

**Portales Municipal Schools**  
**CURRICULUM MAP**

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	7 <sup>th</sup> Grade	<b>Created by:</b> Pam Shafer, Erin Shaw, Keith Parrish, Killeen Lynch
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<b>Essential Questions: How do numbers and operations relate to one another?</b> <b>What are different ways in which I can represent numbers?</b> <b>How can I identify a rational number?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p>	<p>1.A.3. [Use properties of the real-number system to explain reasoning and to formulate and solve real-world problems.] <b>Introduce</b> / [Review]</p> <p>1.A.4. <i>Read, write, and compare rational numbers in scientific notation (e.g., positive and negative powers of 10) with approximate numbers using scientific notation.</i> <input checked="" type="checkbox"/> <b>Master</b> / <b>Introduce</b></p> <p>1.B.1. [Add, subtract, multiply, and divide rational numbers (e.g., integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.] [Review]</p> <p>1.B.5. <i>Multiply, divide, and simplify rational numbers by using exponent rules.</i> <b>Introduce</b></p> <p>1.B.8. <i>Simplify and evaluate positive rational numbers raised to positive whole-number powers.</i> <b>Introduce</b></p> <p>1.C.3. <i>Read, write, and compare rational numbers in scientific notation (e.g., positive and negative powers of 10) with approximate numbers using scientific notation.</i> <b>Introduce</b></p>	<p><b>Participating</b> with your classmates, investigate and discover the different properties of addition and multiplication. <b>Compare and contrast</b> the properties and investigate the application of those properties to subtraction and division. (Remediation pg 179-180)  <b>*Problem Solving/Reasoning &amp; Proof/Communication</b></p> <p><b>Assessment:</b>            When given a set of numbers (even natural numbers, division; negative numbers, multiplication) <b>select</b> the properties which apply. <b>Support</b> your sections. (Remediation pg 180)</p> <p><b>Assess</b> and <b>evaluate</b> given equations by using the distributive property.  <b>Implement</b> the distributive property to <b>write</b> equivalent expressions by expanding or simplifying given equations. (Remediation pg 181-182)  <b>*Problem Solving/Representation</b></p> <p><b>Assessment:</b>  <b>Compare and Contract</b> two given formulas for the perimeter of a rectangle and <b>justify</b> their equality.            Given a real-world word problem, <b>rewrite</b> as an algebraic equation then <b>incorporate</b> the distributive property to <b>evaluate</b> the problem two different ways. (Remediation pg 182).</p> <p><b>Assess</b> and use the power of 10 notation and multiplying by powers of 10. Make <b>conclusions</b> based on your observations.  <b>Implement</b> your observation while <b>evaluating</b> real-world word problems. <b>Support</b> your solutions by showing all work and steps taken.  <b>*Problem Solving/Reasoning &amp; Proof/Communication/Representation</b></p> <p><b>Assessment:</b>  <b>Express</b> numbers in scientific notation (including negative exponents) in appropriate problem situations using a pencil and paper then check your work with a calculator. <b>Evaluate</b> real-world word problems. (Lesson 2.5/Constructed Response 8.1.C.8 Test Practice)</p>	<p>Student journal/notebook  <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Remediation pg 179-182</li> <li>2. Activity Generator Lesson 2.5</li> <li>3. Best Practices Toolkit Pre-AP Resources pg 326-327(326 as a class/327 indep).</li> </ol> <p>Calculators</p>

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<b>Essential Questions: How can I categorize numbers according to their properties? How do number properties assist in computation?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</i></p>	<p>1.A.2. <i>Illustrate the relationships among natural (i.e., counting) numbers, whole numbers, integers, rational and irrational numbers. Introduce</i></p>	<p>As a class, examine and <b>discuss</b> (communicate) the <i>Types of Numbers (Prentice-Hall Algebra Transparencies pg 22)</i> Venn Diagram. <b>Review</b> the subsets of real numbers <b>discussing</b> examples of each and <b>explain</b> where you may use these numbers in the real-world. <b>Reorganize</b> your examples into a fishbone <b>diagram</b> for each subset.</p> <p style="text-align: center;"><b>*Reasoning &amp; Proof/Communication/ Connections/Representation</b></p> <p><b>Assessment:</b></p> <p>Teacher will handout a list of 10 numbers and the students will <b>identify</b> which subsets the numbers belong. Numbers may belong in more than one subset. {i.e., 0.62, <math>3\sqrt{2}</math>, 0.333..., <math>\epsilon</math>, -7, 4, <math>\frac{22}{7}</math>, ...}</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>Prentice-Hall</i></p> <ol style="list-style-type: none"> <li>1. Algebra Transparencies pg 22</li> </ol> <p>Teacher generated Fishbone diagrams (optional)</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p>	<p>1.A.1. <b>Determine the absolute value of rational numbers.</b> ☑Master / Introduce</p> <p>1.B.9. <b>Solve addition, subtraction, multiplication, and division problems that use positive and negative integers and combinations of these operations.</b> ☑Master / Introduce</p> <p>1.B.6. <b>Understand the meaning of the absolute value of a number:</b></p> <ul style="list-style-type: none"> <li>• interpret the absolute value as the distance of the number from zero on a number line</li> <li>• determine the absolute value of real numbers</li> </ul> <p>☑Master / Introduce</p>	<p><b>Using</b> a flow chart, practice as a class on the board and in your journals, addition, subtraction, multiplication, and division of integers with different combinations of the operations. (You may <b>support</b> your solutions with the use of a number line.)</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/ Communication/Representation</p> <p><u>Assessment:</u></p> <p><b>Draw</b> a number line and graph the given integers. <b>Find</b> the absolute value of a given number. <b>Find</b> the sum, difference, product, or quotient of basic equations. <b>Use</b> mental math to <b>solve</b> basic equations. <b>Identify</b> the inequality or equality symbol necessary to complete the given mathematical statement. (Course 2 Ch. 6 Test B pg 72)</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Teacher generated flow chart giving rule for addition, subtraction, multiplication, and division of integers.</p> <p>Number lines</p> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Ch. 6 Test B pg 72</li> </ol>

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**Essential Questions: What patterns or relationships do we see in each type of mathematics?**  
**How do patterns and functions relate to one another?**  
**How can I represent a function using algebraic symbols?**  
**What is the role of a variable in a function?**

Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p> <p><i>D. Analyze changes in various contexts.</i></p>	<p>2.A.2. Represent a variety of relationships using tables, graphs, verbal rules, and possible symbolic notation, and recognize the same general pattern presented in different representations. <b>Introduce</b></p> <p>2.B.1. Write verbal expressions and sentences as algebraic expressions and equations:</p> <ul style="list-style-type: none"> <li>• evaluate algebraic expressions</li> <li>• solve simple linear equations</li> <li>• graph and interpret results</li> </ul> <p><input checked="" type="checkbox"/>Master / Introduce</p> <p>2.B.3. Use the order of operations to evaluate algebraic expressions. (through brackets) <input checked="" type="checkbox"/>Master / Introduce</p> <p>2.B.2. Use variables and appropriate operations to write an expression, an equation, or an inequality that represents a verbal description. <b>Introduce</b></p> <p>2.B.6. Use letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes. <b>Introduce</b></p> <p>2.D.1. Use variables and appropriate operations to write an expression, an equation, and/or an inequality that represents a verbal description involving change. <b>Introduce</b></p> <p>2.D.4. Solve two-step equations and inequalities with one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results. <input checked="" type="checkbox"/>Master / Introduce</p>	<p>As a class, <b>discuss</b> the symbols which are used to replace terms when writing numerical and variable expressions, then <b>rewrite</b> math word phrases using the appropriate symbols. <b>Rewrite</b> numerical and variable expressions as math word phrases. Note that some operations can be represented by more than one symbol. <b>Rewrite</b> additional expressions from word phrases and vice versa (independently). (Remediation pg 167)</p> <p style="text-align: center;">*Communication/Connections/Representation</p> <p><b>Assessment:</b> <b>Rewrite</b> math word problems as an algebraic expression in relation to one another using symbols. (Remediation pg 168)</p> <p><b>Participate</b> with your class in <b>evaluating</b> a variable expression by <b>substituting</b> a given value for the variable(s), and then <b>implement</b> the order of operations (Remediation pg 177). Work independently on #1-12 (Remediation pg 178).</p> <p style="text-align: center;">*Problem Solving/Communication/Connections/Representation</p> <p><b>Assessment:</b> <b>Evaluate</b> given expressions then <b>decide</b> if the expression represented the measurement for the area of a square, a triangle, rectangle or the perimeter of a rectangle. (Remediation pg 178).</p> <p><b>Plot</b> two points and connect them. Graph the line through the points and then <b>evaluate</b> the linear equation. <b>Evaluate</b> given equations, <b>plot</b> the points and graph the line through the points. (Remediation pg 205-206).</p> <p style="text-align: center;">*Problem Solving/Communication/Connections/Representation</p> <p><b>Assessment:</b> <b>Evaluate</b> given equations consisting of different operations, <b>plot</b> the points and graph the line through the points. <b>Formulate</b> the equation for the line through a given set of points. Given a set of points, <b>determine</b> which do not belong and <b>support</b> your decision (Remediation pg 206).</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Remediation pg 167-167, 177-178, 205-206</li> <li>2. Pupil ed. Pg 337, 338, 364</li> <li>3. Activity Generator 7.1</li> <li>4. Practice B worksheet Ch. 7 pg 6</li> <li>5. Toolkit pg 57</li> </ol>

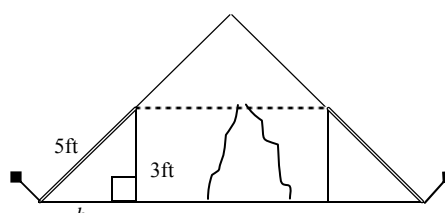
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<b>Essential Resources: What strategies can I use to make reasonable estimates?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p>	<p>1.C.1. <i>Use estimation to check reasonableness of results, and use this information to make predictions in situations involving rational numbers, pi, and simple algebraic equations.</i> <input checked="" type="checkbox"/> Master / Introduce</p>	<p><b>Investigate</b> estimating through the use of open faced clocks, i.e. a clock face is a full circle. A circle is 360°. A clock face is divided into 12 numbered sections. From one numbered division to the next is 1/12 of a full circle. 1/12 of 360° is 360°/12 = 30°. Thus, the <math>\hat{A}</math> formed by the hands of the clock @ 1:00 is 30°; @ 2:00 is 60°, etc...</p> <p><b>Estimate</b> other divisions of the clock face. Given a set of angles, <b>estimate</b> their measure. <b>Use</b> a protractor to check for accuracy.</p> <p style="text-align: center;">*Problem Solving/Communication/Connections/ Representation</p> <p><u><b>Assessment:</b></u></p> <p><b>Use estimation</b> to check reasonableness of results, and use this information to make <b>predictions</b> in situations involving rational number, pi, and simple algebraic equations. Given a real-world word problem <b>construct</b> a response, i.e., Cassie is knitting the front of a sweater. Each row of the front uses 62 stitches. When the front is finished it will be 85 rows. How many total stitches will be needed for the front of the sweater? <b>Estimate</b> the answer to check the reasonableness of your answer.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. NM Standards Review &amp; Test Practice Grade 7 pg 7.1.C.1</li> <li>2. Toolkit pg 63</li> </ol> <p>Teacher generated Protractor clocks</p>

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<b>Essential Questions: How do the sides of a square relate to a perfect whole-number square?</b>				
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<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p> <p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions.</i></p> <p><i>D. Analyze changes in various contexts.</i></p>	<p>1.B.7. <i>Find square roots of perfect whole-number squares.</i> <input checked="" type="checkbox"/> Master / Introduce</p> <p>1.C.6. <i>Use the inverse relationship between rising to a power and extracting the root of a perfect square integer.</i> Introduce</p> <p>2.A.4. <i>Interpret and evaluate expressions involving integer powers and simple roots.</i> <input checked="" type="checkbox"/> Master / Introduce</p> <p>2.D.2. <i>Interpret and evaluate expressions involving integer powers and simple roots as they relate to change.</i> Introduce</p>	<div style="text-align: center;">  </div> <p>You are setting up a tent. The ropes that are used to hold the tent down are 5 feet long, and each rope attaches to the tent 3 feet above the ground. <b>Apply</b> the rule of Pythagorean Theorem and <b>Evaluate</b> the distance of the base (b). <b>Justify</b> your answer.</p> <p><b>*Problem Solving/Reasoning &amp; Proof/Connections</b></p> <p><b>Assessment:</b></p> <p>Given various right triangles, <b>apply</b> the rule of Pythagorean Theorem and <b>evaluate</b> the hypotenuse. Refer to the tent, <b>evaluate</b> how far from the base each rope should be staked down? Round to the nearest tenth.</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil Edition Ch 11.3 pg 589</li> <li>2. Practice pg 24</li> </ol>

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Essential Questions: What are several ways in which I can add fractions using illustrations as well as algorithms? What strategies do I use to find the sums and differences of fractions with unlike denominators?				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p>	<p><b>1.B.4. Add and subtract fractions with unlike denominators. ☑Master</b></p> <p><b>1.C.5. Add and subtract fractions with unlike denominators. ☑Master</b></p>	<p><i>Write</i> fractions with like denominators and then <i>add</i>. <i>Write</i> the solution in simplest form.</p> <p><i>Write</i> fractions with like denominators and, if necessary, rename the first fraction. Then subtract and <i>write</i> the solution in simplest form.</p> <p>If the sum of fractions is improper, <i>rewrite</i> it as a mixed number and <i>add</i> to the whole. (Practice Lesson 5.2 pg 16). <b>*Problem Solving/Reasoning &amp; Proof/Connections</b></p> <p><u>Assessment:</u></p> <p><i>Add</i> or subtract given mixed numbers. <i>Write</i> the solution in simplest form.</p> <p>Given a real-world word problem, <i>formulate</i> and equation and then <i>evaluate</i>. (Remediation pg 55-56)</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Remediation pg 55-56</li> <li>2. Practice Lesson 5.2 pg 16</li> </ol>

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<b>Essential Questions: How do decimals, fractions, and percentages relate to one another?</b> <b>How can I estimate fractional, decimal, or percentage values without actually calculating?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>1<sup>st</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p>	<p>1.B.2. [Convert terminating decimals into reduced fractions.] ☑Master / [Review]</p> <p>1.C.2. Convert fractions to decimals and percents and use these representations in estimations, computations, and applications. ☑Master</p>	<p><b>Compare</b> the area of individual states within the United States given a map which indicates the fraction of the total area per state.</p> <p><b>Convert</b> the fraction of area per state into a decimal and the decimal into a percent. (Pupil ed. Pg 201: Geography table) *Problem Solving/Connections/Representation</p> <p><u>Assessment:</u></p> <p><b>Explain</b> how to write each of the following:</p> <ol style="list-style-type: none"> <li>1. A mixed number as an improper fraction.</li> <li>2. An improper fraction as a mixed number</li> <li>3. A fraction as a decimal</li> <li>4. A terminating decimal as a fraction</li> </ol>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil ed. Pg 201: Geography table</li> <li>2. Alternate Assessment and Math Journal, Ch 4 pg 55</li> </ol>

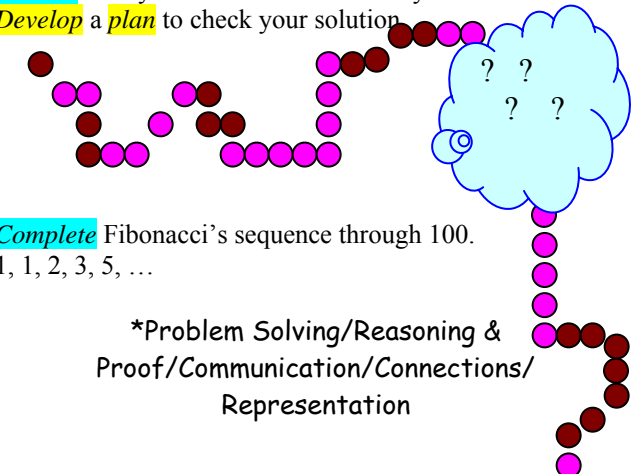
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<b>Essential Questions: What strategies are important when calculating multi-step problems using the four operations of mathematics?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<p><b>2<sup>nd</sup> Nine Weeks</b></p>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.</i></p> <p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions.</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p>	<p><b>1.A.5. Simplify numerical expressions using order of operations. (to brackets)</b> <b>☑Master</b></p> <p><i>2.A.3. Simplify numerical expressions by applying properties of rational numbers, and justify the process used. <b>Introduce</b></i></p> <p><i>2.B.4. Simplify numerical expressions by applying properties of rational numbers. <b>Introduce</b></i></p>	<p>As a class:</p> <p>Karen’s garden is a rectangle. The length of the garden is <math>4x</math> and the width is <math>x + 4</math>.</p> <ol style="list-style-type: none"> <li>1. <b>Create</b> a diagram and <b>label</b> the problem.</li> <li>2. <b>Write</b> and simplify an expression for perimeter.</li> <li>3. <b>Write</b> and simplify an expression for the area</li> </ol> <p style="text-align: center;"><b>*Problem Solving/Communication/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p><b>Write</b> a short paragraph <b>explaining</b> how this could be helpful in planting a yard with sod.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Teacher generated rubric</p>

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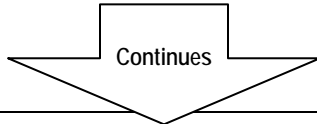
<b>Essential Questions: How do patterns in the world connect to mathematics? How can I use patterns to problem solve?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions.</i></p>	<p>2.A.1. <i>Identify and continue patterns presented in a variety of formats.</i> <b>Introduce</b></p>	<p><b>Approximate</b> how many beads are hidden under the cloud?  <b>Discuss</b> with your classmates how many beads are hidden.  <b>Develop</b> a <b>plan</b> to check your solution.</p>  <p><b>Complete</b> Fibonacci's sequence through 100. 1, 1, 2, 3, 5, ...</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/Communication/Connections/ Representation</p> <p><b>Assessment:</b></p> <p><b>Describe</b> a pattern and then <b>write</b> the next three numbers.  <b>Describe</b> a pattern and then <b>draw</b> the next figure.  <b>Describe</b> a pattern and then <b>write</b> the next three letters.            Given a real-world word problem <b>evaluate</b> and then <b>explain</b> the pattern you used.</p>	<p>Student journal/notebook  <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Practice B Lesson 1.1 pg 7</li> <li>2. Toolkit: Integer patterns pg 55</li> </ol> <p>Teacher generated</p>

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**Essential Questions: In which ways can models be used to represent quantitative relationships?**

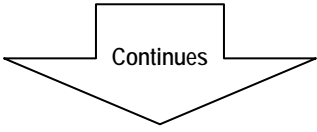
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<p><b>2<sup>nd</sup> Nine Weeks</b></p>	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>C. Use mathematical models to represent and understand quantitative relationships.</i></p> <p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.</i></p>	<p>2.C.2. <i>Understand and use the coordinate plane to graph ordered pairs and linear equations. <b>Introduce</b></i></p> <p>3.B.1. <i>Construct and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine the image under translations and reflections. <b>Introduce</b></i></p>	<p><b>View Tubes:</b> Does the length of a viewing tube, its diameter, or the distance from an object affect the type of data collected and the resulting graph?</p> <p><b>Participate</b> within groups of four or five.</p> <ol style="list-style-type: none"> <li>1. Students will work in groups at designated “viewing stations.”</li> <li>2. Each viewing station has a measuring tape on the wall and standing positions marked on the floor in front of the wall.</li> <li>3. Each student standing at indicated distances from the wall will use a tube to view the measuring tape and then describe to other group members what portion of the poster is visible.</li> <li>4. Other group members will <b>measure</b> the height of the described viewable portion to the nearest inch.</li> <li>5. Data is <b>recorded</b> as collected for each member of the group.</li> <li>6. Graphs of best-fit lines or curves are drawn and <b>interpretations</b> made.</li> <li>7. <b>Investigating</b> the relationship between the dimensions of the tubes, slopes, and intercepts should reveal:</li> </ol> <p>A. When tube length and diameter are constant, the viewable height is a linear function of the distance from the wall. The intercept is the diameter of the tube.</p> <p>B. When distance from the wall and tube length are constant, the viewable height is a linear function of the diameter of the tube.</p> <p>C. When the distance from the wall and tube diameter are constant, the viewable height is a nonlinear function of the length of the tube.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Each group needs:</p> <ol style="list-style-type: none"> <li>1. Measuring Tape placed vertically on the wall from the floor upward.</li> <li>2. Assorted tubes with varying lengths and diameters to correspond to the investigation assigned to each group</li> <li>3. Tape to mark standing positions on the floor in front of the measuring tape</li> <li>4. Grid paper for each group</li> <li>5. Poster</li> </ol> <p><a href="http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf">http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf</a> (copy then paste in address bar) (activity and student worksheet if preferred)</p>





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<p><b>2<sup>nd</sup> Nine Weeks</b></p>	<p><i>(Continued Page 3)</i></p> <p><b>ALGEBRA:</b> Students will understand algebraic concepts and applications.</p> <p><b>C.</b> Use mathematical models to represent and understand quantitative relationships.</p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</p> <p><b>B.</b> Specify locations and describe spatial relationships using coordinate geometry and other representational systems.</p>	<p><i>(Continued Page 3)</i></p> <p>2.C.2. Understand and use the coordinate plane to graph ordered pairs and linear equations. <b>Introduce</b></p> <p>3.B.1. Construct and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine the image under translations and reflections. <b>Introduce</b></p>	<p><b>View Tubes:</b> <b>Investigation B</b></p> <p>1. <b>Collect</b> the Data: Each member of the group will view the measuring tape with the given tubes of the same length, but different diameters a designated distance from the wall. Others will mark the top and bottom of the described portion to <b>determine</b> the measurement in inches of the viewing height. <b>Calculate</b> the average visible height for each of the distances.</p> <p>2. Graph the Data: Choose appropriate <b>labels</b> and scales for the horizontal and vertical axes. <b>Plot</b> the data as ordered pairs, (x, y).</p> <p>3. <b>Read</b> the Results: Looking at your points, do they seem to lie along a line or a curve? <b>Draw</b> the line that best fits your data.</p> <p>4. <b>Describe</b> in words how to <b>determine</b> the height of the visible portion if you know the diameter of the tube.</p> <p>5. <b>Describe</b> by equation how to determine the height of the visible portion (y) if you know the diameter of the tube (x).</p> <p style="text-align: center;">y =</p> <p>6. <b>Predict</b> the height of the visible portion for a tube with a diameter of five inches.</p> <p>7. <b>Predict</b> the diameter of a tube that would allow you to see a 10-inch portion of the <b>poster</b>.</p> <p style="text-align: center;"><b>Viewing Height: Same Distance from Wall &amp; Tube Length Varying Diameters</b></p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;">Student name</th> <th colspan="8">Diameter of Tube</th> </tr> <tr> <th></th> <th>1"</th> <th>2"</th> <th>3"</th> <th>4"</th> <th>5"</th> <th>6"</th> <th>7"</th> <th>8"</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr> <td>Average</td> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;">  </p>	Student name	Diameter of Tube									1"	2"	3"	4"	5"	6"	7"	8"																																																																									Average									<p><i>(Continued Page 3)</i></p> <p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Each group needs:</p> <ol style="list-style-type: none"> <li>1. Measuring Tape placed vertically on the wall from the floor upward.</li> <li>2. Assorted tubes with varying lengths and diameters to correspond to the investigation assigned to each group</li> <li>3. Tape to mark standing positions on the floor in front of the measuring tape</li> <li>4. Grid paper for each group</li> </ol> <p><a href="http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf">http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf</a> (copy then paste in address bar) (activity and student worksheet if preferred)</p>
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Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>(Continued Page 5)</i></p> <p><b>ALGEBRA:</b> Students will understand algebraic concepts and applications.</p> <p><i>C. Use mathematical models to represent and understand quantitative relationships.</i></p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</p> <p><i>B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.</i></p>	<p><i>(Continued Page 5)</i></p> <p>2.C.2. Understand and use the coordinate plane to graph ordered pairs and linear equations. <b>Introduce</b></p> <p>3.B.1. Construct and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine the image under translations and reflections. <b>Introduce</b></p>	<p><b>View Tubes:</b></p> <p>As a result of this activity, students learn to <b>analyze</b> data that they have collected, look for relationships, and make <b>predictions</b>.</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/ Communication/Representation</p> <p><b>Assessment:</b></p> <p>Have students answer the following questions:</p> <ol style="list-style-type: none"> <li>1. <b>Explain</b> how you knew the graphs were or were not linear.</li> <li>2. <b>Predict</b> the height of the visible portion of the measuring tape if you were standing 15 feet from the wall.</li> <li>3. <b>Predict</b> the distance you would have to stand from the wall in order to see a 30-inch portion of the measuring tape.</li> <li>4. <b>Predict</b> the height of the visible portion for the tube with a diameter of 7.5 inches.</li> <li>5. <b>Predict</b> the diameter of a tube that would allow you to see a 20-inch portion of the measuring tape.</li> </ol>	<p><i>(Continued Page 5)</i></p> <p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Each group needs:</p> <ol style="list-style-type: none"> <li>1. Measuring Tape placed vertically on the wall from the floor upward.</li> <li>2. Assorted tubes with varying lengths and diameters to correspond to the investigation assigned to each group</li> <li>3. Tape to mark standing positions on the floor in front of the measuring tape</li> <li>4. Grid paper for each group</li> </ol> <p><a href="http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf">http://fcit.usf.edu/math/lessons/lessons8.htm/viewT.pdf</a> (copy then paste in address bar) (activity and student worksheet if preferred)</p>

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<b>Essential Questions: How do I formulate unbiased questions in order to collect and analyze data?</b> <b>What models can I use to display data?</b> <b>How do I know which model represents data best?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</i></p> <p><i>B. Select and use appropriate statistical methods to analyze data.</i></p>	<p><i>5.A.7. Use various scales and formats to display the same data set. <b>Introduce</b></i></p> <p><i>5.B.2. Know various ways to display data sets (e.g., stem and leaf plot, box and whisker plot, scatter plots) and use these forms to display a single set of data or to compare two sets of data. <b>Introduce</b></i></p>	<p>As a class, <b>discuss</b> different types of graphs &amp; tables.</p> <p><b>Explain</b> how and why different graphs and tables represent different data better than another.</p> <p><b>Measure</b> the height of each classmate. <b>Integrate</b> the data you have collected into three different graphs.</p> <p><b>Explain</b> how you decided on one graph over another and the process used in <b>creating</b> your graphs (i.e., intervals used).</p> <p>*Reasoning &amp; Proof/Communication/Connections/Representation</p> <p><b>Assessment:</b></p> <p>Which graph best represent the data? <b>Justify</b> your reasoning.</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Teacher generated.</p>

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<b>Essential Questions: How can the measures of central tendency describe data?</b> <b>How do I know which measure of central tendency best describes my data?</b> <b>How can I represent my data using a model or illustration?</b> <b>What kinds of questions can be answered using different data displays?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</i></p> <p><i>B. Select and use appropriate statistical methods to analyze data.</i></p>	<p>5.A.3. [Use measures of central tendency and spread to describe a set of data.] <b>[Review]</b></p> <p>5.A.4. <b>[Choose between median and mode to describe a set of data and justify the choice for a particular situation.]</b> <b>[Master / [Review]</b></p> <p>5.A.5. <i>Determine the quartiles of a data set.</i> <b>Introduce</b></p> <p>5.A.10. <i>Compute the minimum, lower quartile, median, upper quartile, and maximum of a data set.</i> <b>Introduce</b></p> <p>5.B.1. [Choose and justify appropriate measures of central tendencies (e.g., mean, median, mode, range) to describe given or derived data.] <b>[Review]</b></p>	<p>Choosing the Best Measure <b>Discuss</b> the meaning of the measures of central tendency. Then, given a set of 9 numbers <b>Find</b> the mean of a given set of data. <b>Find</b> the median for the given set of data. <b>Find</b> the mode for the given set of data. <b>Find</b> the range for the given set of data. <b>Discuss</b> which measure best represents the whole. <b>Justify</b> your reasoning. *Problem Solving/Reasoning &amp; Proof/Communication/Connections/Representation</p> <p><b>Assessment:</b></p> <p><b>Evaluate</b> what would happen if you receive three more numbers (generate additional numbers). Which measure best represents the amounts? <b>Justify</b> your reasoning.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil ed. Pg 110-111</li> <li>2. Practice B worksheet 7</li> <li>3. Remediation pg 237-238</li> </ol>

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<b>Essential Questions: How do charts, tables, and graphs help you interpret data?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</i></p> <p><i>B. Select and use appropriate statistical methods to analyze data.</i></p> <p><i>C. Develop and evaluate inferences and predictions that are based on data.</i></p>	<p>5.A.1. Describe how data representations influence interpretation.</p> <p>5.A.2. Select and use appropriate representation for presenting collected data and justify the selection.</p> <p>5.A.6. Identify ordered pairs of data from a graph and interpret the data in terms of the situation depicted by the graph.</p> <p>5.A.8. Identify and explain the misleading representations of data.</p> <p>5.A.9. Collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set.</p> <p>5.A.11. Identify and explain the effects of scale and/or interval changes on graphs of whole number data sets.</p> <p>5.A.13. Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, and selecting, collecting, and displaying appropriate data to address the problem.</p> <p>5.B.6. Identify data that represent sampling errors and explain why the sample and the display might be biased.</p> <p>5.C.1. Formulate and justify mathematical conjectures based on data and a general description of the mathematical question or problem posed.</p> <p>5.C.2. Analyze data to make accurate inferences, predictions, and to develop convincing arguments from data displayed in a variety of forms.</p> <p>5.C.3. Approximate a line of best fit for a data set in a scatter plot form and make predictions using the simple equation of that line. <b>All of the Above are Introduced in Seventh</b></p>	<p>What is the most appropriate representation for a given set of data?</p> <p><b>Explore</b> appropriate data displays for data sets. <b>Use</b> data to answer questions. <b>Use</b> data displays to answer questions. <b>Compare</b> answers. <b>Draw conclusions</b> based on your observations to complete exercises. <b>Discuss</b> misleading data displays. (Activity generator lesson 3.6 activity A) <b>*Problem Solving/Reasoning &amp; Proof/Communication/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p><b>Explain</b> what type of data can be represented by a given display. Given a real-world word problem, <b>determine</b> the best graph to represent the data. Given a graph representing real-world data, <b>formulate</b> a question that you could answer from looking at the graph.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Activity generator Lesson 3.6 Activity A</li> </ol> <p>Teacher generated Data worksheet Data displays worksheet</p>

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<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	7 <sup>th</sup> Grade	<b>Created by:</b> Pam Shafer, Erin Shaw, Keith Parrish, Killeen Lynch
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<b>Essential Questions:</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard/ Essential Question</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</i></p> <p><i>B. Select and use appropriate statistical methods to analyze data.</i></p>	<p>5.A.12. [Use and explain sampling techniques (e.g., observations, surveys, and random sampling) for gathering data.] <b>Introduce / [Review]</b></p> <p>5.B.3. Use the analysis of data to make convincing arguments. <b>Introduce</b></p> <p>5.B.5. Use data samples of a population and describe the characteristics and limitations of the sample. <b>Introduce</b></p> <p>5.B.7. Identify claims based on statistical data and evaluate the validity of the claims. <b>Introduce</b></p>	<p><b>Discuss</b> terminology related to sampling methods and surveys.</p> <p><b>Explain</b> which method of collecting data will result in the best sample.</p> <p><b>Explain</b> which survey question(s) is best for a given situation. (Remediation pg 261-262)</p> <p style="text-align: center;"><b>*Reasoning &amp; Proof/Communication/Connections</b></p> <p><b>Assessment:</b></p> <p>Suppose you want to survey your fellow students about summer plans.</p> <p><b>Specify</b> the population for your survey.</p> <p><b>Explain</b> a way to get a random sample of your population.</p> <p><b>Formulate</b> an appropriate survey question.</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Remediation pg 261-262</li> <li>2. Activity Generator “Conducting Surveys”</li> <li>3. Pupil pg 115</li> </ol>

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<b>Essential Questions: How can I use technology to gather and display data?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>2<sup>nd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>B. Select and use appropriate statistical methods to analyze data.</i></p>	<p>5.B.4. <i>Use appropriate technology to gather and display data sets and identify the relationships that exist among variables within the data set.</i></p> <p><b>Introduce</b></p>	<p><b>Research</b> on the Internet to find the daily mean temperatures for each month in Chicago. <b>Record</b> the data in the first two columns of a spreadsheet. <b>Use</b> the steps for making a bar graph but select line graph instead. (Pupil ed. Pg 125).</p> <p style="text-align: center;">*Communication/Connections/Representation</p> <p><b>Assessment:</b></p> <p><b>Research</b> on the Internet to find the daily mean temperatures for each month of the year for a city in your state. Then <b>create</b> a line graph of the data.</p> <p><b>Compare</b> the daily mean temperature for Chicago with those for the city you selected.</p> <p>Now <b>compare</b> the average daily temperatures with Anchorage, Alaska.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil ed pg 125</li> <li>2. Spreadsheet software</li> </ol> <p>Graphing calculators</p>

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Essential Questions: How can I characterize two and three-dimensional figures? How do the radius, diameter, circumference, and pi relate to one another?																																		
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials																														
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.</i></p>	<p>3.A.2. Understand the concept of a constant (e.g., <math>\pi</math>) and use the formulas for the circumference and area of a circle. <b>Introduce</b></p> <p>3.A.4. <b>Determine the radius, diameter, and circumference of a circle and explain their relationship.</b> <input checked="" type="checkbox"/>Master / <b>Introduce</b></p>	<p><b>Exploring Diameter and Circumference</b></p> <p><b>Examine</b> the relationship between the diameter and circumference of a circle by measuring the diameter and circumference of several circular objects to the nearest millimeter. If necessary, wrap a string around the object and measure the length of the string with a ruler. <b>Record</b> the measurements in the table.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 15%;">Object</th> <th style="width: 15%;">Radius</th> <th style="width: 15%;">Diameter</th> <th style="width: 15%;">Circumference</th> <th style="width: 15%;">Circumference Diameter</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p><b>Record</b> the ratios in the last column of the table above.</p> <p><b>Solve</b> for the mean of the ratios in your table. <b>Communicate</b> with your classmates and <b>discover</b> how your mean <b>compares</b> with the means found by the other students in your class?</p> <p><b>Incorporate</b> the results to write a formula for the circumference <math>C</math> of a circle in terms of the diameter <math>d</math>.</p> <p><b>Model</b> the formula you <b>developed</b> by <b>evaluating</b> the circumference of the circle given its diameter <math>d</math>.</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/Communication/ Connections/Representation</p> <p><b>Assessment:</b></p> <p><b>Use</b> your observations to draw <b>conclusions</b>.</p> <p><b>Compare</b> the ratio of <math>C</math> to <math>d</math> for each object. What do you notice?</p> <p><b>Create</b> a scatter plot of your data. <b>Plot</b> each object's circumference on the horizontal axis and diameter on the vertical axis. Do you notice any patterns? <b>Explain</b>.</p> <p><b>Explain</b> what your answers to the above suggest about the relationship between the circumference <math>C</math> and the distance <math>d</math></p>	Object	Radius	Diameter	Circumference	Circumference Diameter																										<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Other related interactive resources: <a href="http://www.mathgoodies.com/lessons/vol2/geometry.html">http://www.mathgoodies.com/lessons/vol2/geometry.html</a> (Geometry and the circle)</p> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Activity Generator Ch. 11.6</li> <li>2. Pupil ed. Pg 607</li> </ol> <p>Round objects Metric ruler string</p>
Object	Radius	Diameter	Circumference	Circumference Diameter																														

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Essential Questions: How do perimeter and area relate to one another? What strategies can I use to find missing angle measures?				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<p><b>3<sup>rd</sup> Nine Weeks</b></p>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.</i></p> <p><i>D. Use visualization, spatial reasoning, and geometric modeling to solve problems.</i></p> <p><i>MEASUREMENT: Students will understand measurement systems and applications.</i></p> <p><i>B. Apply appropriate techniques, tools, and formulas to determine measurements.</i></p>	<p>3.A.5. [Use properties to classify solids including pyramids, cones, prisms, and cylinders.] [Review]</p> <p>3.D.1. [Compute the perimeter and area of common geometric shapes and use the results to find measures of less common objects.] [Master/[Review]</p> <p>4.B.1. Apply strategies and formulas to find missing angle measurements in triangles and quadrilaterals. <b>Introduce</b></p> <p>4.B.2. Select and use formulas to determine the circumference of circles and the area of triangles, parallelograms, trapezoids, and circles. <b>Introduce</b></p>	<p><b>Daffynition Decoder</b> For each exercise, <b>evaluate</b> the angle measure indicated. Look for each answer in the code. Each time the answer appears, write the letter of the exercise above it.</p> <p>Warehouse: 105°, 40°, 36°, 78°, 151°, 55°, 45°, 146°, 36°, 151°, 105°, 40°, 135°, 42°, 34°, 55°, 146°, 78°</p> <p>Explain: 42°, 55°, 78°, 146°, 116°, 56°, 36°, 74°, 29°, 34°, 135°, 100°, 55°, 56°, 60°, 56°, 98°, 135°, 100°</p> <p><b>H</b> If <math>m\hat{A}1 = 50^\circ</math>, then <math>m\hat{A}2 = \underline{\hspace{1cm}}</math>  <b>F</b> If <math>m\hat{A}3 = 120^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math>  <b>O</b> If <math>m\hat{A}2 = 35^\circ</math>, then <math>m\hat{A}1 = \underline{\hspace{1cm}}</math>  <b>E</b> If <math>m\hat{A}4 = 45^\circ</math>, then <math>m\hat{A}3 = \underline{\hspace{1cm}}</math>  <b>B</b> If <math>m\hat{A}6 = 29^\circ</math>, then <math>m\hat{A}8 = \underline{\hspace{1cm}}</math>  <b>Y</b> If <math>m\hat{A}6 = 29^\circ</math>, then <math>m\hat{A}5 = \underline{\hspace{1cm}}</math>  <b>C</b> If <math>m\hat{A}5 = 116^\circ</math>, then <math>m\hat{A}7 = \underline{\hspace{1cm}}</math>  <b>I</b> If <math>m\hat{A}8 = 82^\circ</math>, then <math>m\hat{A}7 = \underline{\hspace{1cm}}</math>  <b>A</b> If <math>m\hat{A}11 = 144^\circ</math>, then <math>m\hat{A}10 = \underline{\hspace{1cm}}</math>  <b>N</b> If <math>m\hat{A}8 = 78^\circ</math> and <math>m\hat{A}9 = 60^\circ</math>, then <math>m\hat{A}10 = \underline{\hspace{1cm}}</math>  <b>D</b> If <math>m\hat{A}9 = 47^\circ</math> and <math>m\hat{A}10 = 33^\circ</math>, then <math>m\hat{A}8 = \underline{\hspace{1cm}}</math>  <b>U</b> If <math>m\hat{A}10 = 45^\circ</math> and <math>m\hat{A}8 = 90^\circ</math>, then <math>m\hat{A}9 = \underline{\hspace{1cm}}</math>  <b>M</b> If <math>m\hat{A}6 = 66^\circ</math> and <math>m\hat{A}9 = 40^\circ</math>, then <math>m\hat{A}10 = \underline{\hspace{1cm}}</math>  <b>T</b> If <math>m\hat{A}11 = 130^\circ</math> and <math>m\hat{A}9 = 52^\circ</math>, then <math>m\hat{A}8 = \underline{\hspace{1cm}}</math>  <b>W</b> If <math>m\hat{A}8 = 81^\circ</math> and <math>m\hat{A}9 = 24^\circ</math>, then <math>m\hat{A}11 = \underline{\hspace{1cm}}</math>  <b>R</b> If <math>m\hat{A}2 = 56^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math>  <b>L</b> If <math>m\hat{A}1 = 56^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math>  <b>S</b> If <math>m\hat{A}1 = 56^\circ</math>, then <math>m\hat{A}3 = \underline{\hspace{1cm}}</math></p> <p>*Communication/Problem Solving/Representation</p> <p><b>Assessment:</b> Students <b>Identify</b> angle relationships for <math>\hat{A}1 - \hat{A}11</math> <b>Defend</b> your answers.</p>	<p>Student journal/notebook <i>McDougal Littell Course 3</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Related to <i>McDougal Littell Course 2</i> 1. Activity Generator 11.5, 12.1</p> <p><i>Middle School Math w/Pizzazz! Book D</i> pg. 36</p> <p>Copy of Following Angles</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>(Continue Page 2)</i></p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</p> <p><i>A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.</i></p> <p><i>D. Use visualization, spatial reasoning, and geometric modeling to solve problems.</i></p> <p><b>MEASUREMENT:</b> Students will understand measurement systems and applications.</p> <p><i>B. Apply appropriate techniques, tools, and formulas to determine measurements.</i></p>	<p><i>(Continue Page 2)</i></p> <p>3.A.5. [Use properties to classify solids including pyramids, cones, prisms, and cylinders.] <b>[Review]</b></p> <p>3.D.1. <b>[Compute the perimeter and area of common geometric shapes and use the results to find measures of less common objects.]</b> <b>[Master/Review]</b></p> <p>4.B.1. <i>Apply strategies and formulas to find missing angle measurements in triangles and quadrilaterals. <b>Introduce</b></i></p> <p>4.B.2. <i>Select and use formulas to determine the circumference of circles and the area of triangles, parallelograms, trapezoids, and circles. <b>Introduce</b></i></p>	<p>Can you use different shapes to find areas of triangles and trapezoids?</p> <p><b>Explore</b> by <b>using</b> graph paper to find the area of a triangle (Activity Generator 11.5)</p> <p><b>*Communication/Problem Solving/Representation</b></p> <p><b>Assessment:</b></p> <p><b>Use</b> your observations to draw <b>conclusions</b>. Given a triangle <b>evaluate</b> the area. For a given triangle suppose the lengths <math>b</math> and <math>h</math> are known. <b>Explain</b> how to find the area of the triangle in terms of <math>b</math> and <math>h</math>.</p> <p><b>Participate</b> with a partner to: <b>Investigate</b> and <b>explore</b> classifying solids through the “Brain Game” (Activity Generator 12.1).</p> <p><b>*Communication/Problem Solving/Representation</b></p> <p><b>Assessment:</b></p> <p>Given a solid <b>describe</b> a characteristic that is unique to the solid.</p> <p>Given a solid <b>describe</b> the solid. Be specific so that your answer describes only the solid named. <b>Justify</b> your description.</p>	<p><i>(Continue Page 2)</i></p> <p>Student journal/notebook <i>McDougal Littell Course 3</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Related to <i>McDougal Littell Course 2</i> 1. Activity Generator 11.5, 12.1</p> <p><i>Middle School Math w/Pizzazz! Book D</i> pg. 36</p> <p>Graph paper Scissors Paper and pencil</p>

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<b>Essential Questions: How can I represent a function on a coordinate plane?</b> <b>What predictions can the patterns or relationships support?</b> <b>How do I determine whether the slope is positive or negative by looking at the graph? Looking at the function/equation?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions.</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p> <p><i>D. Analyze changes in various contexts.</i></p>	<p>2.A.5. [Graph and interpret linear functions.] <b>Introduce</b> / [Review]</p> <p>2.B.5. <b>Graph linear functions and identify slope as positive or negative.</b>  <input checked="" type="checkbox"/>Master / <b>Introduce</b></p> <p>2.D.3. <b>Graph and interpret linear functions as they are used to solve problems.</b>  <input checked="" type="checkbox"/>Master / <b>Introduce</b></p>	<p>Without finding the slope of a line, <b>identify</b> the indicated slope of a line as positive, negative, or zero.  <b>Evaluate</b> the slope of a given line.  <b>Plot</b> given coordinates and <b>draw</b> the line that passes through the points. Then <b>evaluate</b> the slope of the line.            Given a slope and the coordinates of one point, <b>plot</b> the point and <b>draw</b> the line that passes through the given point. <b>Interpret</b> a graph representing real-world data. (Practice workbook Ch 8.3 practice B pg 32)</p> <p style="text-align: center;">*Problem Solving/Communication/ Connections/Representation</p> <p><b>Assessment:</b></p> <p><b>Copy</b> and complete a table representing side lengths (x) and perimeters(y) of four squares.  <b>Plot</b> points according to directions. <b>Draw</b> a line through the points.  <b>Interpret</b> what the slope of the line tells about the relationship between the side length of a square and its perimeter.            (Pupil ed. Ch 8.3 pg 413)</p>	<p>Student journal/notebook  <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Practice workbook Ch 8.3 practice B pg 32</li> <li>2. Pupil ed. Ch 8.3 pg 413</li> </ol>

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<b>Essential Questions: What are the strategies that can be used to calculate percentages of numbers?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>B. Understand the meaning of operations and how they relate to one another.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p>	<p>1.B.3. <i>Calculate given percentages of quantities and use them to solve problems (e.g., discounts of sales, interest earned, tips, markups, commission, profit, simple interest).</i> <b>Introduce</b></p> <p>1.C.4. <i>Calculate the percentage of increases and decreases of a quantity.</i> <b>Introduce</b></p>	<p>Dillard's is having a sale. Yeah!!! Shoes are 25% off, jeans are 1/3 off, and sweaters are marked 50% off.</p> <p>You found a pair of shoes and the original price was \$89.00, pants \$66.00, and sweater was \$94.00. <b>Evaluate</b> the total cost of the three (3) items with discounts?</p> <p>Tax is figured at 8.25%. <b>Evaluate</b> the total with tax included.</p> <p>The sales clerk receives a 2% commission on all sales before tax. <b>Evaluate</b> the clerk's commission on your purchase.</p> <p style="text-align: center;">*Problem Solving/Communication/ Connections/Representation</p> <p><b>Assessment:</b></p> <p>You have \$200.00, and you would like to rent a sailboat for 4 hours. It costs \$45.00 per hour or \$130.00 per day to rent a sailboat. <b>Evaluate</b> the percent of your total money that you will save by choosing the better rate? <b>Explain</b> how you found your answer.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Teacher generated</p> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil ed. Ch. 9.4 pg 469</li> </ol>

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**CURRICULUM MAP**

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	7 <sup>th</sup> Grade	<b>Created by:</b> Pam Shafer, Erin Shaw, Keith Parrish, Killeen Lynch
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<b>Essential Questions: How is the probability of compound events determined? How do I determine whether events are dependent or mutually exclusive?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard	Suggested Student Activities/Assessments	Resources/Materials
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><i>D. Understand and apply basic concepts of probability.</i></p>	<p>5.D.1. <i>Determine the probability of a compound event composed of two independent events.</i></p> <p>5.D.2. <i>Identify examples of events having the probability of one or zero.</i></p> <p>5.D.3. <i>Describe the probability of events using fractions, decimals, and percents.</i></p> <p>5.D.4. <i>Express probability as a fraction, zero, or one.</i></p> <p>5.D.5. <i>Use probability to generate convincing arguments, draw conclusions, and make decisions in a variety of situations.</i></p> <p>5.D.6. <i>Make predictions based on theoretical probabilities of compound events.</i></p> <p>5.D.7. <i>Determine the probability of a simple event or a compound event composed of a simple, independent events.</i></p> <p style="text-align: center;"><b><i>All of the Above are Introduced in Seventh</i></b></p>	<p><b>Make</b> a chart for Theoretical Probability of rolling 2 die.</p> <p><b>Participate</b> with your partner in the 2 dice game &amp; <b>calculate</b> experimental probability.</p> <p><b>Predict</b> the sums more likely to occur when rolling two dice by responding orally to your partner.</p> <p><b>Determine</b> the sum of the dice by adding the numbers using mental math, paper-pencil, and/or a manipulative.</p> <p><b>Record</b> data from the dice rolls by using tally marks.</p> <p>Help <b>create</b> a probability chart to determine the sum that might occur most often by <b>participating</b> in a discussion with the whole class and with your partner.</p> <p><b>Demonstrate</b> your knowledge of the information from the probability chart by placing your game pieces on the number line with a strategy that relates to the probability chart and by <b>explaining</b> your reasoning for your game strategy orally and by <b>writing</b> a short journal entry.</p> <p><b>*Problem Solving/Reasoning &amp; Proof/Communication/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p><b>Compare and contrast</b> your results from the experiment and theoretical probability. In addition, <b>convert</b> the probabilities as decimals and percents</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p>Teacher generated Pencil/paper Graph paper</p> <p>Copy of “Two Dice Game”</p>

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<b>Essential Questions: How do sides of a right triangle relate to one another?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.</i></p>	<p>3.A.3. Explain and use the Pythagorean theorem.</p> <p><b>Introduce</b></p>	<p>Understand and <b>apply</b> the Pythagorean Theorem and necessary terminology.</p> <p><b>Construct</b> squares on each side of a right triangle on a geoboard and <b>find</b> the area of each square. Then repeat the process using several different triangles, <b>recording</b> your results in a table. Then <b>interpret</b> any patterns in the table.</p> <p><b>Measure</b> the distance diagonally from first to third base on a baseball field and <b>compare</b> it to the distance run by a player who goes from first to second to third. Note that it is a shorter distance diagonally across the field than it is along the two sides. Repeat this type of <b>measuring</b> activity for other squares and rectangles, <b>recording</b> your results in a table and <b>discussing</b> any patterns you see. <b>Calculate</b> the square of each of the three sides of each triangle, record your results in a table. Then <b>interpret</b> any patterns in the table</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/Communication/ Connections/Representation</p> <p><b>Assessment:</b></p> <p>Suppose the side lengths of a right triangle are 27, 36, and 45 units. <b>Explain</b> how you know which one is the hypotenuse?</p> <p><b>Explain</b> the steps you would take to find the length of the hypotenuse of a right triangle if you are given the leg lengths.</p> <p><b>Evaluate</b> the length of the hypotenuse of a right triangle with legs of 4 units and 8 units.</p> <p>Suppose you were given the length of one leg of a right triangle and the length of its hypotenuse. Could you determine the length of the other leg? <b>Justify</b> your reasoning.</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Activity Generator 11.3</li> </ol>

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<b>Essential Questions: What is the relationship between rate, speed, distance, and time?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>A. Understand patterns, relations, and functions.</i></p> <p><i>MEASUREMENT: Students will understand measurement systems and applications.</i></p> <p><i>A. Understand measurable attributes of objects and the units, systems, and processes of measurement.</i></p>	<p><i>2.A.6. Solve problems involving rate, average speed, distance, and time. <b>Introduce</b></i></p> <p><i>4.A.5. Use measures expressed as rates and measures expressed as products to solve problems, check the units of the solutions, and analyze the reasonableness of the answer. <b>Introduce</b></i></p>	<p><i>Investigate</i> real-world story problems expressed as rates.  <i>Evaluate</i> real-world story problems by <i>utilizing</i> rates.                      (Toolkit Ch. 8 pg 559).                      *Problem Solving/Communication/Connections/Representation</p> <p><u><b>Assessment:</b></u>  <i>Create</i> and <i>evaluate</i> your own rate story problem including rate, time and distance.</p>	<p>Student journal/notebook  <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition                             <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM                             <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i>                      1. Toolkit Ch. 8 pg 559</p>

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<b>Essential Questions: What makes geometric figures similar?</b> <b>What makes geometric figures congruent?</b> <b>How does a change of scale affect the area of a geometric figure?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.</i></p> <p><i>C. Apply transformations and use symmetry to analyze mathematical situations.</i></p>	<p>3.A.1. <i>Classify geometric figures as similar or congruent. Introduce</i></p> <p>3.C.1. <i>Determine how perimeter and area are affected by changes of scale. Introduce</i></p>	<p><i>Discuss</i> the terminology relating to similar figures.</p> <p><i>Explore</i> Similar rectangles by <i>drawing</i> similar rectangles.</p> <p><i>Measure</i> rectangles and <i>calculate</i> ratios. <i>Determine</i> if two rectangles are similar using ratios to <i>justify</i> your reasoning. (Activity Generator activity 10.5).</p> <p style="text-align: center;">*Problem Solving/Reasoning &amp; Proof/Communication/ Connections/Representation</p> <p><u>Assessment:</u></p> <p><i>Use</i> your observations to draw <i>conclusions</i>.</p> <p>Suppose you wanted to know if two rectangles are similar. <i>Explain</i> how you could <i>determine</i> whether the two rectangles were similar.</p> <p>Rectangle M is similar to Rectangle N. Rectangle M is 7 units long and 3 units wide. The ratio of Rectangle M to Rectangle N is 3/4. <i>Calculate</i> the dimensions of Rectangle N? <i>Justify</i> your solution and round to the nearest tenth if necessary.</p> <p>Can you think of any shapes that are always similar? <i>Explain</i> what these shapes have in common?</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <p>1. Activity Generator activity 10.5</p> <p>Graph paper Rulers</p>

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<b>Essential Questions: What does a ratio entail?</b> <b>What is the difference in a ratio and proportion?</b> <b>How do ratios and scale factor relate to one another?</b>				
Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>MEASUREMENT: Students will understand measurement systems and applications.</i></p> <p><i>B. Apply appropriate techniques, tools, and formulas to determine measurements.</i></p> <p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>C. Use mathematical models to represent and understand quantitative relationships.</i></p>	<p>4.B.3. [Solve problems involving scale factors, ratios, and proportions.] <b>Introduce / [Review]</b></p> <p>2.C.1. Create scale models and use them for dimensional drawings. <b>Introduce</b></p> <p>2.C.3. Select and use an appropriate model for a particular situation. <b>Introduce</b></p>	<p><i>Investigate</i> a scale drawing <i>using</i> proportions. <i>Evaluate</i> for the scale of a drawing. <i>Calculate</i> scale dimensions by <i>implementing</i> scale proportions. (Activity Generator activity 8.6). <b>*Problem Solving/Communication/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p><i>Use</i> your observations to draw <i>conclusions</i>.</p> <p><i>Create</i> a scale drawing of the top of a named object. In your drawing, let 1 inch represent 8 feet.</p> <p>Cut out the scale drawings and <i>organize</i> the pieces on the scale drawing of the bedroom. <i>Explain</i> why this method might be used to decide the arrangement of the furniture.</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Activity Generator activity 8.6</li> </ol> <p>Scissors Rulers</p>

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<b>Essential Questions: How do I classify angles based on their relationship to another angle or other angles?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>D. Use visualization, spatial reasoning, and geometric modeling to solve problems.</i></p>	<p>3.D.2. <i>Identify and describe the properties of two-dimensional figures:</i></p> <ul style="list-style-type: none"> <li>• <i>identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms</i></li> <li>• <i>use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle</i></li> <li>• <i>draw quadrilaterals and triangles from given information</i></li> </ul> <p><i>Introduce</i></p>	<p><i>Investigate</i> the sum of angle measures in triangles and various diagrams. Given the measure of one angle <i>calculate</i> the measure of another (adjacent, vertical, supplementary, complementary...) (Activity Generator activity 10.3/What Do You Get When You.. worksheet)</p> <p style="text-align: center;"><b>*Problem Solving/Reasoning &amp; Proof/Connections/Representation</b></p> <p><u>Assessment:</u></p> <p><i>Calculate</i> indicated angle measures by <i>implementing</i> other given angle measures.</p>	<p>Student journal/notebook</p> <p><i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher's Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <p style="padding-left: 20px;">1. Activity Generator activity 10.3</p> <p><i>What Do You Get When You</i> worksheet</p> <p>Scissors Rulers Protractors</p>

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<b>Essential Questions: How can I compare masses, weights, geometric measures, and temperatures within measurement systems?</b>				
<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>MEASUREMENT: Students will understand measurement systems and applications.</i></p> <p><i>A. Understand measurable attributes of objects and the units, systems, and processes of measurement.</i></p>	<p>4.A.1. [Choose appropriate units of measure and ratios to recognize new equivalences (e.g., 1 square yard equals 9 square feet) to solve problems.] <b>[Review]</b></p> <p>4.A.2. <b>Select and use the appropriate size and type of unit for a given measurement situation.</b> <b>☑Master</b></p> <p>4.A.3. [Compare masses, weights, capacities, geometric measures, times, and temperatures within measurement systems.] <b>[Review]</b></p> <p>4.A.4. <i>Approximate the relationship between standard and metric measurement systems (e.g., inches and centimeters, pounds and kilograms, quarts and liters).</i> <b>Introduce</b></p>	<p><b>Review</b> the examples of metric measures. Give <b>examples</b> of where they would be seen or used in real-world situations. (Pupil ed. Pg 84-86).</p> <p><b>Estimate</b> the measurements of several given objects. After giving an estimation, <b>measure</b> using centimeters to <b>support</b> your answer. (Activity Generator activity 2.6). <b>*Problem Solving/Communication/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p>Given different real-world scenarios, <b>decide</b> which would be the appropriate unit of measure. (Pupil ed. Pg 87).</p>	<p>Student journal/notebook <i>McDougal Littell Course 2</i></p> <ul style="list-style-type: none"> <li>• Pupil/Teacher’s Edition               <ul style="list-style-type: none"> <li>❖ See Appendix for Related pages</li> </ul> </li> <li>• CD-ROM               <ul style="list-style-type: none"> <li>❖ e-edition/tutorial</li> <li>❖ Power Presentations</li> <li>❖ Toolkit</li> </ul> </li> </ul> <p><i>McDougal Littell Course 2</i></p> <ol style="list-style-type: none"> <li>1. Pupil ed. Pg 84-87</li> <li>2. Activity Generator activity 2.6</li> </ol> <p>Metric rulers Standard rulers Various Objects to measure Graph paper</p>