

Grade 1 Module 1 - Sums and Differences to 10

Vocabulary:

- Count on (Students count up from one addend to the total.)
- Track (Students use different objects to track the count on from one addend to the total.)
- Expression (e.g., $2 + 1$ or $5 + 5$.)
- Addend (One of the numbers being added.)
- Doubles (e.g., $3 + 3$ or $4 + 4$.)
- Doubles plus 1 (e.g., $3 + 4$ or $4 + 5$.)

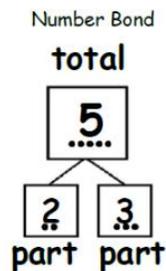
Note: Visually recognizing (perceptually subitizing) sets of objects, particularly fingers, allows students to move toward seeing two sets of objects together (conceptually subitizing), thus preparing them for the fluency objective of Grade 1.



Teacher flashes fingers the Math Way for numbers 0–10 (see pictures above: teacher's raised fingers should begin with the right pinky and end with the left pinky so students see fingers from left to right).

Topic A: Embedded Numbers and Decompositions

- Look for numbers “hiding” inside a given number



- Count on by understanding

1 more than ____ is _____. and ____ is 1 more than _____.

For example: 1 more than 5 is 6. And 6 is 1 more than 5.

Topic B: Counting On From Embedded Numbers / Topic C: Addition Word Problems

- Represent put together situations with number bonds. Count on from one embedded number or part to totals of 6, 7, 8, 9, and 10 generate all addition expressions for each total.



- The Rekenrek has a 5 and 10 structure, with a color change at 5 (eliciting the visual effect of grouping 5 and grouping 10). The 20-bead Rekenrek consists of 2 rows of 10 beads, allowing students to see numbers to 10 either as a number line on one row or a ten-frame (5 beads on two rows). A 100-bead Rekenrek has 10 rows of 10 beads. Other names for the Rekenrek are “Calculating Frame,” “Slavonic Abacus,” “Arithmetic Rack,” or “Math Rack.”



- put together math stories (e.g., 5 students sitting, 2 students standing: $5 + 2 = 7$; 3 students facing sideways, 5 students facing forward: $3 + 5 = 8$.)

Topic C: Addition Word Problems

- students need to draw a picture
- solve the problem
- write a number sentence for the problem along with a statement answering the question

Topic D: Strategies for Counting On / Topic E: The Commutative Property of Addition and the Equal Sign

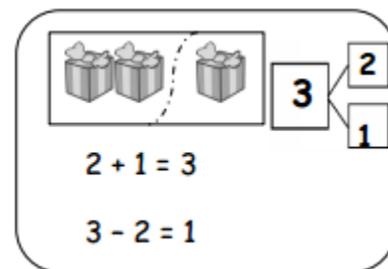
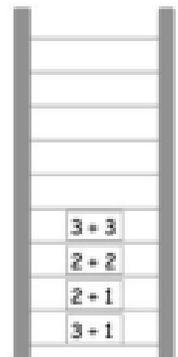
- commutative property - $3 + 4 = 4 + 3$ $3 + 4 = 4 + 3$
- doubles – $1 + 1, 2 + 2, 3 + 3, 7 + 7$
- doubles plus 1 - $4 + 5 = 9$ Use our doubles facts. $4 + 4 = 8$. Add 1 more and you get 9

Topic E: The Commutative Property of Addition and the Equal Sign

- in the context of addition to 10, students expand their knowledge of two basic ideas of mathematics: equality and the commutativity of addition - can add in any order and it doesn't change the answer
- $4 + 3 = 3 + 4$

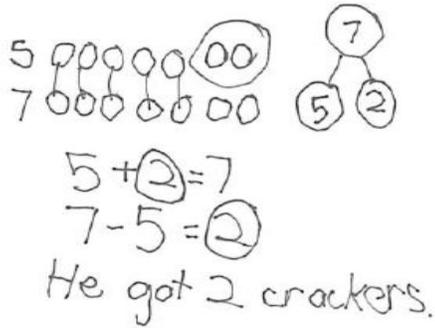
Topic F: Development of Addition Fluency Within 10

- The Related Fact Ladder provides students an opportunity to demonstrate level of comprehension. This activity facilitates student discovery of patterns and structures in their math work.
- Break the total into parts. Write a number bond and addition and subtraction number sentences



Topic G: Subtraction as an Unknown Addend Problem

- the concept of subtraction as a missing addend
- For example: Ben had 5 crackers. He got some more. Now he has 7. How many crackers did Ben get?



Topic H: Subtraction Word Problems

- Students make math drawings that flow from their understanding of the stories. They engage in dialogue to relate their drawings to number sentences and explain the meaning of the subtraction symbol

