two 2-digit numbers (across a 10)
Subtract two 2-digit numbers (not across a 10)
Subtract two 2-digit numbers (across a 10)
Mixed addition and subtraction
Compare number sentences
Missing number problems
Recognise equal groups
Make equal groups
Add equal groups
Introduce the multiplication symbol
Multiplication sentences
Use arrays
Make equal groups – grouping
Make equal groups – sharing
The 2 times-table
Divide by 2
Doubling and halving
Odd and even numbers
The 10 times-table

Double Half, halve, Equals, is the same as (including equals sign)
Difference between How many more to make...?
How many more is...than...? How much more is...? Subtract, take away, minus How many fewer is...than...? How much less is...?

		<p>tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <ul style="list-style-type: none"> □ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot □ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. <p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p>		
<p>GDS Stretch and Challenge</p>	<p>Mathematical fluency is secure in all areas and GDS pupils are able to reason and explain mathematical concepts and procedures from their expected year group curriculum and use them to solve a variety of problems The GDS pupil can independently make links between different areas of Maths to choose the most efficient method to solve a problem often identifying and manipulating patterns. When solving a problem with more than one possible answer, a GDS pupil will work methodically, accurately and logically to ensure that they have found all the answers.</p>			