POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

MATH: GRADE K	STATE STANDARD AREA/UNIT:	Numbers and Operations: Counting and Cardinality	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Know number names and the count sequence.

- **K.CC.1** Count to 100 by ones and by 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).

Count to tell the number of objects.

- **K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality.
    A. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
    B. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
    C. 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.

Compare numbers.

- **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.
- **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals.

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **How can numbers from 1 to 20 be counted, read, and written?** • **How can quantities be determined, represented, & communicated?** • **How can numbers to 100 be counted using a hundred chart?** • **How can a set of objects that come in 2's be accurately counted?** • **Does order matter when you count? Why?** • **How can language be used to describe the relationship between numbers?**	count compare number arrangement order quantity number line sequence handful ten-frame size (value) inventory double check (accuracy of counting) counting backwards taking attendance (counting stick)	taking attendance (counting stick) more most greater larger less least fewer fewest same equal zero one two three four	five six seven eight nine ten eleven twelve thirteen fourteen fifteen sixteen seventeen eighteen nineteen twenty penny	**Formative:** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **Summative:** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated projects • Teacher observation checklists • Student activity book page

UNIT OF INSTRUCTION: COUNTING AND CARDINALITY	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	C.C.2.1.K.A.1: Know number names and write and recite the count sequence. **Essential Skills and Understanding** • Ability to use rote counting (e.g., simply reciting numbers in order with no meaning attached) to one hundred. • Ability to use verbal counting (e.g., meaningful counting employed in order to solve a problem, such as finding out how many are in a set. • Ability to count using the hundreds chart or number line. • Ability to initially use concrete materials, hundreds chart or number line to model counting from a given number other than 1. • Knowledge that counting is the process of adding 1 to the previous number.	• Count the number of students in the class. • Use the calendar to count days. • Connect number names, numerals and quantities. • Establish one-to-one correspondence between equal groups. • Develop strategies for accurately counting and keeping track of quantities up to the number of students in the class (counting a set of objects by 1's) • Create an equivalent set. • Count, create, record and represent quantities. • Estimate the number of objects, compare groups, determine which had more/less. • Make an estimate of the number of objects up to 100 and verify by counting. • Develop an understanding of more than/fewer than. • Develop the idea of equivalence. • Count, read and order numbers to 100.

UNIT OF INSTRUCTION: COUNTING AND CARDINALITY	• Ability to match a set with a number card that states its quantity. • Ability to build numbers with concrete materials and then write the numerals that represent those numbers. • Knowledge that zero represents an empty set. • Ability to immediately recognize a quantity when counting objects (subtilizing). • Ability to understand that the quantity of a set does not change, no matter how the objects of the set are displayed (Conservation of Number). **C.C.2.1.K.A.2: Apply one-one correspondence to count the number of objects.** **Essential Skills and Understanding** • Knowledge that cardinality is the understanding that, when counting a set, the last number represents the total number of the objects in the set. • Ability to apply a one-to-one correspondence when counting. **C.C.2.1.K.A.3: Apply the concept of magnitude to compare numbers and quantities**. **Essential Skills and Understanding** • Knowledge that when one more is added to a number set, this new number includes all the previous objects in the set, plus the new one. (e.g., 6+1=7). • Ability to use concrete materials when comparing sets. • Ability to compare visually, to compare by matching, and to compare by counting. • Ability to apply knowledge of an experience with comparing concrete objects.	• Practice the rote counting sequence, from 1-30. • Keep track of a growing set of objects. • Write numbers from 0-20. • Create a set of a given size. • Record an arrangement of a quantity. • Math sets with a 1 to1correspondence. • Explore math manipulatives and attributes. • Use the calendar as a tool for keeping track of time and events. • Represent quantities with pictures, numbers, objects, and/or words. • Use numbers to represent quantities and record how many. • Consider whether order matters when you count. • Compare two or more quantities to determine which is more. • Using a ten-frame to develop visual images for quantities up to 10. • Count forwards/backwards. • Develop an understanding of the magnitude and position of numbers. • Develop language for comparing quantities. • Order quantities from least to most. • Count spaces and move on a game board. • Use the number line as a tool for counting. • Use subsets to count a set of objects. • Work with 2 to 1 correspondence. • Count by groups of two and ten.

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

<table>
<tr><td colspan="4">DIFFERENTIATION ACTIVITIES:
Teacher directed differentiated instructional projects and activities are ongoing and based on student need.</td></tr>
<tr><td>ENRICHMENT:</td><td>• Extended assignment
• Independent projects/assignments
• First in Math
• Sumdog
• Versatiles
• Math Centers
• Supporting the range of learners as per teacher manual
• Thinkfinity website: http://www.thinkfinity.org/home.aspx
• United Streaming: http://streaming.discoveryeducation.com/index.cfm
• Gifted education teacher</td><td>REMEDIATION:</td><td>• Adapted assignments
• Additional time, alternative assessments
• Chunking of content
• Accommodations based on IEP and/or need
• Math Centers
• One-on-one re-teaching
• Volunteer/peer tutoring
• Accommodation based on need and/or IEP
• Chunking of assignments and assessments
• Supporting the range of learners as per teacher manual
• Teacher generated/differentiated instruction activities binder
• IXL website: http://www.ixl.com/math/kindergarten
• Math support or learning support teachers</td></tr>
<tr><td>RESOURCES:</td><td colspan="3">• Investigations Teacher Manuals Units 1, 2, 6
• Student math handbook flipchart
• Partner Games
• Coolmath.com
• Collaborativelearning.PBworks.com
• PDE SAS portal: http://www.pdesas.org
• Math Their Way
• Thinking Maps
• KWL Charts
• Versatiles
• Exit Tickets
• Adaptions checklist
• Teacher generated/differentiated instruction activities binder
• ELL Instructional Strategies for Math
o ESL Handbook
o Click on “Academic Resources” from PMSD website
o Click on “ESL” on left side of tool bar.
o Click on the link to the PMSD ESEL Handbook
▪ Scroll through to page 44 in the appendices.</td></tr>
</table>

RESOURCES:

- Promethean Flipcharts/ActiveVotes
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
- BrainPOP Junior/BrainPOP
- Assessment Resource: http://mrsriccaskindergarten.blogspot.com/2012/02/common-core-assessment-packet-freebies 23.html
- http://www.khanacademy.org/
- Thinkfinity website: http://www.thinkfinity.org/home
- IXL Website: http://www.IXL.com/math/
- United Streaming: http://streaming.discoveryeducation.com/index.cfm
- www.sumdog.com
- http://edhelper.com/place_value.html
- http://illuminations.nctm.org
- http://insidemathematics.org
- www.teachingchannel.org
- www.Learnzillion.com
- http://illustrativemathematics.org/standards/k8
- http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/
- www.teachingchannel.org
- http://www.learnzillion.com
- ABCYA.com
- Ghost Blasters 2 Website: http://resources.oswego.org/games/ghostblasters2/gb2nores.html
- Harcourt math facts: http://www.harcourtschool.com
- http://gamequarium.com/placevalue.html
- http://www.commoncoresheets.com
- http://www.kidsknowit.com
- http://www.teacherspayteachers.com

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

MATH: GRADE K	STATE STANDARD AREA/UNIT:	Numbers and Operations: Numbers and Operations in Base Ten	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

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

K.NBT.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.

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS	VOCABULARY	ASSESSMENT
• **How can you add 1 ten and some ones to make the numbers 11 to 19?** • **How can you break the numbers 11-19 into parts?**	tens ones place value penny nickel dime	**Formative:** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **Summative:** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated project • Teacher observation checklists • Student activity book page

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: NUMBERS AND OPERATIONS IN BASE 10	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.1.K.B.1: Use place value to compose and decompose numbers within 19. **Essential Skills and Understanding** • Ability to use concrete materials (e.g., Unifix Cubes, Snap Cubes, Base 10 Blocks, etc. (to represent the combination of one ten and ones for each number). • Ability to record the representations of 11 through 19 in pictures, numbers, and/or equations. • Ability to use concrete materials to build sets, towers, or groups of 10, to make sense of counting by tens. • Ability to count, with or without manipulatives by ones or tens.	• Decompose numbers in different ways. • Represent days of school by using ones, tens and hundreds during calendar activities. • Combine 10 ones to make a ten and 10 tens to make a hundred. • Compose and decompose the ten numbers into one ten and some number of ones. • Use place value blocks to represent numbers 11-19 as ones alone or a combination of tens and ones. • Identify and name coins and their values. • Count sets of pennies, sets of nickels and sets of dimes up to a dollar. • Recognize the symbol for cents.

DIFFERENTIATION ACTIVITIES: Teacher directed differentiated instructional projects and activities are ongoing and based on student need.			
ENRICHMENT:	• Math Centers • Supporting the range of learners as per teacher manual • Encourage and support learners in explaining how they applied their skills during mathematical tasks • Thinkfinity website: http://www.thinkfinity.org/home.aspx • Unite Streaming: http://streaming.discoveryeducation.com/index.cfm • Gifted education teacher	**REMEDIATION:**	• Adapted assignments • Additional time, alternative assessments • Alternative assessments • Chunking of content, assignment and/or assessments • Accommodations based on IEP and/or need • Math Centers • One-on-one re-teaching • Volunteer/peer tutoring • Supporting the range of learners as per teacher manual • Teacher generated/differentiated instruction activities binder • IXL website: http://www.ixl.com/math/kindergarten • Math support or learning support teachers

RESOURCES:

- Investigations Teacher Manual Unit 6
- PDE SAS portal: http://www.pdesas.org
- Math Their Way
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Exit Tickets
- Adaptions checklist
- Teacher generated/differentiated instruction activities binder
- ELL Instructional Strategies for Math
    - ESL Handbook
    - Click on "Academic Resources" from PMSD website
    - Click on "ESL" on left side of tool bar.
    - Click on the link to the PMSD ESEL Handbook
        - Scroll through to page 44 in the appendices.
- Promethean Flipcharts/ActiveVoters
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
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- Assessment Resource: http://mrsriccaskindergarten.blogspot.com/2012/02/common-core-assessment-packet-freebies 23.html
- http://www.khanacademy.org/
- Thinkfinity website: http://www.thinkfinity.org/home
- IXL Website: http://www.IXL.com/math/
- United Streaming: http://streaming.discoveryeducation.com/index.cfm
- www.sumdog.com
- http://edhelper.com/place_value.html
- http://illuminations.nctm.org
- http://insidemathematics.org
- www.teachingchannel.org
- http://illustrativemathematics.org/standards/k8
- http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/
- www.teachingchannel.org
- http://www.learnzillion.com
- ABCYA.com
- Coolmath.com
- Collaborativelearning.PBworks.com
- Ghost Blasters 2 Website: http://resources.oswego.org/games/ghostblasters2/gb2nores.html
- Harcourt math facts: http://www.harcourtschool.com
- http://gamequarium.com/placevalue.html

RESOURCES:	
	• http://www.commoncoresheets.com • http://www.kidsknowit.com • http://www.teacherspayteachers.com • http://www.learnzillion.com

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

MATH: GRADE K	STATE STANDARD AREA/UNIT:	Algebraic Concepts: Operations and Algebraic Thinking	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

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

- **K.OA.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
- **K.OA.2** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- **K.OA.3** Decompose numbers less than or equal to 10 into pairs in more than one way 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).
- **K.OA.4** For any number from 1-9 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.

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **How can you model addition as a combining situation?** • **How can you model subtraction as a taking from/separating situation?** • **What types of situations involve addition/subtraction?** • **How can you find the total when 1, 2 or 3 are added to a set?** • **How can you find the difference when 1, 2 or 3 are subtracted from a set?** • **How can you use addition notation to describe an arrangement of objects?** • **How many different ways can you decompose a given number?**	remove minus number sentence/ equation equal sum solve take away removing combining	combining removing combining join add addend addition altogether in all doubles	total plus subtraction difference pattern repeats same different unit	**Formative:** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **Summative:** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated projects • Teacher observation checklists • Student activity book page

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: OPERATIONS AND ALGEBRAIC THINKING	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.2.K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10. **Essential Skills and Understanding** • Ability to represent addition and subtraction processes in a variety of ways, using concrete materials, pictures, numbers, words, or acting it out. • Knowledge that "putting together" and "adding to" are two different processes of addition. • Knowledge that "taking apart" and "taking from" are two different processes of subtraction. • Ability to represent the process of solving various types of addition and subtraction word problems within 10 using objects, and drawings to develop number sentences. • Knowledge of the different types of word problems (e.g., add to, result unknown; take from, result unknown; put together/take apart, total unknown) which lays the foundation for more difficult word problems. • Ability to use concrete materials or pictures and a part-part-whole mat to organize the manipulatives and make sense of the problem. • Knowledge that decomposition involves separating a number into 2 different parts and understanding that there is a relationship between the sum of the parts and the whole. • Knowledge that there are a variety of combinations that represent a given number. • Ability to begin with the whole when decomposing numbers into pairs. • Knowledge when writing an equation to represent the decomposition of a number, the values on each side of the equal sign are the same (e.g.,7=2+5) • Ability to use experience with K.OA.3 to make sense of this standard. • Ability to apply decomposition knowledge and relationship between addition and subtraction to determine the sum or differences of various problems.	• Use manipulatives, drawings, tools and notation to show strategies and solutions. • Find the total after 1, 2, or 3 is added to, or subtracted from a set. • Combine 2 single digit numbers with totals to 20. • Model the action of combining and separating situations. • Separate one amount from another. • Develop strategies for solving addition and subtraction story problems. • Find combinations of 5 or 6. • Consider combinations of a number. • Use number and/or addition notation to describe arrangements of objects, to record how many, and to represent an addition situation. • Use number, pictures, and/or words to represent a quantity, measurement or solution to a problem. • Copy, construct, compare, describe and record repeating patterns. • Determine what comes next in a repeating pattern. • Compare repeating and non-repeating arrangements. • Distinguish between patterns and non-patterns. • Construct a variety of patterns using the same elements. • Compare different kinds of patterns. • Identify the unit in a repeating pattern. • Describe repeating patterns. • Count the number of units in a repeating pattern. • Count the number of units in a repeating pattern. • Extend a repeating pattern by adding on units to the pattern. • Add/subtract within 5. • Find how many are left after 1, 2, or 3 is subtracted from a set. • Solve a problem in which the total(10) and one part are known. • Use numbers to record how many. • Use addition notation to record each composition and decomposition. • Add/subtract 1 to/from numbers up to 10. • Add to/subtract from one quantity to make another quantity. • Write a number sentence corresponding to an illustration to represent addition and subtraction through 10. • Solve addition and subtraction problem to 10 with manipulatives. • Develop fluency for addition and subtraction problems with sums and differences through 5. • Decompose numbers in different ways.

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

DIFFERENTIATION ACTIVITIES:
Teacher directed differentiated instructional projects and activities are ongoing and based on student need.

ENRICHMENT:

- Math Centers
- Supporting the range of learners as per teacher manual
- Encourage and support learners in explaining how they applied their skills during mathematical tasks
- Thinkfinity website: http://www.thinkfinity.org/home.aspx
- Unite Streaming: http://streaming.discoveryeducation.com/index.cfm
- Gifted education teacher

REMEDIATION:

- Adapted assignments
- Additional time
- Alternative assessments
- Chunking of content, assignment and/or assessments
- Accommodations based on IEP and/or need
- Math Centers
- One-on-one re-teaching
- Volunteer/peer tutoring
- Supporting the range of learners as per teacher manual
- Teacher generated/differentiated instruction activities binder
- IXL website: http://www.ixl.com/math/kindergarten
- Math support or learning support teachers

RESOURCES:

- Investigations Teacher Manuals Units 3, 6
- PDE SAS portal: http://www.pdesas.org
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Exit Tickets
- Adaptions checklist
- Teacher generated/differentiated instruction activities binder
- ELL Instructional Strategies for Math
  - ESL Handbook
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- Assessment Resource: http://mrsriccaskindergarten.blogspot.com/2012/02/common-core-assessment-packet-freebies 23.html
- http://www.khanacademy.org/

RESOURCES:	• Thinkfinity website: http://www.thinkfinity.org/home • IXL Website: http://www.IXL.com/math/ • United Streaming: http://streaming.discoveryeducation.com/index.cfm • www.sumdog.com • http://edhelper.com/place_value.html • http://illuminations.nctm.org • http://insidemathematics.org • www.teachingchannel.org • http://illustrativemathematics.org/standards/k8 • http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/ • www.teachingchannel.org • http://www.learnzillion.com • ABCYA.com • Coolmath.com • Collaborativelearning.PBworks.com • Student math handbook flipchart • www.starfall.com • Math Their way: chapter 2, pp. 21-42;chapter 3, pp. 58-87; chapter 7, pp. 171-197;chapter 9, pp. 237-241; chapter 10, pp. 254-273 • Spacey math website: http://www.learningplanet.com.sam.sm.index.asp • Build a bear math flashcards: http://www.buildabear.com • www.funbrain.com • Ghost Blasters 2 Website: http://resources.oswego.org/games/ghostblasters2/gb2nores.html • Harcourt math facts: http://www.harcourtschool.com • http://gamequarium.com/placevalue.html • http://www.commoncoresheets.com • http://www.kidsknowit.com • http://www.teacherspayteachers.com • http://www.learnzillion.com

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

MATH: GRADE K	STATE STANDARD AREA/UNIT:	Geometry: Geometry	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

- **K.G.1.** Describe objects in the environment using names of shapes, and describe the relative positions of these objects.
- **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"). Analyze, compare, create, and compose shapes.

Analyze, compare, create and compose shapes.

- **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?"

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **What are the attributes of a given 2-D or 3-D shape?** • **Where can you find 2-D and 3-D objects in the real world?** • **What shapes can be created by using the pattern blocks?** • **What is the same/different about two given 2-D or 3-D shapes?**	circle cone cube cylinder hexagon rectangle rectangular prism trapezoid	rhombus sphere square triangle face shape 2-D shape 3-D shape	matching same different geo-board round sides corners/points curved straight	**Formative:** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **Summative:** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated projects • Teacher observation checklists • Student activity book page

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: GEOMETRY	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.3.K.A.1 Identify and describe two and three dimensional shapes. **Essential Skills and Understanding** • Ability to use geometric vocabulary when describing objects. • Ability to sort a variety of shapes into two – and three-dimensional categories and explain why their sorting is correct. **CC.2.3.K.A.2 Analyze, compare, create, and compose 2-and 3-dimensional shapes.** **Essential Skills and Understanding** • Ability to use concrete materials to build composite figures. • Ability to explain how they composed their shape and name what shapes they used to make the composite shape.	• Describe, identify, compare and sort 2-D and 3-D shapes. • Compose and decompose 2-D and 3-D shapes. • Develop language to describe and compare 2-D and 3-D shapes and their attributes. • Relate 2-D and 3-D shapes to real world objects. • Describe the attributes of circles, rectangles, triangles, and squares. • Explore relationships among pattern block shapes. • Compare the faces of different 3-D shapes and the faces of a single 3-D shape. • Construct 2-D shapes. • Find combinations of shapes that fill an area. • Construct 3-D shapes. • Combine 3-D shapes to make a given 3-D shape.

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

DIFFERENTIATION ACTIVITIES:

Teacher directed differentiated instructional projects and activities are ongoing and based on student need.

ENRICHMENT:

- Support the range of learners as per teacher manual
- Encourage and support learners in explaining how they applied their skills during mathematical tasks
- Math Centers
- United Streaming: http://streaming.discoveryeducation.com/index.cfm
- Thinkfinity website: http://www.thinkfinity.org/home.aspx
- Partner Games from next grade level
- Can't wait to tessellate: http://www.pbs.org/teachers/connect/resourece/6981/preview
- Pattern block applet: http://arcytech.org/java/patternsj.shtml
- Gifted education teacher
- Math support or learning support teachers

REMEDIATION:

- Additional time
- Alternative assessments
- Chunking of content, assignment and/or assessments
- Accommodations based on IEP and/or need
- Math Centers
- One-on-one re-teaching
- Volunteer/peer tutoring
- Supporting the range of learners as per teacher manual
- Teacher generated/differentiated instruction activities binder
- IXL website: http://www.ixl.com/math/kindergarten
- Math support or learning support teachers
- Shape Safari http://www.education.com/activity/article/shapesafarifirst/
- Shape and Seek http://www.education.com/activity/article/shapeandseekpreschool/

RESOURCES:

- Investigations Teacher Manual Unit 5
- Family letters
- KWL charts
- Exit Tickets
- Student math handbook flipchart
- Shape construction from www.abcya.com
- Plane shapes and solid shapes videos from Brain Pop Jr.
- Building shapes http://mathforum.org/varnelle/kgeo3.html
- Solid Figures and Plane Shapes: http://www.hbschool.com/activity/solid_figures_plane_shapes/
- Continue the Pattern: http://nlvm.usu.edu\en\nav\frames
- Pattern Block applet: http://www.arcytech.org\java\patterns\patternsj.shtml
- Partner Games
- Coolmath.com
- Colaborativelearning.PBworks.com

RESOURCES:

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- http://www.khanacademy.org/
- Thinkfinity website: http://www.thinkfinity.org/home
- IXL Website: http://www.IXL.com/math/
- United Streaming: http://streaming.discoveryeducation.com/index.cfm
- www.sumdog.com
- http://edhelper.com/place_value.html
- http://illuminations.nctm.org
- http://insidemathematics.org
- www.teachingchannel.org
- www.Learnzillion.com
- http://illustrativemathematics.org/standards/k8
- http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/
- www.teachingchannel.org
- ABCYA.com
- Coolmath.com
- Ghost Blasters 2 Website: http://resources.oswego.org/games/ghostblasters2/gb2nores.html
- Harcourt math facts: http://www.harcourtschool.com
- http://gamequarium.com/placevalue.html
- http://www.commoncoresheets.com
- http://www.kidsknowit.com
- http://www.teacherspayteachers.com
- http://www.learnzillion.com

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

MATH: GRADE K	STATE STANDARD AREA/UNIT:	Measurement, Data and Probability: Measurement and Data	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Describe and compare measurable attributes.

- **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 measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Classify objects and count the number of objects in each category.

- **K.MD.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count 3.

MATHEMATICAL PRACTICES:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **Given a set of 2 objects, how can you determine which one is the longest?** • **What is the proper way to measure an object with non-standard units?** • **What vocabulary can you use to describe the amount of liquid a container holds?** • **How can you sort a set of objects in different ways?**	full empty holds more holds less holds same long longer longer than weight	heavier lighter length short shorter shorter than the same equal to table	graph column row time hour analog clock digital clock sorting attribute	**Formative:** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **Summative:** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated projects • Teacher observation checklists • Student activity book page • Teacher observation checklists • Student activity book page

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: MEASUREMENT AND DATA	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.3.K.A.1: Identify and describe two and three dimensional shapes. **Essential Skills and Understanding** • Ability to use measurement and geometric vocabulary when describing the attributes of objects. **CC.2.3.K.A.2: Analyze, compare, create, and compose 2-and 3-dimensional shapes.** **Essential Skills and Understanding** • Ability to sort objects by a given attribute. • Ability to classify objects by predetermined categories related to attributes (numbers of sides, number of corners).	• Write time in hours using analog and digital clocks. • Name time to the hour on a digital and an analog clock. • Describe the instruments used for measuring time and length. • Understand length. • Directly compare two objects to determine which is longer. • Sort objects into 2 categories according to length. • Develop language to describe and compare lengths. • Identify the longest dimension of an object. • Compare lengths of different objects. • Repeat multiple non-standard units to quantify length. • Develop strategies for measuring the length of an object. • Understand what weight is. • Compare weights of different objects. • Develop strategies for measuring the weight of an object. • Describe several measurable attributes of an object such as length or weight. • Record measurements with pictures, numbers, and/or words. • Compare nonstandard units of capacity in terms of full, empty, holds more, holds less, holds same. • Identify attributes and develop language to describe them. • Identify the attribute that is common to several objects. • Compare how objects are the same and different. • Use attributes to sort a set of objects. • Find objects that share one attribute. • Group data into categories based on similar attributes. • Sort a set of objects or data in different ways. • Create a bar graph with the structure of the graph provided. • Collect, count, represent, describe and compare data.

POCONO MOUNTIAN SCHOOL DISTRICT CURRICULUM

DIFFERENTIATION ACTIVITIES:

Teacher directed differentiated instructional projects and activities are ongoing and based on student need.

ENRICHMENT:

- Support the range of learners as per teacher manual
- Encourage and support learners in explaining how they applied their skills during mathematical tasks
- Math Centers
- United Streaming: http://streaming.discoveryeducation.com/index.cfm
- Thinkfinity website: http://www.thinkfinity.org/home.aspx
- Partner Games from next grade level
- Gifted education teacher
  Math support or learning support teachers

REMEDIATION:

- Adapted assignments
- Additional time
- Alternative assessments
- Chunking of content, assignment and/or assessments
- Accommodations based on IEP and/or need
- Math Centers
- One-on-one re-teaching
- Volunteer/peer tutoring
- Supporting the range of learners as per teacher manual
- Teacher generated/differentiated instruction activities binder
- IXL website: http://www.ixl.com/math/kindergarten
- Math support or learning support teachers

RESOURCES:

- Investigations Teacher Manuals Units 4, 7
- Family letters
- KWL charts
- Exit tickets
- Student math handbook flipchart
- What time is it? Www.primarygames.com/time/start.htm
- Discussing Tools for Telling Time http://www.timemonsters.com/
- Introducing Telling Time to the Half Hour http://www.fi.edu/time/journey/justintime/time_quiz.html
- Telling Time in Minute Intervals http://classroom.jc-schools.net/basic/math-time.html
- Introducing Inch as a Standard Unit of Length http://www.apples4theteacher.com/math.html#measurementgames
- Estimating and Measuring the Length of an Object http://content.scholastic.com/browse/article.jsp?id=2782
- http://www.aaamath.com/B/mea.htm
- http://school.aol.com/elementary/subjects/math/measurement/index.adp
- http://pbskids.org/cyberchase/games/measurement/index.html
- http://www.aaamath.com/B/gra.htm

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- http://www.teacherspayteachers.com