

















Addition and Subtraction: Add Two 2-Digit Numbers, Crossing Ten

<p>Aim: 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.</p>	<p>Success Criteria: I can use place value grids to add two 2-digit numbers, crossing ten. I can use part-whole models to add two 2-digit numbers, crossing ten.</p>	<p>Resources: Lesson Pack Place value counters or other representations of tens and ones.</p>
<p>Add and subtract within 100 by applying related one digit addition and subtraction facts: add and subtract any 2 two-digit numbers. (2 AS-4)</p> <p>To add two 2-digit numbers by adding the ones (crossing 10) and the tens</p>	<p>Key/New Words: Place value, tens, ones, partition, place value column, part-whole model, add, addition, plus, total, compare, less than, more than, equal to, greater than, higher than, lower than.</p>	<p>Preparation: Differentiated High Score Activity Sheets – 1 per child Diving into Mastery Activity Cards – as required Tens and Ones Place Value Grids - as required</p>

Prior Learning: It will be helpful if children have been introduced to adding across ten. The following lesson has been designed to support this aspect of learning:

Learning Sequence

	<p>Remember It: The Lesson Presentation challenges children to match mixed collections of tens and ones counters with numerals. Invite the children to suggest how this challenge could have been made easier. The next slide provides the same challenge, but this time the collections of tens and ones counters are arranged in place value columns. Ask the children to explain how this helped them solve the challenge. The following two slides recap part-whole models. For this challenge, the parts will represent tens and ones. Invite the children to use the clues to complete the part-whole models. Ask them to explain their reasoning.</p>	
	<p>High Score: The Lesson Presentation introduces the children to Anna and Felix, who like to play computer games together. Each time they play, the friends add their points to see if they have beaten their high score. Each friend uses a different method to find the total. Anna uses place value grids, Felix uses part-whole models. Children practise using both methods. Can the children use place value grids to add two 2-digit numbers, crossing ten? Can the children use part-whole models to add two 2-digit numbers, crossing ten?</p>	
	<p>High Score Activity Sheets: Children complete the differentiated High Scores Activity Sheets. They use two different methods to find totals, then compare them with the high score.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="244 1167 576 1417">  <p>Children use the place value grids and part-whole models shown to add 2-digit numbers crossing ten. Prompts are provided and calculations are partially completed to support learning.</p> </div> <div data-bbox="616 1167 975 1272">  <p>Children use place value columns and part-whole models to add 2-digit numbers crossing ten.</p> </div> <div data-bbox="1007 1167 1355 1357">  <p>Children choose which representations to use to add 2-digit numbers crossing ten. They use jottings and number facts to solve the calculations.</p> </div> </div>	
	<p>Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and others may 'dive straight into the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <div style="margin-top: 10px;">  <p>Children build fluency adding two 2-digit numbers, crossing ten. Children would benefit from using place value counters or other equipment representing tens and ones.</p> </div> <div style="margin-top: 10px;">  <p>Children apply their reasoning skills to explain the mistakes made in calculations.</p> </div> <div style="margin-top: 10px;">  <p>Children apply their problem-solving skills to investigate a missing number challenge.</p> </div>	
	<p>Match It: The Lesson Presentation shows two calculations that should match the high score. Children select a method to check if the totals are correct.</p>	

Exploreit

Makeit: Pick cards or roll dice to make two 2-digit numbers. Practise using part-whole models or place value columns to find the totals. Can you beat your high score?

Raceit: Play with a friend. Take turns to write a 2-digit target number. Who will be the first to add two 2-digit numbers to match the target number?

Learnit: Children will find this visually exciting _____ a useful tool to support addition and subtraction skills.