Subtraction Strategies for Mental Maths – Grade 2/3

Teacher Notes

Compensation Strategy

Aim of the worksheet:

The attached resource is designed to be completed at home with the help of a parent / carer. It is part of a series of resources based on subtraction strategies.

The Parent Information sheet aims to get parents / carers more involved in the maths education at home during the Coronavirus Pandemic. The goal is to get the parents to understand the benefits of developing strong number-sense strategies for mathematical problem solving. The student will be in beneficial position if their parent or carer takes more ownership in conveying the understanding of how to solve mathematical problems using a variety of strategies.

It might be worth your while reiterating to parents the expectation of their input. We all know how important it is to get parents more involved in maths education at home!

Background:

Students are taught many efficient strategies for addition and subtraction problems during early primary years. Unfortunately, by the time these students reach upper primary, many are no longer using these strategies fluently. They are, instead, reaching for a calculator or relying on traditional written vertical algorithms. Some students simply 'trust' the steps of traditional algorithms for subtraction without fully understanding the place value regrouping. They use terminology such as 'carry' or 'borrow' the one, however they struggle to articulate what is actually occurring with regard to place value.

Professor Dianne Siemon (Prof of Mathematics Education at RMIT) has conducted a number of Big Ideas in Number workshops at BioLAB over the past 5 years. Her workshops are designed to ensure more students are developing a strong number-sense and meeting non-negotiable milestones throughout their mathematics education pathway. This series of worksheets on mental maths strategies has been largely inspired by Prof Siemon's Big Ideas in Number workshops.

We encourage any feedback from teachers who utilise these resources so we can continually make improvements.

Learning Intention

Use compensation to change the numbers in a subtraction problem to make it easier to solve.

Success Criteria

I am able to demonstrate how to use the compensation strategy to change numbers in a subtraction problem to make it easier to solve:

- I am able to change one of the numbers to make it a friendly anchor number
- I understand that I must compensate for this change by making the same change to the other number before solving the problem

Curriculum Links:

Number and Algebra

- Number and place value
    - Solve simple addition and subtraction problems using a range of efficient mental and written strategies (VCMNA107)
    - Explore the connection between addition and subtraction (VCMNA106)
    - Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (VCMNA105)
    - Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and ten from any starting point, then moving to other sequences (VCMNA103)