

## Column subtraction (with borrowing) lesson plan

DAY	We Are Learning To (WALT):	MODEL / INTRODUCTION	INDEPENDENT WORK	PLENARY																																				
	<p>Mental:</p> <p>Main: Use column subtraction (with borrowing)</p>	<p>Mental:</p> <p>Main: TA to take children who are unable to subtract a 1-digit number from a 2-digit number that requires crossing tens barriers (e.g. 42 - 4) Practice counting down from 100, especially focusing on crossing tens barriers Practice counting down from 100 in tens Calculate mentally by putting first number in head and counting back, using fingers to keep count Work on setting these questions out in columns and calculating them mentally</p> <p>Go through PowerPoint with the following:</p> <ul style="list-style-type: none"><li>• Revise what column and vertical mean</li><li>• Revise 4 key teaching points (see below)</li><li>• Explanation of how when the bottom number in a column is larger than the top number, you need to take a ten / hundred / thousand from the next column to the left, with several examples</li><li>• Go through examples of how to subtract 2-digit and 3-digit numbers e.g.</li></ul> <table><tr><td></td><td></td><td>3</td><td></td><td></td><td></td><td>7</td><td></td><td></td></tr><tr><td>1)</td><td></td><td>4</td><td><sup>1</sup>2</td><td>2)</td><td></td><td>2</td><td>8</td><td><sup>1</sup>2</td></tr><tr><td></td><td>-</td><td>2</td><td>5</td><td></td><td>-</td><td></td><td>5</td><td>7</td></tr><tr><td></td><td></td><td>1</td><td>8</td><td></td><td></td><td>2</td><td>2</td><td>5</td></tr></table> <p>(With every example reinforce four main teaching points:</p> <ul style="list-style-type: none"><li>➤ Start on the right-hand side</li><li>➤ Put only 1 number in a square</li><li>➤ Write the -</li><li>➤ Put units under units and tens under tens and so on</li><li>➤ Cross out the number you take from and write its replacement above it</li></ul> <p>Middle and higher ability start work go to stick success criteria in books</p> <ul style="list-style-type: none"><li>• Model for G+T how to use column subtraction with number with decimal places</li></ul> <p>Remind children to leave space between calculations and not squash them together Have a copy of the success criteria to stick at the top of their page on each child's desk (except for lower ability as they do not need to think about all of the criteria)</p>			3				7			1)		4	<sup>1</sup> 2	2)		2	8	<sup>1</sup> 2		-	2	5		-		5	7			1	8			2	2	5	<p>(At regular intervals have children stop and check their work against the success criteria)</p> <p>Lower ability – subtract 1-digit numbers from 2-digit numbers (give number line if really needed)</p> <p>Middle ability – subtract 2-digit numbers (with borrowing)</p> <p>Higher ability – subtract 3-digit numbers (with borrowing)</p> <p>Extension – subtract 4-digit numbers and numbers with decimal places (with borrowing)</p>	<p>Have children self-assesses their work against the success criteria</p> <p>In ability partners give children 1 question to do each</p> <p>Children need to talk to their partner, explaining what they are doing e.g. I will put the 6 under the 4 because they are both units. Then I will put the 20 under the 40 because they are both tens. Then I draw my equals line with a ruler. Then I start on the right and subtract the units first, borrowing a ten. I cross out the old ten number and write the new number in the tens, and then I subtract the tens</p> <p>Children swap over and partner who spoke first now listens</p>
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