

Maths medium term plan: autumn term

Year 2

Mental Maths objectives to be covered:

Number objectives should be covered at least 5 times a term.

Measurement/ geometry objectives should be covered at least 3 times a term.

Number - Number and place value:

Count forwards and backwards in steps of 1, 2 and 5 from 0 up to 100.

Count forward and backwards in tens from any number.

Read and write numbers to at least 100 in numerals and words.

Say that a number is 10 more/ less than any two-digit number.

Order 2 digit numbers and position them on a number line.

Number – Addition and Subtraction:

Recall and use addition and subtraction facts to 20 fluently, derive and use related facts up to 100.

Add three one-digit numbers mentally.

Number – Multiplication and division:

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.

Recognise odd and even numbers

Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves.

Measurement:

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 amount of money.

Compare and sequence intervals of time

Tell and write the time to five minutes, including quarter past/ to the hour.

Geometry – Properties of shape

Visualise and name all 2D and 3D shapes.

Year Two Medium Term Plan Term One

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives
Week 1	Order Numbers to 100 Place Value Number facts to 20 (Addition) Counting on and back in tens	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems.	<p><u>Spot the mistake:</u> 45,40,35,25 What is wrong with this sequence of numbers?</p> <p><u>True or False?</u> I start at 3 and count in threes. I will say 13?</p> <p><u>What comes next?</u> 41+5=46 46+5=51 51+5=56</p> <p><u>Do, then explain</u> 37 13 73 33 3 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers.</p> <p><u>Do, then explain</u> Show the value of the digit 2 in these numbers? 32 27 92 Explain how you know.</p> <p><u>Make up an example</u> Create numbers where the units digit is one less than the tens digit. What is the largest/smallest number?</p>	Can I mark two-digit numbers on a beaded line, then landmarked line (labelled in tens)? Can I order numbers to 100, compare two numbers, say which is more or less? Can I say a number between any given neighbouring pairs of multiples of ten (e.g. 40 and 50)? Can I count on in tens from single and two-digit numbers and back again? Can I make a sensible estimate up to 100 (e.g. choosing from 10, 20, 50 or 100)? Can I show two-digit numbers on a bead string and write the corresponding addition (e.g. 26 = 20 + 6)? Can I partition two-digit numbers into multiples of ten and one? Can I use place value to add and subtract (e.g. 30 + 4, 53 - 3)?

<p>Week 2</p>	<p>Order Numbers to 100 Place Value Number facts to 20 Counting on and back in tens</p>	<p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p> <p>Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs</p> <p>Read and write numbers to at least 100 in numerals and in words</p> <p>Use place value and number facts to solve problems.</p>	<p><u>Spot the mistake:</u> 45,40,35,25 What is wrong with this sequence of numbers?</p> <p><u>True or False?</u> I start at 3 and count in threes. I will say 13?</p> <p><u>What comes next?</u> 41+5=46 46+5=51 51+5=56</p> <p><u>Do, then explain</u> 37 13 73 33 3 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers.</p> <p><u>Do, then explain</u> Show the value of the digit 2 in these numbers? 32 27 92 Explain how you know.</p> <p><u>Make up an example</u> Create numbers where the units digit is one less than the tens digit. What is the largest/smallest number?</p>	<p>Can I partition all numbers to 10, then 20 into pairs, record related addition sentences and find corresponding subtraction facts?</p> <p>Can I use the $=$ sign to represent equality (e.g. $6 + 4 = 7 + 3$)?</p> <p>Can I recognise the use of a symbol such as \blacksquare to represent an unknown?</p> <p>Can I count on in tens from any single-digit number then any number, and back again?</p> <p>Can I relate counting on/back in tens to finding 10 more/less?</p>
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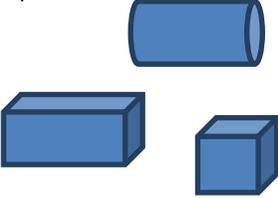
Week 3	Money Time	<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</p> <p>Find different combinations of coins that equal the same amounts of money</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>Compare and sequence intervals of time</p> <p>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</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p>	<p>Undoing</p> <p>The film finishes two hours after it starts. It finishes at 4.30. What time did it start?</p> <p>Draw the clock at the start and the finish of the film.</p>	<p>Can I recognise all coins?</p> <p>Can I find the total value of two coins?</p> <p>Can I find totals up to 20p (including adding more than two amounts using number facts to help)?</p> <p>Can I find change from 20p?</p> <p>Can I find all possibilities by making an ordered list?</p> <p>Can I read the time to the quarter of an hour on digital and analogue clocks?</p> <p>Can I begin to identify time intervals?</p>
Week 4	Length Position Direction	<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>Application (Practical)</p> <p>Draw two lines whose lengths differ by 4cm.</p> <p>Top tips</p> <p>Put these measurements in order starting with the smallest.</p> <p>75 grammes 85 grammes 100 grammes</p> <p>Explain your thinking</p> <p>Position the symbols</p> <p>Place the correct symbol between the measurements > or <</p> <p>36cm <input type="checkbox"/> 63cm 130ml <input type="checkbox"/> 103ml</p> <p>Explain your thinking</p>	<p>Can I measure the length of objects using standard units (dm, cm and m)?</p> <p>Can I identify left and right?</p> <p>Can I recognise whole, half and quarter turns, both clockwise and anticlockwise?</p> <p>Can I recognise that a right angle is a quarter turn?</p>

<p>Week 5</p>	<p>Compliments to ten Addition and Subtraction of money</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p>	<p><u>Continue the pattern</u> $90 = 100 - 10$ $80 = 100 - 20$ Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>Other possibilities</u> $\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p><u>Fact families</u> Which four number sentences link these numbers? 100, 67, 33</p> <p><u>What else do you know?</u> If you know this: $87 = 100 - 13$ what other facts do you know?</p>	<p>Can I use pairs to ten to find the complement to the next multiple of ten?</p> <p>Can I find change from 20p?</p> <p>Can I add and subtract 10, 11 and 20 in the context of money?</p>
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<p>Week 6</p>	<p>Count in twos Count in tens Fractions</p>	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>Missing numbers $10 = 5 \times \square$ What number could be written in the box?</p> <p>Making links I have 30p in my pocket in 5p coins. How many coins do I have?</p> <p>Making links Write the multiplication number sentences to describe this array</p> <table border="1" data-bbox="1055 459 1368 539"> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </table> <p>What do you notice?</p> <p>Prove It Which four number sentences link these numbers? 3, 5, 15? Prove it.</p> <p>True or false? When you count up in tens starting at 5 there will always be 5 units.</p>	X	X	X	X	X	X	<p>Can I count in 10s from any number?</p> <p>Can I recognise multiples of 10?</p> <p>Can I begin to use multiplication?</p> <p>Can I count in 2s?</p> <p>Can I recognise odd and even numbers?</p> <p>Can I find halves and quarters of shapes?</p>
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X	X	X								

<p>Week 7</p>	<p>Doubling Halving Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Continue the pattern</u> $90 = 100 - 10$ $80 = 100 - 20$ Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>What else do you know?</u> If you know this: $87 = 100 - 13$ what other facts do you know?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60</p>	<p>Can I find doubles to double 20? Can I find corresponding halves? Can I add and subtract 10, 20, 11 and 21?</p>
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Week 8	2D shape	<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</p> <p>Compare and sort common 2-D and 3-D shapes and everyday objects.</p> <p>Order and arrange combinations of mathematical objects in patterns and sequences</p> <p>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).</p>	<p><u>What's the same, what's different?</u> Pick up and look at these 3-D shapes.</p>  <p>Do they all have straight edges and flat faces? What is the same and what is different about these shapes?</p> <p><u>Visualising</u> In your head picture a rectangle that is twice as long as it is wide. What could its measurements be?</p> <p><u>Always, sometimes, never</u> Is it always, sometimes or never true that when you fold a square in half you get a rectangle.</p> <p><u>Other possibilities</u> Can you find shapes that can go with the set with this label?</p> <p><u>Working backwards</u> If I face forwards and turn three quarter turns clockwise then a quarter turn anti-clockwise describe my finishing position.</p> <p><u>What comes next?</u>  Explain why</p>	<p>Can I recognise common 2D shapes, identify from pictures in different positions and orientations?</p> <p>Can I draw, sort and describe 2D shapes?</p> <p>Can I understand symmetry?</p> <p>Can I understand right angles ('square' corners)?</p>
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<p>Week 9</p>	<p>Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Convince me</u> What digits could go in the boxes? $7 \square - 2 \square = 46$ Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p>	<p>Do I know pairs with a total of 20</p> <p>Can I derive the subtraction facts for numbers that total twenty?</p> <p>Can I recognise the use of a symbol such as \square to represent an unknown?</p> <p>Can I add a single digit to a 2-digit number not crossing 10s using number facts and pattern?</p> <p>Can I subtract a single digit from a 2-digit number not crossing 10s using number facts and pattern?</p> <p>Can I add a single digit to a 2-digit number by bridging multiples of ten using knowledge of pairs to ten & place value?</p> <p>Can I subtract a single digit from a 2-digit number by bridging multiples of ten using knowledge of pairs to ten & place value?</p>
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<p>Week 10</p>	<p>Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Hard and easy questions</u> Which questions are easy / hard? 23 + 10 = 93 + 10 = 54 + 9 = 54 + 1 = Explain why you think the hard questions are hard?</p> <p><u>Other possibilities</u>  +  +  = 14 What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p><u>Fact families</u> Which four number sentences link these numbers? 100, 67, 33</p> <p><u>What else do you know?</u> If you know this: 87 = 100 - 13 what other facts do you know?</p> <p><u>Convince me</u> What digits could go in the boxes? 7  - 2  = 46 Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 74 - 13 55 + 17 87 - 34</p> <p><u>Always, sometimes, never</u> Is it always, sometimes or never true that if you add three numbers less than 10 the answer will be an odd number</p>	<p>Can I add 20, 30, 40, 50 to two-digit numbers (answer less than 100)?</p> <p>Can I subtract 20, 30, 40, 50 from two-digit numbers (answer less than 100)?</p> <p>Can I add 11, 12, 13, 21, 22, 23, 31, 32 and 33 to two-digit numbers (answer less than 100)?</p> <p>Can I begin to subtract 11, 12, 21 and 22 from two-digit numbers?</p>
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<p>Week 11</p>	<p>Addition</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Continue the pattern</u> $90 = 100 - 10$ $80 = 100 - 20$ Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>What else do you know?</u> If you know this: $87 = 100 - 13$ what other facts do you know?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Convince me</u> What digits could go in the boxes? $7 \square - 2 \square = 46$ Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p>	<p>Can I add two-digit numbers by counting on in 10s and 1s?</p> <p>Can I add near multiples of 10 by adding 10s and adjusting?</p> <p>Can I identify and test patterns?</p>
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Maths medium term plan: spring term Year 2

Mental Maths objectives to be covered:

Number - Number and place value:

Count forwards and backwards in steps of 2, 3 and 5 from 0 up to 100.

Count forward and backwards in tens from any number.

Read and write numbers to at least 100 in numerals and words.

Partition two digit numbers in different ways, including into multiples of 10 and 1

Use the greater than, less than and equals sign to order numbers/ compare number sentences.

Number – Addition and Subtraction:

Recall and use all addition and subtraction facts for each number to 20 fluently, all pairs with totals to 20, all pairs of multiples of 10 with totals up to 100 and derive and use related facts up to 100.

Add three one-digit numbers mentally.

Mentally add and subtract a two-digit number and ones.

Mentally add and subtract a two-digit number and tens.

Number – Multiplication and division:

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.

Recognise odd and even numbers

Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves.

Number - fractions:

Count up in fractions to ten

Measurement:

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 amount of money.

Tell and write the time to five minutes, including quarter past/ to the hour.

Geometry – Properties of shape

Visualise and name all 2D and 3D shapes.

Year Two Medium Term Plan Term Two

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives
Week 1	Number Place value	<p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p> <p>Compare and order numbers from 0 up to 100; use <, > and = signs</p> <p>Read and write numbers to at least 100 in numerals and in words</p> <p>Use place value and number facts to solve problems.</p>	<p><u>Spot the mistake:</u> 45,40,35,25 What is wrong with this sequence of numbers?</p> <p><u>True or False?</u> I start at 3 and count in threes. I will say 13?</p> <p><u>What comes next?</u> 41+5=46 46+5=51 51+5=56</p> <p><u>Do, then explain</u> 37 13 73 33 3 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers.</p> <p><u>Do, then explain</u> Show the value of the digit 2 in these numbers? 32 27 92 Explain how you know.</p> <p><u>Make up an example</u> Create numbers where the units digit is one less than the tens digit. What is the largest/smallest number?</p>	<p>Can I mark two-digit numbers on a landmarked line (labelled in tens)?</p> <p>Can I compare numbers using the symbols < and >?</p> <p>Can I use ordinal numbers in context up to 10th and beyond?</p> <p>Can I use knowledge of order of numbers and properties of number (e.g. odd/even, multiples to describe/sort numbers)?</p> <p>Can I solve logic problems?</p> <p>Can I round two-digit numbers to nearest multiple of ten?</p>

<p>Week 2</p>	<p>Addition and Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>Fact families</u> Which four number sentences link these numbers? 100, 67, 33</p> <p><u>What else do you know?</u> If you know this: $87 = 100 - 13$ what other facts do you know?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \quad \square \quad 20 \quad \square \quad 100$ $100 \quad \square \quad 70 \quad \square \quad 30$ $87 \quad \square \quad 13 \quad \square \quad 100$</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p> <p><u>Always, sometimes, never</u> Is it always, sometimes or never true that if you add three numbers less than 10 the answer will be an odd number</p>	<p>Can I use pairs to ten to find the complement to the next multiple of ten?</p> <p>Use place value to add and subtract (e.g. $30 + 4$, $53 - 3$)?</p> <p>Can I add a single digit to a 2-digit number by bridging multiples of ten using knowledge of pairs to ten & place value?</p> <p>Can I subtract a single digit from a 2-digit number by bridging multiples of ten using knowledge of pairs to ten & place value?</p> <p>Do I understand that addition can be done in any order, but not subtraction?</p> <p>Can I sort calculations as to whether number facts or place value can be used to help identify the useful number fact?</p>
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<p>Week 3</p>	<p>Addition and Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>Other possibilities</u> $\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Convince me</u> What digits could go in the boxes? $7 \square - 2 \square = 46$ Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p> <p><u>Always, sometimes, never</u></p>	<p>Can I add two-digit numbers by adding multiples of ten then one (e.g. add 45 and 23 by adding 20, then 3)?</p> <p>Can I add using a 1-100 number square?</p> <p>Can I add using landmarked lines?</p> <p>Can I subtract two-digit numbers by subtracting multiples of ten then one (e.g. add 45 and 23 by adding 20, then 3)?</p> <p>Can I subtract two-digit numbers by subtracting using a number square?</p> <p>Can I subtract two-digit numbers by subtracting using landmarked lines?</p>
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Week 6	Number Fractions	<p>Recognise, find, name, write fractions $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ of a length, shape, set or quantity</p> <p>Write simple fractions eg $\frac{1}{2}$ of 6 is 3 and recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$</p>	<p><u>Spot the mistake</u> $7, 7\frac{1}{2}, 8, 9, 10$ $8\frac{1}{2}, 8, 7, 6\frac{1}{2},$... and correct it</p> <p><u>What comes next?</u> $5\frac{1}{2}, 6\frac{1}{2}, 7\frac{1}{2}, \dots, \dots$ $9\frac{1}{2}, 9, 8\frac{1}{2}, \dots, \dots$</p> <p><u>What do you notice?</u> $\frac{1}{4}$ of 4 = 1 $\frac{1}{4}$ of 8 = 2 $\frac{1}{4}$ of 12 = 3 Continue the pattern What do you notice?</p> <p><u>True or false?</u> Half of 20cm = 5cm $\frac{3}{4}$ of 12cm = 9cm</p> <p><u>Odd one out.</u> Which is the odd one out in this trio: $\frac{1}{2}$ $\frac{2}{4}$ $\frac{1}{4}$ Why?</p> <p><u>What do you notice?</u> Find $\frac{1}{2}$ of 8. Find $\frac{2}{4}$ of 8 What do you notice?</p> <p><u>Ordering</u> Put these fractions in the correct order, starting with the smallest. $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$</p>	<p>Can I compare two 2-digit numbers?</p> <p>Can I describe properties of numbers?</p> <p>Can I locate numbers on a number line?</p> <p>Can I find numbers in between 2 given numbers?</p> <p>Can I round numbers to the nearest ten?</p> <p>Can I find fractions of amounts $\frac{1}{2}$s, $\frac{1}{4}$s and $\frac{1}{3}$s by sharing and using known number facts?</p>
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Week 7	Addition Subtraction	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>What else do you know?</u> If you know this: 87 = 100 - 13 what other facts do you know?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: 80 <input type="text"/> 20 <input type="text"/> 100 100 <input type="text"/> 70 <input type="text"/> 30 87 <input type="text"/> 13 <input type="text"/> 100</p> <p><u>Convince me</u> What digits could go in the boxes? 7 <input type="text"/> - 2 <input type="text"/> = 46 Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 74 - 13 55 + 17 87 - 34</p>	<p>Can I add 2-digit numbers</p> <p>Can I add 2-digit numbers that cross the tens barrier?</p> <p>Can I subtract 2-digit numbers?</p> <p>Can I find the difference in the context of change?</p>
Week 8	Measuring Data	<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><u>Application</u> (Practical) Draw two lines whose lengths differ by 4cm.</p> <p><u>Top tips</u> Put these measurements in order starting with the smallest. 75 grammes 85 grammes 100 grammes Explain your thinking</p> <p><u>Position the symbols</u> Place the correct symbol between the measurements > or < 36cm <input type="text"/> 63cm 130ml <input type="text"/> 103ml Explain your thinking</p>	<p>Can I estimate, measure and compare capacities, choosing and using suitable non-standard and standard units and suitable measuring instruments?</p> <p>Can I answer a question by collecting & recording data, and representing it as block graphs and pictograms to show results?</p>

Week 9	Multiplication Division as the inverse	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>Missing numbers $10 = 5 \times \square$ What number could be written in the box?</p> <p>Making links I have 30p in my pocket in 5p coins. How many coins do I have?</p> <p>Making links Write the multiplication number sentences to describe this array</p> <table border="1" data-bbox="1055 453 1368 531"> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </table> <p>What do you notice?</p> <p>Prove It Which four number sentences link these numbers? 3, 5, 15? Prove it.</p> <p>True or false? When you count up in tens starting at 5 there will always be 5 units.</p>	X	X	X	X	X	X	<p>Do I understand how to read an array?</p> <p>Do I know that multiplication can be done in any order?</p> <p>Can I use beaded lines and grouping, then hops to work out division problems?</p> <p>Can I create own word problems involving division and multiplication?</p> <p>Can I sort division and multiplication word problems?</p> <p>Do I know that division is the inverse of multiplication?</p>
X	X	X								
X	X	X								

<p>Week 10</p>	<p>Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>Other possibilities</p> <p>$\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p>Fact families</p> <p>Which four number sentences link these numbers? 100, 67, 33</p> <p>What else do you know?</p> <p>If you know this: 87 = 100 - 13 what other facts do you know?</p> <p>Missing symbols</p> <p>Write the missing symbols (+ - =) in these number sentences:</p> <p>80 \square 20 \square 100</p> <p>100 \square 70 \square 30</p> <p>87 \square 13 \square 100</p> <p>Convince me</p> <p>What digits could go in the boxes? 7 \square - 2 \square = 46</p> <p>Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p>Making an estimate</p> <p>Which of these number sentences have the answer that is between 50 and 60 74 - 13 55 + 17 87 - 34</p> <p>Always, sometimes, never</p> <p>Is it always, sometimes or never true that if you add three numbers less than 10 the answer will be an odd number</p>	<p>Can I sort calculations according to whether they are known facts or need to be worked out?</p> <p>Can I use facts to add four or five small numbers, by spotting pairs to ten/doubles?</p> <p>Can I rehearse addition of two two-digit numbers?</p> <p>Can I rehearse subtraction of two two-digit numbers?</p> <p>Can I begin to sort number problems into whether addition and subtraction is needed to work them out?</p>
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<p>Week 11</p>	<p>Mental Addition Subtraction Money</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>Missing numbers What number goes in the missing box? $91 + \square = 100$ $100 - \square = 89$</p> <p>True or false? Are these number sentences true or false? Give your reasons. $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$</p> <p>Other possibilities $\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p>What else do you know? If you know this: $87 = 100 - 13$ what other facts do you know?</p> <p>Missing symbols Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p>Convince me What digits could go in the boxes? $7 \square - 2 \square = 46$ Which of these number sentences have the answer that Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p>Making an estimate is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p>	<p>Do I understand difference as one model of subtraction?</p> <p>Can I subtract two-digit numbers lying either side of a multiple of 10 by counting up, using pairs to ten & place value, e.g. $22 - 17$, $32 - 27$?</p> <p>Can I recognise coins and find totals using a combination of coins?</p> <p>Can I add two 2-digit money amounts together?</p>
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Week 12	Assessment			
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Maths medium term plan: summer term

Year 2

Mental Maths objectives to be covered:

Number - Number and place value:

Count forwards and backwards in steps of 2, 3 and 5 from 0 up to 100.
Count forward and backwards in tens from any number.
Read and write numbers to at least 100 in numerals and words.
Partition two and three digit numbers, understand what each digit represents.
Order 2 and 3 digit numbers and place them on a number line.
Use the greater than, less than and equals sign to order numbers/ compare number sentences.

Number – Addition and Subtraction:

Add three one-digit numbers mentally.
Mentally add and subtract a two-digit number and ones.
Mentally add and subtract a two-digit number and tens.

Number – Multiplication and division:

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.
Describe and extend number sequences and recognise odd and even numbers
Understand that halving is the inverse of doubling. Derive and recall doubles of all numbers to 20 and corresponding halves.

Number - fractions:

Count up in fractions to ten
Recognise, find, name and write fractions $\frac{1}{4}$, $\frac{1}{2}$ of a length, shape, set of objects, quantity

Measurement:

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 amount of money.
Compare and sequence intervals of time.
Tell and write the time to five minutes, including quarter past/ to the hour.

Geometry – Properties of shape

Sort and describe shapes according to their properties.

Year Two Medium Term Plan Term Three

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives
Week 1	Number Fractions	<p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>Recognise, find, name, write fractions $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ of a length, shape, set or quantity</p> <p>Write simple fractions eg $\frac{1}{2}$ of 6 is 3 and recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$</p>	<p><u>Spot the mistake</u> 7, $7\frac{1}{2}$, 8, 9, 10 $8\frac{1}{2}$, 8, 7, $6\frac{1}{2}$, ... and correct it</p> <p><u>What comes next?</u> $5\frac{1}{2}$, $6\frac{1}{2}$, $7\frac{1}{2}$, ..., ... $9\frac{1}{2}$, 9, $8\frac{1}{2}$,, ...</p> <p><u>What do you notice?</u> $\frac{1}{4}$ of 4 = 1 $\frac{1}{4}$ of 8 = 2 $\frac{1}{4}$ of 12 = 3 Continue the pattern What do you notice?</p> <p><u>True or false?</u> Half of 20cm = 5cm $\frac{3}{4}$ of 12cm = 9cm</p> <p><u>Odd one out.</u> Which is the odd one out in this trio: $\frac{1}{2}$ $\frac{2}{4}$ $\frac{1}{4}$ Why?</p> <p><u>What do you notice?</u> Find $\frac{1}{2}$ of 8. Find $\frac{2}{4}$ of 8 What do you notice?</p> <p><u>Ordering</u> Put these fractions in the correct order, starting with the smallest. $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$</p>	<p>Can I count in 2s, 5s, 10s and 3s?</p> <p>Can I recognise multiples of 2, 5, 10 and 3:</p> <p>Find $\frac{1}{2}$s, $\frac{1}{4}$s and $\frac{3}{4}$s of amounts?</p>

<p>Week 2</p>	<p>Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Other possibilities</u> $\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p><u>Fact families</u> Which four number sentences link these numbers? 100, 67, 33</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Convince me</u> What digits could go in the boxes? $7 \square - 2 \square = 46$ Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60</p>	<p>Can I double using partitioning? Can I half using partitioning? Can I add 2-digit numbers by partitioning or counting on? Can I subtract a 2-digit number from another by counting back?</p>
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			74 - 13 55 + 17 87 - 34	
Week 3	Number - Addition Subtraction	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Continue the pattern</u> 90 = 100 - 10 80 = 100 - 20 Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> 91 + <input type="text"/> = 100 100 - <input type="text"/> = 89</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? 73 + 40 = 113 98 - 18 = 70 46 + 77 = 123 92 - 67 = 35 Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? 23 + 10 = 93 + 10 = 54 + 9 =</p>	<p>Can I subtract by counting up? Can I subtract by counting back? Can I choose whether to count back or up to subtract?</p>

$54 + 1 =$

Explain why you think the hard questions are hard?

Other possibilities

$\square + \square + \square = 14$

What single digit numbers could go in the boxes? How many different ways can you do this?

Fact families

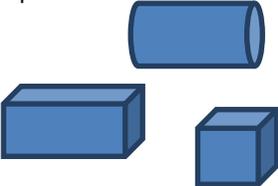
Which four number sentences link these numbers?

100, 67, 33

What else do you know?

If you know this:

$87 = 100 - 13$ what other facts do you know?

Week 4	Shape Time	<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</p> <p>Compare and sort common 2-D and 3-D shapes and everyday objects.</p>	<p>What's the same, what's different? Pick up and look at these 3-D shapes.</p>  <p>Do they all have straight edges and flat faces? What is the same and what is different about these shapes?</p> <p>Visualising In your head picture a rectangle that is twice as long as it is wide. What could its measurements be?</p> <p>Always, sometimes, never Is it always, sometimes or never true that when you fold a square in half you get a rectangle.</p> <p>Other possibilities Can you find shapes that can go with the set with this label?</p> <p>Working backwards If I face forwards and turn three quarter turns clockwise then a quarter turn anti-clockwise describe my finishing position.</p>	<p>Can I identify 3D shapes?</p> <p>Can I identify properties of 3D shapes?</p> <p>Can I tell the time to the nearest $\frac{1}{4}$ hour?</p> <p>Can I begin to tell the time to the nearest 5 minutes?</p>						
Week 5	Multiplication Division as the inverse	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>Missing numbers $10 = 5 \times \square$ What number could be written in the box?</p> <p>Making links I have 30p in my pocket in 5p coins. How many coins do I have?</p> <p>Making links Write the multiplication number sentences to describe this array</p> <table border="1" data-bbox="1055 1222 1368 1302"> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table> <p>What do you notice?</p> <p>Prove It Which four number sentences link these numbers? 3, 5, 15? Prove it.</p>	X	X	X	X	X	X	<p>Can I work out multiplication using beaded lines and land marked lines?</p> <p>Can I work out division using beaded lines and also land marked lines?</p> <p>Do I understand multiplication as the inverse of division?</p> <p>Can I use land marked lines to solve mystery multiplications and divisions?</p>
X	X	X								
X	X	X								

			True or false? When you count up in tens starting at 5 there will always be 5 units.	
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Week 6	Number Place Value	<p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p> <p>Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs</p> <p>Read and write numbers to at least 100 in numerals and in words</p> <p>Use place value and number facts to solve problems.</p>	<p>Spot the mistake: 45,40,35,25 What is wrong with this sequence of numbers?</p> <p>True or False? I start at 3 and count in threes. I will say 13?</p> <p>What comes next? 41+5=46 46+5=51 51+5=56</p> <p>Do, then explain 37 13 73 33 3 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers.</p> <p>Do, then explain Show the value of the digit 2 in these numbers? 32 27 92 Explain how you know.</p> <p>Make up an example Create numbers where the units digit is one less than the tens digit. What is the largest/smallest number?</p>	Can I place 2-digit numbers on a line?
				Can I round 2-digit numbers?
				Can I order and compare 3-digit numbers?
				Do I understand place value additions?

<p>Week 7</p>	<p>Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Continue the pattern</u> $90 = 100 - 10$ $80 = 100 - 20$ Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>What else do you know?</u> If you know this: $87 = 100 - 13$ what other facts do you know?</p> <p><u>Missing symbols</u> Write the missing symbols (+ - =) in these number sentences: $80 \square 20 \square 100$ $100 \square 70 \square 30$ $87 \square 13 \square 100$</p> <p><u>Convince me</u> What digits could go in the boxes? $7 \square - 2 \square = 46$ Try to find all of the possible answers. How do you know you have got them all? Convince me</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 50 and 60 $74 - 13$ $55 + 17$ $87 - 34$</p>	<p>Can I add pairs of 2-digit numbers by partitioning or counting on?</p> <p>Can I subtract by counting up or counting back?</p> <p>Can I choose to add or subtract to solve money word problems?</p>
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Week 8	Measure Data	<p>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); 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>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>Compare and sequence intervals of time</p> <p>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</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p>	<p>Application (Practical) Draw two lines whose lengths differ by 4cm.</p> <p>Top tips Put these measurements in order starting with the smallest. 75 grammes 85 grammes 100 grammes Explain your thinking</p> <p>Position the symbols Place the correct symbol between the measurements $>$ or $<$ 36cm <input type="checkbox"/> 63cm 130ml <input type="checkbox"/> 103ml Explain your thinking</p>	<p>Do I know by heart the names and order of the days of the week?</p> <p>Do I know by heart the names and order of the months of the year?</p> <p>Can I construct a block graph?</p> <p>Can I tell the time to the nearest $\frac{1}{4}$ hour?</p> <p>Can I tell the time to the nearest 5 minutes?</p>						
Week 9	Multiplication Division as the inverse	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>Missing numbers $10 = 5 \times \square$ What number could be written in the box?</p> <p>Making links I have 30p in my pocket in 5p coins. How many coins do I have?</p> <p>Making links Write the multiplication number sentences to describe this array</p> <table border="1" data-bbox="1055 1075 1368 1153"> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table> <p>What do you notice?</p> <p>Prove It Which four number sentences link these numbers? 3, 5, 15? Prove it.</p> <p>True or false? When you count up in tens starting at 5 there will always be 5 units.</p>	X	X	X	X	X	X	<p>Can I half or double a 2-digit number?</p> <p>Do I know that multiplication is the inverse of division?</p> <p>Can I multiply and divide using beaded or landmarked lines?</p>
X	X	X								
X	X	X								

<p>Week 10</p>	<p>Money Addition Subtraction</p>	<p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <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 <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><u>Continue the pattern</u> $90 = 100 - 10$ $80 = 100 - 20$ Can you make up a similar pattern starting with the numbers 74, 26 and 100?</p> <p><u>Missing numbers</u> $91 + \square = 100$ $100 - \square = 89$</p> <p>What number goes in the missing box?</p> <p><u>True or false?</u> Are these number sentences true or false? $73 + 40 = 113$ $98 - 18 = 70$ $46 + 77 = 123$ $92 - 67 = 35$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $23 + 10 =$ $93 + 10 =$ $54 + 9 =$ $54 + 1 =$ Explain why you think the hard questions are hard?</p> <p><u>Other possibilities</u> $\square + \square + \square = 14$</p> <p>What single digit numbers could go in the boxes? How many different ways can you do this?</p> <p><u>Fact families</u> Which four number sentences link these numbers? 100, 67, 33</p>	<p>Can I use and recognise coins? Can I add 2-digit amounts using partitioning or counting up? Can I subtract by finding a difference or counting back? Can I use addition and subtraction to solve 2-step money problems?</p>
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Week 11	Fractions Multiplication Division Time	<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p><u>Spot the mistake</u> 7, $7\frac{1}{2}$, 8, 9, 10 $8\frac{1}{2}$, 8, 7, $6\frac{1}{2}$, ... and correct it</p> <p><u>What comes next?</u> $5\frac{1}{2}$, $6\frac{1}{2}$, $7\frac{1}{2}$, ..., ... $9\frac{1}{2}$, 9, $8\frac{1}{2}$,,</p> <p><u>What do you notice?</u> $\frac{1}{4}$ of 4 = 1 $\frac{1}{4}$ of 8 = 2 $\frac{1}{4}$ of 12 = 3 Continue the pattern What do you notice?</p> <p><u>True or false?</u> Half of 20cm = 5cm $\frac{3}{4}$ of 12cm = 9cm</p> <p><u>Odd one out.</u> Which is the odd one out in this trio: $\frac{1}{2}$ $\frac{2}{4}$ $\frac{1}{4}$ Why?</p> <p><u>What do you notice?</u> Find $\frac{1}{2}$ of 8. Find $\frac{2}{4}$ of 8 What do you notice?</p> <p><u>Ordering</u> Put these fractions in the correct order, starting with the smallest. $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$</p>	<p>Can I find halves and quarters of amounts?</p> <p>Can I tell the time in analogue and digital to the nearest 5 minutes?</p>
Week 12	Assessment	Assessment week is moveable		
Week 13	Revision of topics based on results of assessment			