



















Number and Place Value: Partitioning in Different Ways

<p>Aim: Recognise the place value of each digit in a two-digit number (tens, ones).</p> <p>DfE Ready-to-Progress Criteria: Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. (2NVP-1)</p> <p>To partition two-digit numbers in different ways.</p>	<p>Success Criteria: I can say what the value of each digit is in a two-digit number.</p> <p>I can partition a two-digit number into tens and ones.</p> <p>I can partition two-digit numbers in more than one way.</p>	<p>Resources: Lesson Pack</p> <p>Base ten blocks and other equipment for partitioning</p> <p>Whiteboard and pens - class set</p>
	<p>Key/New Words: Numbers 0-100, up, back, zero, teen, two-digit, represent, partition, tens, ones.</p>	<p>Preparation: Square Number Cards 0-100 – one per pair</p> <p>Partitioning in Different Ways Activity Sheets – one per child</p> <p>Diving into Mastery Activity Sheets - as required</p>

Prior Learning: Year 1 conceptual prerequisite: It will be helpful if children know that multiples of 10 are made up from a number of tens, for example, 50 is 5 tens. For a great lesson to support this please click [here](#).

Learning Sequence

	<p>Remember It: Children match the representations to the number of tens they show on the Lesson Presentation, giving reasons for their answers.</p>	
	<p>Let's Find Another Way: Using the number 32 as an example, recap how we partition two-digit numbers (e.g. into a multiple of ten and ones, $32 = 30 + 2$). Using the Lesson Presentation, explain and model to the children different ways you can partition two-digit numbers. This includes: into a multiple of ten and a two-digit number ($32 = 10 + 22$); into a two-digit number and ones ($32 = 31 + 1$); into three numbers ($32 = 20 + 10 + 2$); into four numbers ($32 = 10 + 10 + 10 + 2$). Number sentences will be shown alongside a range of representations including base ten, money and bar models. Repeat with the number 45, this time giving children time to respond before showing the answers. Can children say what the value of each digit in a two-digit number is? Can they partition a two-digit number into tens and ones?</p>	
	<p>Find the Ways: Children work with a partner, randomly selecting a two-digit number from the Square Number Cards 0-100. Using equipment, children partition the number in as many ways as they can, recording their methods in number sentences on whiteboards. Ask for volunteers to demonstrate their findings using the equipment. Can the children partition two-digit numbers in more than one way?</p>	
	<p>Partitioning in Different Ways: Children complete the differentiated Partitioning in Different Ways Activity Sheets, partitioning numbers and representing them in number sentences and on number lines.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="236 1585 571 1760">  <p>Children partition two-digit numbers in three different ways, recording on a blank number line or a bar model.</p> </div> <div data-bbox="576 1585 970 1789">  <p>Children partition two-digit numbers in four different ways, recording on a blank number line and a bar model. They solve the incorrect partition.</p> </div> <div data-bbox="975 1585 1369 1814">  <p>Children partition two-digit numbers and one three-digit number in different ways, recording on a blank number line and a bar model. They solve the partition problem.</p> </div> </div>	

	<p>Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <p> Children match numbers to a representation showing a partitioned number and complete a number line and bar model showing two-digit numbers partitioned in various ways.</p> <p> Children say whether a number has been correctly partitioned and whether the number line drawn matches this. They can explain their answers and show how the number line should be drawn. They then reason if a number can be partitioned into four parts.</p> <p> Children find the mistake in a variety of representations showing the partitioning of a two-digit number using reasoning to support their answer. They then partition the number 65 in a variety of ways.</p>	
	<p>Guess My Number: Children work with a partner. The aim of the game is to see if they can work out the number that their partner is thinking. Children take it in turns to guess the tens number and the ones number of the two-digit number that their partner has selected from the Square Number Cards 0-100. They must ask questions to which their partner can only answer 'yes' or 'no' and they only have five guesses. Children can track the guesses on a whiteboard. The child who has guessed the number correctly the soonest wins. If no-one guesses correctly both children can have more guesses until one of them gets the correct answer.</p>	

Exploreit

Solveit: Children work in pairs to complete the challenges in the _____

Rollit: Children work in pairs. One child rolls a ten-sided dice two times and makes a two-digit number. They must then race against a 1-minute timer to partition the number in as many ways as possible. If they partition the number the same way twice, they do not get a point. The child with the most points after five turns wins the game.

Changeit: Children work in pairs using base ten blocks. One partner selects tens and ones randomly to make a two-digit number. Children take it in turns to use the base ten blocks to partition the number in a different way. The last person to think of a different way to partition the number wins the round.

Learnit: Children will find this visually exciting useful tool for supporting understanding of number and place value.