

Core Content

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

Standard 1: Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

*Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)

MASTERY Patterns of Reasoning:

Conceptual:

Students will understand that addition is “putting together and adding to.”

Students will understand that addition is the joining of two sets to create a larger set.

Students will understand that subtraction is “taking apart and taking from.”

Students will understand that subtraction is the separation of a larger set into two smaller sets.

Procedural:

Students will represent addition problems with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations to join sets.

Students will represent subtraction problems with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations to take apart sets.

Representational:

Students will model addition and subtraction using objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.

Supports for Teachers

Critical Background Knowledge
<p>Conceptual: Students will understand that the last number name said tells the number of objects counted. Students will understand that, when counting objects, each successive number name refers to a quantity one larger (K. CC4). Students will understand that the number of objects in one group is greater than, less than, or equal to the number of objects in another group (K. CC6).</p> <p>Procedural: Students can count how many objects are in a set.</p> <p>Representational: Students can represent a given number with objects</p>
Academic Vocabulary and Notation
<p>join, add, addend, addition, equal to, equation, expression, subtract, sum, difference, plus, minus, separate, combine, put together, total, take away, compare, take apart</p>

Instructional Strategies Used	Resources Used
<p>Teachers can tell a story using addition or subtraction to introduce the topic.</p>	<p>Base, Graeme. <i>Uno's Garden</i>. Abrams Books for Young Readers, 2006.</p>
<p>Teachers can use students to role-play addition and subtraction problems.</p>	<p>Jonas, Ann. <i>Splash</i>. Greenwillow Books, 1997.</p>
<p>Teachers may begin instruction by using objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations.</p>	<p>Maccarone, Grace. <i>Monster Math (Level 1) (Hello Reader, Math)</i>. Cartwheel, 1995.</p> <p>Maccarone, Grace. <i>Monster Math Picnic</i>. Cartwheel, 1998.</p>

	<p>Raffi. <i>Over In The Meadow</i>. Rounder, 1979.</p> <p><u>Music:</u> Do an Internet search for the following composers if you are interested in music for this standard. Jack Hartman Shari Sloane Dr. Jean Raffi</p>
Assessment Tasks Used	
<p>Skill-Based Task: Teacher distributes linking cubes to students. Teacher reads an addition story problem and has students act out the problem using the linking cubes.</p> <p>Teacher distributes linking cubes to students. Teacher reads a subtraction story problem and has students act out the problem using the linking cubes.</p>	<p>Problem Task: Students create their own addition or subtraction story problem using objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations.</p>