



Diocese of Greensburg Curriculum Math Kindergarten

Unit	Standards	Content	Skills
<p>Time</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.A. Know number names and the count sequence.</p> <p>K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p> <p>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).</p> <p>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <p>MP.5. Use appropriate tools strategically.</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>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>	<ul style="list-style-type: none"> • Time sequence: first, next, last • Calendar (Months, days, years) • Time (hours, AM, PM) 	<p>The students will be able to:</p> <p>Knowledge:</p> <ul style="list-style-type: none"> • Understand concepts of yesterday, today and tomorrow • Understand time sequence: first, next, last: <p>Application:</p> <ul style="list-style-type: none"> • Organize activities that happen first, next and last as happening in 1-2-3 order • Identify parts of the calendar • To read numbers to 31 • Identify the 4 seasons - winter, spring, summer, fall • Identify and recite days of the week • Identify and recite months of the year • Sequence months, days of the week, seasons and other elements that change throughout the year • Identify which of two activities takes more or less time • Tell time to the hour • Identify activities that happen at daytime or nighttime • Tell the time when an activity might take place

Unit	Standards	Content	Skills
			<ul style="list-style-type: none"> Understand Morning, afternoon, evening
Problem Solving	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Operations & Algebraic Thinking K.OA.A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</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>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <p>MP.1. Make sense of problems and persevere in solving them.</p> <p>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Algebra Represent and analyze mathematical situations and structures using algebraic symbols</p>	<p>**NOTE: Problem solving will appear in all Units and will covered content specific to that Unit.</p>	<p>**NOTE: Problem solving will appear in all Units and will cover skills specific to that Unit.</p>

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	<p>illustrate general principles and properties of operations, such as commutativity, using specific numbers;</p> <p>use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations.</p> <p>Process Standards</p> <p>Problem Solving</p> <p>Build new mathematical knowledge through problem solving</p> <p>Solve problems that arise in mathematics and in other contexts</p> <p>Apply and adapt a variety of appropriate strategies to solve problems</p> <p>Monitor and reflect on the process of mathematical problem solving</p> <p>Reasoning and Proof</p> <p>Recognize reasoning and proof as fundamental aspects of mathematics</p> <p>Make and investigate mathematical conjectures</p> <p>Develop and evaluate mathematical arguments and proofs</p> <p>Select and use various types of reasoning and methods of proof</p> <p>Communication</p> <p>Organize and consolidate their mathematical thinking through communication</p> <p>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others</p> <p>Analyze and evaluate the mathematical thinking and strategies of others;</p>		

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	<p>Use the language of mathematics to express mathematical ideas precisely.</p> <p>Connections</p> <p>Recognize and use connections among mathematical ideas</p> <p>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole</p> <p>Recognize and apply mathematics in contexts outside of mathematics</p> <p>Representation</p> <p>Create and use representations to organize, record, and communicate mathematical ideas</p> <p>Select, apply, and translate among mathematical representations to solve problems</p> <p>Use representations to model and interpret physical, social, and mathematical phenomena</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		
<p>Number Formation and Recognition</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.A. Know number names and the count sequence.</p> <p>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).</p> <p>PA: Early Childhood: K-2 (2016) PA: Grade K</p> <hr/> <p>Mathematical Thinking and Expression</p>	<ul style="list-style-type: none"> • Number recognition 0-31 • Number formation 0-31 • Numbers to 100 • Place value 	<p>The students will be able to:</p> <p>Knowledge:</p> <ul style="list-style-type: none"> • Identify and write 0 - 31 • Count numbers to 100 • Count by 5 to 100 • Count by 10 to 100 <p>Comprehension and Analysis:</p> <ul style="list-style-type: none"> • Compare numbers and quantities

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	<p>2.1 Numbers and Operations</p> <p>A.1 Counting and Cardinality – Cardinality 2.1 K.A.1 Know number names and write and recite the count sequence.</p> <p>A.2 Counting and Cardinality –Counting 2.1 K.A.2 Apply one-to-one correspondence to count the number of objects.</p> <p>A.3 Counting and Cardinality – Comparing 2.1 K.A.3 Apply the concept of magnitude to compare numbers and quantities.</p> <p>B.1 Numbers and Operations in Base Ten 2.1 K.B.1 Use place-value to compose and decompose numbers within 19.</p> <p>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Number & Operations Understand numbers, ways of representing numbers, relationships among numbers, and number systems</p> <p>count with understanding and recognize "how many" in sets of objects;</p> <p>use multiple models to develop initial understandings of place value and the base-ten number system;</p> <p>develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections;</p> <p>develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers;</p> <p>connect number words and numerals to the quantities they represent, using various physical models and representations;</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and</p>		

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<p>Number Concepts</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.B. Count to tell the number of objects.</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.4c. Understand that each successive number name refers to a quantity that is one larger.</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>K.CC.C. Compare numbers.</p> <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> <p>K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.</p> <p>Measurement & Data K.MD.B. Classify objects and count the number of objects in each category.</p>	<p>Numbers:</p> <ul style="list-style-type: none"> ○ Greater than, less ○ Even/odd ○ Before/after/between ○ Equal to ● 1 to 1 correspondence ● Estimation 	<p>The students will be able to:</p> <p>Knowledge: <u>Identify/match 1 to 1 correspondence:</u> understanding/matching a set of objects to the equal number</p> <p>Comprehension: <u>Estimate:</u> Guess and check</p> <p>Application:</p> <p><u>Compare sets:</u></p> <ul style="list-style-type: none"> ● Alike/same ● Different ● Sort by color ● Sort by size ● Sort by shape ● Equal <p><u>Compare numbers:</u></p> <ul style="list-style-type: none"> ● Greater than, less than ● Even/odd ● Before/after/between ● Equal to <p><u>Estimate:</u></p> <ul style="list-style-type: none"> ● Guess and check

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	<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>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <p>MP.3. Construct viable arguments and critique the reasoning of others.</p> <p>PA: Learning Standards for Early Childhood K-2 (2016) PA: Grade K</p> <hr/> <p>Mathematical Thinking and Expression 2.1 Numbers and Operations</p> <p>A.2 Counting and Cardinality –Counting 2.1 K.A.2 Apply one-to-one correspondence to count the number of objects.</p> <p>A.3 Counting and Cardinality – Comparing 2.1 K.A.3 Apply the concept of magnitude to compare numbers and quantities.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		

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<p>Patterns</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.A. Know number names and the count sequence.</p> <p>K.CC.A.1. Count to 100 by ones and by tens. K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p> <p>K.CC.B. Count to tell the number of objects.</p> <p>K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality.</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 refers to a quantity that is one larger.</p> <p>K.CC.C. Compare numbers.</p> <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> <p>K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.</p> <p>Measurement & Data K.MD.B. Classify objects and count the number of objects in each category.</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>Mathematical Practice</p>	<ul style="list-style-type: none"> • Sets: <ul style="list-style-type: none"> ○ Alike/same and different ○ Sort by color, shape, and size ○ Equal sets • Patterns <ul style="list-style-type: none"> ○ Color patterns ○ Shape patterns ○ Size and growing patterns ○ Transfer patterns ○ Make patterns ○ Find a pattern ○ Number patterns • Place Value <ul style="list-style-type: none"> ○ Before/after ○ Ordering a given set of numbers • Skip Counting <ul style="list-style-type: none"> ○ By 10's ○ By 5's • Ordinal Numbers <ul style="list-style-type: none"> ○ First through tenth ○ Sequencing with ordinal numbers • Positional Words <ul style="list-style-type: none"> ○ Above, below ○ Top, middle, bottom ○ Over, on under ○ Inside, outside ○ In front of, behind ○ Left, right ○ Left, between, right ○ Before, between, after • Problem Solving 	<p>The students will be able to:</p> <p>Knowledge and Synthesis:</p> <p>Identify and Create Patterns</p> <ul style="list-style-type: none"> • Color patterns • Shape patterns • Size and growing patterns • Transfer patterns • Make patterns • Find a pattern • Number patterns <p>Recognize/Locate Place Value</p> <ul style="list-style-type: none"> • Before/after • Ordering a given set of numbers <p>Recite Skip Counting</p> <ul style="list-style-type: none"> • By 10's • By 5's <p>Application:</p> <p>Use and Identify Ordinal Numbers</p> <ul style="list-style-type: none"> • First through tenth • Sequencing with ordinal numbers <p>Use and Identify Positional Words</p> <ul style="list-style-type: none"> • Above, below • Top, middle, bottom • Over, on under • Inside, outside • In front of, behind • Left, right

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	<p>MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <p>MP.1. Make sense of problems and persevere in solving them.</p> <p>MP.4. Model with mathematics.</p> <p>MP.8. Look for and express regularity in repeated reasoning.</p> <p>PA: Early Childhood: K-2 (2016) PA: Grade K</p> <hr/> <p>Approaches to Learning through Play AL.2 Organizing and Understanding Information</p> <p>D. Patterning AL.2 K.D Recognize and create simple patterns.</p> <p>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Algebra Understand patterns, relations, and functions</p> <p>sort, classify, and order objects by size, number, and other properties;</p> <p>recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another;</p> <p>analyze how both repeating and growing patterns are generated.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		<ul style="list-style-type: none"> • Left, between, right • Before, between, after

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<p>Data and Graphs</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.A. Know number names and the count sequence. K.CC.A.1. Count to 100 by ones and by tens.</p> <p>K.CC.B. Count to tell the number of objects. K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality. 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. 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. K.CC.B.4c. Understand that each successive number name refers to a quantity that is one larger.</p> <p>K.CC.C. Compare numbers. 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> <p>Measurement & Data K.MD.A. Describe and compare measurable attributes. 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>	<ul style="list-style-type: none"> • Probability of simple events <ul style="list-style-type: none"> ○ More, less, and equally likely • Tally Marks <ul style="list-style-type: none"> ○ Write the number of objects in a group to match the number of tally marks ○ Use tally marks to record data on a chart ○ Interpret tally charts ○ Use tally marks to record data on a picture graph, pictograph and bar graph • Different types of Graphs <ul style="list-style-type: none"> ○ Identify the purpose of a picture graph ○ Collect, organize and interpret data ○ Complete and interpret a pictograph ○ Identify the purpose of a pictograph ○ Identify the purpose of a bar graph ○ Complete and interpret a bar graph • Surveys • Problem Solving Techniques 	<p>The students will be able to:</p> <p>Knowledge:</p> <p>Identify various types of graphs</p> <ul style="list-style-type: none"> • Identify the purpose of a picture graph • Collect, organize and interpret data • Complete and interpret a pictograph • Identify the purpose of a pictograph • Identify the purpose of a bar graph • Complete and interpret a bar graph <p>Application:</p> <ul style="list-style-type: none"> • Collect data and show in graph form • Apply probability of simple events • Identify more likely, equally likely, less likely <p>Analysis:</p> <ul style="list-style-type: none"> • Surveys groups to collect data to form graphs • Use real-life authentic experiences/surveys to collect data to form graphs <p>Synthesis:</p> <p>Construct graphs</p> <ul style="list-style-type: none"> • Write the number of objects in a group to match the number of tally marks • Use tally marks to record data on a chart • Interpret tally charts

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	<p>K.MD.B. Classify objects and count the number of objects in each category.</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>Mathematical Practice</p> <p>MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <p>MP.5. Use appropriate tools strategically.</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>NCTM: Mathematics</p> <p><u>NCTM: Pre-K - 2</u></p> <p>Data Analysis & Probability</p> <p>Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them</p> <p>pose questions and gather data about themselves and their surroundings;</p> <p>sort and classify objects according to their attributes and organize data about the objects;</p> <p>represent data using concrete objects, pictures, and graphs.</p> <p>Select and use appropriate statistical methods to analyze data</p> <p>describe parts of the data and the set of data as a whole to determine what the data show.</p>		<ul style="list-style-type: none"> Use tally marks to record data on a picture graph, pictograph and bar graph

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	<p>Develop and evaluate inferences and predictions that are based on data</p> <p>discuss events related to students' experiences as likely or unlikely.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		
<p>Measurement</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Measurement & Data K.MD.A. Describe and compare measurable attributes.</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>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>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.</p> <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 and critique the reasoning of others.</p> <p>MP.4. Model with mathematics.</p>	<p><u>Weight:</u></p> <ul style="list-style-type: none"> • Heavier/lighter <p><u>Capacity:</u></p> <ul style="list-style-type: none"> • More or less <p><u>Size:</u></p> <ul style="list-style-type: none"> • Smaller or larger <p><u>Length:</u></p> <ul style="list-style-type: none"> • Longer/shorter <p><u>Height:</u></p> <ul style="list-style-type: none"> • Shorter/taller <p><u>Distance around</u></p> <p><u>Temperature:</u></p> <ul style="list-style-type: none"> • Hot and cold <p><u>Problem Solving</u></p>	<p>The students will be able to:</p> <p>Application: Problem Solving Strategies</p> <p>Analysis and Evaluation : Compare and order:</p> <ul style="list-style-type: none"> • Weight <ul style="list-style-type: none"> ○ Identify which object is heavier/lighter ○ Order by weight ○ Identify the heaviest/lightest out of a set of at least 3 objects • Capacity <ul style="list-style-type: none"> ○ Identify which of two different-size containers holds more or less ○ Order by capacity ○ Identify what holds the most/least out of a set of at least 3 objects • Size <ul style="list-style-type: none"> ○ Identify which object is smaller or larger ○ Order by size • Length

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	<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>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Algebra Analyze change in various contexts</p> <p>describe qualitative change, such as a student's growing taller;</p> <p>Measurement Understand measurable attributes of objects and the units, systems, and processes of measurement</p> <p>recognize the attributes of length, volume, weight, area, and time;</p> <p>compare and order objects according to these attributes;</p> <p>understand how to measure using nonstandard and standard units;</p> <p>select an appropriate unit and tool for the attribute being measured.</p> <p>Apply appropriate techniques, tools, and formulas to determine measurements</p> <p>measure with multiple copies of units of the same size, such as paper clips laid end to end;</p> <p>use repetition of a single unit to measure something larger than the unit, for instance, measuring the length of a room with a single meterstick;</p>		<ul style="list-style-type: none"> ○ Identify which of two objects is longer/shorter ○ Identify the longest/shortest out of a set of at least 3 objects ○ Order objects by length ○ Estimate and measure length of objects using nonstandard units ● Height <ul style="list-style-type: none"> ○ Identify which of two objects is shorter/taller ○ Order objects by height ● Measure distance around a shape using nonstandard units ● Categorize temperature as hot and cold temperatures

Unit	Standards	Content	Skills
	<p>use tools to measure;</p> <p>develop common referents for measures to make comparisons and estimates.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		
<p>Fractions</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. MP.3. Construct viable arguments and critique the reasoning of others.</p> <p>MP.4. Model with mathematics.</p> <p>MP.5. Use appropriate tools strategically.</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>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Number & Operations Understand numbers, ways of representing numbers, relationships among numbers, and number systems</p> <p>understand and represent commonly used fractions, such as $\frac{1}{4}$, $\frac{1}{3}$, and $\frac{1}{2}$.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and</p>	<ul style="list-style-type: none"> • Parts of a whole • Problem Solving 	<p>The students will be able to:</p> <p>Application:</p> <ul style="list-style-type: none"> • Recognize a whole, one half, and one fourth divided into equal parts • Recognize one half as 1 of 2 equal parts • To recognize one fourth as 1 of 4 equal parts • Identify symmetric figures • Identify parts of a whole <p>Analysis:</p> <ul style="list-style-type: none"> • Explore symmetry through modeling and paper folding

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Money	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.A. Know number names and the count sequence. K.CC.A.1. Count to 100 by ones and by tens. K.CC.B. Count to tell the number of objects. 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>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. MP.1. Make sense of problems and persevere in solving them. MP.2. Reason abstractly and quantitatively. MP.3. Construct viable arguments and critique the reasoning of others. MP.4. Model with mathematics. MP.5. Use appropriate tools strategically. MP.8. Look for and express regularity in repeated reasoning.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>	<ul style="list-style-type: none"> • Coins: <ul style="list-style-type: none"> ○ Penny and value as .01 ○ Nickel and value as .05 ○ Dime and value as .10 ○ Quarter and value as .25 • Fair Trade of coins • Coins comparison • Addition and subtraction with money • Problem Solving 	<p>The students will be able to:</p> <p>Knowledge: Name coins and their value up to a quarter</p> <ul style="list-style-type: none"> • Penny and value as .01 • Nickel and value as .05 • Dime and value as .10 • Quarter and value as .25 <p>Match cost of an item to the correct coin amount</p> <p>Comprehension:</p> <ul style="list-style-type: none"> • Demonstrate Fair Trade • Compare two groups of coins to determine which amount is greater or which amount is less <p>Application:</p> <ul style="list-style-type: none"> • Solve problems by modeling <p>Synthesis:</p> <ul style="list-style-type: none"> • Combine coins for simple addition and subtraction(adding cents, subtracting cents) • Count on: • Pennies and nickels • Dimes and quarters

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<p>Addition and Subtraction</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Counting & Cardinality K.CC.B. Count to tell the number of objects.</p> <p>K.CC.B.4c. Understand that each successive number name refers to a quantity that is one larger.</p> <p>Operations & Algebraic Thinking K.OA.A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p> <p>K.OA.A.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</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>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>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>K.OA.A.5. Fluently add and subtract within 5.</p> <p>Number & Operations in Base Ten K.NBT.A. Work with numbers 11-19 to gain foundations for place value.</p>	<ul style="list-style-type: none"> • Introduce concept of addition • Ten-Frame addition • Introduce concept of subtraction • Ten-Frame subtraction • Problem Solving 	<p>The students will be able to:</p> <p>Comprehension:</p> <ul style="list-style-type: none"> • Demonstrate the concepts of joining (addition) and taking-away(subtraction) <p>Application:</p> <ul style="list-style-type: none"> • Solve horizontal and vertical addition problems • Solve horizontal and vertical subtraction problems • Join groups • Add on to create sums 1-10 <p>Synthesis:</p> <ul style="list-style-type: none"> • Combine groups to create sums 1-10 <p>Evaluation:</p> <ul style="list-style-type: none"> • Interpret and model addition story problems • Interpret and model subtraction story problems

Unit	Standards	Content	Skills
	<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 (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>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. 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 and 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>PA: Early Childhood: K-2 (2016) PA: Grade K</p> <hr/> <p>Mathematical Thinking and Expression 2.2 Algebraic Concepts</p> <p>A. Operations and Algebraic Thinking 2.2 K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10.</p> <p>Mathematical Processes</p>		

Unit	Standards	Content	Skills
	<p>Model with mathematics.(Modeling and Using Tools)</p> <p>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Number & Operations Understand meanings of operations and how they relate to one another</p> <p>understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations;</p> <p>understand the effects of adding and subtracting whole numbers;</p> <p>understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally.</p> <p>Compute fluently and make reasonable estimates</p> <p>develop and use strategies for whole-number computations, with a focus on addition and subtraction;</p> <p>develop fluency with basic number combinations for addition and subtraction;</p> <p>use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators.</p> <p>Algebra Use mathematical models to represent and understand quantitative relationships</p> <p>model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols.</p> <p>Process Standards Communication</p>		

Unit	Standards	Content	Skills
	<p>Organize and consolidate their mathematical thinking through communication</p> <p>Analyze and evaluate the mathematical thinking and strategies of others;</p> <p>Connections</p> <p>Recognize and use connections among mathematical ideas</p> <p>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole</p> <p>Recognize and apply mathematics in contexts outside of mathematics</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		
<p>Telling Time</p>	<p>CCSS: Mathematics CCSS: Grade 1</p> <hr/> <p>Measurement & Data 1.MD.B. Tell and write time.</p> <p>1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>	<ul style="list-style-type: none"> • Identify analog and digital clock time • Distinguish big and small hands on clock • Time to the hour • Write time in standard notation • Identify AM and PM 	<p>The students will be able to:</p> <p>Knowledge:</p> <ul style="list-style-type: none"> • Read a digital clock • Read an analog clock • Write time to the hour • Identify the small hand as hour • Identify the large hand as minute • Illustrate a given time on the clock <p>Application:</p> <ul style="list-style-type: none"> • Tell time to the hour • Identify activities that happen at daytime or nighttime

Unit	Standards	Content	Skills
			<ul style="list-style-type: none"> Tell the time when an activity might take place Understand morning, afternoon, evening
<p>Geometry</p>	<p>CCSS: Mathematics CCSS: Kindergarten</p> <hr/> <p>Geometry</p> <p>K.G.A. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).</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, behind, and next to.</p> <p>K.G.A.2. Correctly name shapes regardless of their orientations 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>K.G.B. Analyze, compare, create, and compose shapes.</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>K.G.B.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>K.G.B.6. Compose simple shapes to form larger shapes.</p>	<ul style="list-style-type: none"> Recognize 2-D shapes <ul style="list-style-type: none"> Triangle Square and rectangle Circle Combine and separate figures Recognize 3-D shapes <ul style="list-style-type: none"> Cylinder, cone, and sphere Cube and rectangular prism Moving shapes Plane figures on solid figures 	<p>The students will be able to:</p> <p>Knowledge:</p> <ul style="list-style-type: none"> Recognize 2-D and 3-D Shapes Triangle Square and rectangle Circle Combine and separate figures Cylinder, cone, and sphere Cube and rectangular prism Moving shapes Plane figures on solid figures <p>Application:</p> <ul style="list-style-type: none"> Model and compose 2-D and 3-D figures

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	<p>Mathematical Practice MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. MP.3. Construct viable arguments and 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>PA: Early Childhood: K-2 (2016) PA: Grade K</p> <hr/> <p>Mathematical Thinking and Expression 2.3 Geometry</p> <p>A.1 Geometry – Identification 2.3 K.A.1 Identify and describe two and three dimensional shapes.</p> <p>A.2 Geometry – Application 2.3 K.A.2 Analyze, compare, create, and compose two and three dimensional shapes.</p> <p>NCTM: Mathematics NCTM: Pre-K - 2</p> <hr/> <p>Geometry Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships recognize, name, build, draw, compare, and sort two- and three-dimensional shapes;</p>		

Unit	Standards	Content	Skills
	<p>describe attributes and parts of two- and three-dimensional shapes;</p> <p>investigate and predict the results of putting together and taking apart two- and three-dimensional shapes.</p> <p>Specify locations and describe spatial relationships using coordinate geometry and other representational systems</p> <p>describe, name, and interpret relative positions in space and apply ideas about relative position;</p> <p>describe, name, and interpret direction and distance in navigating space and apply ideas about direction and distance;</p> <p>find and name locations with simple relationships such as "near to" and in coordinate systems such as maps.</p> <p>Apply transformations and use symmetry to analyze mathematical situations</p> <p>recognize and apply slides, flips, and turns;</p> <p>recognize and create shapes that have symmetry.</p> <p>Use visualization, spatial reasoning, and geometric modeling to solve problems</p> <p>create mental images of geometric shapes using spatial memory and spatial visualization</p> <p>recognize and represent shapes from different perspectives;</p> <p>relate ideas in geometry to ideas in number and measurement;</p> <p>recognize geometric shapes and structures in the environment and specify their location.</p> <p>© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.</p>		

Unit	Standards	Content	Skills



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