

## Core Content

**Cluster Title:** Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

**Standard 2:** Solve addition and subtraction word problems, and add and subtract within 10 (e.g., by using objects or drawings to represent the problem).

### **MASTERY Patterns of Reasoning:**

**Conceptual:**

Students will understand that addition is the joining of two sets.

Students will understand that subtraction is decomposing a set.

Students will understand that each set in an addition problem is represented by a number, and when the numbers are joined together they make a new set.

Students will understand that the set in a subtraction problem is represented by a number, and when the numbers are separated they make two sets.

**Procedural:**

Students can solve addition and subtraction story problems using objects and drawings.

Students can add by joining and subtract by separating.

**Representational:**

Students can use objects and drawings to represent addition and subtraction problems.

## Supports for Teachers

### **Critical Background Knowledge**

**Conceptual:**

Addition is the joining of two sets to create a larger set.

Subtraction is the separation of a larger set into two smaller sets.

**Procedural:**

Solve addition and subtraction problems with objects, fingers, mental images, drawings, sounds acting out situations, verbal explanations, expressions, or equations to join sets.

<p><b>Representational:</b>                  Model addition and subtraction using objects, fingers, mental images, drawings, sounds acting out situations, verbal explanations, expressions, or equations.</p>	
<p><b>Academic Vocabulary and Notation</b>                  join, add, addend, addition, equal to, equation, expression, subtract, sum, difference, plus, minus, separate, combine, put together, total, take away, compare</p>	
<p><b>Instructional Strategies Used</b></p> <p>In a whole-group setting, teacher dictates a story problem while students create a representation with manipulatives.</p> <p>In partners, students create and solve story problems using manipulatives.</p> <p>In a whole-group setting, teacher and students create and solve word problems using pictures.</p> <p>Individually, students create and solve word problems pictorially.</p> <p>Word problems include addition.</p> <p>Word problems include subtraction.</p>	<p><b>Resources Used</b></p> <p>Hutchins, Pat. <i>Ten Red Apples</i>. Greenwillow Books, 2000.</p> <p>Long, Lynette. <i>Domino Addition</i>. Charlesbridge Pub., Inc., 1997.</p> <p>Murphy, Stuart J. <i>Elevator Magic (MathStart Subtracting)</i>. HarperCollins, 1997.</p> <p><u>Music:</u>                  (Do an Internet search for these composers if you are interested in music for this standard)                  Jack Hartman                  Shari Sloane                  Dr. Jean                  Raffi</p>
<p><b>Assessment Tasks Used</b></p>	
<p><b>Skill-Based Task:</b>                  Teacher dictates an addition story problem. For example: Olivia has 3 lollipops and her friend Sophie 2 lollipops. How many lollipops do they have all together? Students draw a picture to solve the problem.</p>	<p><b>Problem Task:</b>                  Teacher creates number cards 1 -5. Students will draw two number cards from the pile. Students will create an addition/subtraction problem and solve using illustrations.</p>