

Unit C - How Much? How Many?

Overview

This unit introduces counting through the use of the number line and length measurement. The concept of equality, which was formally introduced in the previous unit, is developed further in this unit when students measure length and work with money. Students are introduced to the number line model through hands-on activities that help them interpret the structure of the number line. Students investigate the number line model as a tool that can be used to order and compare numbers less than 20. The number line is used learn how to solve addition and subtraction problems within 10. They investigate terms such as length, longer and shorter. In addition, they are exposed to the value of a penny and a nickel.

21st Century Capacities: Analyzing

Stage 1 - Desired Results

<p>ESTABLISHED GOALS/ STANDARDS</p> <p>MP 4 Model with mathematics MP 7 Look for and make use of structure CCSS.MATH.CONTENT.K.CC.A.1 Count to 100 by ones and by tens. CCSS.MATH.CONTENT.K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1). CCSS.MATH.CONTENT.K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). CCSS.MATH.CONTENT.K.CC.B.4.A When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. CCSS.MATH.CONTENT.K.CC.B.4.B Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. CCSS.MATH.CONTENT.K.CC.B.4.C Understand that each</p>	Transfer:		
	<p><i>Students will be able to independently use their learning in new situations to...</i></p> <ol style="list-style-type: none"> 1. analyze, compare, and order numbers on a number line in the range of 0-20 (Analyzing) 2. apply more efficient strategies to add and subtract numbers 		
	Meaning:		
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <p>UNDERSTANDINGS: <i>Students will understand that:</i></p> <ol style="list-style-type: none"> 1. there's a specific order and structure to our number system 2. quantities can be compared with equations and symbols 3. they can count forward or backward from a number other than 1 4. there are multiple ways to add and subtract numbers </td> <td style="width: 50%; border: none; vertical-align: top;"> <p>ESSENTIAL QUESTIONS: <i>Students will explore & address these recurring questions:</i></p> <ol style="list-style-type: none"> A. How can I solve this problem faster? B. How can I use a line to represent numbers? C. What do two numbers have in common? How do they differ? D. How can we compare the lengths of two objects? </td> </tr> </table>	<p>UNDERSTANDINGS: <i>Students will understand that:</i></p> <ol style="list-style-type: none"> 1. there's a specific order and structure to our number system 2. quantities can be compared with equations and symbols 3. they can count forward or backward from a number other than 1 4. there are multiple ways to add and subtract numbers 	<p>ESSENTIAL QUESTIONS: <i>Students will explore & address these recurring questions:</i></p> <ol style="list-style-type: none"> A. How can I solve this problem faster? B. How can I use a line to represent numbers? C. What do two numbers have in common? How do they differ? D. How can we compare the lengths of two objects?
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Grade Kindergarten Math Curriculum

<p>successive number name refers to a quantity that is one larger.</p> <p>CCSS.MATH.CONTENT.K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> <p>CCSS.MATH.CONTENT.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, e.g., by using matching and counting strategies.¹</p> <p>CCSS.MATH.CONTENT.K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.</p> <p>CCSS.MATH.CONTENT.K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings¹, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p>CCSS.MATH.CONTENT.K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>CCSS.MATH.CONTENT.K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).</p> <p>CCSS.MATH.CONTENT.K.OA.A.5 Fluently add and subtract within 5.</p> <p>CCSS.MATH.CONTENT.K.NBT.A.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>CCSS.MATH.CONTENT.K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>CCSS.MATH.CONTENT.K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.</p> <p>CCSS.MATH.CONTENT.K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.¹</p>	<p style="text-align: center;">Acquisition:</p> <p><i>Students will know...</i></p> <ol style="list-style-type: none"> 1. how to use a number line to count the number of equal intervals between two points 2. more efficient strategies for adding and subtracting two quantities 3. how to count on to add 4. how to count back to subtract 5. the meaning of the + & - symbols 6. <u>Vocabulary</u>: forward, backward, length, measure, after, before, half, middle, between, left, order, right, greater than, less than, add, addition, count on, equation, strategies, sum, total, in all, count back, minus, plus, subtract, tens, long/longer/longest, longer than, measure, next to, short/shorter/shortest, shorter than, the same, compare, cent, graph, nickel, penny, NC: add, combinations, month, number, number tree, pattern, week, equal, estimate, estimation, least, less, more, most, ones, tens, ten-frame, parts, bottom, double, row top, digit, fewer, identify, larger, smaller, behind, beside, cone, cube, cylinder, forward, inside, in front of, on top of, sphere, three-dimensional (3-D) shape, two-dimensional (2-D) shape, under <p><i>Students will be skilled at...</i></p> <ol style="list-style-type: none"> 1. counting to 40 2. ordering and comparing numbers less than 20 3. counting forward from a given number 4. counting backward from any number in the range of 10-1 5. determining if a quantity is greater than, less than or equal to another quantity 6. adding with sums to 10 7. describing the length of an object 8. describing the difference between the length of two objects 9. identifying and determining the value of a penny and nickel
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