

**WEST JEFFERSON HILLS SCHOOL DISTRICT
MATHEMATICS**

GRADE 5

PA Academic Standards Student must be able to do	Objective Content or process student will be able to know and do	Instructional Methods	Materials/Resources Textbooks, trade books, workbooks, software, hardware, etc.	*Assessment Procedures *Additional adaptations, modifications, accommodations, and enrichment/ acceleration will be provided per IEP	*Additional Learning Opportunities for students who do not meet basic standards *Additional adaptations, modifications, and accommodations will be provided per IEP	*Extended Learning Opportunities for students who can go beyond the basic standards. *Additional enrichment/acceleration will be provided per IEP
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to . . .</i>						
<ul style="list-style-type: none"> • 2.1 Number, Number System and Relationships • 2.2 Computation & Estimation • 2.4 Mathematical Reasoning and Connections • 2.5 Mathematical Problem Solving & Communications • 2.8 Algebra and Functions 	<ul style="list-style-type: none"> • Whole numbers • Read and write to ten millions • Compare and order • Round whole numbers including money amount and decimals • Read and write numbers in standard and expanded form (notation) • Prime and composite numbers • Negative and positive numbers • Multiples and factors 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Create place-value charges • Use place value charts to identify periods • Read and write numbers through the billions period • Identify comparison symbol • Use symbols to compare numbers • Identify values of various digits for rounding process • Round to various values • Practice writing 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Place Value Charts • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Place value models 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Alternative assessment • Other 	<ul style="list-style-type: none"> • Reteaching activities 	<ul style="list-style-type: none"> • Problems of the day • Activity The distance around earth's equator is about 25,000 miles. How many times would you have to travel around the earth to travel one billion miles?

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		numbers in standards, expanded and written forms <ul style="list-style-type: none"> • Construct factor trees to find factors and prime factors and greatest common factor 				

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		<ul style="list-style-type: none"> • Convert fractions to decimals • Find relationships between fractions and decimals 				

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GRADE 5

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~number sentences ~estimating (over and under) 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Write number sentences to solve problems • Solve problems by determining whether to over or under estimate 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Reteaching worksheets 	<ul style="list-style-type: none"> • Problem of the day

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~find needed information ~Multi-step problems 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Read word problems to identify needed information -Choose operation to solve problems • Read word problems -List information needed to solve problems -Choose operations 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Index cards • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Highlighters 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Using index cards, students list all the phrases they can think of that give hints about operations needed to solve the problem. Exchange cards and name the operation suggested by the phrase. 	<ul style="list-style-type: none"> • Problem of the day • Activity ~Create a problem that is easily solved with paper and pencils or mental math and one problem that requires the use of a calculator.

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~different strategies ~simpler, similar problems 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Problem solving -Solve word problems using different strategies -Solve word problems using simpler problems 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Using a supermarket ad, students create a grocery list. Exchange with another student; each student calculates the total cost of that list. 	<ul style="list-style-type: none"> • Problem of the day • Activity ~Create a problem that can be solved by more than one strategy.

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving -Different strategies -Simpler, similar problems 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Problem Solving -Solve word problems using different strategies -Solve word problems using simpler problems 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity -Using a supermarket ad, students create a grocery list. Exchange with another student. Each student calculates the total cost of that list 	<ul style="list-style-type: none"> • Problem of the day • Activity -Create a problem that can be solved by more than one strategy

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<p style="text-align: center;">PA Academic Standards Student must be able to do</p>	<p style="text-align: center;">Objective Content or process student will be able to know and do</p>	<p style="text-align: center;">Instructional Methods</p>	<p style="text-align: center;">Materials/ Resources Textbooks, trade books, workbooks, software, hardware, etc.</p>	<p style="text-align: center;">*Assessment Procedures *Additional adaptations, modifications, accommodations, and enrichment/ acceleration will be provided per IEP</p>	<p style="text-align: center;">*Additional Learning Opportunities for students who do not meet basic standards *Additional adaptations, modifications, and accommodations will be provided per IEP</p>	<p style="text-align: center;">*Extended Learning Opportunities for students who can go beyond the basic standards. *Additional enrichment/acceleration will be provided per IEP</p>
<p><i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to . . .</i></p>						
<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~working backwards ~making a table 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Make tables to solve problems • Solve problems by working backwards 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Graph paper • Colored pencils • Newspaper • Magazines 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Provide bar graphs from newspapers or magazines. Students make a table to show the information in the graph 	<ul style="list-style-type: none"> • Activity ~Working in pairs, have students find a secret number when adding four (4) to it and multiplying the sum by five (5) the result is forty (40)

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~choose correct operation ~find a pattern 	<ul style="list-style-type: none"> • Lecture/ Discussion • Guided reading • Demonstration • Guided practice • Use the five-step plan to understand word problems • Choose the correct operation to solve the problem • Find patterns to solve problems 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Chalkboard 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Textbook reteaching worksheets • Activity ~Students make, then cut out, six yellow triangles, six red squares, and six blue circles. Student creates a pattern. Exchange and extend each other's patterns 	<ul style="list-style-type: none"> • Textbook enrichment worksheets • Problem of the day • Activity ~Draw a sketch and write a description of a pattern found in nature such as the cells in a honeycomb

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Problem solving ~guess, text, revise 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Read word problems to develop a chart -Make guesses -Adjust guesses -Solve problems 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Discuss every day situations when you should use over-estimating or underestimating 	<ul style="list-style-type: none"> • Problem of the day • Activity ~List these numbers on the board: 2, 3, 8, 9, 6, 15, 12. Find which three numbers have a sum of 23

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistics and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Time • Digital • Standard • Converting hours and minutes • Problem-solving • Choose correct operation • Identify extra information 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Practice telling time using clock faces • Add and subtract units of time • Use clock faces to determine elapsed time • Solve word problems by choosing the correct operation and eliminating extra information 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Clock faces • Overhead clock face • Notebook • Transparencies • Chalkboard • Classroom clock • Digital clock 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Time line 	<ul style="list-style-type: none"> • Activity • Investigate the 24-hour time system used in the military and practice telling time using this method • Problem of the day

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.8 Algebra and functions • 2.9 Geometry • 2.10 Trigonometry 	<ul style="list-style-type: none"> • Area • Triangles • Parallelograms 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Use graph paper and scissors to produce right triangles • Develop a formula to find area • Use formula to solve problems • Draw and fold parallelograms on graph paper • Use formula to find area 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Graph paper • Scissors • Chalkboard • Notebook • Transparencies • Rulers • Geoboards • Rubber bands • Grid paper • Geometer's sketch pad 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Reteaching activity Working in pairs. One student spins twice. The other student creates a parallelogram with sides the length of the two numbers. Students find the area of the parallelogram. Both students divide the parallelogram along a diagonal using a rubber band and find the areas of the triangles. 	<ul style="list-style-type: none"> • Problem of the day • Activity Explain the formulas $A=1/2 bh$ and $A=bh/2$ to find the area of a triangle. Challenge students to find two more formulas and then show them on grid paper.

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistic and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Customary measurement • Capacity • Weight • Temperature • Celsius • Fahrenheit 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Note taking • Computer assisted instruction • Cooperative learning • Modeling • Measuring customary capacity and weight • Define units • Relate units to everyday objects estimate renaming • Temperature • Estimate and measure • Temperature and measure • Temperature in Celsius and Fahrenheit <p>Find the amount of change in temperature</p>	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Notebooks • One inch cubes • Chalkboard • Thermometer • Digital scale • Conversion chart 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Draw two thermometers, one in Celsius and one in Fahrenheit. Identify equal temperature on each thermometer. ~Conversion item to share and explain 	<ul style="list-style-type: none"> • Problem of the day • Activity ~Identify a favorite outdoor activity, an ideal Celsius and one in Fahrenheit. Identify equal temperatures on each thermometer.

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistic and data analysis • 2.8 Algebra and functions • 2.11 Concepts of calculus 	<ul style="list-style-type: none"> • Metric measurements • Capacity • Mass 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Note taking • Computer assisted instruction • Cooperative learning • Modeling • Identify metric units -Liter -Milliliter -Kilogram -Gram -Milligram • Estimate mass and capacity • Convert metric units 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Transparencies • Chalkboard • Manipulatives • Calculator • Common objects • Conversion chart 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Sort various classroom objects or items into groups according to whether the objects should be measured in milligrams, grams or kilograms. 	<ul style="list-style-type: none"> • Problem of the day • Activity ~Distribute paper clips and textbooks. List as many objects as they can think of that are the same mass as each of the items.

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MATHEMATICS**

GRADE 5

PA Academic Standards Student must be able to do	Objective Content or process student will be able to know and do	Instructional Methods	Materials/ Resources Textbooks, trade books, workbooks, software, hardware, etc.	*Assessment Procedures *Additional adaptations, modifications, accommodations, and enrichment/ acceleration will be provided per IEP	*Additional Learning Opportunities for students who do not meet basic standards *Additional adaptations, modifications, and accommodations will be provided per IEP	*Extended Learning Opportunities for students who can go beyond the basic standards. *Additional enrichment/acceleration will be provided per IEP
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to. . .</i>						
<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.6 Statistic and data analysis • 2.8 Algebra and functions • 2.11 Concepts of calculus 	<ul style="list-style-type: none"> • Length 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Identify customary units -Inch -Foot -Yard -Mile • Estimate lengths of various common objects • Measure and draw lengths in customary units -Inch -1/2 inch -1/4 inch -1/8 inch 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Common objects • Measuring tape • Notebook • Chalkboard • Ruler 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Activity ~Have pairs of students choose three (3) measurable objects in the room. Measure the objects. 	<ul style="list-style-type: none"> • Problem of the day • Activity ~Give students some uncommon units of length such as: light-year, furlong, and fathom. ~Have them consult resources and compare it to a customary measure.

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<ul style="list-style-type: none"> • 2.4 Mathematical reasoning • 2.5 Mathematical problem solving and communications • 2.6 Statistic and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Pictographs 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Study examples of pictographs • Interpret the data shown on pictographs • Collect data to create a pictograph • Use a computer to design pictographs 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Graph paper • Overhead • Notebook • Calculator • Measuring Manipulatives 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Alternative assessments • Other 	<ul style="list-style-type: none"> • Reteaching activities • Activity Students design a pictograph of favorite foods in classroom. 	<ul style="list-style-type: none"> • Problem of the day • Activity Students design a pictograph that shows the number of student sin each grade of the school.

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<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to . . .</i>						
<ul style="list-style-type: none"> • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.8 Algebra and functions • 2.9 Geometry • 2.10 Trigonometry 	<ul style="list-style-type: none"> • Geometry/ Trigonometry <ul style="list-style-type: none"> ~Identify terms and symbols ~Angles ~Spatial relationships ~Plane figures ~3d figures ~Polygons ~Triangles ~Quadrilaterals ~Slides, flips, turns and rotation ~Congruent figures ~Similar figures ~Space figures ~Properties and circumference – Measurement of circle ~Perimeter ~Volume ~Patterns/ tessellations • Problem solving- draw diagram Strategies 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Identify terms and symbols • Illustrate terms and symbols • Angles <ul style="list-style-type: none"> -Names -Classify types -Draw and measure using protractor • Identify and draw perpendicular, parallel, intersecting lines • Plane figures <ul style="list-style-type: none"> -Identify -Classify • Triangles and quadrilaterals <ul style="list-style-type: none"> -Identify -Classify • Identify congruent and similar figures Identify circles and	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Rulers • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Graph paper • Scissors • Color pencils/ Markers • Protractors • Wire • Cardboard • Construction paper • String • Wire • Geoboard 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 		

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		properties <ul style="list-style-type: none"> • Space figures <ul style="list-style-type: none"> -Define terms -Identify and locate faces, edges and vertices • Draw diagrams to solve story problem • Solve word problem using appropriate strategy • Identify and construct circles and properties • Use metric measuring tapes and rulers to find length and width of classroom objects • Practice procedures to identify formula for finding perimeter • Practice using the formula • Use centimeter graph paper to draw various sizes of rectangles and squares • Practice using the formula to find the area • Use string to determine distance around a spherical object • Use the formula to find circumference 				

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<ul style="list-style-type: none"> • 2.2 Computation & estimation • 2.3 Measurement and estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.8 Algebra and functions • 2.9 Geometry • 2.10 Trigonometry 	<ul style="list-style-type: none"> • Geometry/Trigonometry <ul style="list-style-type: none"> ~Identify terms and symbols ~Angles ~Spatial relationships ~Plane figures ~3d figures ~Polygons ~Triangles ~Quadrilaterals ~Slides, flips, turns and rotation ~Congruent figures ~Similar figures ~Perimeter ~Volume ~Patterns/tessellations • Problem solving • Identify and draw perpendicular and parallel intersecting lines • Plane figures <ul style="list-style-type: none"> ~Identify ~Classify • Triangles and quadrilaterals <ul style="list-style-type: none"> ~Identify ~Classify • Identify lines of symmetry • Identify slides, flips, 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Identify terms and symbols • Illustrate terms and symbols • Angles <ul style="list-style-type: none"> -Names -Classify types -Draw & measure using protractor -Draw diagram -Strategies Use metric measuring tapes and rulers to find length and width of classroom objects 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Rulers • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Graph paper • Scissors • Color pencils/markers • Protractors • Wire • Cardboard • Construction paper • String • Wire • Geoboard 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Other 	<ul style="list-style-type: none"> • Textbooks • Reteaching worksheets • Activity <ul style="list-style-type: none"> Students measure three rectangular objects such as books, desks or tabletops and compute the area of each. 	<ul style="list-style-type: none"> • Textbook enrichment worksheets • Problem of the day • Activity <ul style="list-style-type: none"> Using large and small paper clips estimate how many of each will fit around the perimeter of a desk top. Then measure and compare to the estimate

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	turns and rotations <ul style="list-style-type: none"> • Identify congruent and similar figures • Space figures ~Define terms ~Identify and locate faces, edges and vertices • Draw diagrams to solve story problems • Solve word problem using appropriate strategy • Identify and construct circles and properties • Use metric measuring tapes and rules to find length and width of classroom objects • Practice procedures to identify formula for finding perimeter • Practice using the formula • Use centimeter graph paper to draw various sizes of rectangles and squares Practice using the formula to find the area 	-Practice using the formula <ul style="list-style-type: none"> • Use centimeter graph paper to draw various sizes of rectangles and squares -Practice using the formula to find the area				

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<ul style="list-style-type: none"> • 2.1 Number, number system and relationships • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.5 Mathematical problem solving and communications • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Geometry ~Perimeter ~Area 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Use metric measuring tapes and rulers to find the lengths and widths of classroom object • Practice procedures to identify formula for finding perimeter. Practice using the formula • Use centimeter graph paper to draw various sizes of rectangles and squares • Practice using the formula to find the area • Use string to determine distance around a spherical object • Use the formula to find circumference 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Place value charts • Overhead • Notebook • Transparencies • Chalkboard • Manipulatives • Place value models 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Alternative assessments • Other 	<ul style="list-style-type: none"> • Textbooks reteaching worksheets • Activity Students measure three rectangular objects such as books, desks or tabletops and compute the area of each 	<ul style="list-style-type: none"> • Textbook enrichment worksheets • Problem of the day • Activity Using large and small paper clips estimate how many of each will fit around the perimeter of a desk top. Then measure and compare to the estimate.

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		<ul style="list-style-type: none"> • extra information • Identify various units of time • Choose appropriate unit • Convert units • Identify metric units <ul style="list-style-type: none"> - Liter -Milliliter -Kilogram -Gram -Milligram • Estimate mass and capacity • Convert metric units • Measuring customary capacity and weight • Define units • Relate units to everyday objects • Estimate re-naming • Temperature • Estimate and measure temperature • Measure temperature in Celsius and Fahrenheit • Find the amount of change in temperature • Volume <ul style="list-style-type: none"> -Develop a rule using manipulatives -Use formula to solve problems • Identify customary units • Measure and draw lengths in customary units • - 1/2 inch 			objects or items into groups according to whether the objects should be measured in grams, milligrams, or kilograms. Temperature activity: Draw two thermometers; one in Celsius and one in Fahrenheit. Identify equal temperatures on each thermometer. Conversion item to share and explain. Volume activity: Students working in pairs will build a rectangular prism using centimeter cubes. Count the cubes to determine ITS volume. Pairs then move to other desks to compute volume of other prisms. Measurement activity: <ul style="list-style-type: none"> • Have pairs of students choose three (3) measurable objects in the room. Measure the objects. 	that are the same mass as each of the items. Identify a favorite outdoor activity and ideal Celsius and Fahrenheit temperatures. Identify equal temperatures on each thermometer. Students divide 70-centimeter cubes equally and sit back to back. One student builds a rectangular prism using as many cubes as desired. The second student tries to build the first student's prism using the same number of cubes by asking yes or no questions. Give students uncommon units of length such as: light year, furlong and fathom. Have them consult.

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		<ul style="list-style-type: none"> - 1/4 inch - 1/8 inch - Inch - Foot - Yard - Mile • Estimate lengths of various common objects 				resources and compare it to a customary measure

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<ul style="list-style-type: none"> • 2.2 Computation & estimation • 2.4 Mathematical reasoning and connections • 2.6 Statistic and data analysis • 2.8 Algebra and functions 	<ul style="list-style-type: none"> • Mean, median, mode and range 	<ul style="list-style-type: none"> • Lecture/ Discussion • Demonstration • Guided practice • Group work • Conducting surveys • Note taking • Computer assisted instruction • Cooperative learning • Problem of the day • Modeling • Graphic organizer • List the definitions • Use graphic organizer for guided practice • Solve problems • Teacher directed instruction 	<ul style="list-style-type: none"> • Textbooks • Related worksheets • Computer • Overhead • Notebook • Calculator • Number cubes • Interlocking cubes • Chalkboard 	<ul style="list-style-type: none"> • Teacher observation • Student log • Peer observation • Student journal • Event task • Student project • Observational checklist • Peer assessment • Interview • Role-playing • Anecdotal comments • Student self-assessment • Group project • Student report • Formal task • Parental report • Written test • Alternative Assessments • Other 	<ul style="list-style-type: none"> • Reteaching activities • Activity Students roll a number cube four times. Record the numbers rolled. Find the average. 	<ul style="list-style-type: none"> • Problem of the day • Activity Explain how you would find the average height of students in the classroom.

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		~Record results in a frequency table ~Find various probabilities using a number cube • Probability of independent events ~Establish terms ~Work in pairs to list all possible outcomes of two-colored counters ~Demonstrate a tree diagram ~Repeat activity to list the outcomes I the format of a tree diagram ~Use three colored spinners to develop additional tree diagrams				

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		simple form <ul style="list-style-type: none"> • Mixed numbers/improper fractions • Define terms • Rename • Round to nearest whole number • Find common multiples to determine LCM • Compare and order fractions and mixed numbers • Convert fractions to decimals • Find relationships between fractions and decimals 				