Lavallette Elementary School	
Content Area: Mathematics **Course Title: Mathematics**	**Grade Level: Kindergarten**
Unit Plan 1 Counting and Cardinality *Introduce daily/calendar routines. Standards for all 5 units can be incorporated through these procedures throughout the year.*	September - October Ongoing
Unit Plan 2 Measurement and Data	November - December Ongoing
Unit Plan 3 Geometry	January - February Ongoing
Unit Plan 4 Operations and Algebraic Thinking	March - April Ongoing
Unit Plan 5 Number & Operations in Base Ten	May - June Ongoing
Updated: August 2018 by Sharon Carroll	Board Approved: October 16, 2018

Standards for Mathematical Practice *The following standards for mathematical practice should be incorporated in all units.*	
MP.1 Make sense of problems and persevere in solving them.	Find meaning in problems Look for entry points Analyze, conjecture and plan solution pathways Monitor and adjust Verify answers Ask themselves the question: “Does this make sense?”
MP.2 Reason abstractly and quantitatively.	Make sense of quantities and their relationships in problems Learn to contextualize and decontextualize Create coherent representations of problems
MP.3 Construct viable arguments and critique the reasoning of others.	Understand and use information to construct arguments Make and explore the truth of conjectures Recognize and use counterexamples Justify conclusions and respond to arguments of others
MP 4 Model with mathematics.	Apply mathematics to problems in everyday life Make assumptions and approximations Identify quantities in a practical situation Interpret results in the context of the situation and reflect on whether results make sense
MP.5 Use appropriate tools strategically	Consider the available tools when solving problems Are familiar with tools appropriate for their grade or course (pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer programs, digital content located on a website and other technological tools) Make sound decisions of which of these tools might be helpful
MP.6 Attend to precision.	Communicate precisely to others Use clear definitions, state the meaning of symbols and are careful specifying units of measure and labeling axes Calculate accurately and efficiently
MP.7 Look for and make use of structure	Discern patterns and structures Can step back for an overview and shift perspective See complicated things as single objects or as being composed of several objects

MP.8 Look for and express regularity in repeated reasoning.	Notice if calculations are repeated and look for both general methods and shortcuts. In solving problems, maintain oversight of the process while attending to detail Evaluate the reasonableness of their immediate results

Lavallette School
MATHEMATICS CURRICULUM
Unit Overview

Content Area: Mathematics **Grade Level:** Kindergarten

Domain (Unit Title): Counting and Cardinality

Cluster: K.CC

Cluster Summary:

- Know number names and the count sequence
- Count to tell the number of objects
- Compare numbers

Primary Interdisciplinary Connections:

Science	weather patterns/sequence stages of life cycle/plants
Social Studies	dates/timelines/calendar
Language Arts	morning meeting/circle time literacy counting books
Technology	interactive games/classroom website/interactive whiteboard

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Environmental Literacy	Students demonstrate knowledge and understanding of their environmental surroundings by using counting and comparing skills.

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets

Content Standards:

Number	Standard for Mastery
K.CC.1	Count to 100 by ones and tens.
K.CC.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1)
K.CC.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)
K.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality. ● 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 ● 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. ● Understand that each successive number name refers to a quantity

	that is one larger.
K.CC.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.
K.CC.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 [include groups with up to ten objects]
K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.

Unit Essential Questions	**Unit Enduring Understandings**
● Why do we count things? ● Is there a wrong way to count? Why? ● How do you know when you have more or less?	*Students will understand that…* ● counting is used constantly in everyday life; i.e. counting toys or people on a team. ● numerals are used to represent quantities. ● people used numbers to communicate with others; i.e. two more forks are needed for the dinner table.

Unit Objectives	**Unit Objectives**
Students will know… ● number names and the count sequence. ● numbers are used to count and order objects. ● numerals are represented by written symbols. ● numbers represent a quantity that can be compared**.**	*Students will be able to…* ● count orally to 100 (by ones and tens). ● count and represent objects up to 20. ● write numerals from 0 to 20. ● identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.

Lavallette School
MATHEMATICS CURRICULUM
Unit Overview

Content Area: Mathematics **Grade Level:** Kindergarten

Domain (Unit Title): Measurement and Data

Cluster: K.MD

Cluster Summary:

- Describe and compare measurable attributes.
- Classify objects and count the number of objects in each category.

Primary Interdisciplinary Connections:

Science	measure/collect/compare data/physical characteristics of plants, humans, and other animals
Social Studies	survey data
Language Arts	Math stories
Technology	interactive games/classroom website/interactive whiteboard

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Civil Literacy	Students understand the skills of mapping, gridding, and compass direction.

College and Career Readiness

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Learning Targets

Content Standards:

Number	**Standard for Mastery**
K.MD.1	Describe measurable attributes of objects such as length or weight. Describe several measurable attributes of a single object.
K.MD.2	Directly compare two objects with a common measurable attribute ; to see which object has “more of” / “less of” the attribute and describe the difference (i.e., compare the height of two children and describe one child as taller/shorter).
K.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. [Limit category counts to be less than or equal to 10.]
Number	Standard for Introduction
1.MD.3	Tell and set time to the hour using analog clocks.
2.MD.8	Identify coins (penny, nickel, dime and quarter).

Unit Essential Questions	**Unit Enduring Understandings** *Students will understand that…*
● How can you tell when one day is bigger than another? ● How is height different from length? ● How can we classify objects?	● measurement helps to understand the world such as in cooking, playing and pretending. ● people compare objects to communicate and collaborate with others (i.e., the heavy book or the long dress). ● objects can be classified into different categories based on common attributes.

Unit Objectives *Students will know…*	**Unit Objectives** *Students will be able to…*
● objects have measurable attributes that can be compared. ● objects can be classified and counted based on common attributes	● identify and describe common measurable attributes. ● describe several measurable attributes of a single object. ● directly compare two objects with a common measurable attribute. ● classify, count and sort objects into categories.

Lavallette School
MATHEMATICS CURRICULUM
Unit Overview

Content Area: Mathematics **Grade Level:** Kindergarten

Domain (Unit Title): Geometry

Cluster: K.G

Cluster Summary:

- Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)
- Analyze, compare, create, and compose shapes.

Primary Interdisciplinary Connections:

Science	Identify shapes
Social Studies	maps/signs/symbols
Language Arts	Math stories/puzzles
Technology	interactive games/classroom website/interactive whiteboard/digital tools to gather and organize information

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Civil Literacy	Students understand the skills of mapping, gridding, and compass direction.

College and Career Readiness

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Learning Targets

Content Standards:

Number	Standard for Mastery
K.G.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.
K.G.2	Correctly name shapes regardless of their orientations or overall size.
K.G.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).
K.G.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).
K.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
K.G.6	Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

Unit Essential Questions ● Where can we find shapes in our world? ● What are the ways to describe where an object is? ● What are all the things that you can think of that are round? What is the same about these things? ● How are these shapes alike and how are they different? ● Can you use shapes to create a new shape?	**Unit Enduring Understandings** *Students will understand that…* ● shapes help people to describe the world. ● people communicate where things are by their location in space using words like next to, below, and in between.

Unit Objectives *Students will know…* ● all objects have shape. ● shapes have specific attributes. ● shapes can be analyzed, compared and created	**Unit Objectives** *Students will be able to…* ● identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). ● describe shapes using position terms. ● correctly name shapes regardless of orientation and size. ● identify two and three dimensional shapes. ● analyze and compare two and three dimensional shapes. ● construct and draw shapes using a variety of materials. ● compose simple shapes to form larger shapes.

Lavallette School
MATHEMATICS CURRICULUM
Unit Overview

Content Area: Mathematics **Grade Level:** Kindergarten

Domain (Unit Title): Operations and Algebraic Thinking

Cluster: K.OA

Cluster Summary:

- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from

Primary Interdisciplinary Connections:

Science	experiments/data
Social Studies	weather/economics
Language Arts	Read and comprehend word problems
Technology	interactive games/classroom website/interactive whiteboard

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.

Communication	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Financial Literacy	Students use addition and subtraction to make appropriate financial choices.

College and Career Readiness

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Learning Targets

Content Standards:

Number	Standard for Mastery
K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawing, sounds (e.g., claps), acting out situations, verbal explanations, expressions or equations. [Drawings need not show details, but should show the mathematics in the problem.]
K.OA.2	Solve addition and subtraction word problems, and add and subtract within 10 by using objects or drawing to represent the problem.
K.OA.3	Decompose numbers less than or equal to 10 into two addends in more than one way by using objects or drawings and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
K.OA.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.
K.OA.5	Fluently add and subtract within 5.

Unit Essential Questions	**Unit Enduring Understandings** *Students will understand that…*
● What happens when two quantities are combined?	● people combine quantities to find

● What happens when a set of objects is separated into different sets?	a total (i.e. number of boys and girls in the classroom). ● people use subtraction to find out what is left over (i.e. number of toys left after giving some away).

Unit Objectives *Students will know…* ● that addition is putting together and adding to. ● that subtraction is taking apart and taking from.	**Unit Objectives** *Students will be able to…* ● represent addition and subtraction in a variety of ways. ● solve addition and subtraction word problems. ● add and subtract within 10 using manipulatives or drawings. ● decompose numbers less than and equal to 10 in more than one way. ● find complements of 10 (i.e. 1 + 9, 2 + 8, ● 3 + 7, 4 + 6, 5 +5). ● use mental math strategies to solve addition and subtraction facts within 5.

Lavallette School
MATHEMATICS CURRICULUM
Unit Overview

Content Area: Mathematics **Grade Level:** Kindergarten

Domain (Unit Title): Number and Operations in Base Ten

Cluster: K.NBT

Cluster Summary:
- Work with numbers 11-19 to gain foundations for place value.

Primary Interdisciplinary Connections:

Science	Weather patterns/temperature
Social Studies	dates/timelines/calendar
Language Arts	morning meeting/circle time
Technology	interactive games/classroom website/interactive whiteboard

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
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Learning Targets

Content Standards:

Number	Standard for Mastery
K.NBT.1	Compose and decompose numbers from 11 to 19 into a group of ten and one(s) and record each composition or decomposition through 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.

Unit Essential Questions	Unit Enduring Understandings
● How can you represent the number 11? 12? 13? 14? 15? 16? 17? 18? 19? ● Why do we group numbers into tens and ones?	*Students will understand that…* ● numbers can be represented in a variety of ways. ● numbers greater than 9 (11-19) are grouped into a ten and one(s).

Unit Objectives	Unit Objectives
Students will know… ● the foundation of the base- ten system.	*Students will be able to…* ● 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.

Evidence of Learning

Suggested Formative Assessments:

- Teacher Observation
- Performance Assessment
- Exit Slips/Slate Assessment
- Portfolios/Journals
- Pre-Assessment
- · Games
- · Anecdotal Records
- · Oral Assessment/Conferencing
- · Daily Classwork

Suggested Summative Assessments:

- Tests
- Quizzes
- National/State/District Assessments

Suggested Modifications (ELLs, Special Education, Gifted and Talented):

Low Level Strategies:

- Modified classroom and homework assignments
- Teacher tutoring
- Parent - teacher communication

- Anchor charts and visual aids
- Flexible grouping
- Teacher - student goal setting
- Technology integration
- Centers
- Response to intervention

High Level Strategies

- Multi-step and higher level math problems
- Enrich problems
- Extend activities
- Centers
- Student driven activities
- Student choice activities
- Peer tutoring

Suggested activities for lesson plans:

Bingo	Pair up for bingo match using numbers 11-19
Sound Off	Students count the numbers up to 20
Beyond Fingers	Teach students to use the numberline after 10 or to “put in their head”

Teacher Notes:

- Integrate standards through morning meeting and calendar routines as applicable