



**Operations and Algebraic Thinking
Unpacking Current and Prerequisite
Standards to Increase Student Success
Grades 3-5**



Agenda

Operations and Algebraic Thinking

- **Unpack the Standards**
 - Standard
 - SLOs
 - Rationale
 - Vocabulary
 - Prerequisites
- **Math Stations**
- **Connection to Assessment**
- **Debrief and Discuss**

SCHOOL

Problem Solving Task Cards

Maria has 137 rainbow stickers, 48 unicorn stickers and 26 balloon stickers. She gave 58 of her stickers to Gia. How many stickers does Maria have left?



There are 336 students in the 3rd grade. 178 students are girls. How many boys are in the 3rd grade?



Jason has 148 marbles. Tyrone has 57 marbles. Jason gave Tyrone 29 of his marbles. How many marbles does Tyrone have now? How many marbles does Jason have now?



Regrouping – Problem Solving Cards
Math Center

- Directions:
- Work with a partner to solve the 5 problems.
 - Read and discuss each problem together.
 - Draw a star to solve the problem.
 - Show all work on your activity sheet.
 - Listen over answers.

Example:

There were 28 pages in the book. I read 12 pages to my friend. How many pages are left in the book?

$$\begin{array}{r} 28 \\ -12 \\ \hline 16 \end{array}$$

Standards:

• **1.NB.A.1** Identify and extend with 100 using strategies and algorithms with base ten blocks for the unknown quantity. *Anchor*
• **1.NB.A.2** Understand the meaning of the subtraction operation.
• **1.NB.A.3** Recognize and represent addition and subtraction.

When using addition and subtraction

only when it is necessary and helpful

Benefits of Task Cards

- A great way to engage students
- Students choose which task they do first
- Students do not feel overwhelmed by multiple problems on a worksheet
- Mathematical discourse takes place when working with a partner
- Answers can be provided for



Vocabulary

multiplication/multiply
division/divide
addition/add
subtraction/subtract
equations
unknown
remainders
reasonableness
mental computation
estimation
rounding

Prerequisite Skills

Concept(s):

Letters or symbols
in an equation
represent an
unknown quantity.

Students are able to:

- represent the solution to two-step word problems with equations.
- use a symbol to represent an unknown in an equation.
- assess the reasonableness of answers in two-step word problems using mental computation and estimation strategies including rounding
- explain, using an estimation strategy, whether an answer is reasonable.



Unpacking Standard 5.OA.A.2

- This standard refers to expressions.
- Students should understand the difference between an expression and an equation.
- This standard calls for students to verbally describe the relationship between expressions without actually calculating them.
- The standard does not include the use of variables, only numbers and signs for operations.

Debrief and Discuss

“Next Day Plan”

Discuss with a partner(s):

How will today’s unpacking of the standards and math stations impact your delivery of instruction?

What are some immediate changes that can be implemented?

What is your “Next Day Plan”?

