

Adding and subtracting using fingers and mentally lesson plan

| | |
|---------------------------|---|
| Subject: Maths | Lesson Title: Adding and subtracting by using fingers and mentally |
| Date: | Time Span: |
| Year Group: Year 2 | Group Size: 30 |

Desired Learning Outcomes

To be able to use their fingers to add and subtract

To be able to add and subtract mentally with 2-digit / 3-digit numbers

Key Language:

Add, plus, more, less, subtract, minus, take away, jump, tens and hundreds

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 add and subtract up to 10 with their fingers.

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 to their partner how they are completing the calculation as they work it out?

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 counting from the first number when adding or subtracting e.g. to calculate $6 + 3$, counting 6, 7, 8, instead of 7, 8, 9

Children not being able to work without relying on concrete aids i.e. number lines and hundred squares

Resources

Number lines available from <http://www.sparklebox.co.uk/2576-2580/sb2579.html#.UFmq1BgQmPo> (laminated and cut up)

Hundred squares

Pupil whiteboards and pens

| Introduction | Time |
|--|-------------|
| <p>TA to take children who are still insecure on adding and subtracting with their fingers with numbers below 10. If unsure ask children to quickly do a couple of questions to check</p> <p>Model how to add and subtract numbers using your fingers, revising strategies from previous lessons</p> <p>Emphasise the need to start counting from the next number e.g. to calculate $6 + 3$, count from 7, so 7, 8, 9, and not count from 6, so 6, 7, 8</p> <p>(If all children able to add and subtract with their fingers up to 10, TA to take G+T)</p> <p>Teacher (with remainder of class)</p> <p>Model how to add and subtract numbers using your fingers with one number by placing the first number in your head and using your fingers to count on / back by the second number</p> <p>Emphasise the need to start counting from the next number e.g. to calculate $6 + 3$, count from 7, so 7, 8, 9, and not count from 6, so 6, 7, 8</p> <p>(Middle ability children begin work)</p> <p>Briefly revise how to add and subtract with a hundred square and a number line. Tell children that they will not be using these today, but that if they imagine them in their minds it will help them.</p> <p>Revise how to add and subtract multiples of ten by only changing the tens digit e.g. $45 + 20$, only the 4 in the tens column changes.</p> <p>Revise how to add and subtract 2-digit numbers by adding and subtracting the tens first and then the units e.g. $45 + 23$ you add the two tens first to get 65 and then add the units to get 68</p> <p>Remind children to visualise number lines and hundred squares as they work to help them</p> <p>Revise for G+T children how to add or subtract the hundreds first, then the tens, then the units, emphasising how if you are adding or subtracting hundreds, only the hundreds column changes</p> | 15 mins |
| <p>Main (including differentiated tasks)</p> <p>Lower ability – adding and subtracting with fingers (with totals up to 10). Children who work slowly to work on sheet rather than in books</p> <p>Middle ability – adding and subtracting with fingers (with totals up to 100)</p> <p>Higher ability – adding and subtracting 2-digit numbers mentally</p> <p>Gifted and talented – adding and subtracting 3-digit numbers mentally</p> <p>Extension – children to make up their own addition and subtraction sentences to calculate on pupil whiteboards</p> <p>(If children are really struggling to work without number lines / hundred squares, provide them, but only as last resort as aim of them is to give children mental images / strategies to work with, rather than becoming reliant / dependent on them)</p> | 20 mins |
| <p>Plenary</p> <p>In ability partners give children 2 questions per pair, one for each partner. Children need to talk to their partner, explaining how they are working out the calculation</p> | 10 mins |