POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

MATH: GRADE 2	STATE STANDARD AREA/UNIT:	Numbers and Operations: Numbers and Operations in Base Ten	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Understand place value.

- **2.NBT.1** Understand that the three digits of a three- digit number represent amounts of hundreds, tens and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens- called a "hundred". b. The numbers 100,200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- **2.NBT.2** Count within 1000; skip- count by 5's, 10's, 100's.
- **2.NBT.3** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- **2.NBT.4** Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using <, >, and = symbols to record the results of comparisons.

Use place value understanding and properties of operations to add and subtract.

- **2.NBT.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **2.NBT.6** Add up to four two-digit numbers using strategies based on place value and properties of operations.
- **2.NBT.7** Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, and sometimes it is necessary to compose or decompose tens or hundreds.
- **2.NBT.8** Mentally add 10 or 100 to a given number 100-900.
- **2.NBT.9** Explain why addition and subtraction strategies work, using place value and the properties of operations.

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 MOUNTAIN SCHOOL DISTRICT CURRICULUM

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **How can place value help us locate a number on the number line?** • **What is the difference between place and value?** • **How can place value help us tell which of two or more numbers is greater?**	dozen digit place value ones ones place tens tens place hundreds thousands single-digit number double-digit number base ten bundle expanded form standard form word form 100 chart addend(s) total sum add/adding/ addition	doubles near-doubles plus 10 combinations doubles plus 1 count on count all plus plus sign regroup/compose/ decompose minus minus sign take away minuend subtrahend difference doubles minus 1 subtract/subtracting/ subtraction count back vertical	horizontal equal(s) equal sign equal to/same number sentence/equation compare greater than/more table less than/fewer multiple skip count/skip counting counting by 5's/counting by 10's relationship fact family	**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

UNIT OF INSTRUCTION: NUMBERS AND OPERATIONS IN BASE TEN	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.1.2.B.1 Use place value concepts to represent amounts of tens and ones to compare three digit numbers. **Essential Skills and Understanding** • Understand that the three digits of a three digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens—called a "hundred. b. The numbers 100, 200, 300, 400, 500, 600, 700, 800 and 900 refer to one, two, three, four, five, six, seven, eight or nine hundreds (and 0 tens and 0 ones).	• Look at patterns and develop fluency with skip counting by 2s, 5s, and 10s. • Consider the relationship between skip counting and grouping. • Count by groups of 2, 5, and 10. • Notice and describe a 2:1 relationship (e.g., there are 2 legs for every 1 person). • Solve problems that involve equal groups. • Know that the size of a group remains constant no matter how it is counted (by 1s, 2s, 5s, or 10s). • Use the number line to reason about, and keep track of information about, the magnitude and relationship of numbers. • Develop an understanding of the structure of the 100 chart. • Count, write, and read numbers sequentially from 1 to 100 and beyond. • Identify coins and their values. • Identify and use coin equivalencies. • Combine various combinations of mixed coins up to one dollar and represent it with a cent sign. • Trade equivalent amounts of pennies, nickels, dimes and quarters

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: NUMBERS AND OPERATIONS IN BASE TEN	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.1.2.B.2 Use place value concepts to read, write, and skip count to 1000. **Essential Skills and Understanding** • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Add up to four two-digit numbers using strategies based on place value and properties of operations. • Add and subtract within 1000, using concrete models or drawings and strategies based on a place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. • Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. • Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900. • Explain why addition and subtraction strategies work, using place value and the properties of operations.	• Count a collection of bills and coins up to $1.00 and make change. • Add coin amounts, up to $1.00. • Use coins to model adding by 5s and 10s. • Count sets of up to 60 objects. • Develop strategies for counting accurately. • Count a quantity in more than one way. • Develop and analyze visual images for quantities up to 10. • Count by groups of 10. • Recognize that the first digit of a 2-digit number designates the number of groups of 10 and the second digit designates the number of ones. • Solve problems about 10s and 1s. • Use a place-value model to represent a number as 10s and 1s. • Find as many combinations of a number as possible, using only 10s and 1s. • Recognize that different combinations of 10s and 1s for the same number are equivalent (e.g., 4 tens and 6 ones = 3 tens and 16 ones, etc.). • Become familiar with the structure of the 100 chart. • Develop fluency with the sequence of numbers from 1 to 100. • Find and use patterns in the sequence of numbers. • Use the 100 chart to reason about, and keep track of, information about the magnitude and relationship of numbers. • Skip count by 2s, 5s, and 10s. • Think about the structure of 100 in terms of groups of 5 and 10. • Identify patterns in the multiples of 2, 5, and 10. • Use the relationship between 5 and 10, and between nickels and dimes, to solve problems. • Organize cubes into 10s and 1s. • Use a place-value model to represent a number as 10s and 1s. • Using coin equivalencies. • Working with the relationship between 1, 10, and 100. • Visualize, retell and model the action of addition and subtraction situations with an unknown start. • Develop strategies for solving addition and subtraction problems with an unknown start and record work. • Use standard notation (+,-, =) to represent addition and subtraction situations with an unknown start. • Consider the relationship between addition and subtraction. • Add 10 to/subtract from a given number and describe what part of the number changes. • Add and subtract 10 and multiples of 10 to/from any number.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: NUMBERS AND OPERATIONS IN BASE TEN	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
		• Use < and > notation to compare numbers. • Read/ write 3-digit numbers. • Use a place value model to represent and compare 3-digit numbers as 100's, 10's and 1's. • Represent 2 and 3- digit numbers using expanded form. • Recognize that the numbers 100, 200, 300, etc. represents group of 100. • Add 100 to/subtract 100 from a given number and describe what part of the number changes. • Identify the value that each digit in a 3-digit number represents. • Make and justify generalizations about adding even to odd numbers. • Add 2-digit numbers by adding tens and ones. • Notice what happens to place value when two 2-digit numbers with a sum over 100 are combined. • Represent 3-digit number using a place value model. • Represent 3-digit numbers as hundreds, tens and ones. • Add two 3-digit numbers by combining hundreds, tens and ones. • Add two and three digit numbers accurately and efficiently. • Notice what happens to the place value when two numbers are combined and there are more than 10 ones in the ones place or 10 in the tens place. • Add tens and ones to combine 2-digit numbers. • Notice what happens to the tens place when a multiple of 10 is added or subtracted. • Solve a subtraction problem by keeping one number whole and subtracting the other in parts by place. • Subtract numbers where it is necessary to regroup the number of tens (or hundreds) in the total amount. • Develop and achieve fluency with the Plus 9 and remaining combination. • Develop fluency with subtraction facts related to near doubles combinations. • Develop fluency with the subtraction facts related to the Plus 9 addition combinations and remaining subtraction facts. • Consider the relationship between addition and subtraction.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

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

ENRICHMENT:

- Pearson Successnet On-Line Teacher's Edition-Click On Appropriate "Topic" To Open Window To Select "Enrichment" Link
- 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 Teacher support as needed
- http://www.coolmath.com/
- http://www.khanacademy.org/
- Allow student to use stackable place value cards to create expanded form
- http://www.senteacher.org/worksheet/47/placevalue.xhtml

REMEDIATION:

- Pearson Successnet On-Line Teacher's Edition-Click on "Printable Resources" and scroll down to "Math Diagnosis and Intervention"
- Adapted assignment
- 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.ISL.com/math/kindergarten
- Math Support or Learning Support Teachers

RESOURCES:

- Investigations Teacher's Manual Units 5, 6, 8
- Student math handbook flipchart
- 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
- Ghost Blasters 2 Website: http://resources.oswego.org/games/ghostblsters2/gb2nores.html
- Spacey Math Website: http://www.learningplanet.com/sam/sm/index.asp
- Build A Bear Math Flashcards: http://www.gbuildabear.com
- http://illuminations.nctm.org
- http://insidemathematics.org
- www.teachingchannel.org
- http://www.etacuisenaire.com/pdf/gridpaper.pdf
- http://www.ablongman.com/vandewalleseries/Vol_1_BLM_PDFs/BLM19.pdf
- Reviewing place value in 2-,3- and 4-digit numbers http://www.learningbox.com/base10/baseten.html
- PDE SAS portal: http://www.pdesas.org
- Math Their Way
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Calculators
- 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/ActiveVotes
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
- BrainPOP Junior/BrainPOP
- 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

RESOURCES:	
	• www.teachingchannel.org • http://illustrativemathematics.org/standards/k8 • http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/ • 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 • www.starfall.com • http://www.etacuisenaire.com/pdf/gridpaper.pdf • http://www.ablongman.com/vandewalleseries/Vol_1_BLM_PDFs/BLM19.pdf • Who Has? More or Less http://www.mathwire.com/whohas/whmoreorless.pdf • Who Has? With tens and ones http://www.mathwire.com/whohas/whbaseten.pdf • Who Has? With hundreds http://www.mathwire.com/whohas/whohaspv.pdf • http://www.senteacher.org/worksheet/47/placevalue.xhtml • http://www.commoncoresheets.com

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

MATH: GRADE 2	STATE STANDARD AREA/UNIT:	Algebraic Concepts: Operations and Algebraic Thinking	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Represent and solve problems involving addition and subtraction.

- **2.OA.1** Use addition and subtraction within 100 to solve one- and two- step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Add and subtract within 20.

- **2.OA.2** Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers. Work with equal groups of objects to gain foundations for multiplication.

Work with equal groups of objects to gain foundations for multiplication.

- **2.OA.3** Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's; write an equation to express an even number as a sum of two equal addends.
- **2.OA.4** Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equations to express the total as a sum of equal addends.

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 are addition and subtraction used in everyday life? • What strategies and models we can use to understand how to solve an addition or subtraction problem? • How do I develop fact fluency?	take away minuend subtrahend horizontal story problem addends sum total add/addition plus sign difference minus minus sign pattern/repeating pattern unit/pattern unit	subtract/subtraction equal(s) equal sign unknown number number sentence/equation symbol even odd array multiplication row column	**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

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: OPERATIONS AND ALGEBRAIC THINKING	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100. **Essential Skills and Understanding** • Use addition and subtraction within 100 to solve one- and two- step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. **CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.** **Essential Skills and Understanding** • Fluently add and subtract with 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. **CC.2.2.2.A.3 Work with equal groups of objects to gain foundations for multiplication.**	• Generate equivalent expressions for a number. • Compare two amounts under 45 to find the difference. • Combine two quantities with totals up to 45. • Visualize, retell, and model the action of addition and subtraction (as removal) situations. • Use known combinations (e.g., combinations that make 10) to compose, decompose, and combine numbers. • Subtract a quantity from a whole of up to 30. • Solve addition and subtraction (as removal) story problems. • Double a quantity. • Develop and achieve fluency with the Make 10, Plus 1, Plus 2, and doubles addition combinations. • Find two addends that make 10. • Find the missing addend to make a total of 10. • Use standard notation (>, <, +, -, =) to describe arrangements of cubes, to record expressions that equal a given number, to compare quantities, to represent addition and subtraction situations, and to represent doubling. • Use the number line to reason about, and keep track of information about, the magnitude and relationship of numbers. • Record strategies for solving problems, including addition and subtraction story problems. • Use equations to record. • Connect standard notation for addition and subtraction (+, -, =) to the quantities and actions that the signs and symbols represent. • Use a rectangular array to model doubling. • Review known addition combinations (combinations of 10, Plus 1, Plus 2). • Use known combinations to add two or more numbers. • Compare a number to 20 to find the difference. • Develop strategies for solving a variety of addition and subtraction story problems with totals up to 45 and recording work. • Solve problems with an unknown change. • Solve an addition story problem by counting on or breaking numbers apart. • Consider whether reordering three addends results in the same total. • Consider a generalization about reordering addends for all numbers. • Consider whether reordering the numbers in a subtraction problem results in the same total. • Consider the relationship between addition and subtraction. • Define even and odd numbers. • Investigate numbers that can and cannot be made into groups of two or two equal groups. • Understand that any number that can be divided into groups of two can also be divided into two equal groups (and vice versa). • Characterize even and odd numbers as those that do or do not make groups of two (partners) and two equal groups (teams).

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: OPERATIONS AND ALGEBRAIC THINKING	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	Essential Skills and Understanding • Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's; write an equation to express an even number as a sum of two equal addends. • Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	• Consider whether observations about even or odd numbers apply to all even numbers or all odd numbers. • Use the calculator as a mathematical tool. • Tell stories to match given equations. • Use tally marks to represent groups of 5. • Relate the doubles and near-doubles combinations. • Develop and achieve fluency with the near-doubles combinations. • Add 10 to any number (or any number to 10). • Developing fluency with the Plus 10 combinations. • Use equations to show how the sum of the responses in each category equals the total responses collected. • Describe the relationship between two quantities in a constant ratio situation. • Use tables to represent the ratio relationship between two quantities. • Find the value of one quantity in a constant ratio situation, given the value of the other. • Connect numbers in a table to the situation they represent. • Use conventional language for a table and its parts: rows, columns. • Identify and use patterns in the structure of the number system. • Describe the pattern in the numbers in a column and interpreting the pattern in terms of the situation the table represents. • Describe what is the same about situations that look different but can be represented by the same table. • Describe how the two numbers in the row of a table are connected to the situation the table represents. • Use information in a table to determine the relationship between two quantities. • Develop efficient methods for adding and subtracting 2-digit numbers. • Add 2-digit numbers by keeping one number whole. • Add multiples of 5 and 10, up to 100. • Determine the difference between a given amount and $1.00. • Subtract amounts from 100 or $1.00, down to 0. • Write an equation that represents a problem. • Develop efficient methods for notating addition and subtraction strategies. • Visualize and make jumps of multiples of 5 on the 100 chart. • Use the 100 chart and the number line to model addition. • Investigate what happens with partners and teams when two groups are combined. • Make and test conjectures about adding even and odd numbers. • Find combinations of odd and even numbers that make given numbers or determine that these combinations are not possible. • Make and justify generalizations about adding even and odd numbers. • Relate unknown combinations to known combinations. •

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: OPERATIONS AND ALGEBRAIC THINKING	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
		• Develop and achieve fluency with the plus 9 combinations. • Subtract amounts from 100. • Develop efficient methods for adding and subtracting two-digit numbers and notate strategies. • Solve subtraction problems by subtracting in parts. • Solve subtraction problems by adding up or subtracting back to find the difference. • Compare problems in which the amount subtracted differs by 1. • Use cubes and the number line to show how addition combinations are related. • Extend a repeating pattern. • Identify the unit of a repeating pattern. • Create a repeating pattern that has the same structure as, but has different elements than, another repeating pattern. • Determine and describe the number sequence associated with one of the elements in an AB, ABC, ABCD, or AABBC repeating pattern. • Determine the element of a repeating pattern associated with a particular counting number in AB, ABC, ABCD, or AABBC patterns. • Determine how and why the same number sequence can be generated by different contexts. • Look at patterns and develop fluency with skip counting by twos, fives and tens. • Consider the relationship between skip counting. • Count by groups of two, five and ten. • Notice and describe a 2:1 relationship. • Solve problems that involve equal groups. • Know that the size of a group remains constant no matter how it is counted (by ones, twos, fives or tens). • Develop fluency with the subtraction facts related to the Plus 1, Plus 2, and Make 10 combinations. • Achieve fluency with the doubles combinations. • Construct and describe rectangular arrays of tiles. • Visualize, retell and model the action of addition and subtraction situations with an unknown start. • Develop strategies for solving addition and subtraction problems with an unknown start and record work. • Use standard notation (+,-, =) to represent addition and subtraction situations with an unknown start. • Consider the relationship between addition and subtraction. • Represent a set of data sorted into categories. • Represent data using a bar graph. • Read/Interpret information represented on a bar graph.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

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

ENRICHMENT:

- Pearson Successnet On-Line Teacher's Edition-Click On Appropriate "Topic" To Open Window To Select "Enrichment" Link
- Supporting The Range Of Learners Activities As Per Teacher Manual
- Encourage And Support Learners In Explaining How They Applied Their Skills During Mathematical Tasks
- Versatiles
- Math Centers
- United Streaming http://Streaming.Discoveryeducation.Com/Index.Cfm
- Thinkfinity Http://Www.Thinkfinity.Org/Home.Aspx
- Partner Games From Next Grade Level
- Can't Wait To Tessalate http://Www.Pbs.Org/Teachers/Connect/Resources/6981/Preview
- Pattern Block Applet: http://wwww.arcytech.org/java/patterns J.Shtml
- Continue the Pattern: http://nlvm.usu.edu/en/nav/frames
- http://Www.Coolmath.Com/ http://Www.Khanacademy.Org/
- Gifted Education Teacher

REMEDIATION:

- Pearson Successnet On-Line Teacher's Edition-Click On "Printable Resources" And Scroll Down To "Math Diagnosis And Intervention"
- Supporting The Range Of Learners Activities As Per Teacher Manual
- One On One Reteaching
- Peer Tutoring
- Math Centers
- Accommodations Based On Need And/Or IEP
- Chunking Of Concept
- Chunking Of Assessment
- Additional Time As Necessary
- Pattern Block Applet http://Arcytech.Org/Java/Patterns/Patterns_J.Shtml
- IXL Website http://Www.Ixl.Com/Math/Kindergarten
- Math Support Or Learning Support Teachers

RESOURCES:

- Investigations Teachers Manual Units 1, 3
- http://Www.Ezschool.Com/Games/Factfamily1.Html
- http://Www.Mrsmcgowan.Com/Math/Factfamilies.Htm
- http://Www.Mathcats.Com/Explore/Factfamilycards.Html
- http://Illuminations.Nctm.Org
- http://Insidemathematics.Org
- www.Teachingchannel.Org
- PDE SAS portal: http://www.pdesas.org
- Math Their Way
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Calculators
- 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/ActiveVotes
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
- BrainPOP Junior/BrainPOP
- 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://learnzillion.com
- http://illustrativemathematics.org/standards/k8
- http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/
- www.teachingchannel.org

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

RESOURCES:	• 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 • www.starfall.com • http://www.etacuisenaire.com/pdf/gridpaper.pdf • http://www.ablongman.com/vandewalleseries/Vol_1_BLM_PDFs/BLM19.pdf • Who Has? More or Less http://www.mathwire.com/whohas/whmoreorless.pdf • Who Has? With tens and ones http://www.mathwire.com/whohas/whbaseten.pdf • Who Has? With hundreds http://www.mathwire.com/whohas/whohaspv.pdf • http://www.senteacher.org/worksheet/47/placevalue.xhtml • http://www.commoncoresheets.com

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

MATH: GRADE 2	STATE STANDARD AREA/UNIT:	Geometry: Geometry	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Reason with shapes and their attributes.

- **2.G.1** Recognize and draw shapes having specified attributes, such as a given number of angles or given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- **2.G.2** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- **2.G.3** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, fourth fourths. Recognize that equal shares of identical wholes need not have the same shape.

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 different shapes?** • **What are the differences between 2-D and 3-D shapes?** • **What are faces, edges and vertices on a 3-D shape?** • **Where do you see 2-D shapes in real life situations?** • **Where do you see 3-D shapes in real life situations?**	geometry attribute(s) 2-D shapes/2-divmensional shapes polygon angle right angle triangles quadrilateral rhombus square rectangle trapezoid pentagon fair shares/equal parts	row(s) column(s) 1 whole/whole hexagon circle one half halves/haft of thirds fourths one and a half two and a half one fourth one quarter fraction 1 whole/whole	3-D shapes/3-dimensional shapes cone cube rectangular prism cylinder sphere faces edges vertices area congruent	**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

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: GEOMETRY	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.3.2.A.1 Analyze and draw two and three dimensional shapes having specified attributes. **Essential Skills and Understanding** • Ability to sort shapes by common attributes. • Knowledge that plane figures are named by the number of sides. • Knowledge and investigations include both regular and irregular polygons. • Ability to partition rectangles into rows and columns of same size squares lays the foundation for the development of multiplication, area, and fractions. • Ability to use concrete materials (e.g. color tiles and cubes) to partition a rectangle. • Ability to apply repeated addition when counting total number of partitions. **CC.2.3.2.A.2 Use the understanding of fractions to partition shapes into halves, quarters and thirds.** **Essential Skills and Understanding** • Ability to partition circles and rectangles into equal parts lays the foundation for the development of fractions. • Ability to model using concrete materials (e.g. paper folding, geoboards, fraction manipulatives) to create equal shares.	• Compose and decompose 2-D and 3-D shapes. • Combine shapes to make a new shape. • Cover a region, without gaps or overlaps, with a single shape or multiple shapes. • Cover a region, without gaps or overlaps, using different shapes. • Combine 3-D shapes to make a 3-D whole. • Draw 3-D shapes. • Compare and sort 2-D and 3-D shapes. • Identify names and attributes of 2-D and 3-D shapes. • Attend to features of 3-D shapes, particularly the number and shape of faces. • Identify categories for 2-D shapes. • Identify a 3-D shape by touch. • Sort polygons by the number of sides. • Sort quadrilaterals by angle. • Identify quadrilaterals as shapes with 4 sides. • Identify rectangles as 4-sided shapes with 4 right angles. • Identify important features of a rectangle. • Define biggest in different ways. • Order rectangles from biggest to smallest. • Recognize that rectangular prisms have rectangular faces. • Recognize which faces of a rectangular prism are the same size and shape. • Construct a rectangular prism from rectangles. • Visualize and describe rectangular prisms. • Compare rectangular prism. • Visualize the structure of arrays. • Cover rectangles with arrays of tiles. • Arrange square tiles in rectangular arrays. • Construct and describe rectangular arrays of tiles. • Make different rectangular arrays using the same number of tiles. • Draw rectangles by attending to the lengths of the sides. • Understand fractions as equal parts of a whole. • Find equal parts of a whole and naming them with fractions (e.g., ½ is one of two equal parts; 1/3 is one of three equal parts, and so on). • Show one half of an object. • Determine whether a block is half of another block. • Determine whether a region is half of a given rectangle. • See different ways to make fourths of a square.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: GEOMETRY	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
		• See different ways to make halves, thirds and fourths of a circle. • Use the term semi-circle to describe one half of a circle. • Identify halves, thirds and fourths of a circle. • Recognize the equivalence of different fourths of the same object. • Identify halves, thirds, and fourths of regions. • Identify and name fractional parts that have numerators greater than 1 (e.g., 2/3, 2/4, ¾). • Understand fractions as equal parts of a group. • Find equal parts of a group and naming them with fractions (e.g., ½ is one of two equal parts; 1/3 is one of three equal parts, and so on. • Find one half of a set. • Solve problems about finding halves of quantities in different contexts. • Solve problems that result in mixed numbers. • Find thirds and fourths of sets. • Find fractions of sets. • Learn the term one half and the notation ½. • Learn the terms and notation for mixed numbers (e.g., one and one half and 1½). • Learn the term one fourth and the notation ¼. • Learn the term one third and the notation 1/3. • Learn the terms and notation for fractions that contain more than one part (e.g., 2/3, 2/4, and ¾). • Sort a set of data by two attributes at one time. • Use a Venn diagram to represent a sorted set of data. • Sort the same set of data in different ways. • Describe what the data show about the group surveyed.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

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

ENRICHMENT:

- Pearson Successnet On-Line Teacher's Edition-Click On Appropriate "Topic" To Open Window To Select "Enrichment" Link
- 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
- Thinkfity Website: Http://Www.Thinkfinity .Org/Home.Aspx
- United Streaming: HTTP://STREAMING.DISCOVERYEDUCATION.COM/INDEX.CFM
- HTTP://WWW.COOLMATH.COM/
- HTTP://WWW.KHANACADEMY.ORG/
- Can't Wait To Tessalate: HTTP://WWW.PBS.ORG/TEACHERS/CONNECT/RESOURCES/6981/PREVIEW
- Gifted Education Teacher

REMEDIATION:

- Pearson Successnet On-Line Teacher's Edition-Click On "Printable Resources" And Scroll Down To "Math Diagnosis And Intervention"
- 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
- Shape Safari HTTP://WWW.EDUCATION.COM/ACTIVITY/ARTICLE/SHAPESAFARI_FIRST/
- Shape And Seek HTTP://WWW.EDUCATION.COM/ACTIVITY/ARTICLE/SHAPEANDSEEK_PRESCHOOL/
- Story Of Shapes: Http://Www.Storyplace .Org/Preschool/Activities/Shapesonstory.Asp?Themeid=9
- The Shape Game: HTTP://KINDERWEBGAMES.COM/INDEX.HTML

RESOURCES:

- Investigations Teacher Manuals Units 2,7
- 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/
- HTTP://WWW.INSTRUCTORWEB.COM/BASICSKILLS/FRACTIONS.ASP
- Interactive Geoboard: HTTP://STANDARDS.NCTM.ORG/DOCUMENT /EEXAMPLES/CHAP4/4.2/INDEX.HTM
- Virtual Geometry: HTTP://NLVM.USU.EDU/EN/NAV/CATEGORY_G_1_T_3.HTML
- Folding squares to illustrate fourths http://www.funbrain.com/tens/index.html
- Coloring fractional parts of shapes http://www.platoacadiau.ca/courses/educ/reid/elem-math-virtual-workshops/fractionsp8/folding.htm
- PDE SAS portal: http://www.pdesas.org
- Math Their Way
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Calculators
- 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/ActiveVotes
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
- BrainPOP Junior/BrainPOP
- 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

RESOURCES:	• http://illustrativemathematics.org/standards/k8 • http://wiki.warren.kyschools.us/groups/wcpscommoncorestandards/ • 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 • www.starfall.com • http://www.etacuisenaire.com/pdf/gridpaper.pdf • http://www.ablongman.com/vandewalleseries/Vol_1_BLM_PDFs/BLM19.pdf • Who Has? More or Less http://www.mathwire.com/whohas/whmoreorless.pdf • Who Has? With tens and ones http://www.mathwire.com/whohas/whbaseten.pdf • Who Has? With hundreds http://www.mathwire.com/whohas/whohaspv.pdf • http://www.senteacher.org/worksheet/47/placevalue.xhtml • http://www.commoncoresheets.com

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

MATH: GRADE 2	STATE STANDARD AREA/UNIT:	Measurement, Data and Probability: Measurement and Data	TIME FRAME:	Ongoing

NATIONAL COMMON CORE STANDARDS:

Measure and estimate lengths in standard units.

- **2.MD.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks and measuring tapes.
- **2.MD.2** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- **2.MD.3** Estimate lengths using units of inches, feet, centimeters, and meters.
- **2.MD.4** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. Relate addition and subtraction to length.

Relate addition and subtraction to length.

- **2.MD.5** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- **2.MD.6** Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0,1,2… and represent whole number sums and differences within 100 on a number line diagram.

Work with time and money.

- **2.MD.7** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- **2.MD.8** Solve word problems involving dollar bills, quarters, dimes, nickels and pennies, using the $ and ¢ symbols appropriately.

Represent and interpret data.

- **2.MD.9** Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole number units.
- **2.MD.10** Draw a picture graph and a bar graph (single unit scale) to represent a data set with up to 4 categories. Solve simple put together, take apart, and compare problems using information presented in a bar graph.

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 MOUNTAIN SCHOOL DISTRICT CURRICULUM

ESSENTIAL QUESTIONS	VOCABULARY			ASSESSMENT
• **How do we measure and tell time?** • **How do you use a.m. and p.m. to describe time?** • **What are the monetary coins we use and what are their values?** • **How do we add coins to make amounts, and solve monetary word problems?** • **How do we represent data gathered from measured information?** • **How do we measure length?** • **How can we compare measurements of length?** • **How do we determine an appropriate instrument for measurement?**	money cent(s) cent sign dollar dollar sign penny nickel dime quarter time analog clock digital clock a.m. p.m. noon midnight minute hand hour hand hour o'clock	half hour quarter hour half past quarter past quarter to timeline measurement/ measure ruler length width height measuring tape inch foot/foot lengths metric/metric system yard/yard stick centimeter estimate standard unit/unit	meter stick/meter accurate/ accurately bar graph picture graph/ pictograph line plot survey data categories scale key Venn diagram tally mark representation rule questionnaire mode outlier	**<u>Formative:</u>** • Journals/logs • KWL chart • Warm up activity • Question and answer • Thumbs up/thumbs down • Individual white boards • Teacher observation checklists • Student activity book page **<u>Summative:</u>** • Benchmark assessments • Teacher observation checklists • Performance based assessments • Student generated projects

UNIT OF INSTRUCTION: MEASUREMENT AND DATA	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools. **Essential Skills and Understanding** • Ability to measure to the nearest inch, centimeter, yard or meter. • Knowledge of and ability to explain why we use standard units of measurement instead of non-standard units. • Ability to estimate before measuring to help determine the appropriate measurement tool and unit. • Knowledge of the connection between a ruler and a number line. • Ability to measure real world objects.	• Group data into categories based on similar attributes. • Sort the same set of data in different ways. • Sort a set of data by two attributes at one time. • Represent a set of data sorted into categories. • Represent data using a bar graph. • Read/ Interpret information represented on a bar graph. • Compare representations of a set of data. • Use equations to show how the sum of the responses in each category equals the total responses collected. • Use a Venn diagram to represent a sorted set of data. • Order, represent, and describe a set of numerical data. • Compare ways of organizing data. • Describe what the data show about the group surveyed. • Interpret a data representation. • Describe important features of a data set.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: MEASUREMENT AND DATA	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	• Ability to recognize the equivalent units of twelve inches equal one foot and 100 centimeters equal one meter as well as non-standard equivalent measurements. • Ability to use a benchmark when estimating. • Ability to compare estimates to actual measurements. • Ability to connect measurement comparisons to subtraction (comparing) and addition (counting on). **CC.2.4.2.A.2 Tell and write time to the nearest five minute using both analog and digital clocks.** **Essential Skills and Understanding** • Knowledge of and ability to apply skip counting by 5. • Knowledge that there are 60 minutes in an hour, 60 seconds in a minute, 24 hours in a day, 12 hours in a.m. and 12 hours in p.m. and know when a.m. and p.m. occur. • Knowledge of the difference between the minute and hour hand and their purposes. • Knowledge of concept of quarter hours and half hours. • Knowledge that there are five minute intervals between each numbers on the clock face. **CC.2.4.2.A.3 Solve problems using coins and paper currency with appropriate symbols** **Essential Skills and Understanding** • Ability to identify both sides of currency. • Ability to count money (dollar bills, quarters, dimes, nickels and pennies). • Ability to count mixed sets of currency. • Ability to count on. • Knowledge of and ability to apply possible strategies such as drawing pictures, using coins, using a number grid, using a number line, using symbols and/or numbers.	• Describe a set of numerical data. • Compare two sets of data. • Develop a hypothesis based on a set of data. • Design and carry out a data investigation. • Choose a survey question. • Make a plan for collecting data. • Make predictions about data to be collected. • Collect and record data from a survey. • Interpret and share results from a data investigation. • Connect numbers in a table to the situation they represent. • Use conventional language for a table and its parts: rows, columns. • Describe the pattern in the numbers in a column and interpret the pattern in terms of the situation the table represents. • Describe what is the same about situations that look different but can be represented by the same table. • Describe how the two numbers in the row of a table are connected to the situation the table represents. • Use information in a table to determine the relationship between two quantities. • Understand length. • Compare two lengths. • Use direct and indirect comparison to identify equal lengths. • Identify length and width as different dimensions of an object. • Use linear units. • Iterate units to measure length. • Estimate and calculate length using units that are related by a 2:1 ratio. • Identify strategies for accurate measurement. • Consider sources of measurement error. • Understand that different-sized units yield different counts (the smaller the unit, the higher the count). • Establish the need for and using a common unit in order to compare measurements. • Identify and label partial units. • Recognize that, given equal counts of two different units, the larger unit marks off a longer length. • Measure with standard units. • Establish the need for and using a standard unit of measure. • Create and use a 12-inch measuring tool. • Iterate a 12-inch measuring tool.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

UNIT OF INSTRUCTION: MEASUREMENT AND DATA	PA COMMON CORE STANDARDS	ESSENTIAL CONTENT\LEARNING ACTIVITIES
	CC.2.4.2.A.4 Represent and interpret data using line plots, picture graphs and bar graphs. **Essential Skills and Understanding** • Understand that a line plot is a representation of data along a number line. • Ability to identify patterns within the set of data and analyze what the data represents. • Ability to collect, sort, organize and graph data. • Knowledge of the elements of picture graphs and bar graphs. • Ability to analyze graphs, answer questions about the data and make decisions based on the data. **CC.2.4.2.A.6 Extend the concepts of addition of subtraction to problems involving length.** **Essential Skills and Understanding** • Ability to develop equations to represent word problems. • Knowledge of inverse relationships. • Ability to justify the reasonableness of their responses. • Ability to locate and represent points on a number line. • Ability to apply knowledge of anchor points as being half way points between numerals.	• Measure lengths that are longer than 12 inches. • Use a ruler as a standard measuring tool. • Compare a variety of measuring tools. • Become familiar with the terms inches, feet, yards, centimeters, and meters as standard units of measure. • Use inches, feet, yards, centimeters, and meters to describe lengths. • Compare centimeters and inches. • Understand time. • Compare the duration of time in real world situations (more/less time). • Tell time to 5 and 15 minute intervals and use appropriate vocabulary such as: quarter past/after, quarter to/of, half past. • Sequence three or four events over a given period of time. • Read a calendar to determine time periods. • Name and use notation for times that are 30 and 15 minutes before or after the hour. • Associate times with daily events. • Tell elapsed time to the hour and half hour. • Develop fluency with subtraction facts related to near doubles combinations.

POCONO MOUNTAIN SCHOOL DISTRICT CURRICULUM

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

ENRICHMENT:	• Pearson Success Net on-line Teacher's Edition-Click on appropriate "topic" to open window to select "Enrichment" link • Extended assignments • Independent projects/assignments • First in Math • Sumdog • Versatiles • Math centers • Supporting the range of learners as per teacher manual • Thinkfity website: http://www.thinkfinity .org/home.aspx • United Streaming: http://streaming.discoveryeducation.com/index.cfm • http://www.coolmath.com/ • http://www.khanacademy.org/ • Gifted Teacher support as needed	**REMEDIATION:**	• Pearson Successnet On-Line Teacher's Edition-Click On "Printable Resources" And Scroll Down To "Math Diagnosis And Intervention" • 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

RESOURCES:

- Investigations Teacher Manuals Units 4,9
- Family letters
- Student Math Handbook Flipchart
- What Time Is It? www.Primarygames.Com/Time/Start.Htm
- http://www.linkslearning.org/Kids/1Math/2IllustratedLessons /6Wrightand Capacity/index.html
- http://school.discovereducation.com/lessonplans/programs/DMbeginningmeasurement/
- http://www.enchantedlearning.com/time/
- http://www.hbschool.com/activity/countingmoney/
- PDE SAS portal: http://www.pdesas.org
- Math Their Way
- Thinking Maps
- KWL Charts
- Versatiles
- Partner Games
- Calculators
- 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/ActiveVotes
- Student math handbook flipchart
- Math Internet Resources from PMSD Resource Page
- BrainPOP Junior/BrainPOP
- 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/
- http://www.learnzillion.com

RESOURECES:	• http://www.senteacher.org/worksheet/47/placevalue.xhtml • http://www.commoncoresheets.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 • www.starfall.com • http://www.etacuisenaire.com/pdf/gridpaper.pdf • http://www.ablongman.com/vandewalleseries/Vol_1_BLM_PDFs/BLM19.pdf • Who Has? More or Less http://www.mathwire.com/whohas/whmoreorless.pdf • Who Has? With tens and ones http://www.mathwire.com/whohas/whbaseten.pdf • Who Has? With hundreds http://www.mathwire.com/whohas/whohaspv.pdf • http://www.senteacher.org/worksheet/47/placevalue.xhtml • http://www.commoncoresheets.com