

Audubon Public Schools



Kindergarten: Math

Curriculum Guide

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Course Description

Kindergarten: Math

In Kindergarten, students develop an understanding of numbers, including written numbers to represent quantities and solve problems. They become fluent in counting objects and comparing sets of objects or numbers. They write and rename numbers in a variety of ways. Students model addition and subtraction equations by putting together and taking apart sets of objects. Students will begin to tell time to the hour and half hour on different types of clocks, as well as identify coins and determine the value of each coin. They use their physical world to understand 2 dimensional and 3 dimensional geometric shapes. Students make predictions and answer questions about data as they apply their growing understanding of numbers. Students classify objects and compare measurable attributes.

Overview / Progressions

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
<p style="text-align: center;">Unit 1</p> <ul style="list-style-type: none"> ● Number Counting Concepts ● Positional Words ● 2 D Shapes ● Patterns ● Measurement and Data 	<ul style="list-style-type: none"> ● K.CC.A.1-3 ● K.CC.B.4, 5 ● K.CC.C.6, 7 ● K.G.A.1-3 ● K.MD.B.3 	<ul style="list-style-type: none"> ● Count and Id Numbers 0-10 ● 1:1 Counting to 10 ● Compare numbers 0-10 ● Number writing 0-10 ● Count to 50 by 1's ● Count by 10's to 100 ● 1 more/1 less to 10 ● Positional Words ● Identify and describe 2D Shapes-square, rectangle, circle, triangle, rhombus, trapezoid, hexagon ● AB Patterns ● Sorting and Classifying Objects ● Counting the number of objects in Categories 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments & critique the reasoning. of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
Unit 2	<ul style="list-style-type: none"> ● K.CC.A.1 	<ul style="list-style-type: none"> ● Counting by 5s to 50 	

<ul style="list-style-type: none"> ● Number Counting Concepts ● Addition and Subtraction to 10 ● Money and Time ● Measurement 	<ul style="list-style-type: none"> ● K.OA.A.1-5 ● K.MD.A.1,2 	<ul style="list-style-type: none"> ● Counting by 2s to 20 ● Add and subtract within 10 ● Knowing the meaning of the addition, subtraction and equal sign ● Tell time to the hour ● Identify coins by name and value ● Compare objects by size ● Use standard and non-standard units to measure objects 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments & critique the reasoning. of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p style="text-align: center;">Unit 3</p> <ul style="list-style-type: none"> ● Number Counting Concepts ● Decomposing Numbers 11-19 ● Measurement 	<ul style="list-style-type: none"> ● K.CC.A.1-3 ● K.CC.B.4, 5 ● K.NBT.A.1 ● K.MD.A.1, 2 ● K.G.A.1-3 	<ul style="list-style-type: none"> ● Count and Id Numbers 11-20 ● 1:1 Counting to 20 ● Compare numbers 11-20 ● Number writing 11-20 ● Decompose numbers 11-19 	<p>MP.1 Make sense of problems and persevere in solving them.</p>

<ul style="list-style-type: none"> ● Time ● Geometry 	<ul style="list-style-type: none"> ● K.G.B.4-6 	<ul style="list-style-type: none"> ● Counting to 100 ● Identify and write numbers to 100 ● Describe and compare objects by length, height, weight and capacity ● Tell time to the half hour ● Identify and describe 3D shapes- cone, cylinder, sphere and cube 	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments & critique the reasoning. of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
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Subject: Math	Grade: Kindergarten	Unit: 1 <ul style="list-style-type: none"> ● Addition and subtraction concepts ● Measurement ● Time ● Money 	1st Trimester (See calendar for specific months)
Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills	
KCC.A 1, Count to 100 by ones and by tens.	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Number names and the count sequence up to 100 <p>Students are able to:</p> <ul style="list-style-type: none"> ● count orally up to up to 50 by 1's ● count orally by 10's up to 100 <p>Learning Goal 1: Count by ones up to 50 and 10's to 100</p>	
KCC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1)	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Number names and the count sequence up to 50 <p>Students are able to:</p> <ul style="list-style-type: none"> ● count orally by ones up to 50 beginning at any number. <p>Learning Goal 2: Count forward up to 50 from numbers other than one.</p>	
K.CC.A3. Write numbers from 0-20. Represent a number of objects with a written numeral 0-20 (with	MP.2 Reason abstractly and quantitatively.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Represent the number of objects with a numeral. <p>Students are able to:</p>	

<p>0 representing a count of no objects)</p>	<p>MP.7 Look for and make use of structure.</p>	<ul style="list-style-type: none"> ● write numbers 0 to 10. <p>Learning Goal 2: Represent the number of objects with a written numeral up to 10</p>
<p>K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality.</p> <p>K.CC.B.4a. 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.</p> <p>K.CC.B.4b. 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.</p> <p>K.CC.B.4c. Understand that each successive number name</p>	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Objects can be counted in any order. Each object is counted once (one-to-one correspondence). ● The next number name in counting is always one greater than the previous number. ● The last number name said tells the number of objects counted. <p>Students are able to:</p> <ul style="list-style-type: none"> ● say number names in the standard order. ● pair each object with one number name (one-to-one correspondence). ● count to tell the number of objects. ● count objects arranged in any order. ● identify the last number named as the number of objects counted. <p>Learning Goal 3: Assign an ascending number name for each object in a group.</p> <p>Learning Goal 4: State the last number named as the number of counted objects in the set.</p> <p>Learning Goal 5: Identify the next number name in counting as one greater than the previous number.</p>

refers to a quantity that is one larger		
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.	MP.8 Look for and express regularity in repeated reasoning.	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> ● count to tell the number of objects arranged in a line, rectangular array, circle, or scattered configuration. ● count to tell the number of objects when asked how many? questions . ● given a number from 1-10, count out that many object. <p>Learning Goal 6: Answer how many? questions about groups of up to 10 objects when arranged in a line, rectangular array or circle.</p> <p>Learning Goal 7: Answer how many? questions about groups of up to 5 when arranged in a scattered configuration.</p>
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	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Different groups can have different numbers of objects. ● Numbers of objects can be compared using phrases such as greater than, less than and equal to. <p>Students will be able to:</p> <ul style="list-style-type: none"> ● compare the number of objects (up to 10) in two groups. ● identify whether the number of objects in one group is greater than, less than, or equal to to the number of objects in another group. <p>Learning Goal 8: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (groups of up to 10 objects)</p>

<p>K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.</p>	<p>MP.2 Reason abstractly and quantitatively</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Number names and the count sequence. ● The next number name in counting is always one greater than the previous number. ● Count to tell the number of objects. <p>Students will be able to:</p> <ul style="list-style-type: none"> ● compare numbers (up to 10) written as numerals. <p>Learning Goal 9: Compare numbers (up to 10) written as numerals.</p>
<p>K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count</p>	<p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Objects can be sorted based on their properties. <p>Students will be able to:</p> <ul style="list-style-type: none"> ● sort objects into categories. <p>Learning Goal 9: Classify objects into given categories and count the objects in each category (up to 10 objects).</p>
<p>K.G.A.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, and next to.</p>	<p>MP.7 Look for and make use of structure</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes have names. ● Positional words (above, below, besides, in front of, behind, next to) <p>Students will be able to:</p> <ul style="list-style-type: none"> ● name shapes in order to describe objects in the environment. ● use terms such as above, below, beside, in front of, behind, and next to in order to describe relative positions of objects. <p>Learning Goal 10: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such</p>

		as above, below, beside, in front of, behind, and next to
K.G.A.2. Correctly name shapes regardless of their orientation or overall size	MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> • Shapes have names. • Shapes can have the same names but appear different. <p>Students are able to:</p> <ul style="list-style-type: none"> • correctly names shapes regardless of their orientation or overall size. <p>Learning Goal 5: Correctly names shapes regardless of their orientation or overall size.</p>
K.G.A.3. Identify shapes as two dimensional (lying in a plane, “flat”) or three-dimensional (“solid”)	MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> • Shapes may be flat or solid. <p>Students are able to:</p> <ul style="list-style-type: none"> • identify shapes as two-dimensional (lying in a plane, flat) • compare two-dimensional in different sizes, and orientations. <p>Learning Goal 6: Identify shapes as two-dimensional (lying in a plane, flat)</p>

Formative Assessments	Summative Assessments
<ul style="list-style-type: none"> ● Observation in whole group ● Kindergarten Skills Checklist ● Pick a Project ● Slate work ● Observations in math groups ● Daily workbook practice 	<ul style="list-style-type: none"> ● Kindergarten Trimester 1 Assessment Packet ● enVisions End of Topic Assessments
Suggested Primary Resources	Suggested Supplemental Resources
<ul style="list-style-type: none"> ● enVisions 	<ul style="list-style-type: none"> ● Anchor Chart: How to maneuver the classroom and materials while social distancing” ● Google Classroom and Slides ● Math Talks ● Number writing poems ● Chalkboard/dry erase board ● Math games ● Number cards ● Math topic videos and songs ● Read alouds ● RazKids ● Manipulatives ● Rekenrek ● 10 frames ● Number lines ● Number grid ● Abcya.com ● Handwriting Without Tears ● IXL

Cross-Curricular Connections & 21st Century Skills

- Pick a Project
- STEAM projects
- Math read alouds
- YouTube videos

Essential Questions

- What are the names of numbers?
- How can I count in sequence?
- How can I count to tell the numbers of objects?
- How can I compare numbers?
- What are the numbers from 0-50?
- How can I count forward from any number other than 1?
- How can I write numbers up to 10 and show numbers of objects from 0-10?
- What is the connection between numbers and quantity?
- How can I count objects saying the number names in order?
- When I count objects, how can I identify the total number counted?
- How can I count, up to 10, the same amount of objects arranged in a line, a rectangular array or a circle?
- How can I count, up to 10, objects arranged in a scattered configuration?
- How can I use matching and counting strategies to:
 - identify which number is larger?
 - identify which number is smaller
 - tell if two groups have the same amount of objects
- What is a category?
- How can I classify objects into categories?

Enduring Understanding

- Numbers are symbols that we use to represent quantities of items and are ordered from least to greatest.
- We use numbers to represent quantities, to combine quantities and to find the difference of quantities.
- I can orally count numbers up to 50 and by 10's to 100
- Identify the numbers up to 10 on a number grid.
- I can understand the sequence of numbers and patterns on a number grid to count forward from a given number.
- I can write digits 0-9 and apply knowledge to two digit numbers up to 10 and use manipulatives to represent the numerical value.
- I can use manipulatives to show the value of a given number.
- I can understand the sequence of numbers to orally count objects.
- I can use number sense to know that the last number counted represents "how many".
- I can count objects between numbers 1-10 using manipulatives regardless of orientation.
- I can one to one correspondence to count objects regardless of the given orientation.
- I can use a number line, number grid, or number sense to identify if numbers are smaller, larger, or equal.
- I can identify similar attributes and sort objects into common groups.
- I can look at categories and figure out which has less than or equal to 10.

<ul style="list-style-type: none"> ● How can I count single objects and then count the categories they are in? ● What is a: square, circle, triangle, rectangle, hexagon, cube, cone, cylinder and sphere? ● What is orientation of a shape? ● What is a two dimensional object? ● How can I compare and contrast 2 dimensional shapes? ● What are vertices? ● How can I make model shapes? 	<ul style="list-style-type: none"> ● A shape is an outline of an object. ● I can identify, compare, analyze and create a square, circle, triangle, rectangle, hexagon, ● I can identify and name similarities of 2D shapes and sort them by attribute. ● I can identify that vertices are sides of shape. ● I can create model shapes by using sticks, clay or drawings. ● I can use words like, above, below, beside, in front of, behind and next to describe the relationship between shapes. ● I can identify a 2D shape as a circle, square, triangle, rectangle, or rhombus, lying on a plane and is flat.
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Differentiation		
504	<ul style="list-style-type: none"> ● preferential seating ● extended time on tests and assignments ● reduced homework or classwork ● verbal, visual, or technology aids 	<ul style="list-style-type: none"> ● modified textbooks or audio-video materials ● behavior management support ● adjusted class schedules or grading ● verbal testing
Enrichment	<ul style="list-style-type: none"> ● Utilize collaborative media tools ● Provide differentiated feedback ● Opportunities for reflection 	<ul style="list-style-type: none"> ● Encourage student voice and input ● Model close reading ● Distinguish long term and short term goals

IEP	<ul style="list-style-type: none"> ● Utilize “skeleton notes” where some required information is already filled in for the student ● Provide access to a variety of tools for responses ● Provide opportunities to build familiarity and to practice with multiple media tools ● Graphic organizers 	<ul style="list-style-type: none"> ● Leveled text and activities that adapt as students build skills ● Provide multiple means of action and expression ● Consider learning styles and interests ● Provide differentiated mentors
ELLs	<ul style="list-style-type: none"> ● Pre-teach new vocabulary and meaning of symbols ● Embed glossaries or definitions ● Provide translations ● Connect new vocabulary to background knowledge 	<ul style="list-style-type: none"> ● Provide flash cards ● Incorporate as many learning senses as possible ● Portray structure, relationships, and associations through concept webs ● Graphic organizers
At-risk	<ul style="list-style-type: none"> ● Purposeful seating ● Counselor involvement ● Parent involvement 	<ul style="list-style-type: none"> ● Contracts ● Alternate assessments ● Hands-on learning
21st Century Skills		
<ul style="list-style-type: none"> ● Creativity ● Innovation ● Critical Thinking 	<ul style="list-style-type: none"> ● Problem Solving ● Communication ● Collaboration 	
Integrating Technology		

<ul style="list-style-type: none"> ● Chromebooks ● Internet research ● Online programs 	<ul style="list-style-type: none"> ● Virtual collaboration and projects ● Presentations using presentation hardware and software
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Subject: Math	Grade: Kindergarten	Unit 2: <ul style="list-style-type: none"> ● Number Counting Concepts ● Addition and Subtraction to 10 ● Money and Time ● Measurement 	2nd Trimester (See calendar for specific months)
Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills	

<p>K.OA.A.1. Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p>	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Understand addition as putting together and adding to. ● Understand subtraction as taking apart and taking from. <p>Students are able to:</p> <ul style="list-style-type: none"> ● create addition events with objects (up to 10). ● create addition events with drawings and sounds (up to 10). ● create addition events by acting out situations and with verbal explanations. <p>Learning Goal 8: Create addition events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations for sums up to 10.</p>
<p>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>MP.1 Make sense of problems and persevere in solving them. MP. 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> ● use objects and drawings to represent addition and subtraction. ● add and subtract within 10. <p>Learning Goal 5: Use objects or drawings to represent and solve addition and subtraction word problems (within 10).</p>

<p>K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g. using objects or drawings, and record each decomposition by a drawing or equation (e.g. $5 = 3 + 2$ and $5 = 4 + 1$).</p>	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Part-to-whole relationships ● Some groups of objects can be broken into two smaller groups while the total number remains the same. ● Some groups of objects can be broken into two smaller groups in more than one way. <p>Students will be able to:</p> <ul style="list-style-type: none"> ● decompose numbers less than or equal to ten into two numbers. ● record the decomposition with a drawing. ● record the decomposition with an equation. ● decompose the same number in more than one way. <p>Learning Goal 7: Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing or equation</p>
<p>K.OA.A.4. For any number from 1 to 9, find the number that makes 10 when added to the given number e.g. by using objects or drawings, and record the answer with a drawing or equation.</p>	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> ● find a missing part of 10 using objects. ● given a number from 1 to 9, use drawings, or equations to find the number that makes 10. <p>Learning Goal 8: Given a number less than 10, find the number that makes 10.</p>
<p>K.OA.A.5. Demonstrate fluency for addition and subtraction within 5 (by the end of Kindergarten).</p>	<p>MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> ● add and subtract within 5 with accuracy and efficiency. <p>Learning Goal 2: Fluently add and subtract within 5.</p>

<p>K.CC.A.1. Count to 100 by ones and by tens.</p>	<p>MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Number counting patterns by 2s and 5s <p>Students are able to:</p> <ul style="list-style-type: none"> ● count orally by 2s up to 20. ● count orally by 5s up to 50. <p>Learning Goal 1: Count by 2s and 5s.</p>
<p>K.MD.A.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p>	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Measurable attributes: length, weight, size (volume) ● A single object can have more than one measurable attribute. <p>Students are able to:</p> <ul style="list-style-type: none"> ● identify measurable attributes. ● describe the measurable attributes of multiple objects. ● describe multiple measurable attributes of a single object. <p>Learning Goal 2: Describe measurable attributes of multiple objects and describe several measurable attributes of a single object.</p>
<p>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 differences.</p>	<p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● When comparing objects by measuring, each object must have the same starting point. ● Moving an object does not change its measure. <p>Students are able to:</p> <ul style="list-style-type: none"> ● directly compare and describe two objects with measurable attributes in common using more of or less of. <p>Learning Goal 3: Directly compare two objects with a measurable attribute in common; use more of or less of to compare the objects.</p>

<p>Formative Assessments</p>	<p>Summative Assessments</p>
<ul style="list-style-type: none"> ● Observation in whole group ● Kindergarten Skills Checklist 	<ul style="list-style-type: none"> ● Kindergarten Trimester 2 Assessment Packet ● enVisions End of Topic Assessments

<ul style="list-style-type: none"> ● Pick a Project ● Slate work ● Observations in math groups ● Daily workbook practice 	
Suggested Primary Resources	Suggested Supplemental Resources
<ul style="list-style-type: none"> ● enVisions 	<ul style="list-style-type: none"> ● Math Talks ● chalkboard/dry erase board ● math games ● number cards ● dot cards ● Math topic videos and songs ● read alouds ● RazKids ● Manipulatives ● Rekenrek ● coins ● clocks ● 10 frames ● number lines ● number grid ● IXL ● abcya.com
Cross-Curricular Connections & 21st Century Skills	
<ul style="list-style-type: none"> ● Pick a Project ● STEAM projects ● Math read alouds ● YouTube videos 	

Essential Questions	Enduring Understanding
<ul style="list-style-type: none"> ● How can I count numbers? ● How can I show addition and subtraction with objects, fingers, mental images, drawings and sounds, explanations, expressions or equations? ● How can I record answers to addition and subtraction problems by using drawings and equations? ● How can I solve addition and subtraction word problems by adding and subtracting within 10? ● When using numbers from 0-9, how can I use addition to come up with a total of 10 by using objects and drawings? ● How can I separate numbers less than or equal to 10 into pairs in more than one way? ● How can I fluently add and subtract within 5? ● What are some ways I can measure objects? ● How can I compare measurements of objects to see which is more or less than the other? 	<ul style="list-style-type: none"> ● I can count orally by 2s to 20 and 5s to 50. ● I can use manipulatives, mental images, or drawings to combine or take away objects to tell “how many”. ● I can use explanations, expressions or equations to combine or take away objects to tell “how many”. ● I can identify addition and subtraction signs to combine or take away objects to solve a word problem within 10. ● I can represent a given number with drawings and add more or cross out drawings to solve an addition or subtraction problem within 10. ● I can combine/put together manipulatives or use a ten frame to show ways to make 10. ● I can identify the addition sign means “more” and show work using drawings and equations. ● I can identify the minus sign means “less” and show work using drawings and equations. ● I can identify the equal sign means “equal to” and show work using drawings and equations. ● I can decompose numbers less than and equal to 10 by creating different number combinations. ● I can use mental images and number sense to fluently add and subtract within 5. ● I can compare measurements using the terms, longest, longer, shorter, or same. ● I can determine the length of an object using non standard units. ● I can determine the length of an object using a measuring tool such as a ruler or standard units. ● I can determine the weight of an object using the terms heavier or lighter.

Differentiation

504	<ul style="list-style-type: none"> ● preferential seating ● extended time on tests and assignments ● reduced homework or classwork ● verbal, visual, or technology aids 	<ul style="list-style-type: none"> ● modified textbooks or audio-video materials ● behavior management support ● adjusted class schedules or grading ● verbal testing
Enrichment	<ul style="list-style-type: none"> ● Utilize collaborative media tools ● Provide differentiated feedback ● Opportunities for reflection 	<ul style="list-style-type: none"> ● Encourage student voice and input ● Model close reading ● Distinguish long term and short term goals
IEP	<ul style="list-style-type: none"> ● Utilize “skeleton notes” where some required information is already filled in for the student ● Provide access to a variety of tools for responses ● Provide opportunities to build familiarity and to practice with multiple media tools ● Graphic organizers 	<ul style="list-style-type: none"> ● Leveled text and activities that adapt as students build skills ● Provide multiple means of action and expression ● Consider learning styles and interests ● Provide differentiated mentors

<p>ELLs</p>	<ul style="list-style-type: none"> ● Pre-teach new vocabulary and meaning of symbols ● Embed glossaries or definitions ● Provide translations ● Connect new vocabulary to background knowledge 	<ul style="list-style-type: none"> ● Provide flash cards ● Incorporate as many learning senses as possible ● Portray structure, relationships, and associations through concept webs ● Graphic organizers
<p>At-risk</p>	<ul style="list-style-type: none"> ● Purposeful seating ● Counselor involvement ● Parent involvement 	<ul style="list-style-type: none"> ● Contracts ● Alternate assessments ● Hands-on learning
<p>21st Century Skills</p>		
<ul style="list-style-type: none"> ● Creativity ● Innovation ● Critical Thinking 	<ul style="list-style-type: none"> ● Problem Solving ● Communication ● Collaboration 	
<p>Integrating Technology</p>		
<ul style="list-style-type: none"> ● Chromebooks ● Internet research ● Online programs 	<ul style="list-style-type: none"> ● Virtual collaboration and projects ● Presentations using presentation hardware and software 	

Subject: Math	Grade: Kindergarten	Unit 3: <ul style="list-style-type: none"> ● Number Counting Concepts ● Decomposing Numbers 11-19 ● Measurement ● Time ● Geometry 	3rd Trimester (See calendar for specific months)
Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills	
K.CC.A.1. Count to 100 by ones and by tens.	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Number names and the count sequence up to 100. <p>Students are able to:</p> <ul style="list-style-type: none"> ● count orally by 1s up to 100. <p>Learning Goal 1: Count to 100 by 1s.</p>	
K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).		<p>Concept(s): No new concept(s) introduced</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> ● count orally by ones up to 100, beginning at any number. <p>Learning Goal 2: Count forward up to 100 starting from numbers other than one.</p>	
K.CC.A.3. Write numbers from 0 to 20. Represent a number of	MP. 2 Reason abstractly and quantitatively.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● The number of objects can be represented by a numeral. 	

<p>objects with a written numeral 0-20 (with 0 representing a count of no objects).*(benchmarked)</p>	<p>MP.7 Look for and make use of structure.</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> ● write numbers from 0 to 20. <p>Learning Goal 3: Represent a number of objects with a written numeral 0 to 20.</p>
<p>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>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> ● count to tell the number of objects arranged in a line, rectangular array, circle, or scattered configuration. ● count to tell the number of objects when asked "how many?" questions. ● given a number from 1-20, count out that many objects. <p>Learning Goal 6: Answer how many? questions about groups of up to 20 objects when arranged in a line, rectangular array or circle. Learning Goal 7: Answer how many? questions about groups of up to 10 when arranged in a scattered configuration.</p>
<p>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 (e.g. $18 = 10 + 8$); Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Numbers from 11 to 19 can be represented as one group of ten ones and another group containing fewer than ten ones. <p>Students are able to:</p> <ul style="list-style-type: none"> ● compose and decompose numbers from 11 to 19 into a group of ten ones and another group of one(s). ● use the term ones to describe the number of objects in each group. ● record each composition or decomposition using objects and drawings. ● record each composition or decomposition by a drawing or equation. <p>Learning Goal 9: Compose and decompose numbers from 11 to 19 into a group of ten and one(s) with or without manipulatives; record each composition or decomposition through a drawing or equation.</p>

<p>K.G.A.2. Correctly name shapes regardless of their orientation or overall size.</p>	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes have names. ● Shapes can have the same names but appear different. <p>Students are able to:</p> <ul style="list-style-type: none"> ● correctly names shapes regardless of their orientation or overall size. <p>Learning Goal 5: Correctly names shapes regardless of their orientation or overall size</p>
<p>K.G.A.3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”)</p>	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes may be flat or solid. <p>Students are able to:</p> <ul style="list-style-type: none"> ● identify shapes as two-dimensional (lying in a plane, flat) or three-dimensional (not flat, solid). ● compare two- and three- dimensional shapes, in different sizes, and orientations. <p>Learning Goal 6: Identify shapes as two-dimensional (lying in a plane, flat) or three-dimensional (not flat, solid).</p>
<p>K.G.B.4. Analyze and compare two- and three- dimensional shapes, in different sizes, and orientations, using informal language to describe their similarities, differences, parts (e.g. number of sides and vertices “corners”) and other attributes (e.g. having sides of equal length).</p>	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Orientation does not alter attributes or size. ● Shapes may have sides of unequal or equal length. ● Shapes may or may not have the same number of sides or ‘corners’. <p>Students are able to:</p> <ul style="list-style-type: none"> ● compare two- and three- dimensional shapes in different sizes and in different orientations and identify similarities and differences. ● compare parts of two- and three-dimensional shapes [e.g. number of sides, number of vertices (corners)]. ● compare attributes of two- and three-dimensional shapes [e.g. sides have equal length.]

		<ul style="list-style-type: none"> ● use informal language to describe similarities, differences, parts, and other attributes when comparing two- and three-dimensional shapes, in different sizes and orientations <p>Learning Goal 3: Use informal language to describe similarities, differences, parts (number of sides, number of corners), and other attributes (having sides of equal length) when comparing two- and three-dimensional shapes, in different sizes and orientations.</p>
K.G.B.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Basic shapes exist in real world objects. <p>Students are able to:</p> <ul style="list-style-type: none"> ● recognize basic shapes in the real world. ● use objects (clay, sticks, etc) to model shapes. ● model shapes in the world by drawing shapes. <p>Learning Goal 4: Model shapes in the world by building and drawing shapes.</p>
K.G.B.6. Compose simple shapes to form larger shapes. For example: “Can you join these two triangles with full sides touching to make a rectangle?”	MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes can be combined to make larger shapes. <p>Students are able to:</p> <ul style="list-style-type: none"> ● compose simple shapes to form larger shapes. <p>Learning Goal 5: Compose simple shapes to form larger shapes.</p>

Formative Assessments	Summative Assessments
<ul style="list-style-type: none"> ● Observation in whole group ● Kindergarten Skills Checklist ● Pick a Project ● Slate work ● Observations in math groups ● Daily workbook practice 	<ul style="list-style-type: none"> ● Kindergarten Trimester 3 Assessment Packet ● enVisions End of Topic Assessments

Suggested Primary Resources	Suggested Supplemental Resources
<ul style="list-style-type: none"> ● enVisions 	<ul style="list-style-type: none"> ● Math Talks ● chalkboard/dry erase board ● math games ● number cards ● dot cards ● fact cards ● Math topic videos and songs ● read alouds ● RazKids ● Manipulatives ● Rekenrek ● coins ● clocks ● double frames ● base 10 blocks ● number lines ● number grid ● IXL ● abcya.com
Cross-Curricular Connections & 21st Century Skills	
<ul style="list-style-type: none"> ● Pick a Project ● STEAM projects ● Math read alouds ● YouTube videos 	

Essential Questions

- What are the numbers from 0-100?
- How can I count forward from any number other than 1?
- How can I write numbers up to 20 and show numbers of objects from 0-20?
- How can I count objects saying the number names in order up to 20?
- When I count objects up to 20, how can I identify the total number counted?
- How can I count, up to 20, the same amount of objects arranged in a line, a rectangular array or a circle?
- How can I use matching and counting strategies to identify which number is larger, identify which number is smaller and tell if two groups have the same amount of objects?
- How can I use drawings and objects to compose and separate numbers from 11-19?
- How can I figure out that the numbers between 11-19 are composed of ten ones and ones from 11-19?
- What is a: cube, cone, cylinder and sphere?
- What is orientation of a shape?
- What is a three dimensional object?
- How can I compare and contrast 2 and 3 dimensional shapes?
- What are vertices?
- How can I make model shapes?
- What can happen when I join shapes?

Enduring Understanding

- I can orally count numbers up to 100 and identify the number on a number grid.
- I can understand the sequence of numbers and patterns on a number grid to count forward from a given number.
- I can write digits 0-9 and apply knowledge to two digit numbers up to 20 and use manipulatives to represent the numerical value.
- I can use manipulatives to show the value of a given number.
- I can understand the sequence of numbers to orally count objects.
- I can use number sense to know that the last number counted represents “how many”.
- I can count objects between numbers 1-20 using manipulatives regardless of orientation.
- I can use one to one correspondence to count objects to 20 regardless of the given orientation.
- I can use a number line, number grid, or number sense to identify if numbers are smaller, larger, or equal.
- I can show the numbers between 11 and 19 are composed of ten ones and ones from 11-19.
- I can use place value blocks to show that teen numbers are composed of tens and ones.
- A three dimensional shape is a solid and can be filled. 3D shapes are identified as a cube, cone, cylinder, and sphere
- I can identify and name similarities of 2D and 3D shapes and sort them by attribute.
- I can identify that vertices are sides of shape.
- I can create model shapes by using sticks, clay or drawings.
- I can use simple shapes to create new and complex shapes.cube, cone, cylinder and sphere, regardless of orientation or size.

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| | <ul style="list-style-type: none">● I can distinguish between defining attributes of an object (shape and number of sides) and non-defining attributes of a shape (size, color, orientation).● I can build composite shapes by combining other simple shapes to create new shapes.. |
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Appendix A

Audubon Public Schools

Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills

Written By: Christine Brady, Patricia Martel, Beth Canzanese

Revised by Katie Mueller

Reapproved June 2017

Course Title: Kindergarten Mathematics Unit Name: Numeration & Calculations

Grade Level: Kindergarten

<p>Content Statements This unit gives students the understanding of the necessity of numbers in order to represent quantities of items in their world in the context of:</p> <ol style="list-style-type: none"> 1. There is a relationship between number and quantity 2. Numbers have names and can be part of a sequence 3. Numbers represent quantities and help to describe the physical world 	<p>NJSLS: K.CC 1-7</p>
<p>Overarching Essential Questions What are the names of numbers? How can I count in sequence? How can I count to tell the numbers of objects? K.CC.B.5 How can I compare numbers?</p>	<p>Overarching Enduring Understandings Numbers are symbols that we use to represent quantities of items and are ordered from least to greatest. We use numbers to represent quantities, to combine quantities and to find the difference of quantities.</p>
<p>Unit Essential Questions What are the numbers from 0-10, 0-20, 0-50, 0-100?</p> <p>How can I count forward from any number other than 1?</p> <p>How can I write numbers up to 20 and show numbers of objects from 0-20? K.CC.B.5</p>	<p>Unit Enduring Understandings I can orally count numbers up to 100 and identify the number on a number grid.</p> <p>I can understand the sequence of numbers and patterns on a number grid to count forward from a given number.</p> <p>I can write digits 0-9 and apply knowledge to two digit numbers up to 20 and use manipulatives to represent the numerical value.</p>

<p>What is the connection between numbers and quantity? K.CC.B.5</p> <p>How can I count objects saying the number names in order? K.CC.B.5</p> <p>When I count objects, how can I identify the total number counted? K.CC.B.5</p> <p>How can I count, up to 20, the same amount of objects arranged in a line, a rectangular array or a circle? K.CC.B.5</p> <p>How can I count, up to 10, objects arranged in a scattered configuration? K.CC.B.5</p> <p>How can I use matching and counting strategies to:</p> <ul style="list-style-type: none"> ▪ identify which number is larger? ▪ identify which number is smaller ▪ tell if two groups have the same amount of objects 	<p>I can use manipulatives to show the value of a given number.</p> <p>I can understand the sequence of numbers to orally count objects.</p> <p>I can use number sense to know that the last number counted represents “how many”.</p> <p>I can count objects between numbers 1-20 using manipulatives regardless of orientation.</p> <p>I can use one to one correspondence to count objects regardless of the given orientation.</p> <p>I can use a number line, number grid, or number sense to identify if numbers are smaller, larger, or equal.</p>
<p>Unit Rationale Understanding Numbers and how they work is essential in order to build a mathematical foundation.</p>	<p>Unit Overview This unit teaches students about the numbers from 0 to 100, their order and commonly used groupings for counting and cardinality.</p>

Activities: *Relationship Between Number and Quantity*

Number Formation 0-10: number writing poems, number writing formation packet, chalkboard slates/dry erase boards, number cards, counting videos. My Math: Chapter 1/Lesson 2 (Read and Write 1-3) pgs: 19-22. My Math: Chapter 1/Lesson 4 (Read and Write 4-5) pgs: 31-34. My Math: Chapter 1/Lesson 5 (Read and Write 0) pgs: 37-40. My Math: Chapter 2/Lesson 3 (Read and Write 6-8) pgs: 95-98. My Math: Chapter 2/Lesson 3 (Read and Write 9-10) pgs: 127-130.

- Supplemental Teaching Tool:
 - Monster Math Number Writing Packet
 - <http://www.kindergartenworks.com/guided-math/monster-numbers/>
- Videos: *I Can Write My Numbers* by: Harry Kindergarten

Number Quantities 0-20: counters, blocks, manipulatives pictures/drawings, number grid, dot cards, ten frames, twenty frames. My Math Chapter 1/Lessons: 1, 3. Chapter 2/Lessons: 1, 2, 4, 5. Teen Numbers: Chapter 3: Lessons 1-6.

- Supplemental Teaching Tool:
 - Number Writing/Quantity Practice
 - <https://www.teacherspayteachers.com/Product/Number-Practice-Printables-0-20-463077>
 - Number Representation: Pile it High Ice Cream Game
 - <https://www.teacherspayteachers.com/Product/Kindergarten-Numbers-0-30-Number-Representations-Pile-It-High-Ice-Cream-1117232>
- Read Alouds:
 - *How Do Dinosaurs Count to Ten* by Jane Tolen and Mark Teague
 - *Olivia Counts* by Ian Falconer
 - *Chicka Chicka 1, 2, 3* by Bill Martin Jr.
 - *Click Clack Splash Splash* by Doreen Cronin

Comparing Numbers number cards, counters, dice, dot cards, pictures/drawings, number line, My Math: Chapter 2/Lesson 8.

- Supplemental Teaching Tools:
 - Comparing Numbers Task Cards:

- <https://www.teacherspayteachers.com/Product/Kindergarten-Comparing-Numbers-Task-Cards-Scout-KCCC6-2137048>

- Read Alouds:
 - *Alfie the Alligator* by Sandy Turley

Audubon Public Schools
Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills
Written By: Christine Brady, Patricia Martel
Course Title: Kindergarten Mathematics Unit Name: Operations and Algebraic Thinking
Grade Level: Kindergarten

<p>Content Statements Addition is putting together and adding to; subtraction is taking apart and taking from</p>	<p>NJSLS: K.OA. 1-5</p>
<p>Overarching Essential Questions What is addition? K.OA.A.5 What is subtraction? K.OA.A.5 What is an equation?K.OA.A.5</p>	<p>Overarching Enduring Understandings I can use numbers to represent quantities, to combine quantities and to find the difference of quantities. It is important to be able to count, order, add and subtract numbers in order to solve real life problems. I can identify and apply the addition, subtraction, and equal sign to solve a mathematical equation. Terms such a “solution, difference, sum, total, and same as” are words that can be translated into equations.</p>

<p>Unit Essential Questions</p> <p>How can I show addition and subtraction with objects, fingers, mental images, drawings and sounds? K.OA.A.2</p> <p>How can I solve addition and subtraction word problems by adding and subtracting within 10? K.OA.A.2</p> <p>How can I use drawings and objects to solve an addition or subtraction problem within 10? K.OA.A.2</p> <p>When using numbers from 0-9, how can I use addition to come up with a total of 10 by using objects and drawings? K.OA.A.2</p> <p>How can I record answers to addition problems by using drawings and equations? K.OA.A.2</p> <p>How can I separate numbers less than or equal to 10 into pairs in more than one way? K.OA.A.3</p> <p>How can I fluently add and subtract within 5? K.OA.A.5</p>	<p>Unit Enduring Understandings</p> <p>I can use manipulatives, mental images, or drawings to combine or take away objects to tell “how many”.</p> <p>I can identify addition and subtraction signs to combine or take away objects to solve a word problem within 10.</p> <p>I can represent a given number with drawings and add more or cross out drawings to solve an addition or subtraction problem within 10.</p> <p>I can combine/put together manipulatives or use a ten frame to show ways to make 10.</p> <p>I can identify the addition sign means “more” and show work using drawings an equation.</p> <p>I can decompose numbers less than and equal to 10 by creating different number combinations.</p> <p>I can use mental images and number sense to fluently add and subtract within 5.</p>
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<p>Unit Rationale Students must have a strong foundation in both the concept and the operation of addition and subtraction so that they will be able to successfully solve real world problems that involve adding and subtracting.</p>	<p>Unit Overview This unit introduces students to the concepts of addition and subtraction. They will be able to add any numbers from 0-9 to equal 10; and they will be able to subtract within 5 by using mental imagery, their fingers, objects and drawing.</p>
<p>Activities: Addition and Subtraction</p> <p>Addition: manipulatives, connecting cubes, pictures/drawings, dot cards, story problems. My Math Lessons: (Make Numbers up to 10) Chapter 4/Lessons: 1, 3, 5, 6, 8.</p> <ul style="list-style-type: none"> ● Supplemental Teaching Tools: <ul style="list-style-type: none"> ○ Math Addition Games and Centers <ul style="list-style-type: none"> ■ https://www.teacherspayteachers.com/Product/Addition-Addition-Centers-and-Hands-On-Addition-Activities-Games-329056 ○ Websites: ABCya Addition with Manipulatives ● Read Alouds: <ul style="list-style-type: none"> ○ <i>What's New at the Zoo</i> by Suzanne Slade ○ <i>This Plus That</i> by Amy Krouse Rosenthal <p>Subtraction: manipulatives, connecting cubes, pictures/drawings, dot cards, story problems. My Math Lessons: (Take Apart Numbers up to 10) Chapter 4/Lessons: 2, 4, 5, 7, 9.</p> <ul style="list-style-type: none"> ● Supplemental Teaching Tools: <ul style="list-style-type: none"> ○ Minus Mustache Game <ul style="list-style-type: none"> ■ https://www.teacherspayteachers.com/Product/Minus-Mustache-A-Subtraction-Game-2200422 ○ Spin and Subtract Bowling Game <ul style="list-style-type: none"> ■ https://www.teacherspayteachers.com/Product/Spin-Subtract-Bowling-a-Kindergarten-Subtraction-Printable-1224638 ○ Websites: ABCya balloon pop subtraction 	

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Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills
Written By: Christine Brady, Patricia Martel
Revised by Katie Mueller
Reapproved June 2017

Course Title: Kindergarten Mathematics Unit Name: Number and Operations in Base Ten
Grade Level: Kindergarten

<p>Content Statements This unit will give students the opportunity to work with numbers 11-19, in order to gain foundations, like place value.</p>	<p>NJSLS: K.NBT, 1</p>
<p>Overarching Essential Questions What is place value?</p>	<p>Overarching Enduring Understandings Place value is the meaning of a number based on its position. It is the name of the location of a digit in a number.</p>
<p>Unit Essential Questions How can I use drawings and objects to compose and separate numbers from 11-19? K.NBT.A.1</p> <p>How can I figure out that the numbers between 11-19 are composed of ten ones and ones from 11-19? K.NBT.A.1</p>	<p>Unit Enduring Understandings I can show the numbers between 11 and 19 are composed of ten ones and ones from 11-19.</p> <p>I can use place value blocks to show that teen numbers are composed of tens and ones.</p>

<p>Unit Rationale To provide a strong foundation for the understanding of mathematical practice, students must have an understanding of base ten and place value. This understanding will provide the necessary skills to problem solve using numbers that have multiple digits.</p>	<p>Unit Overview This unit introduces students to the concept of base ten operations and face value within 11-19.</p>
<p>Activities: <i>Compose and Decompose Numbers/Place Value</i></p> <p>Place Value: Base 10 blocks, pictures/drawings (ones, tens, units) number grid, counting by tens video. My Math Chapter 7 (Compose and Decompose Numbers) Lessons:1-5.</p> <ul style="list-style-type: none"> ● Supplemental Teaching Activities: <ul style="list-style-type: none"> ○ Math Place Value Centers/Games <ul style="list-style-type: none"> ■ https://www.teacherspayteachers.com/Product/Kindergarten-Math-Game-for-Place-Value-Kindergarten-Math-Centers-2208888 ○ Place Value Smartboard Activity <ul style="list-style-type: none"> ■ https://www.teacherspayteachers.com/Product/Place-Value-Kindergarten-First-Grade-2240553 ○ Websites ABCya <ul style="list-style-type: none"> ■ Place Value Hockey, Base Ten Bingo 	

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Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills
Written By: Christine Brady, Patricia Martel
Revised by Katie Mueller
Reapproved June 2017
Course Title: Kindergarten Mathematics Unit Name: Measurement and Data
Grade Level: Kindergarten

Content Statements	NJSLS:
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<p>This unit will provide an introduction to describing and comparing measurable attributes of an object, such as weight and length. It will also introduce classification of objects into categories, which can be sorted.</p>	<p>K.MD, 1-3</p>
<p>Overarching Essential Questions What is measurement? What is a category?</p>	<p>Overarching Enduring Understandings Measurement is the dimension, quantity, or capacity of an object as compared to a standard. A category is a group of objects that have similar attributes.</p>
<p>Unit Essential Questions What are some ways I can measure objects? How can I compare measurements of objects to see which is more or less than the other. How can I classify objects into categories? How can I count single objects and then count the categories they are in?</p>	<p>Unit Enduring Understandings I can determine the length of an object using a measuring tool such as a ruler or standard units. I can determine the weight of an object using the terms heavier or lighter. I can compare measurements using the terms, longest, longer, shorter, or same. I can identify similar attributes and sort objects into common groups. I can look at categories and figure out which has less than or equal to 10.</p>

<p>Unit Rationale To provide a strong foundation for the understanding of mathematical practice, students must have an understanding of measurement and classification.</p>	<p>Unit Overview This unit introduces students to the concepts of measurement and classification. Students will classify objects and determine relationships between categories, like more, less or equal to, within 10.</p>
<p>Activities: <i>Measurement</i></p> <p><u>Comparing Length, Height, Weight:</u> manipulatives, ruler, standard units of measurement, pan balance. My Math: Chapter 8/Lessons: 1-6.</p>	

Audubon Public Schools
Engaging Students ~ Fostering Achievement ~ Cultivating 21st Century Global Skills
Written By: Christine Brady, Patricia Martel
Revised by Katie Mueller
Reapproved June 2017

Course Title: Kindergarten Mathematics Unit Name: Geometry
Grade Level: Kindergarten

<p>Content Statements This unit will introduce the skill of naming, describing and identifying the relative positions of shapes. Students will also be taught the skills and methodology of analyzing, comparing, creating and composing those shapes.</p>	<p>NJSLS: K.G, 1-6</p>
<p>Overarching Essential Questions What is a shape? What is a dimension?</p>	<p>Overarching Enduring Understandings A dimension is a measure of width, height or length. A shape is the outline of an object.</p>

<p>Unit Essential Questions What is a: square, circle, triangle, rectangle, hexagon, cube, cone, cylinder and sphere?</p> <p>What is orientation of a shape?</p> <p>What is a two dimensional object?</p> <p>What is a three dimensional object?</p> <p>How can I compare and contrast 2 and 3 dimensional shapes?</p> <p>What are vertices?</p> <p>How can I make model shapes?</p> <p>What can happen when I join shapes?</p>	<p>Unit Enduring Understandings I can identify, compare, analyze and create a square, circle, triangle, rectangle, hexagon, A three dimensional shape is a solid and can be filled. 3D shapes are identified as a cube, cone, cylinder, and sphere. I can identify and name similarities of 2D and 3D shapes and sort them by attribute.</p> <p>I can identify that vertices are sides of shape.</p> <p>I can create model shapes by using sticks, clay or drawings.</p> <p>I can use simple shapes to create new and complex shapes.cube, cone, cylinder and sphere, regardless of orientation or size. I can use words like, above, below, beside, in front of, behind and next to describe the relationship between shapes.</p> <p>I can identify a 2D shape as a circle, square, triangle, rectangle, or rhombus, lying on a plane and is flat.</p>
<p>Unit Rationale To begin the process of reasoning with shapes and their attributes, students must first have the capacity to identify, analyze and compose basic shapes.</p>	<p>Unit Overview This unit introduces students to the concepts of shape, dimension and relative position.</p>

Activities: Two Dimensional Shapes/ Three Dimensional Shapes

2D Shapes: attribute blocks, shapes poems, shapes activity packet, shapes in the real world packet, pattern block puzzles. My Math Chapter 11/Lessons: 1-4.

3D Shapes: real life objects, smart board activities, shape sorting, materials to construct shapes. My Math Chapter 12/Lessons: 1-5.

Appendix

Differentiation	
Enrichment	<ul style="list-style-type: none">● Utilize collaborative media tools● Provide differentiated feedback● Opportunities for reflection● Encourage student voice and input● Model close reading● Distinguish long term and short term goals

<p>Intervention</p>	<ul style="list-style-type: none"> ● Utilize “skeleton notes” where some required information is already filled in for the student ● Provide access to a variety of tools for responses ● Provide opportunities to build familiarity and to practice with multiple media tools ● Leveled text and activities that adapt as students build skills ● Provide multiple means of action and expression ● Consider learning styles and interests ● Provide differentiated mentors ● Graphic organizers
<p>ELLs</p>	<ul style="list-style-type: none"> ● Pre-teach new vocabulary and meaning of symbols ● Embed glossaries or definitions ● Provide translations ● Connect new vocabulary to background knowledge ● Provide flash cards ● Incorporate as many learning senses as possible ● Portray structure, relationships, and associations through concept webs ● Graphic organizers
<p>21st Century Skills</p>	
<ul style="list-style-type: none"> ● Creativity ● Innovation ● Critical Thinking ● Problem Solving 	

- Communication
- Collaboration

Integrating Technology

- Chromebooks
- Internet research
- Online programs
- Virtual collaboration and projects
- Presentations using presentation hardware and software