

HIAS MOODLE+ RESOURCE

# Year 2 Unit Plan 2.1

**Number and Place Value**

**Addition and Subtraction**

**Autumn Term**

HIAS Maths Team  
September 2026  
Final version

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# 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:

### Number and Place Value

- 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.

## **Addition and Subtraction**

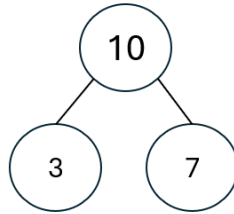
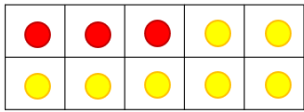
- solve problems with addition and subtraction:
  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
  - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and 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 is about continuing the learning on numbers and the number system from Year 1. Over the course of Year 2, pupils will use their mastery and understanding of number and place value to calculate efficiently with 2-digit numbers. It is therefore essential that they continue to consolidate this understanding through a range of tasks and problems. Opportunities to ensure that mental fluency developed across Year 1 is embedded and consolidated so that pupils can move forwards towards calculating with all two-digit numbers efficiently.</p>		<p><b>Notional Time:</b> <b>20 sessions</b></p>
<p><b>Check and Refresh - skills and knowledge that pupils need to know</b></p>	<p><b>Verbal coding- precise mathematical language to model during worked examples</b></p>	<p><b>Mastering Key Facts in Key Stage 1 – developing fluency and automaticity</b></p>
<p>Count to and across 100, forwards and backwards. Subitising: the ability to recognise the number of objects in a small group without counting them individually.</p> <p>Developing ‘concept images’ of numbers to 20: pupil’s ability to visualise teen numbers and their relationships to each other.</p>	<p>___ is the whole; ___ is a part; ___ is a part.</p> <p>A teen number is 10 and some more.</p> <p>___ = ___ ten and ___ ones.</p> <p>5 is halfway between ___ and ___</p> <p>15 is halfway between ___ and ___</p> <p>One more than ___ is ___.</p> <p>One less than ___ is ___.</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- important pieces of information learners should take away from the unit</b></p>	<p><b>Watch out for</b></p>	<p><b>DfE Ready -to- progress criteria</b></p>
<p>Unitising: ten ‘ones’ can be counted as one ‘ten’.</p> <p>Understanding the value of digits: for example: 17 – the digit 1 is in the tens place. It shows 1 ten (10).</p> <p>Language of greater than, less than and equal to.</p> <p>Understanding the position of numbers on the number line.</p> <p>Part-whole relationships and commutativity.</p>	<p>Pupils who do not understand that numbers can be partitioned in different ways.</p> <p>Pupils who do not understand and cannot talk about ‘part-whole’ relationships.</p> <p>Pupils who cannot see small numbers within a larger collection.</p> <p>Pupils who cannot automatically recall number bonds up to 10.</p>	<p><b>1 NPV-2                      2NPV-1</b></p> <p><b>2NF-1</b></p> <p><b>Formative assessment questions - key questions to support pupil reasoning and teacher assessment</b></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>

## Visual coding: key representations

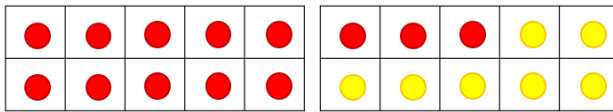
### Number bonds

If I know  $3 + 7 = 10$

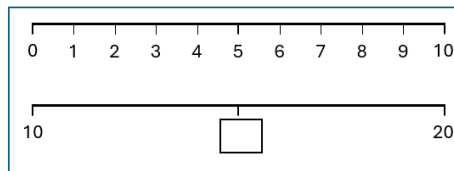
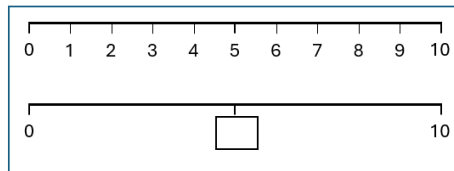


I know  $7 + 3 = 10$   
 I know  $10 - 3 = 7$   
 I know  $10 - 7 = 3$

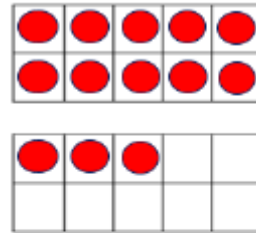
If I know  $3 + 7 = 10$ , then I know that  $13 + 7 = 20$



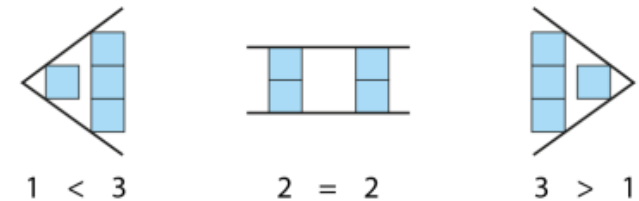
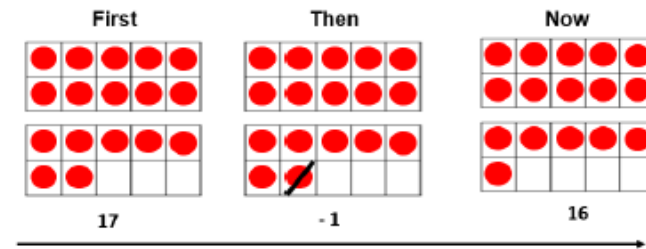
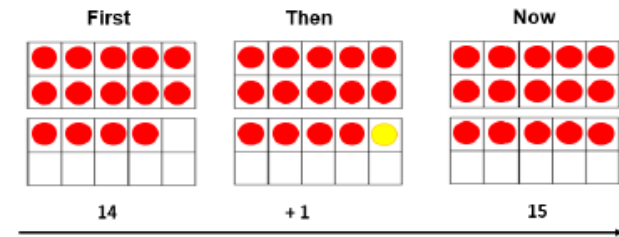
### Number lines



### Partitioning



### One more, one less



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## Learning Journey – Number and Place Value

Autumn unit 2.1 (2 weeks)	Autumn unit 2.4 (1 week)	Spring unit 2.8 (1 week)	Summer unit 2.12 (1 week)
I can read and write numbers to at least 100 in numerals and in words			
<p>I can count in steps of 10 from 0.</p> <p>I can count in steps of 2 from 0.</p> <p>I can partition numbers up to 20 into tens and ones.</p> <p>I can use 'less than', 'greater than' and 'equal to' when comparing numbers up to 20.</p> <p>I can find one more than a number.</p> <p>I can find one less than a number.</p> <p>I can order numbers on a number line (up to 20).</p>	<p>I can count in steps of 10 from any number.</p> <p>I can partition numbers up to 50 into tens and ones.</p> <p>I can flexibly partition numbers up to 50.</p> <p>I can use 'less than', 'greater than' and 'equal to' when comparing numbers up to 50.</p> <p>I can partition numbers up to 100 into tens and ones.</p> <p>I can flexibly partition numbers up to 100.</p> <p>I can find ten more than a given number.</p> <p>I can find ten less than a given number.</p>	<p>I can count in steps of 5 from 0.</p> <p>I can reason about the location of a two-digit number on a number line.</p> <p>I can use 'less than', 'greater than' and 'equal to' when comparing numbers up to 100.</p> <p>I can find one more than a number.</p> <p>I can find one less than a number.</p> <p>I can find ten more than a given number.</p> <p>I can find ten less than a given number.</p>	<p>I can count in steps of 3 from 0.</p> <p>I can recognise the place value of each digit in a two-digit number.</p> <p>I can identify, represent and estimate numbers using different representations, including the number line.</p> <p>I can use place value and number facts to solve problems.</p>

## Learning Journey – Addition and Subtraction

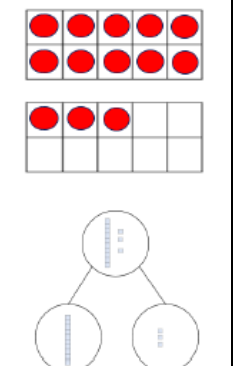
Autumn unit 2.1 (2 weeks)	Autumn unit 2.2 (2 weeks)	Autumn unit 2.4 (2 weeks)	Spring unit 2.5 (2 weeks)
<p>I can represent and use number bonds within 10.</p> <p>I can represent and use number bonds to 10.</p> <p>I can represent and use number bonds and related subtraction facts within 10.</p> <p>I can 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**

<p><b>Mastering Key Facts in Key Stage 1</b></p>	<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>
<p><b>Counting Fluency</b></p>	<ul style="list-style-type: none"> <li>I can count in steps of 10 from 0.</li> <li>I can count in steps of 2 from 0.</li> </ul> <p><a href="#">Moodle: Primary Daily Count Resource</a></p>
<p><b>I can...</b></p>	<p><b>Mathematical Concepts, Key Skills and Suggested Tasks</b></p>

**10 sessions - NPV**

<p>I can partition numbers up to 20 into tens and ones.</p>	<p>To understand place value, pupils need to learn a skill called unitising. This means learning to see a group of single items as one whole unit.</p> <ul style="list-style-type: none"> <li>Instead of seeing 10 individual cubes, help pupils see them as 1 group of ten.</li> <li>This is important because our number system is based on groups of ten (called Base 10).</li> </ul> <p>In Year 2, pupils build on what they learned in Year 1. They start to break numbers into tens and ones using real objects (like cubes or counters).</p> <ul style="list-style-type: none"> <li>The number 13 can be shown as: 1 full ten-frame (which is 10) and 3 more ones</li> <li>So, <math>13 = 1 \text{ ten and } 3 \text{ ones}</math></li> </ul>	 <p>The diagrams illustrate the concept of unitising. The first is a 2x5 grid of 10 red dots. The second is a 1x10 grid with 3 red dots in the first three positions. The third is a tree diagram showing the number 13 branching into 10 and 3.</p>
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I can use 'less than', 'greater than' and 'equal to' when comparing numbers up to 20.

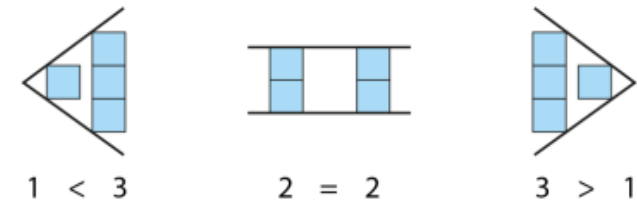
Before introducing the symbols  $<$ ,  $>$ , and  $=$ , ensure pupils are confident using the comparative language from Year 1: 'less than', 'more than', and 'equal to'. It may be helpful to explicitly teach that 'greater than' means the same as 'more than', as this terminology is often used alongside the symbols.

\_\_\_\_\_ is greater than \_\_\_\_\_

\_\_\_\_\_ is less than \_\_\_\_\_

\_\_\_\_\_ is equal to \_\_\_\_\_

It is important that adults refrain from using informal mnemonic devices such as "smallest number eats the biggest number", which can hinder conceptual understanding. To the right is a generalised representation using stacks of cubes to introduce the symbols.



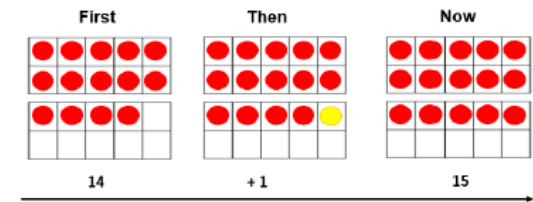
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I can find one more than a number.

In this step, pupils are revisiting the idea of one more. This is a key part of understanding how numbers work and how they are ordered. Pupils can use number lines and hundreds squares to help them see the order of numbers and understand that one more is moving one step forward.

It is important that pupils also find one more without counting, as this will further develop their number sense.

- Tens frame as concept images: I have 14 counters. What happens if I add one more? Do I need to count? If I know 8 is the whole and 7 is a part and 1 is a part, then I know that  $7 + 1$  is 8
- Picture 7 in your head. What do you see? What happens if I add one more? What changes? What stays the same? *E.g. a pupil might see 5 and 2 in a tens frame pattern, and then change this to 5 and 3.*

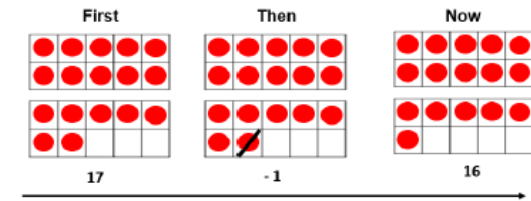


I can find one less than a number.

In this step, pupils are revisiting the idea of one less. Pupils can use number lines and hundreds squares to help them see the order of numbers and understand that one less is moving one step backwards.

It is important that pupils also find one less without counting, as this will further develop their number sense.

- If 6 is my whole, and 1 is my part, what is my missing part? If I know  $1 + 5$  is 6, then I know that  $6 - 1$  is 5.
- Picture 8 in your head. What do you see? What happens if I take one away? What changes? What stays the same? *E.g. a pupil might see 4 and 4 in a dot pattern and then change this to a 4 and a 3.*
- Show a tens frame pattern e.g. 19. *"I know this is 1 less than 20 without having to count because..."*



I can order numbers on a number line (up to 20).

Pupils should be introduced to the number line as a representation of the order and relative size of numbers. Pupils should begin to:

- develop the ability to mentally visualise a number line, with consecutive whole numbers equally spaced along it
- draw number lines, with consecutive whole numbers equally spaced along them
- identify or place numbers up to 20 on marked and unmarked number lines

Pupils should use efficient strategies and appropriate reasoning, including working backwards from a multiple of 10, to identify or place numbers on marked number lines.

[Mathematics guidance: key stages 1 and 2 \(covers years 1 to 6\) - 1NPV-2](#)

Make links to prior learning when reasoning, including the use of language of comparison and one more, one less.

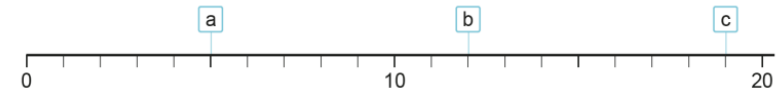


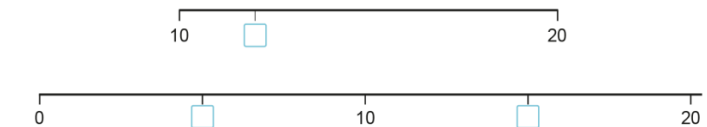
Figure 7: identifying 5, 12 and 19 on a marked 0 to 20 number line

**Language focus**

"a is 5 because it is halfway between 0 and 10."

"b is 12 because it is 2 more than 10."

"c is 19 because it is one less than 20."



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## 10 sessions – Addition & Subtraction

I can represent and use number bonds within 10.

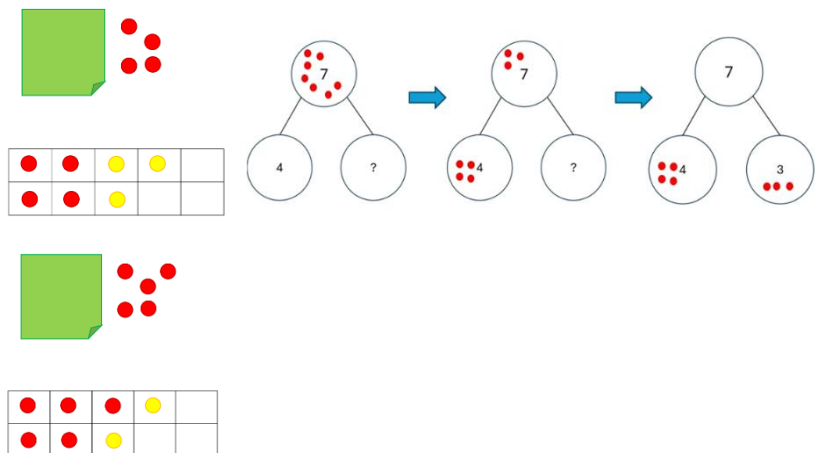
This step builds on from the Year 1 knowledge of recognising parts within wholes. Number bonds are pairs of numbers that add up to a given total. When exploring number bonds up to 9, encourage pupils to use their subitising skills rather than counting in ones. This will help pupils see number relationships quickly and builds a stronger understanding of how numbers are made up.

Consider tasks that develop conceptual understanding, enable fluency practice and application into problem solving contexts.

- I have 7 counters in total. How many are hidden under the card?

7 is the whole, 4 is a part, \_\_\_ is a part.

*I know 4 and 3 make 7. 7 is the whole, 4 is a part, 3 is a part.*



- What happens if I move one of my counters out from under the card.
- What has changed? What has stayed the same?

7 is the whole, 5 is a part, \_\_\_ is a part.

I can represent and use number bonds to 10.

### Developing conceptual understanding:

Fill a tens frame with red counters. Can you find a way of splitting 10 into two parts?  
How has your partner split 10? Can you find another way of splitting 10 into two parts?  
This is an opportunity to support pupils with working systematically to find all the number bonds to 10.

### Developing fluency:

- Number bond snap
- Matching pairs game
- Ten frame flash – flash a partially filled in tens frame. Pupils to show using fingers how many more to make 10.

### Application/Problem solving:

Use real life scenarios or games to support deep understanding and flexible use of number bonds to 10.

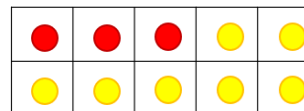
I can represent and use number bonds and related subtraction facts within 10.

This step focuses on helping pupils understand and use the relationship between addition and subtraction through number bonds within and to 10. Pupils should be able to represent each number bond in four related facts. For example:

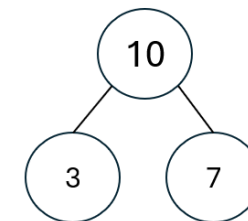
- $6 + 4 = 10$
- $4 + 6 = 10$
- $10 - 6 = 4$
- $10 - 4 = 6$

To support this, pupils need a secure understanding of part-whole relationships and should be encouraged to use real-world objects (e.g. 3 apples and 7 oranges), maths concrete resources, visual representations (like ten frames or bar models), and oral rehearsal. Emphasise the connection between the operations, not just memorisation. This builds fluency and prepares them for more complex number work.

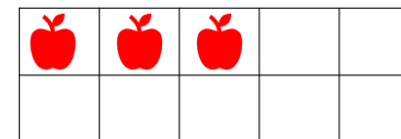
If I know  $3 + 7 = 10$



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



Watch out for pupils who have misconceptions around commutativity. Clarify the concept that addition is commutative, (for example,  $3 + 7 = 7 + 3$ ) but subtraction is not (for example,  $10 - 3 \neq 3 - 10$ ). Use real-life objects or concrete manipulatives to support understanding. E.g. "If you have 10 apples and give away 3, is that the same as having 3 and giving away 10?"



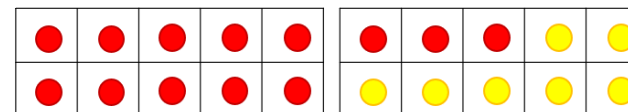
I can represent and use number bonds and related subtraction facts within 20.

This step builds on pupils' understanding of number bonds to 10 and introduces them to number bonds to 20, along with their related subtraction facts. Pupils should be able to represent each bond with four related facts, for example:

- $13 + 7 = 20$
- $7 + 13 = 20$
- $20 - 13 = 7$
- $20 - 7 = 13$

To support this, encourage pupils to spot patterns between number bonds to 10 and number bonds to 20. For example, if they know  $3 + 7 = 10$ , they can use that to understand  $13 + 7 = 20$ . This helps them see how number facts build on each other and strengthens their mental maths strategies.

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



Use visual representations like tens frames, Rekenreks and Diennes to show how the numbers relate.

Reinforce the idea that addition and subtraction are connected and encourage pupils to explain their thinking using part-whole language.

**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](#)

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