

HIAS MOODLE+ RESOURCE

# Year 2 Unit Plan 2.2

**Measurement**

**Addition and Subtraction**

**Autumn Term**

HIAS Maths Team  
September 2026  
Final version

© Hampshire County Council

# Overview

## This document contains...

Year 2 Unit Plans linked to the Hampshire Medium Term Overview

## Points to consider when using this resource:

These unit plans provide an example of how medium-term planning could be developed into units of work. These unit plans will need to be adapted to meet the needs of pupils. The unit plan provides an outline of a possible learning journey with suggestions of types of tasks that could be used. They also identify required prior learning, some common misconceptions and an indication of key skills pupils need to secure competency. It is assumed that teachers will make use of appropriate mathematical representations (manipulatives, visuals and symbolic) to support conceptual understanding for pupils alongside procedural fluency.

## National Curriculum Links:

### Measurement

- 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
- compare and order lengths, mass, volume/capacity and record the results using  $>$ ,  $<$  and  $=$
- 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
- compare and sequence intervals of time
- 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.

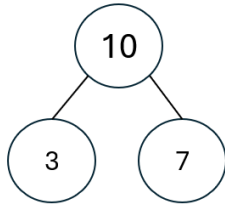
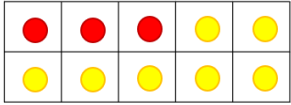
## **Addition and Subtraction**

- 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
- 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.

<p>This unit builds on the skills developed in Unit 2.1, where pupils began working with numbers within 20. Now, pupils are extending their understanding by using teen numbers and known number facts to add and subtract one-digit numbers. They are applying these skills with concrete resources to explore both non-bridging and bridging scenarios, deepening their fluency and confidence. Additionally, pupils begin to derive and use related facts up to 100, laying the groundwork for more complex mental strategies. Pupils continue to develop their understanding of measurement by estimating and measuring length/height and comparing values using symbols.</p>	<p><b>Notional Time:</b> <b>15 sessions</b></p>					
<p><b>Check and Refresh</b> - <i>skills and knowledge that pupils need to know</i></p>	<p><b>Verbal coding</b>- <i>precise mathematical language to model during worked examples</i></p>	<p><b>Mastering Key Facts in Key Stage 1</b> – developing fluency and automaticity</p>				
<p>Count to and across 100, forwards and backwards.</p> <p>Count in steps of 10 from 0.</p> <p>Count in steps of 2 from 0.</p> <p>12 = 1 ten and 2 ones (including 13, 14, 15, 16, 17, 18 and 19)</p> <p>Language of longer, taller, shorter, heavier, lighter, full, empty, half full, nearly full</p>	<p>___ is the whole; ___ is a part; ___ is a part.</p> <p>___ = ___ ten and ___ ones.</p> <p>If I know ___ + ___ = ___, then I know ___ + ___ = ___</p> <p>If I know ___ - ___ = ___, then I know ___ - ___ = ___</p> <p>___ is less than ___</p> <p>___ is greater than ___</p> <p>___ is equal to ___</p>	<p>Autumn 1: Recall number bonds for 10 (addition and subtraction)</p> <p>Autumn 2: Recall number bonds within 10 (addition and subtraction) Focusing on 2, 3, 4, 5 <i>Make reference to doubles and near doubles.</i></p>				
<p><b>Mathematical Concepts</b>- <i>important pieces of information learners should take away from the unit</i></p>	<p><b>Watch out for</b></p>	<p><b>DfE Ready -to- progress criteria</b></p>				
<p>Understand the value of digits: for example:</p> <ul style="list-style-type: none"> <li>27 – the digit 2 is in the tens place. It shows 2 tens (20).</li> </ul> <p>Understand how adding ones can affect both the ones and tens digits</p> <p>Apply number bonds to 10 and known addition facts to help with bridging.</p> <p>Break apart the ones being added to make a ten first, then add the rest.</p>	<p>Pupils who do not understand the value of digits in 2-digit numbers.</p> <p>Pupils who are counting in ones rather than using knowledge of number bonds within and to 10.</p> <p>Pupils who break apart numbers incorrectly or are not using number bonds effectively.</p> <p>Pupils who think 1 metre is smaller than 100 cm because “1 is less than 100”.</p> <p>Pupils who use the mnemonic “smallest eats biggest” when comparing length.</p>	<table border="0" style="width: 100%; text-align: center;"> <tr> <td><b>1NF-1</b></td> <td><b>2NPV-1</b></td> </tr> <tr> <td><b>2NF -1</b></td> <td><b>2AS-1      2AS-3</b></td> </tr> </table> <p><b>Formative assessment questions</b> - <i>key questions to support pupil reasoning and teacher assessment</i></p> <ul style="list-style-type: none"> <li>What is the same and what is different?</li> <li>What if I change...?</li> <li>Can you give me an example of... and another...and another?</li> <li>Which is harder and which is easier...?</li> <li>If I know this, then what else do I know?</li> </ul>	<b>1NF-1</b>	<b>2NPV-1</b>	<b>2NF -1</b>	<b>2AS-1      2AS-3</b>
<b>1NF-1</b>	<b>2NPV-1</b>					
<b>2NF -1</b>	<b>2AS-1      2AS-3</b>					

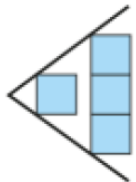
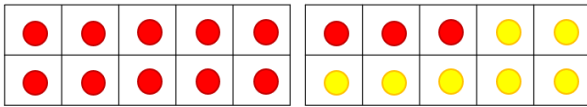
## Visual coding: key representations

If I know  $3 + 7 = 10$

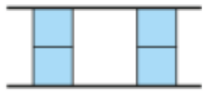


I know  $7 + 3 = 10$   
 I know  $10 - 3 = 7$   
 I know  $10 - 7 = 3$

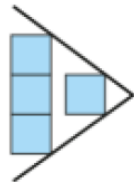
If I know  $3 + 7 = 10$ , then I know that  $13 + 7 = 20$



$$1 < 3$$



$$2 = 2$$



$$3 > 1$$



Learning Journey – Measurement		
Autumn unit 2.2 (1 week)	Spring unit 2.9 (2 weeks)	Summer unit 2.13 (2 weeks)
I can recall the number of minutes in an hour and the number of hours in a day.		
<p>I can measure and estimate length/height in cm and m.</p> <p>I can use the symbols <math>&lt;</math>, <math>&gt;</math> and <math>=</math> when comparing lengths.</p> <p>I can measure and estimate mass in g and kg.</p> <p>I can use the symbols <math>&lt;</math>, <math>&gt;</math> and <math>=</math> when comparing mass.</p> <p>I can measure and estimate capacity in ml and l.</p> <p>I can use the symbols <math>&lt;</math>, <math>&gt;</math> and <math>=</math> when comparing capacity.</p> <p>I can measure and compare temperature.</p>	<p>I can recognise and name coins and notes.</p> <p>I can find different combinations of coins that equal the same amounts of money</p> <p>I can compare amounts of money.</p> <p>I can solve simple problems in a practical context involving addition and subtraction of money.</p> <p>I can solve problems by finding change.</p> <p>I can tell and write the time to half past the hour.</p> <p>I can tell and write the time to quarter past/to the hour.</p> <p>I can draw the hands on a clock face to show quarter past/to the hour.</p>	<p>I can compare and order length, mass, capacity, and temperature.</p> <p>I can solve simple problems in a practical context involving addition and subtraction of money.</p> <p>I can solve multi-step problems involving addition and subtraction of money, including finding change.</p> <p>I can compare and sequence intervals of time.</p> <p>I can tell and write the time to five minutes.</p> <p>I can draw the hands on a clock face to show these times.</p>

## Learning Journey – Addition and Subtraction

Autumn unit 2.1 (2 weeks)	Autumn unit 2.2 (2 weeks)	Autumn unit 2.4 (2 weeks)	Spring unit 2.5 (2 weeks)
<p>I can represent and use number bonds within 10.</p> <p>I can represent and use number bonds to 10.</p> <p>I can represent and use number bonds and related subtraction facts within 10.</p> <p>I can represent and use number bonds and related subtraction facts within 20.</p>	<p>I can add a two-digit number and ones using concrete objects (without bridging)</p> <p>I can subtract a two-digit and ones using concrete objects (without bridging)</p> <p>I can partition numbers up to 30 into tens and ones.</p> <p>I can add a two-digit number and ones using concrete objects (with bridging)</p> <p>I can subtract a two-digit and ones using concrete objects (with bridging)</p> <p>I can derive and use related facts up to 100 (tens + tens).</p>	<p>I can add a two-digit number and tens using concrete objects and pictorial representations.</p> <p>I can subtract a two-digit and tens using concrete objects and pictorial representations.</p> <p>I can add a two-digit number and two-digit number using concrete objects and pictorial representations (partitioning)</p> <p>I can subtract a two-digit and a two-digit number using concrete objects and pictorial representations (partitioning)</p>	<p>I can add a two-digit number and ones using pictorial representations (without bridging)</p> <p>I can subtract a two-digit and ones using pictorial representations (without bridging)</p> <p>I can add a two-digit number and ones using pictorial representations (with bridging)</p> <p>I can subtract a two-digit and ones using pictorial representations (with bridging)</p> <p>I can add three one-digit numbers.</p>
Spring unit 2.8 (2 weeks)		Summer unit 2.12 (3 weeks)	
<p>I can use the inverse relationship between addition and subtraction and use this to check calculations</p> <p>I can add a two-digit and tens using pictorial representations.</p> <p>I can subtract a two-digit and tens using pictorial representations.</p> <p>I can add a two-digit number and a two-digit number using pictorial representations (with bridging).</p> <p>I can subtract a two-digit number and a two-digit number using pictorial representations (with bridging).</p> <p>I can solve missing number problems.</p>		<p>I can add and subtract numbers using concrete objects, pictorial representations and mentally including:</p> <ul style="list-style-type: none"> <li>• A two-digit and ones</li> <li>• A two-digit and tens</li> <li>• Two two-digit numbers</li> <li>• Adding three one-digit numbers</li> </ul> <p>I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</p> <p>I can solve one-step problems with addition and subtraction.</p> <p>I can solve multi-step problems with addition and subtraction.</p>	

**Proposed lesson sequence to support development of mathematical concepts**

**Developing fluency and automaticity – ongoing daily practice**

<b>Mastering Key Facts in Key Stage 1</b>	<p><b>Autumn 1 Ongoing Mental Fluency Practice</b></p> <ul style="list-style-type: none"> <li>Recall number bonds for 10 (addition and subtraction)             <ul style="list-style-type: none"> <li>Explicit teaching versus retrieval practice to ensure pupils are able to recall number bonds for 10 within 3 seconds.</li> </ul> </li> <li>Count to and across 100, forwards and backwards.             <ul style="list-style-type: none"> <li>Consider use of daily counting activities to consolidate counting to and across 100.</li> </ul> </li> <li>Read and write numbers to at least 100 in numerals and in words             <ul style="list-style-type: none"> <li>Include numbers written in numerals and in words as part of task design so that pupils are regularly reading and writing as part of the learning journeys.</li> </ul> </li> </ul>
<b>Key Fact Retrieval</b>	<ul style="list-style-type: none"> <li>I can name the days of the week and the months of the year.</li> <li>I can recall the number of minutes in an hour and the number of hours in a day.</li> </ul>

<b>I can...</b>	<b>Mathematical Concepts, Key Skills and Suggested Tasks</b>
-----------------	--------------------------------------------------------------

**5 sessions - Measurement**

<p>I can measure and compare temperature.</p>	<p>Pupils can develop understanding of measuring and comparing temperature through ongoing, practical experiences rather than a single lesson. This builds on their knowledge of measurement and comparison in real-life contexts. This can be embedded as a continuous activity, where pupils measure and compare temperature across the day, week or month, identifying simple patterns. Introduce key vocabulary: temperature, degrees Celsius (<math>^{\circ}\text{C}</math>), warmer/colder. Model how to read a thermometer, linking to number lines (higher numbers = warmer).</p> <p><b>Suggested activity:</b></p> <ul style="list-style-type: none"> <li>Daily temperature checks recorded on a class chart</li> <li>Compare temperatures using language and symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>)</li> </ul> <p>Encourage reasoning: “Which is warmer?”, “How has it changed?”, “What do you notice?”</p>
-----------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

I can measure and estimate length/height in cm and m.

In Year 1, learning was practical and language-rich, with regular opportunities for pupils to handle objects, make direct comparisons, and articulate their observations using appropriate mathematical vocabulary, for example, long/short, longer/shorter, tall/short. Pupils measured length and height using non-standard measurements, such as cubes, and began measuring in centimetres. For this step, begin by asking if pupils can talk about their experience of measuring.

Introduce the vocabulary:

- **Centimetres:** small units used to measure short lengths. Show a ruler under a visualiser and count up using the centimetre marks together.
- **Metres:** a metre is a longer unit – pupils need to know that there are 100 centimetres in 1 metre. Compare a metre stick to a ruler. This learning can be connected to their knowledge of number lines and counting in 10s.



Model how to start measuring from 0 on the ruler or metre stick.

**Suggested tasks:**

- Centimetre Hunt
  - Hide cards around the room with objects and their lengths in cm.
  - Pupils find the object and check if the measurement is accurate using a ruler.
- Outdoor: Give pupils rulers ask them to measure:
  - The length of a bench (in m)
  - The height of a fence (in m or cm)
  - The distance between two trees (in m)

Encourage discussion and reasoning: “Why did you choose centimetres instead of metres?”

Once pupils are confident using centimetres and metres to measure and have developed a sense of reference for common lengths, they are ready to begin estimating lengths. Estimation helps pupils internalise the size of standard units and apply their understanding in real-world contexts.

Encourage pupils to estimate the length of an object before measuring it, then compare their estimate with the actual measurement. This supports their ability to judge length and reinforces the concept of measurement as a way to describe and compare objects.

As they work, prompt them to use comparative language such as ‘longer than, shorter than, about the same as’.

<p>I can use the symbols &lt;, &gt; and = when comparing lengths.</p>	<p>Pupils can begin to compare lengths using the mathematical symbols for less than, greater than and equal to. This concept builds on their understanding of measuring length in centimetres and metres and reinforces the symbolic representation of comparisons.</p> <p><b>Suggested task:</b> Pupils collect classroom or natural objects, measure and compare them using rulers or metre sticks and record comparisons using symbols.</p> <p>Ensure that pupils can use sentence stems alongside the symbolic representation:</p> <p>___ is longer/taller than ___      ___ &gt; ___</p> <p>___ is shorter than ___      ___ &lt; ___</p> <p>___ is equal to ___      ___ = ___</p>
<p>I can measure and estimate mass in g and kg.</p>	<p>In Year 1, learning was practical and language-rich, with regular opportunities for pupils to handle objects, make direct comparisons, and describe mass using vocabulary such as heavy/light and heavier/lighter. Pupils used balance scales to compare objects and measured mass using non-standard units, such as cubes or counters, focusing on consistency and accurate comparison.</p> <p>For this step, begin by asking pupils to talk about their prior experiences of comparing weight. What does “heavier” mean? How did they use scales?</p> <p>Introduce the new vocabulary:</p> <ul style="list-style-type: none"> <li>• <b>Grams (g):</b> a small unit used to measure lighter objects (e.g. a pencil or an apple). Show small classroom objects and discuss their mass in grams.</li> <li>• <b>Kilograms (kg):</b> a larger unit used to measure heavier objects (e.g. a bag of flour). Explain that 1 kilogram = 1000 grams. Compare a 1kg weight to gram weights where possible.</li> </ul> <p>Demonstrate how to place an object on a scale and read the measurement carefully. Show both digital and analogue scales (if available), emphasising how to read units correctly. Reinforce the importance of starting from zero and using the correct unit (g or kg).</p> <p><i>See next page for further detail:</i></p>

**Suggested tasks:**

- Mass Sorting Activity
  - Provide a range of objects and ask pupils to sort them into those best measured in grams or kilograms.
- Weigh and Record
  - Pupils use scales to weigh classroom objects and record their mass in g or kg.
- Practical investigation (e.g. “Which is heavier?”)
  - Pupils compare two objects, estimate which is heavier, then test using scales.

Encourage discussion and reasoning: “Why did you choose grams instead of kilograms?”, “How do you know this is heavier?”, “Is your estimate close? Why or why not?”

Once pupils are confident using grams and kilograms and have a sense of reference for common masses, they are ready to develop their estimation skills further. Estimation supports pupils in understanding the relative size of units and applying this knowledge in real-life contexts.

Encourage pupils to estimate before measuring and to refine their ideas through experience. Prompt them to use comparative language such as ‘heavier than, lighter than, about the same as, close to’.

I can use the symbols  $<$ ,  $>$  and  $=$  when comparing mass.

Pupils can begin to compare mass using the mathematical symbols for less than ( $<$ ), greater than ( $>$ ) and equal to ( $=$ ). This builds on their understanding of measuring mass using both non-standard units (e.g. cubes) and standard units (grams and kilograms) and reinforces the symbolic representation of comparisons. It is important to emphasise that the symbols represent the relationship between the masses, not the size or appearance of the objects or the units used.

**Suggested task:**

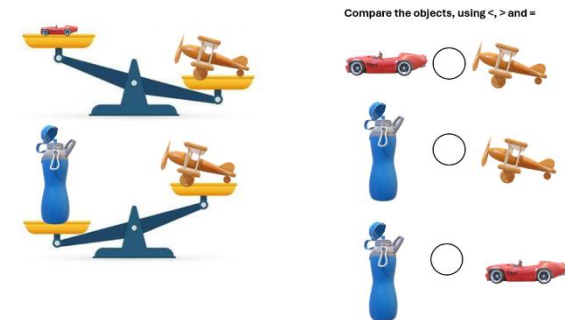
Pupils collect classroom or natural objects, weigh them using balance scales or digital/analogue scales, and record comparisons using symbols.

Ensure that pupils can use sentence stems alongside the symbolic representation:

\_\_\_ is heavier than \_\_\_                      \_\_\_  $>$  \_\_\_  
\_\_\_ is lighter than \_\_\_                        \_\_\_  $<$  \_\_\_  
\_\_\_ is equal to \_\_\_                            \_\_\_  $=$  \_\_\_

**Watch out for:**

- Pupils who confuse grams and kilograms, assuming that 3g and 3kg are similar because the number is the same, rather than understanding that kilograms are a much larger unit.



I can measure and estimate capacity in ml and l.

In Year 1, learning was highly practical and exploratory, with regular opportunities for pupils to handle containers, fill and empty them, and describe what they observed using vocabulary such as full/empty, more than, less than, and half full. Pupils compared capacity by pouring between containers and began measuring using non-standard units, such as counting how many cups were needed to fill a container, focusing on consistency and accurate comparison.

For this step, begin by asking pupils to talk about their prior experiences of comparing capacity. What does “full” or “empty” mean? How did they know one container held more than another?

Introduce the new vocabulary:

- **Millilitres (ml):** a small unit used to measure smaller amounts of liquid (e.g. a cup of water or juice). Show a labelled measuring container and explore markings in ml.
- **Litres (l):** a larger unit used to measure greater volumes (e.g. a bottle of water). Explain that **1 litre = 1000 millilitres**, linking to pupils’ knowledge of number and place value. Compare a 1 litre container to smaller measures.

Demonstrate how to read a scale on a measuring jug, focusing on the markings and units. Show how to pour carefully, placing the jug on a flat surface and reading at eye level for accuracy. Reinforce the importance of using the correct unit (ml or l) and reading the scale correctly.

**Suggested tasks:**

- Capacity Sorting Activity
  - Provide a range of containers and ask pupils to decide whether their capacity would be best measured in ml or l.
- Fill and Measure
  - Pupils fill containers with water and measure the capacity using a measuring jug, recording results in ml or l.
- Practical investigation (e.g. “Which holds more?”)
  - Pupils compare two containers by estimating and then checking by measuring or pouring.

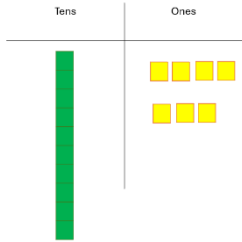
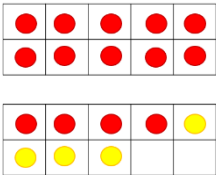
Encourage discussion and reasoning: “Why did you choose millilitres instead of litres?”, “How do you know this holds more?”, “Is your estimate close? Why or why not?”.

Once pupils are confident using millilitres and litres and have a sense of reference for common capacities, they are ready to develop their estimation skills further. Estimation supports pupils in understanding the relative size of units and applying this knowledge in real-life contexts. Encourage pupils to estimate before measuring and refine their understanding through experience. Prompt them to use comparative language such as more than, less than, about the same as, close to, nearly full, half full.

<p>I can use the symbols <math>&lt;</math>, <math>&gt;</math> and <math>=</math> when comparing capacity.</p>	<p>Pupils can begin to compare capacity using the mathematical symbols for less than (<math>&lt;</math>), greater than (<math>&gt;</math>) and equal to (<math>=</math>). This builds on their understanding of measuring capacity using both non-standard units (e.g. cups) and standard units (millilitres and litres) and reinforces the symbolic representation of comparisons.</p> <p><b>Watch out for:</b></p> <ul style="list-style-type: none"> <li>• Pupils who assume a taller or larger-looking container holds more, rather than checking by measuring.</li> <li>• Pupils who confuse millilitres and litres, assuming 500ml is greater than 1l because 500 is a larger number, rather than understanding that 1 litre = 1000ml.</li> <li>• Pupils who reverse symbols when recording comparisons.</li> </ul>
---------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**10 sessions – Addition & Subtraction**

<p>I can add a two-digit number and ones using concrete objects (without bridging)</p>	<p>This step supports pupils in developing a secure understanding of place value and addition by using concrete resources. The focus is on non-bridging scenarios, where the ones being added do not cause the total to cross into the next ten (e.g., <math>14 + 3 = 17</math>).</p> <p>This step is a crucial part of the progression from counting to calculating. It reinforces the structure of tens and ones; builds confidence in manipulating numbers using known facts and prepares pupils for abstract methods and mental strategies in later steps.</p> <p>This builds directly on learning from Unit 2.1, where pupils worked with teen numbers and began to explore place value. Now, they apply that understanding to addition, using their knowledge of number bonds within 10 to support efficient calculation. Pupils should be encouraged to use known number facts (e.g., <math>4 + 3</math>) rather than counting on in ones from the two-digit number.</p> <p>When modelling, emphasise efficient strategies that draw on place value understanding and number bonds, rather than starting at 14 and counting each number individually.</p> <p>Use concrete resources to model the structure of the numbers and the addition process:</p> <p><b>e.g. <math>14 + 3 = ?</math></b></p> <ul style="list-style-type: none"> <li>• Represent 14 as 1 ten and 4 ones using counters or Diennes.</li> <li>• Add 3 more ones. “What do you see?”, “How do you see it?”</li> <li>• Ask: “<i>What is <math>4 + 3</math>?</i>” (Use number bonds to 10).</li> <li>• Combine: 1 ten and 7 ones = 17.</li> </ul> <p><b><math>14 + 3 = 17</math></b></p> <p>Encourage pupils to explain their thinking using place value language:          “I know 14 is 1 ten and 4 ones. I’m adding 3 more ones. <math>4 + 3</math> is 7, so I still have 1 ten and now 7 ones. That makes 17.”</p>
----------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



I can subtract a two-digit and ones using concrete objects (without bridging)

This step supports pupils in developing a secure understanding of place value and subtraction through the use of concrete resources. The focus is on non-bridging scenarios, where the number of ones being subtracted does not require crossing into the previous ten (e.g.,  $18 - 6 = 12$ ).

This builds directly on learning from Unit 2.1, where pupils developed fluency with the four related facts for addition and subtraction (e.g.,  $6 + 2 = 8$ ,  $2 + 6 = 8$ ,  $8 - 6 = 2$ ,  $8 - 2 = 6$ ). Pupils are expected to use their knowledge of number bonds within 10 and related facts to support efficient calculation and reasoning.

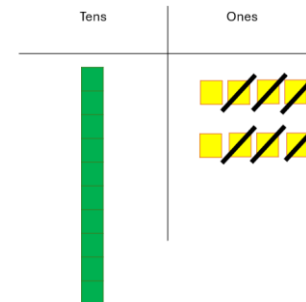
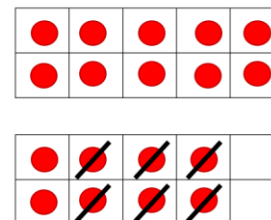
e.g:  $18 - 6 = ?$

- Represent 18 as 1 ten and 8 ones using counters or Dienes.
- Remove 6 ones.
- Ask: "What is  $8 - 6$ ?" (Use number bonds to 10).
- Combine: 1 ten and 2 ones = 12.

$18 - 6 = 12$

Encourage pupils to explain their thinking using place value language: "I know 18 is 1 ten and 8 ones. I'm taking away 6 ones.  $8 - 6$  is 2, so I still have 1 ten and now 2 ones. That makes 12."

*In the image, the counters and diennes have been placed in a 2s pattern as this makes it easier to remove a group of 6 without needing to count in 1s. The counters and diennes have been crossed out to demonstrate the counters or diennes would have been removed in a practical context.*

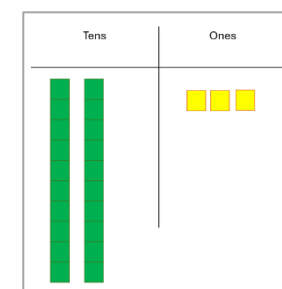
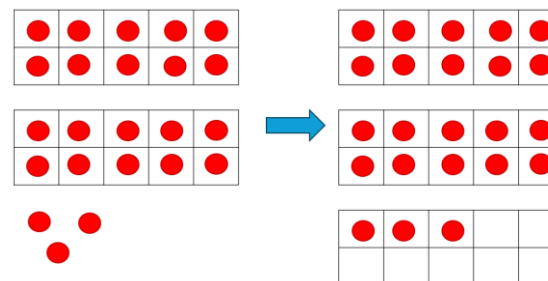


I can partition numbers up to 30 into tens and ones.

Although pupils may have counted beyond 20, they may not yet have a secure understanding of how numbers beyond 20 are structured. It is essential that pupils physically represent numbers to 30 using place value resources (such as Dienes, place value counters, or ten frames) to develop a deep conceptual understanding.

Count out 23 counters. Get two ten frames and fill these with the counters. Remember not to count into the tens frame.

- "What do you see?" "What do you notice?"
- 23 is 2 full ten frames and 3 of the next ten.
- The digit 2 is in the tens place. It shows 2 tens (20).
- The digit 3 is in the ones place. It shows 3 ones.



**Suggested task:**

Use concrete resources to build numbers from 21 – 30. Ask pupils to describe what they see using correct place value language.

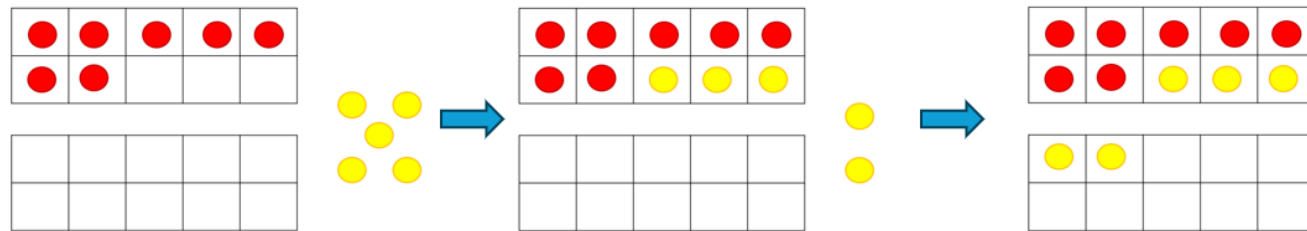
I can add a two-digit number and ones using concrete objects (with bridging)

This step introduces pupils to the idea of bridging through 10, a key mental strategy that supports efficient addition. Pupils learn to partition numbers and use their knowledge of number bonds to 10 to help them calculate sums that go beyond 10.

Emphasise partitioning the second number to make 10 first. Use concrete manipulatives to demonstrate this. Encourage the use of subitising (instantly recognising quantities) and recall of known number facts to support calculation, rather than relying on counting in ones.

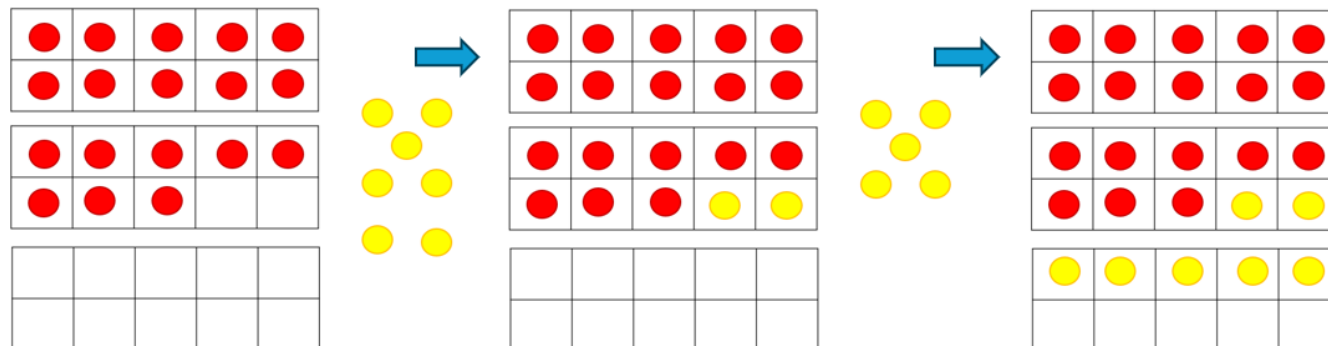
Start with 1-digit + 1-digit and two tens frames.

- **7 + 5** is solved by thinking: “7 needs 3 to make 10. I can break 5 into 3 and 2. So,  $7 + 3 = 10$ , then  $10 + 2 = 12$ .”



When pupils are secure with making 10, move onto teen numbers + 1-digit with three tens frames.

- **18 + 7** is solved by thinking “18 needs 2 to make 20. I can break 7 into 2 and 5. So  $18 + 2 = 20$ , then  $20 + 5 = 25$ .”

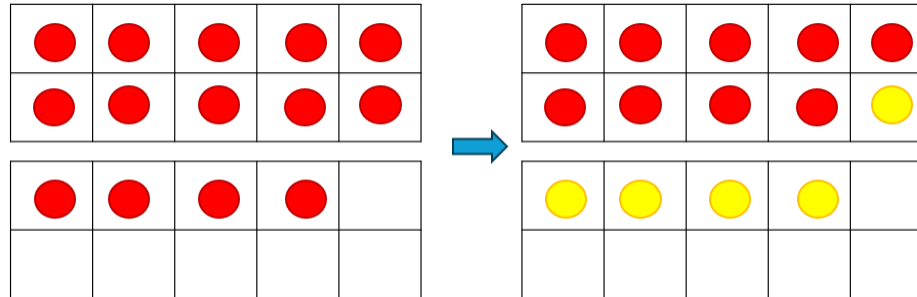


I can subtract a two-digit and ones using concrete objects (with bridging)

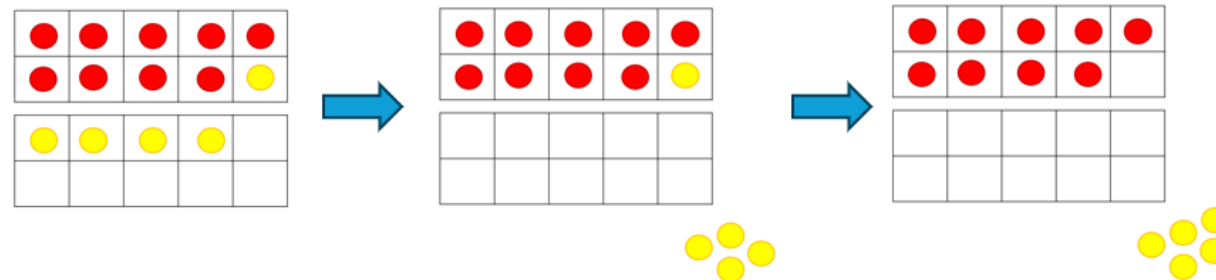
As with the previous step, this step uses partitioning of the subtrahend and uses 10 as a stepping stone to support efficient calculation.

e.g.  $14 - 5 = ?$

Some pupils may benefit from seeing 5 counters flipped over to reveal the different colour before subtracting. “What do you notice?”



- $14 - 5$  can be solved by thinking: 14 is 4 more than 10. I can break 5 into 4 and 1. So,  $14 - 4 = 10$ , then  $10 - 1 = 9$ .



Focus on subtraction with teen numbers or 2-digit numbers no higher than 30. This keeps the numbers familiar so pupils can concentrate on partitioning the 1-digit number they are taking away and using 10 as a helpful landmark. The aim is not just to get the answer right, but to build a deep understanding of how numbers work together—by breaking apart the number being subtracted and using 10 as a helpful stepping stone.

I can derive and use related facts up to 100 (tens + tens).

This step will help pupils recognise patterns and relationships between numbers, using known facts to solve problems efficiently.

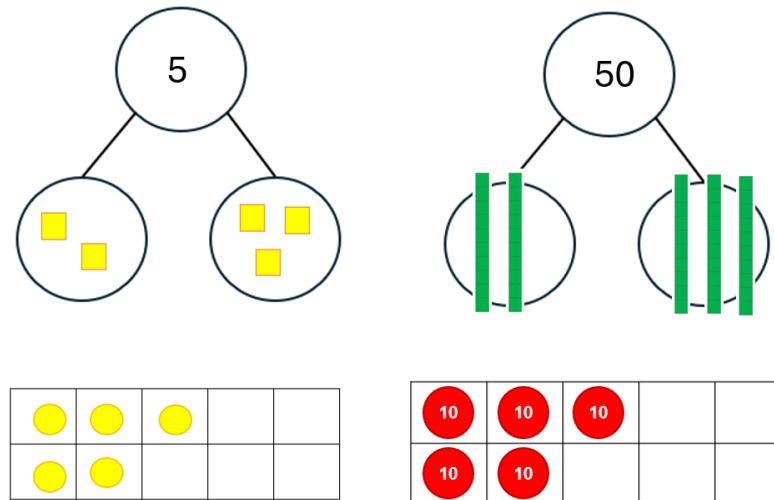
e.g.  $2 + 3 = ?$

- 2 ones + 3 ones = 5 ones
- 2 tens + 3 tens = 5 tens

**Deriving related facts means:**

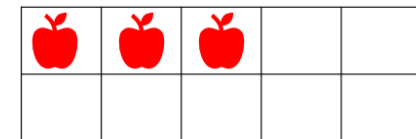
If you know  $20 + 30 = 50$ , then you know

- $30 + 20 = 50$
- $50 - 20 = 30$
- $50 - 30 = 20$



Watch out for pupils who have misconceptions around commutativity. Clarify the concept that addition is commutative, (for example,  $2 + 3 = 3 + 2$ ) but subtraction is not (for example,  $5 - 3 \neq 3 - 5$ ). Use real-life objects or concrete manipulatives to show that  $2 + 3$  and  $3 + 2$  give the same total, but  $5 - 3$  and  $3 - 5$  do not.

“If you have 7 apples and give away 3, is that the same as having 3 and giving away 7?”



**HIAS Resources to support:**

- Reasoning and Intelligent Practice Tasks: [Reasoning and Intelligent Practice Tasks](#)
- Faded Scaffolds and Intelligent Practice: [Faded Scaffolds and Intelligent Practice](#)
- Paired Examples: [Paired Examples](#)
- Entry and Exit tickets: [Entry and Exit Tickets](#)
- Interleaving, Recall and Retrieval: [Interleaving, Recall and Retrieval \(hants.gov.uk\)](#)
- Connect4Maths: [Connect4Maths - Primary](#)
- Moderation Documents: [Moderation Documents](#)
- KS1 Key Facts: [Key Stage 1 Key Facts Document](#)
- Mastering Times Tables: [Mastering Times Tables](#)

**NCETM Resources to support:**

- Exemplification of ready -to -progress criteria (RTPS): [Exemplification of ready-to-progress criteria | NCETM](#)
- NCETM Professional Development materials spine 1: [Number, Addition and Subtraction | NCETM](#) ;
- The NCETM Mastery Task booklets can be used as a source of tasks to support end of year teacher assessment for both EXS and GDS  
[Teaching for Mastery Booklets Yr1-6](#)

# HIAS Maths Team

Jo Lees – Lead Inspector  
Email: [jo.lees@hants.gov.uk](mailto:jo.lees@hants.gov.uk)

Kate Spencer – Lead Inspector  
Email: [kathryn.spencer@hants.gov.uk](mailto:kathryn.spencer@hants.gov.uk)

Rebecca Vickers – Teaching & Learning Adviser  
Email: [rebecca.vickers@hants.gov.uk](mailto:rebecca.vickers@hants.gov.uk)

Nikki Barber – Teaching & Learning Advisor  
Email – [nicola.barber@hants.gov.uk](mailto:nicola.barber@hants.gov.uk)

Olivia Goodburn – Teaching & Learning Advisor  
Email – [olivia.goodburn@hants.gov.uk](mailto:olivia.goodburn@hants.gov.uk)

For further details on the full range of services available please contact us using the following email:

[hias.publications@hants.gov.uk](mailto:hias.publications@hants.gov.uk)

# Upcoming Courses

Keep up-to-date with our learning opportunities for each subject through our Upcoming Course pages linked below. To browse the full catalogue of learning offers, visit our new Learning Zone. Full details of how to access the site to make a booking are provided [here](#).

- [English](#)
- [Maths](#)
- [Science](#)
- [Geography](#)
- [RE](#)
- [History](#)
- [Leadership](#)
- [Computing](#)
- [Art](#)
- [D&T](#)
- [Assessment](#)
- [Support Staff](#)
- [SEN](#)
- [TED](#)
- [MFL](#)

# Terms and conditions

## Terms of licence

Moodle+ subscribers are licenced to access and use this resource and have agreed to pay the annual subscription fee. This licence begins once the fee is paid and remains valid until the subscription period expires, unless renewed. This resource is intended solely for personal or classroom use. By using it, you agree that you will not copy or reproduce this file except for your own personal, non-commercial use.

This document/file must be used and shared in its original form. The use of artificial intelligence (AI) tools (Copilot, Gemini, Chat GPT etc) or automated systems to alter, rewrite, translate, or otherwise modify its content is strictly prohibited without prior written permission from the original author(s) or publisher. Unauthorised use of AI in this way may result in misrepresentation, loss of context, or breach of intellectual property rights, and may lead to corrective or legal action.

HIAS reserves the right to modify these terms at any time. Any changes will take immediate effect and supersede all previous agreements.

## You are welcome to:

- download this resource
- save this resource on your computer
- print as many copies as you would like to use in your school
- amend this electronic resource so long as you acknowledge its source and do not share as your own work.

## You may not:

- claim this resource as your own
- sell or in any way profit from this resource
- store or distribute this resource on any other website or another location where others are able to electronically retrieve it
- email this resource to anyone outside your school or transmit it in any other fashion.