

Developing Efficient Computation with Mini Lessons

Topic: Developing Addition and Subtraction Strategies

Mini-Lesson Background

Mini-Lessons¹ are short 10 to 15 minute engagements focused on computation using a strategically designed set of related examples used to highlight and develop number relationships and operations. These collections of problems will be referred to as “strings” and will contribute to the development of efficient mental math computation.

Content Standards

- » *Number and Operations in Base 10 (Grade 2)*
 - » Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
 - » Add up to four two-digit numbers using strategies based on place value and properties of operations.
 - » Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction

Practice Standards

- » *Make sense of problems and persevere in solving them*
Students persevere to understand and solve the problem.
- » *Model with mathematics*
Students create representations and number sentences associated with the problem.

¹ The development of efficient addition and subtraction computation can be found in *Young Mathematicians at Work: Constructing Number Sense, Addition, and Subtraction* pp. 127-151 (Fosnot & Dolk, 2001)

Addition Mini-Lessons

Examples:

Solve the following problems in your head. Show a representation of the thinking you used to solve the problem.

$43 + 20$

$62 + 30$

$62 + 39$

$54 + 48$

Subtraction Mini-Lessons

Examples:

Solve the following problems in your head. Show a representation of the thinking you used to solve the problem.

$82 - 6$

$64 - 59$

$56 - 8$

$132 - 6$

$135 - 13$

$132 - 128$

$135 - 122$