

Year 2 Unit 1: Numbers within 100 (2 weeks)

Before you start...

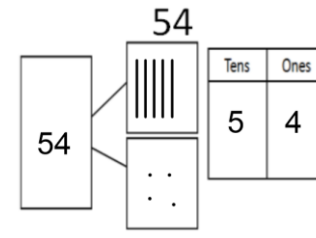
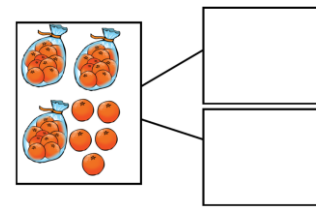
Pupils were introduced to numbers within 100 in the Summer term of Year 1. How securely can pupils recall...

- Reading, recognising and writing numbers to 100?
- Identifying groups of tens and ones?
- Representing numbers to 100 on a number line and a place value chart?
- Comparing and ordering numbers to 100?



Getting to grips with bead strings

There are plenty of strategies in [this article](#) that you can apply in your own classroom related to using a bead string as a concrete representation to develop place value understanding.



Developing Number Sense & Place Value

Use this [NRICH article](#) to find further activities to use in the classroom to deepen understanding around ordering, positioning and amount.

Pupils may benefit from additional time exploring how to partition more numbers non-canonically. You may wish to use a consolidation lesson here.

Promoting the CPA approach in my classroom

Engage with our E-learning modules on the concrete-pictorial-abstract approach: [part one](#) and [part two](#) to learn how making connections between varied representations deepens understanding.

Identifying tens and ones in 2-digit numbers

- L1 Explore 2-digit numbers by grouping in tens
- L2 Identify tens and ones in a 2-digit number

Using the Big Picture to contextualise place value, pupils organise fruit into bags of ten and leftover ones. Providing pupils with practical experiences of organising everyday objects into groups of ten helps them to make sense of our abstract number system (place value). These experiences are essential in developing conceptual understanding before working with bead strings and Dienes on a place value chart.

? What does each representation stress and ignore about place value? How can you continue to embed this as the unit progresses?

Partitioning 2-digit numbers into different combinations

- L3 Partition 2-digit numbers
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Pupils use part-whole models to partition numbers into tens and ones. Make connections across pictorial (fruit), concrete (Dienes and bead strings) and abstract (numerals) representations. Links to commutativity can also be made – changing the order the parts are added does not affect the value of the whole. Exposing pupils to non-standard equations ($34 = 30 + 4$) can deepen their understanding. Lesson 4 applies this learning to non-canonical partitioning ($34 = 24 + 10$).

? How can modelling part-whole language make connections to place value? E.g. '34 is my whole, 30 is one part and 4 is my other part'.

Problem solving with place value

- L5 Represent 2-digit numbers

Pupils apply their learning so far to represent a range of 2-digit numbers on a number line as well as identifying mystery numbers from clues. Encourage pupils to go beyond simply finding an answer for each clue - engage in mathematical thinking by using a range of representations to find all possibilities.

? What opportunities will you provide for learners to reflect on the types of thinking they have done and the choices they have made, so that they can deploy these actions again in future problem solving?

Comparing and ordering numbers to 100

- L7 Compare numbers to 100
- L8 Order numbers to 100
- L9 Explore number patterns

Pupils apply their learning from lessons throughout this unit to compare numbers to 100, with $<$ and $>$ symbols introduced in lesson 7. Pupils use familiar representations such as Dienes and bead strings to support them in coming to generalisations such as 'when the tens values are the same, the value of the ones is compared' and 'when the tens values are different the value of the tens is compared'. Pupils can apply these generalisations when ordering multiple numbers. Lesson 9 focuses on counting forwards and backwards in threes, applying knowledge of ordering numbers. Pupils engage in mathematical thinking when predicting and justifying the value of numbers in sequences.

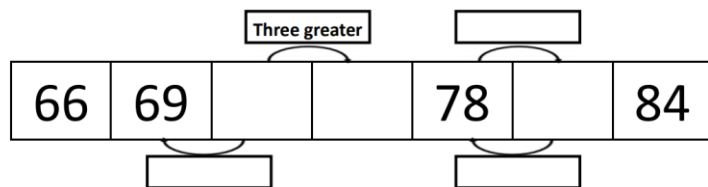
? What questions and prompts might you offer to encourage pupils to wonder if something that has happened in a particular case, will always happen (e.g. engaging in generalising)?

Representing 2-digit numbers with words

- L6 Read and write numbers to 100 in words

Pupils explore patterns in writing 2-digit numbers in words. Make connections to corresponding abstract representations (numerals) and to previous learning in this unit on partitioning using part-whole models. Pupils might find teen numbers challenging. They may apply their knowledge of place value (tens then ones) and write 'ten three' instead of 'thirteen'. Plan to spend time exploring this in the Develop Learning

? How could you consolidate writing numbers to 100 in words within Maths Meetings throughout the year?



Will I say the number thirteen if I count forwards in threes from five?



There are only nine planned lessons in this 2-week unit which allows you to respond to how pupils are progressing. Although there is only one suggested consolidation lesson, use your professional judgement to add further consolidation lessons to pre-teach, post-teach and break learning across multiple lessons according to your pupils' needs. When adapting, keep in mind the [yearly planner](#) to ensure curriculum coverage.

