



Unit 2 Operations and Algebraic Thinking-Foundations to 5 Kindergarten

Last Update: August 1, 2025

Archdiocesan Curriculum > Grade K > Math > Length of unit 31 days

Stage 1: Desired Results						
General Information In this unit, students will deepen their understanding of numbers through comparison, addition, and subtraction within 5. They will use matching and counting strategies to compare sets, identifying when groups are equal to, greater than, or less than others, and will begin recognizing ordinal positions to fifth. Students will model addition by putting together numbers to make sums up to 5 and begin writing and solving addition equations using symbols and drawings. They will also explore subtraction by taking apart groups, solving word problems, and writing subtraction equations to represent situations within 5. Key vocabulary such as compare, greater than, less than, plus, minus, add, subtract, and equation will support students in expressing their mathematical thinking. Mathematical Practices MP1 – Make sense of problems and persevere in solving them MP2 – Reason abstractly and quantitatively MP4 – Model with mathematics MP7 – Look for and make use of structure	Essential Question(s) • How can we compare groups of objects to understand more, less, or the same? • What are different ways we can put numbers together and take them apart to show how quantities change? • How do addition and subtraction help us solve real-world problems with numbers? • How can pictures, objects, and symbols help us show that a number sentence is true? • Why is it important to know the position of things in a group, and how do we describe that position?					
Enduring Understanding/Knowledge Students will: • Use matching and counting strategies to compare sets with the same number of objects. • Use matching and counting strategies to compare sets when the number of objects in one set is greater than the number of objects in the other set. • Use matching and counting strategies to compare sets when the number of objects in one set is less than the number of objects in the other set. • Make a model to solve problems using a matching strategy. • Use a counting strategy to compare sets of objects. • Recognize the ordinal positions to 5th. Review/Assess • Put together numbers to make numbers to 3. • Put together numbers to make 4 and 5. • Take away from numbers to 5. • Put together and take away within 5. Review/Assess • Use symbols to write an addition equation. • Use addition to put together two groups. • Use objects or drawings to show that an	Vocabulary <table><tr><th>New</th><th>Review</th></tr><tr><td> • compare • equal to • greater than • less than • first • second • third • fourth • fifth • before • after • plus • minus • add • is equal to • equation • sum • subtract • difference </td><td> • zero • one • two • three • four • five • pair • larger • forward • backward • fewer • more • match </td></tr></table>		New	Review	• compare • equal to • greater than • less than • first • second • third • fourth • fifth • before • after • plus • minus • add • is equal to • equation • sum • subtract • difference	• zero • one • two • three • four • five • pair • larger • forward • backward • fewer • more • match
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addition equation is true. • Write and solve addition equations with sums up to 5. Review/Assess • Use symbols to write a subtraction equation. • Use subtraction to take apart two groups. • Use objects or drawings to show that a subtraction equation is true. • Write and solve subtraction equations within 5. • Solve subtraction word problems within 5. Review/Assess		
Connections to Catholic Identity / Other Subjects Religion/Catholic Identity: • Use a bible story The Lost Coin or Noah's Ark to practice addition and subtraction. Other Subject Here: • ELA: When reading a counting book, we can add or subtract the different objects or characters (For example, "How many frogs are now sitting on the log?" • Science: When conducting experiments, we can add and subtract and compare quantities.	Differentiation Enrichment • Extend Ordinal Concepts – Have students explore ordinal numbers beyond fifth by applying them to stories, calendars, or line-up games. • Create and Solve Story Problems – Invite students to write and illustrate their own addition and subtraction stories using sums and differences to 5. • Number Sentence Challenges – Encourage students to find multiple addition or subtraction equations that equal the same number using a mix of models and symbols. • Explore Number Relationships – Ask students to compare and explain why different equations have the same sum or difference using terms like "equal to" and "greater than." • Use a Number Line – Guide students in using a number line to represent and solve addition and subtraction problems up to 5, promoting abstract thinking. Support • Hands-On Matching Activities – Provide physical materials (e.g., counters, cubes) to visually compare groups and reinforce "greater than," "less than," and "equal to." • Sentence Frames for Comparison – Use stems such as "There are more ____ than ____" or "This group has fewer ____" to support comparison language. • Color-Coded Equation Templates – Offer simple addition and subtraction sentence frames with color cues (e.g., red for minus, green for plus) to guide symbol use. • Build and Break with Manipulatives – Practice "put together" and "take away" problems with snap cubes or linking bears to show part-part-whole relationships. • Repeated Practice with Pictures – Use picture-based equations and problems with consistent structure for additional repetition and confidence-building.	

Standards & Benchmarks

Compare Numbers Through 5:

K.CC.3

Read and write numbers using base ten numerals from 0 to 20. Represent a number of objects with a written numeral, in or out of sequence (0 represents a count of no objects).

K.CC.5

Use counting to answer questions about “how many.” For example, 20 or fewer objects arranged in a line, a rectangular array, or circle; 10 or fewer objects in a scattered configuration. Using a number from 1–20, count out that many objects.

K.CC.6

Use matching or counting strategies to identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. Include groups with up to ten objects.

K.CC.4

Understand the relationship between numbers and quantities; connect counting to cardinality.

K.CC.4.c

Understand that each successive number refers to a quantity that is one greater than the previous number.

K.CC.B.5

Count to answer questions about “How many?” when 20 or fewer objects are arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 to 20, count out that many objects.

K.CC.C.6

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.

K.CC.A.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0 to 20 (with 0 representing a count of no objects).

Put Together and Take Apart Numbers to 5:

K.CC.3

Read and write numbers using base ten numerals from 0 to 20. Represent a number of objects with a written numeral, in or out of sequence (0 represents a count of no objects).

K.OA.1

Represent addition and subtraction with objects, fingers, mental images, simple drawings, or sounds. For example, use clapping, act out situations, and use verbal explanations, expressions, or equations.

K.OA.2

Solve addition and subtraction word problems within 10. Use objects or drawings to represent the problem.

K.OA.3

Decompose numbers less than or equal to 10 into pairs in more than one way by using objects or drawings. Record each decomposition by a drawing or equation. For example, $5 = 2 + 3$ and $5 = 4 + 1$.

K.CC.A.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0 to 20 (with 0 representing a count of no objects).

Addition Up to 5:

K.OA.5

Fluently add and subtract using numbers within 5.

K.OA.1

Represent addition and subtraction with objects, fingers, mental images, simple drawings, or sounds. For example, use clapping, act out situations, and use verbal explanations, expressions, or equations.

K.OA.2

Solve addition and subtraction word problems within 10. Use objects or drawings to represent the problem.

K.OA.A.1

Represent addition and subtraction concretely.

K.OA.A.2

Solve addition and subtraction word problems and add and subtract within 10.

Subtraction Within 5:

K.OA.5

Fluently add and subtract using numbers within 5.

K.OA.1

Represent addition and subtraction with objects, fingers, mental images, simple drawings, or sounds. For example, use clapping, act out situations, and use verbal explanations, expressions, or equations.

K.OA.2

Solve addition and subtraction word problems within 10. Use objects or drawings to represent the problem.

K.OA.A.1

Represent addition and subtraction concretely.

K.OA.A.2

Solve addition and subtraction word problems and add and subtract within 10.

Teaching Ideas/Resources

Websites/Resources:

- [Free Printable Kindergarten Math Worksheets PDF](#)
- [More Free Printables for Kindergarten](#)
- [TPT Free Subtraction and Addition Printables](#)