

Adding and subtracting using a hundred square

Subject: Maths	Lesson Title: Adding and subtracting using a hundred square
Date:	Time Span:
Year Group: Year 2	Group Size: 30

Desired Learning Outcomes

To be able to find one more / less than a given number

To be able to add / subtract a multiple of ten / 2-digit number using a hundred square

Key Language:

More, less and equals

Use of ICT:

Smartboard for introduction

Assessment (Make reference to each section of the lesson)

Intro – TA to check children who may / may not be able to find one more or less than a number.

Main – Mark children's work as they complete it. Sit with any children who are struggling, bringing them back to the carpet if necessary. If still unsure by end of lesson sit with TA during plenary.

Plenary – Can children explain their working out and reasoning?

Use of Other Adults

TA to work with lower ability children during main part of lesson

TA to sit and continue working with children (of any ability) who struggled in plenary

Anticipated Misconceptions/Difficulties

Children moving the wrong direction on the hundred square

Children counting the number they start on as a 'jump' e.g. saying $20 + 20 = 30$ because they put their finger on the number 20 and count it as one jump of ten

Children not knowing what to do / moving incorrectly when they reach the end of a row e.g. they get to 50 and to count on one more move to the wrong place

Resources

Number lines available from <http://www.sparklebox.co.uk/2576-2580/sb2579.html#.UFmg1BgQmPo> (laminated and cut up)

Hundred squares (laminated and cut up)

Base ten materials (plastic / wooden version or paper laminated and cut up)

	Time
<p>Introduction</p> <p>TA to take children who are unable to find one more / less than another number. If unsure if some children can do this / get confused between more / less, ask them to do a couple of examples quickly to find out.</p> <p>TA to model for children how to find one more / less than a number on a number line</p> <p>Emphasise how when we add more we move forward / up the number line, whereas when we find less we move back / down the number line</p> <p>Once children are confident with this, model how to find one more / less than a number mentally, by putting the number in their heads (pretend to push it in to your head) and counting on / back one</p> <p>Teacher (with remainder of class)</p> <p>Explain that we will be working on using a hundred square and not getting confused between more / less</p> <p>Revise sayings and actions of:</p> <ul style="list-style-type: none"> • To add one more (put one finger up), we move forward (point to the side) • To find one less (put one finger up), we move forward (point to the side) • To add ten more (put ten fingers up), we move down a row (point down) • To find ten less (put ten fingers up), we move up a row (point up) <p>Revise how to find ten more / less or one more / less than a number on a hundred square using this method, reinforcing the sayings above, emphasising which direction to move and how we add ten by only changing the tens number</p> <p>(At this point you may get middle ability children to begin their independent work)</p> <p>Revise for higher ability children how to use a hundred square to add and subtract multiples of ten and 2-digit numbers</p> <p>To add / subtract multiples of 10 you need to see how many tens there are and move down / up this many rows e.g. to calculate $30 + 40$, there are 4 tens in 40 so you need to start on 30 and move down 4 rows to get to 70.</p> <p>To add / subtract 2 digit numbers you need to first move down / up however many tens there are and then forward / backward how many units e.g. to calculate $30 + 56$ there are five tens so you move down five rows and there are six units so then you move forward six spaces.</p> <p>Cover examples where you need to cross a 'tens barrier' e.g. $48 + 26$ and model how to move back to the beginning of the next row down when you reach the end of a row e.g. when you get to 50, to count on one more you move down and back to 51.</p> <p>Emphasise need to check whether a question is more / less or add / subtract</p> <p>(Higher ability start work)</p> <p>Model for G+T how to add and subtract multiples of 100 by only changing the numbers in the hundreds column, similar to how we add multiples of 10 by only changing the numbers in the tens column</p> <p>Model how to add and subtract 3-digit numbers by adding / subtracting the hundreds, then the tens and then the units</p>	15 mins
<p>Main (including differentiated tasks)</p> <p>Lower ability – find one more / less than a number</p> <p>Middle ability – find one more / less or ten more / less than a number on a hundred square</p> <p>Higher ability – add and subtract 2-digit numbers</p> <p>Gifted and talented – add and subtract 3-digit numbers (with base ten materials if needed)</p> <p>Extension – make up some of their own number sentences to calculate</p>	20 mins
<p>Plenary</p> <p>Revise sayings and actions from introduction. In ability partners give children 2 questions per pair, one for each partner. Children need to talk to their partner, explaining why they are using the method that they are using e.g. moving down 4 rows to add 40 because there are 4 tens in forty.</p>	10 mins