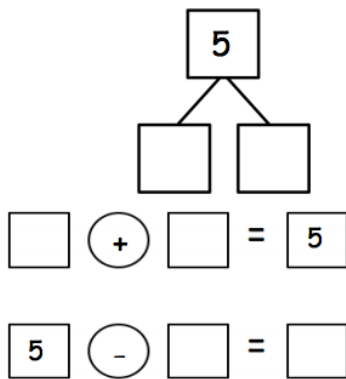


## Sums and Differences to 10

In this first module of Grade 1, students make significant progress toward fluency with addition and subtraction of numbers to 10. They are presented with opportunities designed to advance them from counting all to counting on. This leads many students to decomposing and composing total amounts. This module is an important foundational piece for our first grade mathematicians.



Number bonds are used to relate addition and subtraction

$1 + 2$	$1 + 3$
$2 + 2$	
$3 + 2$	$3 + 3$

Students will learn to solve related addition problems

## What Comes After this

**Module:** In Module 2, students begin to problem-solve with teen numbers. Students will go beyond the beginning strategies of counting on and counting back and learn to use more sophisticated strategies that involve working with groups of 10 as a basic unit, either taking away ten or making ten to solve problems.

## New Terms, Phrases, and Strategies in this Module:

**Count on** - Students count up from one addend to the total, e.g. for  $5 + 4$  they would start with 5, then count 6..7..8..9 to get the total of 9

**Expression** - e.g.,  $2 + 1$  or  $5 + 5$  (expressions do not have an equals sign, thus are not equations)

**Addend** - One of the numbers being added in an addition problem

**Doubles** - e.g.,  $3 + 3$  or  $4 + 4$

**Doubles plus 1** - e.g.,  $3 + 4$  or  $4 + 5$

**Part** - e.g., “What is the unknown part?  $3 + \underline{\quad} = 8$ ”

**Equation and number sentence** - these words are used interchangeably throughout the module

**Number Bond** - a graphic showing part/part/whole (see reverse side for more information)

## + How you can help at home:

- Practice “counting on” as a strategy for addition, e.g. if you have 7 LEGO pieces, and then you get 3 more, encourage your student to start with the number 7 and count “8...9...10” to find the total.
- Discuss various ways to take apart a given number, e.g. 6 is made of 1 and 5, 2 and 4, 3 and 3, etc.

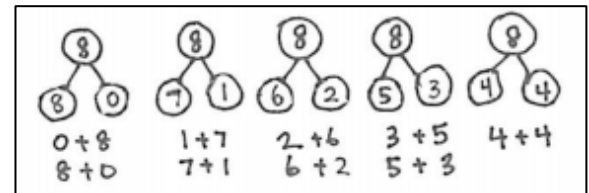
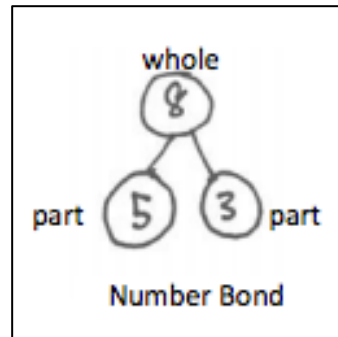
## Key Common Core Standards:

- Represent and solve problems involving addition and subtraction**
  - Use addition and subtraction within 10 to solve word problems
- Understand and apply properties of operations and the relationship between addition and subtraction**
  - Apply properties of operations as strategies to add and subtract
  - Understand subtraction as an unknown-addend problem
- Add and subtract within 10 (eventually within 20)**
  - Relate counting to addition and subtraction
- Work with addition and subtraction equations**
  - Understand the meaning of the equal sign
  - Determine the unknown whole number in an addition or subtraction equation relating three whole numbers

## Welcome to A Story of Units!

Each module's parent tip sheet will highlight a new strategy or math model your student will be working on.

In Module 1, first grade students will use Number Bonds to understand the part-part-whole relationships inherent to addition and subtraction. The Number Bond is a powerful mathematical model that students will return to throughout *A Story of Units*.



Number Bonds showing ways to make 8

### Read on to learn a little bit about *Eureka Math*, the creators of *A Story of Units*:

*Eureka Math* is a complete, PreK-12 curriculum and professional development platform. It follows the focus and coherence of the Common Core State Standards (CCSS) and carefully sequences the progression of mathematical ideas into expertly crafted instructional modules.

This curriculum is distinguished not only by its adherence to the CCSS; it is also based on a theory of teaching math that is proven to work. That theory posits that mathematical knowledge is conveyed most effectively when it is taught in a sequence that follows the “story” of mathematics itself. This is why we call the elementary portion of *Eureka Math* “A Story of Units.” The sequencing has been joined with methods of instruction that have been proven to work, in this nation and abroad. These methods drive student understanding beyond process, to deep mastery of mathematical concepts.

The goal of *Eureka Math* is to produce students who are not merely literate, but fluent, in mathematics. Your student has an exciting year of discovering the story of mathematics ahead!

#### Sample Problem from Module 1:

How many animals do you see?

Write at least 2 different number bonds to show different ways to break apart the total.

(Sample taken from Module 1, Lesson 2)

