

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

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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**Essential Questions for the 1<sup>st</sup> 9 Weeks:** How do the four basic operations relate to one another?  
 Why is it important to apply the appropriate mathematical property?  
 What kinds of questions can I address with the relevant data to answer those questions?  
 What is the relationship between linear equations and graphing?  
 What strategies can I use to solve and find the relationship between ratios, proportions and percents?  
 Do I have an understanding of math vocabulary?

Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	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.1. [Use real number properties (e.g., commutative, associative, distributive) to perform various computational procedures.] [Review]</p> <p>1.B.2. <b>Perform arithmetic operations and their inverses (e.g., addition/subtraction, multiplication/division, square roots of perfect squares, cube roots of perfect cubes) on real numbers.</b> <b>Introduce/</b><input checked="" type="checkbox"/><b>Master</b></p> <p>1.B.3. <b>Find square roots (cube roots, 4<sup>th</sup> root, ...) of real numbers using calculators.</b> <input checked="" type="checkbox"/><b>Master/Introduce</b></p> <p>1.C.4. [Use real number properties to perform various computational procedures and explain how they were used.] [Review]</p>	<p><b>Discuss</b> and <b>record</b> results in your individual journals while creating a group sorting web for the relationship of “commute” to commutative and “associate” to associative properties and go over examples.</p> <p><b>Create</b> two problems of your own demonstrating the commutative property and two problems demonstrating the associative property and <b>explain</b> or <b>illustrate</b> the properties step-by-step.</p> <p>What is the sign of the sum of two negative integers? <b>Explain</b> your answer using a number line.</p> <p><b>Predict</b> the sign of the sum of a positive and a negative integer before you add the numbers.</p> <p>*Reasoning &amp; Proof</p> <p><b>Assessment:</b></p> <p>Have students complete a <b>compare and contrast</b> page on problems from the homework as commutative or associative. Students will correctly <b>evaluate</b> 8 out of 10 problems over adding signed integers.</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>Blank Sorting webs</p> <p>Teacher generated examples</p> <p>Compare and contrast record sheet</p> <p>Number line template page</p> <p><a href="http://www.webmath.com/k8numlineuse.html">http://www.webmath.com/k8numlineuse.html</a> (copy then paste in address bar) (Allows students to enter data then it generates a model of the no. line)</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
1 <sup>st</sup> Nine Weeks	<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>C. Compute fluently and make reasonable estimates.</i></p>	<p>1.A.1. <b>Sort numbers by their properties (e.g., prime, composite, square, square root).</b> <input checked="" type="checkbox"/>Master</p> <p>1.C.1. <i>Formulate algebraic expressions that include real numbers to describe and solve real-world problems.</i> <b>Introduce</b></p> <p>1.C.2. <i>Use a variety of computational methods to estimate quantities involving real numbers.</i> <b>Introduce</b></p> <p>1.C.3. [Differentiate between rational and irrational numbers.] <b>[Review]</b></p> <p>1.C.5. <b>Perform and explain computations with rational numbers, pi, and first-degree algebraic expressions in one variable in a variety of situations.</b> <input checked="" type="checkbox"/>Master</p> <p>1.C.7. [Approximate, mentally and with calculators, the value of irrational numbers as they arise from problem situations.] <b>[Review]</b></p>	<p>In cooperative groups...</p> <p><b>Classify</b> the given numbers by their properties then Analyze the Grass for Goats scenario...</p> <p>"The Jacobsens keep their goat on a chain that is 3 meters long."</p> <ol style="list-style-type: none"> <li>1. If they chain the goat to a metal hook in the center of their yard, what is the area of the grass that the goat can reach to eat? Sketch an <b>illustration</b> and <b>validate</b> your solution.</li> <li>2. Sometimes the Jacobsens chain the goat to the corner of a shed that is 5 meters by 4 meters. The 3-meter chain is attached to the base of the wall at ground level. What is the area of grass that the goat can reach? <b>Construct</b> a diagram and <b>explain</b> your the solution.</li> </ol> <p>*Problem Solving/Reasoning &amp; Proof/Connections</p> <p><b>Assessment:</b></p> <ol style="list-style-type: none"> <li>3. Suppose the goat was chained at ground level to the center of the 4-meter shed wall. Would the amount of grass the goat can reach be greater than what he could reach when chained to the corner of the shed? Use <b>substitution</b> within formulas, <b>illustrations</b> and <b>models</b> to <b>justify</b> your solution in your journal/notebook.</li> </ol>	<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>Page of Various numbers consisting of all properties in random order.</p> <p>MC<sup>2</sup> Worksheet (<i>Grass for Goats</i>)</p> <p>Rulers</p> <p>Tracing Paper</p> <p>Pencils (colored)</p> <p>Graph paper</p> <p>Compass</p>

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<p><b>1<sup>st</sup> Nine Weeks</b></p>	<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>5.A.2. [Generate, organize, and interpret real numbers in a variety of situations.] [Review]</p>	<p><i>Utilize</i> a broken line graph depicting the average of monthly bills and <i>create</i> an ordered and unordered stem-n-leaf graph.</p> <p><i>Critique</i> each graph.</p> <p><i>Choose</i> between the two graphs the one which allows for an easier interpretation of the data. <i>Defend</i> the choice through reasoning.</p> <p>*Representation/Reasoning &amp; Proof</p> <p><b>Assessment:</b></p> <p>Given a set of data the student will be able to <i>generate</i> an Ordered stem-n-leaf graph.</p> <p><i>Compile</i> an interpretation of the data <i>outlining</i> points on their generated graph.</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>Teacher generated list of billing information.</p> <p>Broken line graph template</p> <p>Teacher generated broken line graph using monthly billings.</p>

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1 <sup>st</sup> Nine Weeks	<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>C. Compute fluently and make reasonable estimates.</i></p>	<p><b>1.A.2. Demonstrate the magnitude of rational numbers (e.g., trillions to millions). <input checked="" type="checkbox"/>Master</b></p> <p><b>1.C.8. Express numbers in scientific notation (including negative exponents) in appropriate problem situations using a calculator. <input checked="" type="checkbox"/>Master/Introduce</b></p>	<p>Real - life Scenario: Two of the wealthiest families in America are the DuPont family, with assets estimated at <math>\\$1.5 \times 10^{11}</math>, and the Walton retailing family, with assets estimated a <math>\\$2.35 \times 10^{10}</math>.</p> <p><i>Using</i> paper and pencil <i>formulate</i> a plan to <i>solve</i> for the combined net worth of the two families. <i>Show</i> the solution in rational number form and in scientific notation.</p> <p><i>Implement</i> the plan <i>defending</i> each step by <i>showing</i> which formula is used, the work required, or a written reason.</p> <p>Check the solution using a calculator, again listing each step taken.</p> <p>*Connections/Problem Solving</p> <p><b>Assessment:</b></p> <p>Given numbers written in one form the student will be able to <i>relate</i> them in another equivalent form.</p> <p>Given a problem situation the student will be able to <i>develop</i> a plan to <i>solve</i>, <i>justifying</i> each step taken, <i>providing</i> the solution in a variety of ways.</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>Calculator</p> <p>Real-life scenario poster</p> <p>Copy of <i>Scott Foresman</i> * <i>Addison Wesley</i> 8 page 20 worksheet</p>

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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>C. Compute fluently and make reasonable estimates.</i></p> <p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p>	<p>1.C.6. [Select and use appropriate forms of rational numbers to solve real-world problems including those involving proportional relationships.] <b>[Review]</b></p> <p>2.B.4. <b>Demonstrate understanding of the relationships between ratios, proportions, and percents and solve for a missing term in a proportion.</b> <input checked="" type="checkbox"/>Master</p>	<p><b>Secret Symbol Puzzle</b></p> <p><b>Provide</b> missing data in a table based on a circle (pie) graph and the correlated circle (pie) graph based on data provided in the table. <b>Use</b> this information to <b>solve</b> a puzzle by shading the numbered boxes with the corresponding answers to reveal a secret symbol.</p> <p>Make <b>conclusions</b> regarding the data given in the circle graph and the table.</p> <p><b>Using</b> a given percent <b>calculate</b> the raw data, fraction, and angle measure of a sector.</p> <p><b>Using</b> a given fraction <b>calculate</b> the raw data, percent, and angle measure of a sector.</p> <p><b>Using</b> a given an angle measure of a sector <b>calculate</b> the raw data, percent, and fraction.</p> <p>Record all data on the provided table and circle graph.</p> <p>Hint: Use fractions within proportions to solve for angle measures of sectors in a circle (pie) graph.</p> <p>*Representation/Problem Solving/Connections</p> <p><b>Assessment:</b></p> <p>Given a raw data total with a percentage score, numerical score, fractional score and an angle measure of a sector the student will <b>compute</b> all missing values then <b>design</b> a table and <b>construct</b> a <b>correlated</b> circle graph to <b>illustrate</b> the solutions.</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>Compass Protractor Ruler</p> <p>Relates to <i>McDougal Littell Course 3 Remediation lesson 8.4 pg 244</i></p>

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1 <sup>st</sup> Nine Weeks	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p>	<p><b>2.B.1. Demonstrate the difference between an equation and an expression.</b> <input checked="" type="checkbox"/>Master</p> <p><b>2.B.2. Solve two-step linear equations and inequalities in one variable with rational solutions.</b> <input checked="" type="checkbox"/>Master/<i>Introduce</i></p> <p><i>2.B.6. Formulate and solve problems involving simple linear relationships, find percents of a given number, variable situations, and unknown quantities.</i> <i>Introduce</i></p> <p>2.B.7. [Use symbols, variables, expressions, inequalities, equations, and simple systems of equations to represent problem situations that involve variables or unknown quantities.] [<b>Review</b>]</p>	<p>Real-life scenario: From a sign, a student noted that an unlimited summer pass to the pool was \$100.00 or they could pay a \$12 registration fee plus \$3.00 per day.</p> <p>In your journal, <b>predict</b> which would be the better deal.</p> <p>Now...</p> <p><b>Evaluate</b> the expression: <math>3(40) + 12</math></p> <p>In your journal, <b>explain</b> what the value of the expression solved represents?</p> <p>Solve the two-step equation: <math>3x + 12 = 100</math></p> <p>In your journal, <b>interpret</b> what the answer demonstrates regarding the payment plans?</p> <p>*Connections/Problem Solving/Communication</p> <p><b>Assessment:</b></p> <p><b>Compare and Contrast</b> each payment plan. <b>Decide</b> which plan would be the better deal then give one reason why you might <b>choose</b> one over the other.</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>Real-life scenario poster</p> <p>Copy of <i>McDougal Littell Course 3</i> page 133</p>

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<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>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><i>2.A.1. Move between numerical, tabular, and graphical representations of linear relationships.</i> <b>Introduce</b></p> <p><i>2.B.5. Graph solution sets of linear equations in two variables on the coordinate plane.</i> <b>Introduce</b></p> <p><i>3.B.1. Represent, formulate, and solve distance and geometry problems using the language and symbols of algebra and the coordinate plane and space (e.g., ordered triplets).</i> <b>Introduce</b></p>	<p><b>Rearrange</b> 25 desks in a square array. <b>Decide</b> on one student as the class recorder. The recorder will hand each students a card with an ordered pair written on it.</p> <p><b>Select</b> a desk based on the card with the ordered pair (x, y) that you have received.</p> <p>You are a human coordinate plane so you must sit according to the characteristics of a coordinate plane by <b>deciding</b> where the x-axis and y-axis intercept.</p> <p>You may refer to the large grid which has some points labeled.</p> <p>If the ordered pair you received has 0 as the first number stand. Through <b>communication</b> identify which axis is identified by this coordinate and on which axis the students with the 0 as the first coordinate stand on. Once a consensus has been made, you need to sit down.</p> <p>If the ordered pair you received has 0 as the second number stand. Through <b>communication</b> identify which axis is identified by this coordinate and on which axis the students with the 0 as the second coordinate stand on. Once a consensus has been made, you need to sit down.</p> <p>If the ordered pair you received has an x-coordinate of 1, stand up. Recorder will write <math>x = 1</math> on the board. Students with an x-coordinate of -2 stand and the recorder will write <math>x = -2</math> on the board. Through <b>communication</b>, decide what type of lines, (vertical, parallel to the y-axis, horizontal, parallel to the x-axis) are formed. Sit down.</p> <p>If the ordered pair you received has a y-coordinate of 1, stand up. Recorder will write <math>y = 1</math> on the board. Students with a y-coordinate of -1 stand and the recorder will write <math>y = -1</math> on the board.</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>25 large ordered pair cards labeled as shown on “<i>Human Coordinate Plane: Student Worksheet</i>”</p> <p>(<a href="http://fcit.usf.edu/math/lessons/lessons8.htm/humanPS.pdf">http://fcit.usf.edu/math/lessons/lessons8.htm/humanPS.pdf</a>) (copy then paste in address bar) (alternate activity and student worksheet if preferred)</p> <p>Large grid posted with several points shown</p> <p>Overhead projector or chalkboard</p>

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<b>1<sup>st</sup> Nine Weeks</b>	<p><i>Continued (Page 2)</i></p> <p><b>ALGEBRA:</b> Students will understand algebraic concepts and applications.</p> <p><b>A. Understand patterns, relations, and functions.</b></p> <p><b>B. Represent and analyze mathematical situations and structures using algebraic symbols.</b></p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</p> <p><b>B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.</b></p>	<p><i>Continued (Page 2)</i></p> <p>2.A.1. Move between numerical, tabular, and graphical representations of linear relationships. <b>Introduce</b></p> <p>2.B.5. Graph solution sets of linear equations in two variables on the coordinate plane. <b>Introduce</b></p> <p>3.B.1. Represent, formulate, and solve distance and geometry problems using the language and symbols of algebra and the coordinate plane and space (e.g., ordered triplets). <b>Introduce</b></p>	<p><i>Continued (Page 2)</i></p> <p>Through <b>communication</b>, decide what type of lines, (vertical, parallel to the y-axis, horizontal, parallel to the x-axis) are formed. Sit down</p> <p>Students whose ordered pair has a sum of 1, stand and the recorder will write <math>x + y = 1</math>. Remain standing while students whose ordered pair first number – the second number equals 1 stand and the recorder will write <math>x - y = 1</math>. Through <b>communication</b>, decide if (1, 0) is a point on both lines and represents the point of intersection. Then substitute values in the equations on the board to show that (1, 0) makes both <math>x + y = 1</math> and <math>x - y = 1</math> true.</p> <p>Repeat the above process using <math>x + y = 1</math> and <math>x + y = 2</math>. <b>Discover</b> if there is a point of intersection and what type of lines, (vertical, parallel to the y-axis, horizontal, parallel to the x-axis) are formed.</p> <p>Transfer all recorded data into your student journal/notebook</p> <p>*Connections/Communication/Representation</p> <p><b>Assessment:</b></p> <p><b>Performance:</b> Ask students whose ordered pair sum is 2 to raise their hands. Now ask students whose ordered pair sum is less than 2 to stand and you write <math>x + y &lt; 2</math> on the board. Show the students a graph with a dotted line for <math>x + y = 2</math> and shading for <math>x + y &lt; 2</math>. Note that the shading includes all points, not just integral values. Repeat the process for other inequalities.</p> <p>The students may later draw the dotted line indicating a sum and shade their own graph indicating an inequality.</p> <p>The students responses will need to be recorded through teacher observation and the students will need to sign and turn in their individual cards for grading purposes.</p>	<p><i>Continued (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>25 large ordered pair cards labeled as shown on “<i>Human Coordinate Plane: Student Worksheet</i>”</p> <p>(<a href="http://fcit.usf.edu/math/lessons/lessons8.htm/humanPS.pdf">http://fcit.usf.edu/math/lessons/lessons8.htm/humanPS.pdf</a>) (copy then paste in address bar) (alternate activity and student worksheet if preferred)</p> <p>Large grid posted with several points shown</p> <p>Overhead projector or chalkboard</p>

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1 <sup>st</sup> Nine Weeks	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>D. Analyze changes in various contexts.</i></p> <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>2.D.1. <i>Use graphs, tables, and algebraic representations to make predictions and solve problems that involve change.</i> <b>Introduce</b></p> <p>2.D.2. <i>Estimate, find, and justify solutions to problems that involve change using tables, graphs, and algebraic expressions.</i> <b>Introduce</b></p> <p>5.A.1. <i>Represent two numerical variables on a plot, describe how the data points are distributed, and identify relationships that exist between the two variables.</i> <b>Introduce</b></p>	<p>In the home economics kitchen or science lab, freeze a container of water. Monitor the freezing point temperature in both Celsius and Fahrenheit.</p> <p><b>Record</b> the room temperature of water held in a congruent container in both Celsius and Fahrenheit..</p> <p>Boil a container of water and again <b>record</b> the temperature in both Celsius and Fahrenheit.</p> <p><b>Generate</b> a table of the data.</p> <p><b>Create</b> a graph for the equation that relates degrees Celsius to degrees Fahrenheit. Use C=0, 10°, 20°, 30°, and 40° in your table values.</p> <p><b>Utilize</b> the conversion formula and <b>convert</b> the Celsius to Fahrenheit. (<math>F = \frac{9}{5}C + 32^\circ</math>)</p> <p><b>Interpret</b> your data, both <b>discovered</b> and <b>computed</b>. Now, approximate the normal body temperature in degrees Celsius.</p> <p>*Communication/Representation/Problem Solving</p> <p><u>Assessment:</u></p> <p>Is 10°C warmer or colder than room temperature? <b>Assess</b> your recorded data and <b>explain</b> how you can use your graph to answer this question.</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>Thermometers (in Celsius and Fahrenheit)</p> <p>Graph paper</p> <p>Rulers</p> <p>Conguent/similar containers</p> <p>Burners</p> <p>Freezer</p> <p>Relates to <i>McDougal Littell Course 3</i> Text pg 602</p> <p>Technology (Students may pull page 602 for ideas from e-edition CD.)</p>

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**Essential Question for the 2<sup>nd</sup> 9 Weeks:** What strategies can I use to solve a multi-step word problem?  
 How do distance, rate and time relate to one another?  
 Do I understand and can apply the basic concepts of probability?  
 How can I collect, organize, and display data and then interpret the data I have collected?  
 Do I have an understanding of math vocabulary?

Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials									
2 <sup>nd</sup> Nine Weeks	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>D. Analyze changes in various contexts.</i></p>	<p>2.D.3. <i>Use appropriate problem-solving strategies (e.g., drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table or graph, working a simpler problem, writing an algebraic expression or working backward) to solve problems that involve change.</i>  <b>Introduce</b></p> <p>2.D.4. [Solve multi-step problems that involve changes in rate, average speed, distance, and time.]  <b>Introduce / [Review]</b></p>	<p>In your notebook, <b>formulate</b> your <i>Problem Solving Plan (PDSA)</i></p> <ol style="list-style-type: none"> <li>1. <b>Read</b> and <b>Understand</b> (Read the problem carefully. Identify the question and any important information)</li> <li>2. Make a <b>Plan</b> (Decide on a problem solving strategy.)</li> <li>3. <b>Solve</b> the Problem (Use the strategy to answer the question showing formulas and work.)</li> <li>4. <b>Assess</b> solution and Look Back (Check that your answer is <i>reasonable</i>.)</li> </ol> <p>Working with a partner...  <b>You and a friend decide to compete in a triathlon. You both swim 200 meters, bike 10 kilometers, and then run 2 kilometers. Using the following table:</b></p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Swimming (m/min)</th> <th style="text-align: center;">Biking (km/min)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><i>You</i></td> <td style="text-align: center;">76.9</td> <td style="text-align: center;">0.43</td> </tr> <tr> <td style="text-align: center;"><i>Friend</i></td> <td style="text-align: center;">82.6</td> <td style="text-align: center;">0.41</td> </tr> </tbody> </table> <p>Determine who has the better total time after these two stages?</p> <p>Which formula would you use to find swimming and running times? <b>Explain</b> your reasoning.</p> <p>A. distance = rate x time    B. time = distance ÷ rate          C. rate = distance ÷ time</p> <p>*Communication/Problem Solving/Reasoning &amp; Proof/Connections</p> <p><b>Assessment:</b>          What if? Suppose that your friend biked at a rate of 0.44 km/min. Who had the better total time after two stages?  <b>Justify</b> your solution.</p>		Swimming (m/min)	Biking (km/min)	<i>You</i>	76.9	0.43	<i>Friend</i>	82.6	0.41	<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 &amp; Littell Course 3</i> pg. 37 &amp; 38</p> <p>Teacher generated worksheet containing necessary table and table templates.</p>
	Swimming (m/min)	Biking (km/min)											
<i>You</i>	76.9	0.43											
<i>Friend</i>	82.6	0.41											

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2 <sup>nd</sup> Nine Weeks	<p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>D. Analyze changes in various contexts.</i></p>	<p>2.D.5. Analyze problems that involve change by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing, and observing patterns. <b>Introduce</b></p> <p>2.D.6. Generalize a pattern of change using algebra and show the relationship among the equation, graph, and table of values. <b>Introduce</b></p> <p>2.D.7. [Recognize the same general pattern of change presented in different representations.] <b>[Review]</b></p>	<p>-life scenario: A deep-sea diver is 160 feet below the surface of the water. The diver is ascending at a rate of 4 feet every 4 minutes.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> <p>Complete the table and <b>generate</b> a graph to <b>illustrate</b> the data.</p> <p>Is the relationship between depth and time linear? <b>Explain.</b></p> <p><b>Formulate</b> an equation that will determine the time to rise to the surface. <b>Justify</b> your answer. (<math>-60 + 20m = 0</math>)</p> <p>Communication/Problem Solving/Reasoning &amp; Connections/Representation</p> <p><b>Assessment:</b></p> <p>Have students graph a table of information and <b>explain</b> the relationship. Given a list of sample relationships, <b>conclude</b> whether there is a relationship. (i.e. is it positive or negative)</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>Graph paper</p> <p>Teacher generated resources/templates</p> <p>Related to <i>McDougal &amp; Littell Course 3</i> pg 602 and <i>McDougal &amp; Littell Remediation Book</i> pg 256</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
2 <sup>nd</sup> Nine Weeks	<p><i>Continued (Page 2)</i></p> <p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>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><i>D. Understand and apply basic concepts of probability.</i></p>	<p><i>Continued (Page 2)</i></p> <p><b>5.A.5. Simulate an event selecting and using different models. ☑Master</b></p> <p><b>5.B 5. Evaluate and defend the reasonableness of conclusions drawn from data analysis. ☑Master</b></p> <p><b>5.C.3. Conduct simple experiments and/or simulations, record results in charts, tables, or graphs, and use the results to draw conclusions and make predictions. ☑Master</b></p> <p><b>5.D.2. Design and use an appropriate simulation to estimate the probability of a real-world event (e.g., disk toss, cube toss). ☑Master</b></p> <p><b>5.D.4. Use theoretical or experimental probability to make predictions about real-world events. ☑Master</b></p> <p><b>5.D.5. [Use probability to generate convincing arguments, draw conclusions, and make decisions in a variety of situations.]</b> <b>[Review]</b></p>	<p><i>Continued (Page 2)</i></p> <p><b>Assess</b> your data. <b>Incorporate</b> your tabular data into a bar or broken line graph. Remember to title and label your graph.</p> <p><b>Compute</b> the theoretical probability of getting a complete set in the first six boxes.</p> <p>*Communication/Problem /Proof/Connections/Representation</p> <p><u><b>Assessment:</b></u></p> <p><b>Appraise</b> your results and <b>write</b> a short paragraph about your experiment. Was the result what you expected it to be? Why or why not? <b>Focus</b> on your experimental answers and your theoretical solution, <b>explain</b> how they compared. <b>Critique</b> the cereal company’s incorporation of prizes as a marketing tool. Use complete sentences.</p>	<p><i>Continued (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>Graph paper</p> <p>Rulers</p> <p>Dice</p> <p>Teacher generated resources/templates</p> <p>“Silly Sweet Cereal” sheet by Dr. Lion.</p> <p>New Mexico’s 4 pt mathematics rubric</p> <p>Teacher generated rubric if preferred.</p> <p><a href="http://rubistar.4teachers.org/index.php?screen=CustomizeTemplate&amp;bank_rubric_id=24&amp;section_id=7&amp;">http://rubistar.4teachers.org/index.php?screen=CustomizeTemplate&amp;bank_rubric_id=24&amp;section_id=7&amp;</a> (Allows you to easily create your own rubric)</p> <p><a href="http://projects.edtech.sandi.net/staffdev/tps_s99/rubrics/rubrics.html">http://projects.edtech.sandi.net/staffdev/tps_s99/rubrics/rubrics.html</a> (Allows you to easily create your own rubric)</p>

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2 <sup>nd</sup> Nine Weeks	<p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>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.6. [Develop an appropriate strategy using a variety of data from surveys, samplings, estimations, and inferences to address a specific problem.] <b>[Review]</b></p> <p>5.B 2. [Generate, organize, and interpret real number and other data in a variety of situations.] <b>[Review]</b></p> <p>5.B 3. [Analyze data to make decisions and to develop convincing arguments from data displayed in a variety of formats that include:</p> <ul style="list-style-type: none"> <li>• plots</li> <li>• distributions</li> <li>• graphs</li> <li>• scatter plots</li> <li>• diagrams</li> <li>• pictorial displays</li> <li>• charts and tables</li> <li>• Venn diagrams ] <b>[Review]</b></li> </ul> <p>5.B 4. [Interpret and analyze data from graphical representations and draw simple conclusions (e.g., line of best fit).] <b>[Review]</b></p>	<p style="text-align: center;"><b>GOALS WILL HELP YOU REACH SUCCESS</b></p> <p>Your present circumstances don't determine where you can go, they merely determine your starting place. The purpose of goals is to focus your attention on your future. Magical things will begin when you set them. Your power to accomplish becomes a reality when you have a goal. Your mind reaches toward achievement when it has clear objectives. Goals give you a starting place and a destination. Just focus the full power of all you are on what you have a burning desire to attain, and you will achieve success.</p> <p style="text-align: center;"><b>Act on your dreams and they are yours.</b></p> <p><b>Count</b> the number of words in each sentence in the above paragraph. <b>Record</b> this data in a stem-and-leaf plot or a line plot.</p> <p>Repeat using a long newspaper clipping (15-20 sentences) of any genre. <b>Create</b> a box-and-whisker plot <b>comparing</b> the two sets of data.</p> <p>What <b>conclusions</b> can you make?</p> <p>*Communication/Representation/Connections</p> <p><b>Assessment:</b></p> <p><b>Count</b> the number of words in each sentence of the two different newspaper clippings which have been provided.</p> <p><b>Create</b> a stem-and-leaf plot, line plot, and a box-and-whisker plot for each clipping.</p> <p>Write a <b>Compare &amp; Contrast</b> paragraph over the graphs.</p> <p>Write a <b>conclusion</b> regarding word count and genre? (Grade using the New Mexico 4 point Rubric)</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 &amp; Littell Course 3</i> pg 658</p> <p>Newspaper Clippings</p> <p>Grid paper</p> <p>New Mexico 4 point Rubric</p>

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2 <sup>nd</sup> Nine Weeks	<p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>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.4. <b>Select the appropriate measure of central tendency to describe a set of data for a particular problem situation.</b> <input checked="" type="checkbox"/> Master</p> <p>5.B.6. <b>Use appropriate central tendency and spread as a means for effective decision-making in analyzing data and outliers.</b> <input checked="" type="checkbox"/> Master</p>	<p>Statistical Terms:</p> <ul style="list-style-type: none"> <li>• Central Tendency               <ul style="list-style-type: none"> <li>○ Mean: average value</li> <li>○ Median: middle no. in ascending order</li> <li>○ Mode: most common value</li> </ul> </li> <li>• Spread of Data               <ul style="list-style-type: none"> <li>○ Low: least value</li> <li>○ High: greatest value</li> <li>○ Range: greatest minus least</li> </ul> </li> </ul> <p>One measure of central tendency may be more appropriate than another to describe a data set.</p> <p>i.e. in the data set 6, 13, 4, 9, 38—38 is an outlier (much greater or much less than the other values).</p> <p>Therefore the Mean = 14 and the Median = 9 The mean is greater than 4 out of the 5 values in the set. The median describes the data set better than the mean.</p> <p><b>Predict</b> what would happen to the mean if the outlier were removed.</p> <p><b>Solve</b> for the new mean? <b>Compare</b> your prediction to the actual mean.</p> <p><b>Compute</b> the central tendencies (mean, median, mode) and the Spread of the data values (low, high, range) for the given set of ages: 38, 50, 43, 31, 48, 55, 50</p> <p><b>Compute</b> the mean, median and mode of the set of numbers below. Then use the letters underneath your answers to answer the riddle.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tr> <td>10</td><td>12</td><td>14</td><td>19</td><td>13</td><td>18</td><td>12</td> </tr> <tr> <td>S</td><td>T</td><td>L</td><td>P</td><td>I</td><td>N</td><td>T</td> </tr> </table> <p>What does the earth do on its axis at 23° that some people do to their hats? (One letter may be used twice.) _ _ _ _ _!</p>	10	12	14	19	13	18	12	S	T	L	P	I	N	T	<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 &amp; Littell Course 3</i> pg 272</p>
10	12	14	19	13	18	12												
S	T	L	P	I	N	T												

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
2 <sup>nd</sup> Nine Weeks	<p><i>Continued (Page 2)</i></p> <p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p>A. <i>Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</i></p> <p>B. <i>Select and use appropriate statistical methods to analyze data.</i></p>	<p><i>Continued (Page 2)</i></p> <p>5.A.4. <b>Select the appropriate measure of central tendency to describe a set of data for a particular problem situation.</b>  <input checked="" type="checkbox"/> Master</p> <p>5.B.6. <b>Use appropriate central tendency and spread as a means for effective decision-making in analyzing data and outliers.</b>  <input checked="" type="checkbox"/> Master</p>	<p><i>Continued (Page 2)</i></p> <p>*Problem Solving/Reasoning &amp; Proof</p> <p><b>Assessment:</b></p> <p>Jorge recorded the following heights (in inches) of the plants he grew for an experiment. 4 25 9 5 5 11 5 8</p> <p><b>Solve</b> for each measure of central tendency.</p> <p><b>Decide</b> which measure of central tendency describes the data set the best? <b>Defend</b> your choice.</p> <p><b>Predict</b> what would happen to the mean if the outlier were removed.</p> <p><b>Solve</b> for the new mean? <b>Compare</b> your prediction to the actual mean.</p>	<p><i>Continued (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 &amp; Littell Course 3</i> pg 272</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
2 <sup>nd</sup> Nine Weeks	<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>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><i>C. Develop and evaluate inferences and predictions that are based on data.</i></p>	<p><b>2.C.1. Generate different representations to model a specific numerical relationship given one representation of data (e.g., a table, a graph, an equation, a verbal description). ☑Master</b></p> <p>5.B.1. [Use changes in scales, intervals, or categories to help support a particular interpretation of data.] <b>[Review]</b></p> <p><b>5.C.4. Compare expected results with experimental results and information used in predictions and inferences. ☑Master</b></p>	<p><i>Secret Symbol Puzzle</i></p> <p><b>Integrate</b> the work you did for the <i>Secret Symbol Puzzle</i> into the following activity:</p> <p><b>calculate</b> your new values in your chart.</p> <p><b>Create</b> a histogram <b>comparing</b> the first total with the new totals.</p> <p><b>Journaling: Compose</b> a summary of the distribution of the data within the graphs.</p> <p>*Communication/Problem Solving/Representation</p> <p><b>Assessment:</b></p> <p><b>Construct</b> a pie chart using the new values.</p> <p>Note: Pie charts need to be correctly proportioned (Á measures must <b>correlate</b> to the correct percent of circle and portion of the total.)</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>Compass Protractor Ruler</p> <p>Relates to <i>McDougal Littell Course 3 Remediation lesson 8.4 pg 244</i></p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials																													
<p><b>2<sup>nd</sup> Nine Weeks</b></p>	<p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><b>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</b></p> <p><b>B. Select and use appropriate statistical methods to analyze data.</b></p> <p><b>C. Develop and evaluate inferences and predictions that are based on data.</b></p>	<p>5.A.3. Organize, <i>analyze</i>, and display appropriate <i>quantitative and qualitative data to address specific questions including:</i></p> <ul style="list-style-type: none"> <li>• frequency distributions</li> <li>• plots</li> <li>• histograms</li> <li>• bar, line, and pie graphs</li> <li>• diagram and pictorial displays</li> <li>• charts and tables</li> </ul> <p><b>Introduce</b></p> <p>5.B 7. <i>Identify simple graphic misrepresentations and distortions of sets of data (e.g., unequal interval sizes, omission of parts of axis range, scaling).</i> <b>Introduce</b></p> <p>5.B 8. <i>Use appropriate technology to display data as lists, tables, matrices, graphs, and plots and to analyze the relationships of variables in the data displayed.</i> <b>Introduce</b></p> <p>5.C.1. <i>Describe how changes in scale, intervals, or categories influence arguments for a particular interpretation of the data.</i> <b>Introduce</b></p> <p>5.C.2. <i>Describe how reader bias, measurement errors, and display distortion can affect the interpretation of data, predictions, and inferences based on data.</i> <b>Introduce</b></p>	<p>While <b>participating</b> with a partner, one rolling two number cubes and one recording the data, you will <b>discover</b> and <b>record</b> the frequency of sums rolled.</p> <p>Roll the number cubes and add the numbers together. Make a tally mark in the second column of the table next to the interval in which the sum falls.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 25%;">Sum of numbers rolled</th> <th style="width: 25%;">Tally</th> <th style="width: 25%;">Frequency</th> </tr> </thead> <tbody> <tr><td>1-3</td><td></td><td></td></tr> <tr><td>4-6</td><td></td><td></td></tr> <tr><td>7-9</td><td></td><td></td></tr> <tr><td>10-12</td><td></td><td></td></tr> </tbody> </table> <p>Repeat the process 20 times, each time record the sum rolled.</p> <p>Add up the tally marks for each interval. <b>Record</b> the sum in the frequency column.</p> <p><b>Determine</b> the scale you will use on the vertical axis for the graph, and then <b>create</b> a graph of the data. <b>Label</b> the vertical axis in the graph provided with the scale you determined above. <b>Draw</b> a bar to represent the frequency for the interval 1-3. <b>Draw</b> a bar to represent the frequency for the interval 4-6, so that it touches the first bar. (Neighboring bars should touch.) <b>Draw</b> bars for the remaining intervals.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td rowspan="2" style="width: 10%; vertical-align: middle;">Frequency</td> <td style="width: 20%; height: 40px;"></td> <td style="width: 20%; height: 40px;"></td> <td style="width: 20%; height: 40px;"></td> <td style="width: 20%; height: 40px;"></td> </tr> <tr> <td>1-3</td> <td>4-6</td> <td>7-9</td> <td>10-12</td> </tr> <tr> <td colspan="5" style="text-align: center;">Sum of Numbers Rolled</td> </tr> </table> <p>You and your partner work together and <b>Interpret</b> your table to answer the following questions.</p>	Sum of numbers rolled	Tally	Frequency	1-3			4-6			7-9			10-12			Frequency					1-3	4-6	7-9	10-12	Sum of Numbers Rolled					<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>Grid paper Ruler Map/color pencils</p> <p>Relates to <i>McDougal Littell Course 3 Lesson 1.1</i></p> <p>Relates to <i>McDougal Littell Course 3 Activity Generator lesson 1.1 Activity C</i></p>
Sum of numbers rolled	Tally	Frequency																															
1-3																																	
4-6																																	
7-9																																	
10-12																																	
Frequency																																	
	1-3	4-6	7-9	10-12																													
Sum of Numbers Rolled																																	

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
<b>2nd Nine Weeks</b>	<p><i>Continued (Page 2)</i></p> <p><b>DATA ANALYSIS AND PROBABILITY:</b> <i>Students will understand how to formulate questions, analyze data, and determine probabilities.</i></p> <p><b>A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.</b></p> <p><b>B. Select and use appropriate statistical methods to analyze data.</b></p> <p><b>C. Develop and evaluate inferences and predictions that are based on data.</b></p>	<p><i>Continued (Page 2)</i></p> <p>5.A.3. Organize, <i>analyze</i>, and display appropriate <i>quantitative and qualitative data to address specific questions including:</i></p> <ul style="list-style-type: none"> <li>• frequency distributions</li> <li>• plots</li> <li>• histograms</li> <li>• bar, line, and pie graphs</li> <li>• diagram and pictorial displays</li> <li>• charts and tables</li> </ul> <p><b>Introduce</b></p> <p>5.B 7. <i>Identify simple graphic misrepresentations and distortions of sets of data (e.g., unequal interval sizes, omission of parts of axis range, scaling).</i> <b>Introduce</b></p> <p>5.B 8. <i>Use appropriate technology to display data as lists, tables, matrices, graphs, and plots and to analyze the relationships of variables in the data displayed.</i> <b>Introduce</b></p> <p>5.C.1. <i>Describe how changes in scale, intervals, or categories influence arguments for a particular interpretation of the data.</i> <b>Introduce</b></p> <p>5.C.2. <i>Describe how reader bias, measurement errors, and display distortion can affect the interpretation of data, predictions, and inferences based on data.</i> <b>Introduce</b></p>	<p><i>Continued (Page 2)</i></p> <p>Which interval had the greatest frequency? Which interval had the least frequency?</p> <p>What was the frequency for the interval 1-3?</p> <p>Which interval had a higher frequency: 4-6 or 10-12? By how much did those frequencies differ?</p> <p>Can you <b>determine</b> from the graph how many times the sum of the number cubes was 8? Explain.</p> <p>What do you notice about the intervals? What other intervals do you think you could use?</p> <p>Graph the given data in intervals of 2 &amp; intervals of 6. <b>Compare &amp; contrast</b> the graphs.</p> <p>Which graph best represents the given data? <b>Justify</b> your answer in a brief paragraph. <b>Conclude</b> why some graphs may be misleading.</p> <p>*Communication/Representation/Reasoning &amp; Proof</p> <p><b>Assessment:</b></p> <p>Suppose you poll your class for the month in which each student was born. You want to <b>create</b> a table and a graph like the ones you created in this activity. <b>Decide</b> what numeric intervals would you use in your table? What scale would you use to represent the frequency on your graph? <b>Justify</b> your choices.</p>	<p><i>Continued (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>Grid paper Ruler Map/color pencils</p> <p>Relates to <i>McDougal Littell Course 3 Lesson 1.1</i></p> <p>Relates to <i>McDougal Littell Course 3 Activity Generator lesson 1.1 Activity C</i></p>

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**Essential Questions for the 3<sup>rd</sup> 9 Weeks:** How can I collect, organize, and display data and then interpret the data I have collected?  
 Why/when do I need to use a variable?  
 How can I use patterns and relationships to solve functions?  
 Can I measure and classify angles?  
 Using geometric vocabulary, can I identify and describe attributes of two- and three-dimensional geometric shapes?  
 What tools and strategies can I use to find perimeter, area, surface area and volume of a geometric shape?  
 How do I use the Pythagorean Theorem?  
 Can I use attributes to find the relationship between geometric shapes?  
 Do I have an understanding of math vocabulary?

Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials												
3 <sup>rd</sup> Nine Weeks	<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.2. [Use variables to generalize patterns and information presented in tables, charts, and graphs:]</p> <p><i>graph linear functions noting that the vertical change per unit of horizontal change (the slope of the graph) is always the same</i></p> <p>[plot the values of quantities whose ratios are always the same,] <i>fit a line to the plot, and understand that the slope of the line equals the quantities. Introduce / [Review]</i></p>	<p>Given the equation <math>y = 4x + 3</math>, <b>provide</b> the y values for the following table, then plot the points on a coordinate plane and <b>draw</b> the resulting line.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">x</th> <th style="padding: 5px;">y</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">- 2</td> <td style="text-align: center; padding: 5px;">- 5</td> </tr> <tr> <td style="text-align: center; padding: 5px;">- 1</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">0</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">1</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td style="padding: 5px;"></td> </tr> </tbody> </table> <p>Using <math>m = \frac{y_2 - y_1}{x_2 - x_1}</math>, <b>calculate</b> the slope of the line 3 times with different sets of ordered pairs each time.</p> <p><b>Predict</b> what would occur if the coefficient in the equation were changed to a 1. <b>Justify</b> your prediction.</p> <p>*Communication/Problem Solving/Representation</p> <p><b>Assessment:</b></p> <p>What <b>conclusions</b> can be drawn regarding the slopes found above. Justify your reasoning.</p> <p><b>Predict</b> what would occur if the coefficient in the equation were changed to a 2. <b>Justify</b> your prediction.</p>	x	y	- 2	- 5	- 1		0		1		2		<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>Coordinate grid paper</p> <p>x, y table</p>
x	y															
- 2	- 5															
- 1																
0																
1																
2																

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3 <sup>rd</sup> Nine Weeks	<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><b>3.A.1. Recognize, classify, and discuss properties of all geometric figures including point, line, and plane.</b></p> <p><input checked="" type="checkbox"/> Master</p>	<p>Within your Notetaking Guide you will:</p> <p><b>Complete</b> statements pertaining to one, two and three-dimensional geometric figures.</p> <p><b>Tell</b> how many sides a give polygon has (i.e. hexagon, heptagon, ...)</p> <p><b>Classify</b> angles by their sides and angles (i.e. equilateral, acute,...)</p> <p><b>Classify</b> solids then tell if they are polyhedrons (i.e. rectangular prism, yes, sphere, no, cone, no...)</p> <p><b>Use</b> a Venn Diagram to sort parallelograms.</p> <p><b>Identify</b> points, lines, parts of lines, and planes.</p> <p>Given a list of geometric figures, <b>reorganize</b> them by the number of sides, angles measures, and dimensions. <b>Justify</b> your organization.</p> <p>*Communication/Representation/Reasoning &amp; Proof</p> <p><b>Assessment:</b></p> <p><b>Reorganize</b> shapes by dimension. <b>Compare &amp; contrast</b> two and three-dimensional figures.</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 3</i> Ch. 8, 10, <i>McDougal Littell Course 3 Skills Review</i> pg 773</p>

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	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>D. Use visualization, spatial reasoning, and geometric modeling to solve problems.</i></p>	<p>3.D.1. Understand angle relationships formed by parallel lines cut by a transversal. <b>Introduce</b></p>	<p><b>Daffynition Decoder</b></p> <p>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:</p> <p><u>105°, 40°, 36°, 78°, 151°, 55°, 45°, 146°, 36°, 151°, 105°, 40°, 135°, 42°, 34°, 55°, 146°, 78°</u></p> <p>Explain:</p> <p><u>42°, 55°, 78°, 146°, 116°, 56°, 36°, 74°, 29°, 34°, 135°, 100°, 55°, 56°, 60°, 56°, 98°, 135°, 100°</u></p> <p><b>H</b> If <math>m\hat{A}1 = 50^\circ</math>, then <math>m\hat{A}2 = \underline{\hspace{1cm}}</math></p> <p><b>F</b> If <math>m\hat{A}3 = 120^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math></p> <p><b>O</b> If <math>m\hat{A}2 = 35^\circ</math>, then <math>m\hat{A}1 = \underline{\hspace{1cm}}</math></p> <p><b>E</b> If <math>m\hat{A}4 = 45^\circ</math>, then <math>m\hat{A}3 = \underline{\hspace{1cm}}</math></p> <p><b>B</b> If <math>m\hat{A}6 = 29^\circ</math>, then <math>m\hat{A}8 = \underline{\hspace{1cm}}</math></p> <p><b>Y</b> If <math>m\hat{A}6 = 29^\circ</math>, then <math>m\hat{A}5 = \underline{\hspace{1cm}}</math></p> <p><b>C</b> If <math>m\hat{A}5 = 116^\circ</math>, then <math>m\hat{A}7 = \underline{\hspace{1cm}}</math></p> <p><b>I</b> If <math>m\hat{A}8 = 82^\circ</math>, then <math>m\hat{A}7 = \underline{\hspace{1cm}}</math></p> <p><b>A</b> If <math>m\hat{A}11 = 144^\circ</math>, then <math>m\hat{A}10 = \underline{\hspace{1cm}}</math></p> <p><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></p> <p><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></p> <p><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></p> <p><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></p> <p><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></p> <p><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></p> <p><b>R</b> If <math>m\hat{A}2 = 56^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math></p> <p><b>L</b> If <math>m\hat{A}1 = 56^\circ</math>, then <math>m\hat{A}4 = \underline{\hspace{1cm}}</math></p> <p><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</p> <p><b>Assessment:</b></p> <p>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 3</i> Lesson practice Level B 8.1 pg 7</p> <p><i>Middle School Math w/Pizzazz! Book D</i> pg. 36</p> <p>Copy of Following Angles</p>

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

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	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 mathematics arguments about geometric relationships.</i></p>	<p><b>3.A.3. Use the Pythagorean theorem and its converse to find the missing side of a right triangle and the lengths of the other line segments. <input checked="" type="checkbox"/>Master</b></p>	<p><b>Perform</b> the following to <b>describe</b> the relationship among the side lengths of a right triangle:</p> <p><b>Draw</b> a right triangle with legs of 3 units and 4 units on graph paper. For each leg, <b>draw</b> a square that has a leg as one side. What if the sum of the areas of these two squares?</p> <p>Measure the hypotenuse <b>using</b> graph paper. If you draw a square with the hypotenuse as one side, what is its area?</p> <p><b>Compare</b> the sum of the areas you found in the first problem to the area you found in the second problem. <b>Formulate</b> a written statement of what do you notice?</p> <p>Draw <b>Conclusions</b> by using your observations to complete these exercises.</p> <p><b>Evaluate</b> the hypotenuse when given legs of lengths:</p> <p>5, 12 and 6, 8</p> <p><b>Evaluate</b> a leg when a given leg is 8 and the hypotenuse is 17.</p> <p>Let the lengths of the legs of a right triangle be <i>a</i> and <i>b</i>, and the length of the hypotenuse be <i>c</i>. <b>Produce</b> a conjecture about the relationship between the lengths of the legs and the length of the hypotenuse.</p> <p><b>*Communication/Problem Solving/Reasoning &amp; Proof/Connections/Representation</b></p> <p><b>Assessment:</b></p> <p>Nikki is trying out for the catcher position on the baseball team. In order to make the team, she must throw from home plate to second base.</p> <p><b>Construct</b> a <b>model</b> and <b>solve</b> for the distance, in feet, from home plate to second base given that the field is a square with sides measuring 90 ft.</p> <p>A large tree in your neighbor's yard was struck by lightning and fell. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (<i>x</i>).</p> <p><b>Construct</b> and <b>label</b> a model for solving the problem then <b>decide</b> which of the following equations could be used to find the length of the fallen part of the tree. (Note: the remaining 8 ft of the trunk is at a right angle with the ground and the top of the tree is 25 ft from the base of the trunk.)</p> <p>A. <math>8^2 + 25^2 = x</math>            B. <math>\sqrt{8^2 + 25^2} = x</math>            C. <math>25^2 - 8^2 = x</math>            D. <math>\sqrt{25^2 - 8^2} = x</math></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 3</i> Activity Generator Lesson 9.3 (Modeling Pythagorean Theorem).</p> <p>Graph paper Straightedge</p>

# Portales Municipal Schools CURRICULUM MAP

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials																																																				
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Understand the concept of volume and use the appropriate units in common measuring systems (e.g., cubic centimeter, cubic inch, cubic yard) to compute the volume of rectangular solids. <input checked="" type="checkbox"/>Master</b></p> <p><b>4.B.6. Estimate volume in cubic units. <i>Introduce</i></b></p>	<div style="text-align: center;"> </div> <p><b>Identify</b> which answer from the bottom of the page belongs in each blank. Then write the letter of the exercise above its correct answer.</p> <p>The figure at the left is a circle with center at O.</p> <p><b>What did the Waitress Mean When She Yelled to the Cook: "1 + 1"?</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">E</td><td>The points on a circle are all the same distance from the ____</td></tr> <tr><td>S</td><td>A line segment from the center to any point on the circle is a ____</td></tr> <tr><td>U</td><td>A line segment with both endpoints on the circle is ____</td></tr> <tr><td>I</td><td>A chord that passes through the center of a circle is a ____</td></tr> <tr><td>O</td><td>A diameter of the circle in the drawing above is the segment ____</td></tr> <tr><td>E</td><td>Which of the following is <i>not</i> a radius: OA, OD, or BC? ____</td></tr> <tr><td>S</td><td>Which of the following is <i>not</i> a chord: BC, OA, or AC? ____</td></tr> <tr><td>N</td><td>Part of a circle, such as between points B and C, is an ____</td></tr> <tr><td>E</td><td>An angle whose vertex is at the center of a circle is a ____</td></tr> <tr><td>P</td><td>Which of the following is not a central angle: <math>\angle AOD</math>, <math>\angle COD</math>, <math>\angle BCA</math>? ____</td></tr> <tr><td>S</td><td>Points A, B, C, and D are all the same ____ from point O.</td></tr> <tr><td>O</td><td>If the length of AC is 20 cm, then the length of OC is ____</td></tr> <tr><td>N</td><td>If the length of OA is 20 cm, then the length of OD is ____</td></tr> <tr><td>W</td><td>If the length of OD is 20 cm, then the length of AC is ____</td></tr> <tr><td>L</td><td>The length of a radius is ____ the length of a diameter.</td></tr> <tr><td>T</td><td>The set of points in a plane at a fixed distance from a given point is a ____</td></tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td style="width: 10%;">10 cm</td><td style="width: 10%;">Arc</td><td style="width: 10%;">Center</td><td style="width: 10%;">Ray</td><td style="width: 10%;">∠BCA</td><td style="width: 10%;">Half</td><td style="width: 10%;">Chord</td><td style="width: 10%;">OA</td><td style="width: 10%;">∠COD</td><td style="width: 10%;">AC</td></tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td style="width: 10%;">20 cm</td><td style="width: 10%;">Central Angle</td><td style="width: 10%;">OD</td><td style="width: 10%;">Diameter</td><td style="width: 10%;">Distance</td><td style="width: 10%;">80 cm</td><td style="width: 10%;">Radius</td><td style="width: 10%;">Circle</td><td style="width: 10%;">BC</td><td style="width: 10%;">40 cm</td></tr> </table>	E	The points on a circle are all the same distance from the ____	S	A line segment from the center to any point on the circle is a ____	U	A line segment with both endpoints on the circle is ____	I	A chord that passes through the center of a circle is a ____	O	A diameter of the circle in the drawing above is the segment ____	E	Which of the following is <i>not</i> a radius: OA, OD, or BC? ____	S	Which of the following is <i>not</i> a chord: BC, OA, or AC? ____	N	Part of a circle, such as between points B and C, is an ____	E	An angle whose vertex is at the center of a circle is a ____	P	Which of the following is not a central angle: $\angle AOD$ , $\angle COD$ , $\angle BCA$ ? ____	S	Points A, B, C, and D are all the same ____ from point O.	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Book D</i> pg. 43, 51-52, 57-58, 69-70</p> <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)  <a href="http://www.321know.com/geo78_x3.htm">www.321know.com/geo78_x3.htm</a> (calculating the area of a rectangle)  <a href="http://www.321know.com/geo79_x7.htm">www.321know.com/geo79_x7.htm</a> (calculating the volume of a rectangular prism)  <a href="http://www.321know.com/geo78_x6.htm">www.321know.com/geo78_x6.htm</a> (calculating the area of a triangle)</p> <p>Related to <i>McDougal Littell Course 3</i> Activity Generator Lesson 6.4</p>
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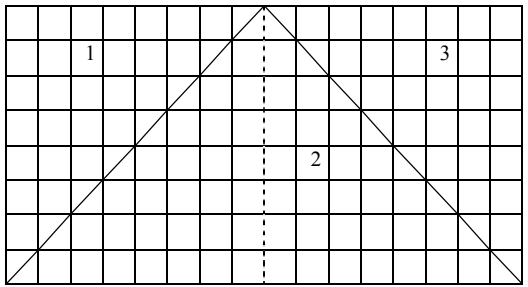
**Portales Municipal Schools**  
**CURRICULUM MAP**

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials																				
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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; text-align: center;"> <thead> <tr> <th style="width: 20%;">Object</th> <th style="width: 20%;">Diameter</th> <th style="width: 20%;">Circumference</th> <th style="width: 40%;">Circumference Diameter</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p><b>Solve</b> for the quotient of the circumference and the diameter to the nearest hundredth for each object you measured. Round to the nearest hundredth, if necessary. <b>Record</b> the quotients in the last column of the table above.</p> <p><b>Solve</b> for the mean of the quotients 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;">1. <math>d = 64</math> mm                      2. <math>d = 140</math> mm                      3. <math>d = 36</math> cm</p> <p><b>Develop</b> a formula for the diameter <math>d</math> of a circle in terms of the circumference <math>C</math>.</p> <p><b>Exploring Volume</b> The <b>volume</b> of a solid is a measure of how much space it occupies. Volume is measured in cubic units. One cubic unit is the amount of space occupied by a cube that measures one unit on each side. This cube is called the <b>unit cube</b>.</p> <p>Given an empty rectangular prism and a container of unit cubes, <b>predict</b> how many unit cubes are necessary to fill the rectangular prism.</p> <p><b>Use</b> the length and width of the cube to build the base. Arrange 2 rows of 4 cubes to make the bottom of the prism. How many cubes did you use to build the base?</p>	Object	Diameter	Circumference	Circumference Diameter																	<p><i>Continued (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><i>Middle School Math w/Pizzazz! 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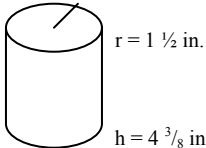
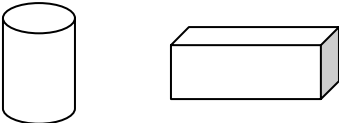
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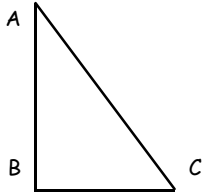
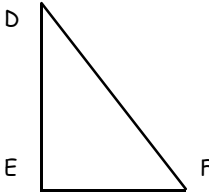
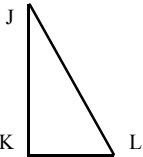
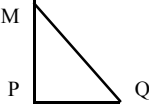

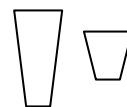
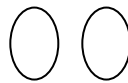
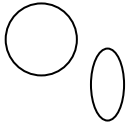
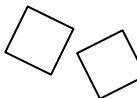


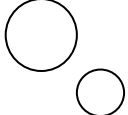

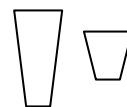
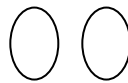
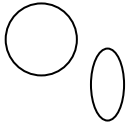
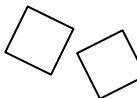


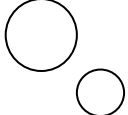

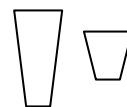
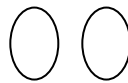
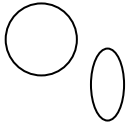
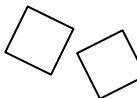


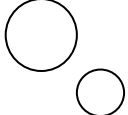
**Portales Municipal Schools**  
**CURRICULUM MAP**

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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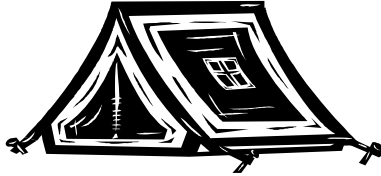
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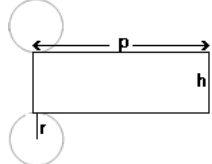

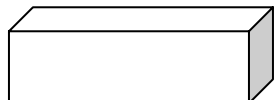
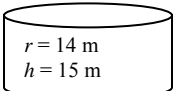
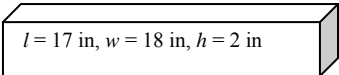
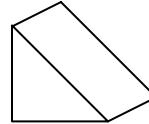
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials				
<p><b>3<sup>rd</sup> Nine Weeks</b></p>	<p><i>NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.</i></p> <p><i>C. Compute fluently and make reasonable estimates.</i></p> <p><i>ALGEBRA: Students will understand algebraic concepts and applications.</i></p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p> <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><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>1.C.9. <i>Estimate answers and use formulas to solve application problems involving surface area and volume. Introduce</i></p> <p>2.B.3. <b>Evaluate formulas using substitution.</b> <input checked="" type="checkbox"/> Master</p> <p>3.D.3. <i>Represent and solve problems relating to size, shape, area, and volume using geometric models. Introduce</i></p> <p>3.D.5. <i>Construct two-dimensional patterns for three-dimensional models (e.g., cylinders, prisms, cones). Introduce</i></p> <p>4.B.4. <i>Apply strategies to determine the surface area and volume of prisms, pyramids, and cylinders. Introduce</i></p>	<p><b>Participate</b> with your class to complete the following:</p> <p>In your journal <b>communicate</b> how to find the areas of <i>parallelograms, trapezoids, and circles</i>. Include a <b>model</b>, the algebraic formula for area, and an example for each type of figure.</p> <p>The following is a three-dimensional sketch of the tent you take on a camping trip:</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Length = 6 ft, width = 7 ft, slant height = 5 ft, height = 4 ft</p> <ul style="list-style-type: none"> <li>• <b>Determine</b> the number of faces of the tent.</li> <li>• <b>Determine</b> the number of edges of the tent.</li> <li>• <b>Determine</b> the number of vertices of the tent.</li> <li>• <b>Evaluate</b> the volume of the tent.</li> <li>• <b>Evaluate</b> the surface area of the tent.</li> <li>• Sketch a net for the tent.</li> <li>• You make a cone shaped paper cup. Its height is 10 centimeters and its diameter is 8 centimeters. <b>Evaluate</b> the volume of water the cup will hold?</li> <li>• You pour a drink of water from your canteen. Your canteen is the shape of a cylinder with a diameter of 20 centimeters and a height of 6 centimeters. <b>Evaluate</b> the volume of water the canteen will hold?</li> <li>• <b>Evaluate</b> the surface area of your canteen?</li> <li>• <b>Decide</b> why all of the following terms are correct ways of referring to the tent: <i>solid, polyhedron, and prism</i>. <b>Justify</b> your answer.</li> </ul> <p>*Communication/Problem Solving/Reasoning &amp; Proof/Representation</p> <p><b>Assessment:</b></p> <p><b>Evaluate</b> the surface area of a rectangular prism that is 6 inches long, 8 inches wide, and 2 inches high?</p> <p><b>Produce</b> the surface area of the prism, where <b>B</b> is the area of the base, <b>P</b> is the perimeter of the base, and <b>h</b> is the height.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="padding: 2px;"><math>B = 8 \text{ m}^2, P = 3 \text{ m}, h = 6 \text{ m}</math></td> <td style="padding: 2px;"><math>B = 15 \text{ m}^2, P = 12 \text{ m}, h = 3 \text{ m}</math></td> </tr> <tr> <td style="padding: 2px;"><math>B = 42 \text{ yd}^2, P = 23 \text{ yd}, h = 8 \text{ yd}</math></td> <td style="padding: 2px;"><math>B = 58 \text{ mm}^2, P = 36 \text{ mm}, h = 20 \text{ mm}</math></td> </tr> </table>	$B = 8 \text{ m}^2, P = 3 \text{ m}, h = 6 \text{ m}$	$B = 15 \text{ m}^2, P = 12 \text{ m}, h = 3 \text{ m}$	$B = 42 \text{ yd}^2, P = 23 \text{ yd}, h = 8 \text{ yd}$	$B = 58 \text{ mm}^2, P = 36 \text{ mm}, h = 20 \text{ mm}$	<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><a href="http://fcit.usf.edu/math/lessons/lessons8.html">http://fcit.usf.edu/math/lessons/lessons8.html</a> (TWO FOR ONE BOX COMPANY ACTIVITY) (Math activity covering volume, nets and ratios)</p>
$B = 8 \text{ m}^2, P = 3 \text{ m}, h = 6 \text{ m}$	$B = 15 \text{ m}^2, P = 12 \text{ m}, h = 3 \text{ m}$							
$B = 42 \text{ yd}^2, P = 23 \text{ yd}, h = 8 \text{ yd}$	$B = 58 \text{ mm}^2, P = 36 \text{ mm}, h = 20 \text{ mm}$							

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

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials			
<b>3<sup>rd</sup> Nine Weeks</b>	<p><i>Continued (Page 2)</i></p> <p><b>NUMBER AND OPERATIONS:</b> Students will understand numerical concepts and mathematical operations.</p> <p><i>C. Compute fluently and make reasonable estimates.</i></p> <p><b>ALGEBRA:</b> Students will understand algebraic concepts and applications.</p> <p><i>B. Represent and analyze mathematical situations and structures using algebraic symbols.</i></p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</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>Continued (Page 2)</i></p> <p>1.C.9. Estimate answers and use formulas to solve application problems involving surface area and volume. <b>Introduce</b></p> <p>2.B.3. Evaluate formulas using substitution. <b>Master</b></p> <p>3.D.3. Represent and solve problems relating to size, shape, area, and volume using geometric models. <b>Introduce</b></p> <p>3.D.5. Construct two-dimensional patterns for three-dimensional models (e.g., cylinders, prisms, cones). <b>Introduce</b></p> <p>4.B.4. Apply strategies to determine the surface area and volume of prisms, pyramids, and cylinders. <b>Introduce</b></p>	<p><i>Continued (Page 2)</i></p> <p><b>Design</b> a model of a cylinder with radius <math>r</math> and height <math>h</math>. Then find its surface area. Use 3.14 for <math>\pi</math> (<math>\hat{e}</math>).</p> <table border="1" style="width: 100%; text-align: center; margin: 10px 0;"> <tr> <td><math>r = 4 \text{ cm}, h = 8 \text{ cm}</math></td> <td><math>r = 10 \text{ in}, h = 12 \text{ in}</math></td> <td><math>r = 3 \text{ ft}, h = 21 \text{ ft}</math></td> </tr> </table> <p><b>Identify</b> the solid shown by the net. Then <b>evaluate</b> for the surface area. Use 3.14 for <math>\pi</math> (<math>\hat{e}</math>).</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="margin-left: 20px;"> <p><math>P = 12 \text{ in.}</math> <math>r = 4 \text{ in.}</math> <math>h = 7 \text{ in.}</math></p> </div> </div> <p><b>Construct</b> a net for the solid. Then <b>evaluate</b> for the surface area of the solid. Use 3.14 for <math>\pi</math> (<math>\hat{e}</math>).</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p><math>l = 15 \text{ in. } d = 2 \text{ in.}</math>      <math>l = 13 \text{ ft, } w = 4 \text{ ft, } h = 6 \text{ ft}</math></p> <p><b>Evaluate</b> the surface area of the solid. Use 3.14 for <math>\pi</math> (<math>\hat{e}</math>).</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p><math>r = 14 \text{ m}</math> <math>h = 15 \text{ m}</math>      <math>l = 17 \text{ in, } w = 18 \text{ in, } h = 2 \text{ in}</math></p> <div style="display: flex; justify-content: center; align-items: center; margin: 20px 0;">  <div style="margin-left: 20px;"> <p><math>l = 12 \text{ cm}</math> <math>w = 11 \text{ cm}</math> <math>h = 9 \text{ cm}</math></p> </div> </div> <p style="text-align: center; margin-top: 20px;"><i>Note: The activity and assessment are interchangeable</i></p>	$r = 4 \text{ cm}, h = 8 \text{ cm}$	$r = 10 \text{ in}, h = 12 \text{ in}$	$r = 3 \text{ ft}, h = 21 \text{ ft}$	<p><i>Continued (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 style="text-align: center; margin-top: 20px;"><a href="http://fcit.usf.edu/math/lessons/lessons8.html">http://fcit.usf.edu/math/lessons/lessons8.html</a> (TWO FOR ONE BOX COMPANY ACTIVITY) (Math activity covering volume, nets and ratios)</p>
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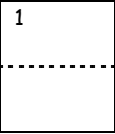
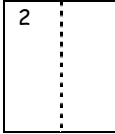
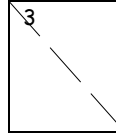
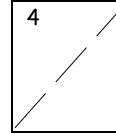
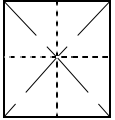


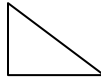
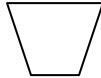





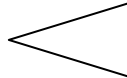
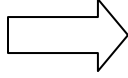
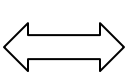


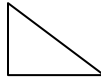
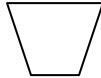





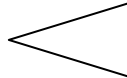
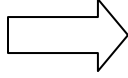
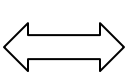


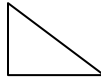
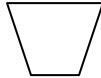





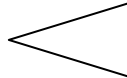
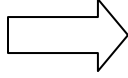
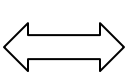
**Portales Municipal Schools**  
**CURRICULUM MAP**

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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<b>Calendar</b>	<b>Strand/Standard/ Benchmark</b>	<b>Performance Standard/ Essential Question</b>	<b>Suggested Student Activities/Assessments</b>	<b>Resources/Materials</b>
<p><b>Essential Questions for the 4<sup>th</sup> 9 Weeks:</b> What tools and units are used to measure the attributes of an object?            How can I use the appropriate techniques, tools, and formulas to determine the measurement?            Can I apply transformations and use symmetry to analyze mathematical situations?            Do I have an understanding of math vocabulary?</p>				
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>C. Apply transformations and use symmetry to analyze mathematical situations.</i></p>	<p><i>3.C.2. Describe and perform single and multiple transformations that include rotation, reflection, translation, and dilation (i.e., shrink or magnify) to two-dimensional figures.</i></p> <p><b>Introduce</b></p>	<p><b>Access</b> the Skills Tutor program (installed on the computers in the computer lab)</p> <p><b>Utilizing</b> this technology you will:</p> <ul style="list-style-type: none"> <li>○ <b>Describe</b> what geometric translations and reflections are</li> <li>○ <b>Perform</b> geometric translations and reflections</li> <li>○ <b>Discover</b> that translations and reflections are both types of geometric transformations</li> <li>○ <b>Predict</b> and <b>Identify</b> the pre-image and image in a geometric transformation</li> <li>○ <b>Identify</b> the line of reflection in a geometric reflection</li> <li>○ <b>Know</b> that in a reflection and in a translation, the pre-image and image are congruent</li> <li>○ <b>Discover</b> that in a reflection, the pre-image and image have reversed orientation</li> <li>○ <b>Know</b> that in a translation, the pre-image and image have the same orientation, i.e. not reversed</li> <li>○ <b>Communicate</b> what reflection symmetry is</li> <li>○ <b>Identify</b> a figure with reflection symmetry</li> <li>○ <b>Identify</b> a line of symmetry in a figure</li> <li>○ <b>Design</b> a transformation to be performed by a fellow student</li> <li>○ <b>Perform</b> a transformation designed by a fellow student</li> </ul> <p>*Communication/Problem Solving/Connections/ Representation</p> <p><b>Assessment:</b></p> <p>The student will be assessed through teacher observation.</p> <p>Given a pre-image and the image, <b>interpret</b> which transformations were applied.</p> <p><b>Design</b> a transformation to be performed by a fellow student</p> <p><b>Perform</b> a transformation designed by a fellow student</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>Computer Lab</p> <ul style="list-style-type: none"> <li>• Skills Tutor</li> </ul>




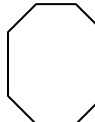
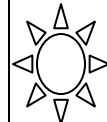

# Portales Municipal Schools CURRICULUM MAP

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials												
<p><b>4<sup>th</sup> Nine Weeks</b></p>	<p><i>GEOMETRY: Students will understand geometric concepts and applications.</i></p> <p><i>C. Apply transformations and use symmetry to analyze mathematical situations.</i></p>	<p>3.C.1. Describe the symmetry of three-dimensional figures.</p> <p><b>Introduce</b></p>	<p>A figure that can be folded so that the two halves match exactly has line symmetry. The fold line is a line of symmetry.</p> <p>A square has four lines of symmetry.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>1</p> </div> <div style="text-align: center;">  <p>2</p> </div> <div style="text-align: center;">  <p>3</p> </div> <div style="text-align: center;">  <p>4</p> </div> </div> <p>Hint: Imagine only one line of symmetry drawn at a time to see that each one is a line of symmetry.</p> <p>Here is the square drawn with its four lines of symmetry.</p> <div style="text-align: center;">  </div> <p><b>Illustrate</b> the lines of symmetry each figure has.</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Given Styrofoam solids, <b>collaborate</b> with your classmates to <b>determine</b> where the line(s) of symmetry would be.</p> <p><b>Compare and Contrast</b> your decisions with the teacher's models.</p> <p>Write your <b>conclusions</b> in your journal.</p> <p>*Communication/Representation</p>													<p>Student journal/notebook</p> <p><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 <i>McDougal Littell Course 3 Remediation</i> pg 123</p> <p>Related to <i>McDougal Littell Course 3 Lesson 13: Line Symmetry</i></p>
																
																
																

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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
<b>4<sup>th</sup> Nine Weeks</b>	<p><i>Continued (Page 2)</i></p> <p><b>GEOMETRY:</b> Students will understand geometric concepts and applications.</p> <p>C. Apply transformations and use symmetry to analyze mathematical situations.</p>	<p><i>Continued (Page 2)</i></p> <p>3.C.1. Describe the symmetry of three-dimensional figures. <b>Introduce</b></p>	<p><i>Continued (Page 2)</i></p> <p><b>Assessment:</b> <b>Illustrate</b> the lines of symmetry each figure has.</p> <div style="border: 1px solid black; padding: 5px; display: flex; justify-content: space-around; align-items: center;">      </div> <p><b>Create</b> triangles with:</p> <ul style="list-style-type: none"> <li>• 3 lines of symmetry</li> <li>• 1 line of symmetry</li> <li>• No line of symmetry</li> </ul> <p><b>Create</b> four types of quadrilaterals that have different numbers of lines of symmetry. <b>Label</b> you quadrilaterals.</p> <p>Chad knows an equilateral triangle has 3 sides and 3 lines of symmetry. He knows that a square has 4 sides and 4 lines of symmetry. What <b>conclusion</b> should Chad draw about the number of lines of symmetry of the pentagon shown? <b>Justify</b> your answer.</p> <div style="text-align: center; margin-top: 20px;">  </div>	<p><i>Continued (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 <i>McDougal Littell Course 3 Remediation</i> pg 123</p> <p>Related to <i>McDougal Littell Course 3 Lesson 13: Line Symmetry</i></p>

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

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade	
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
4 <sup>th</sup> Nine Weeks	<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>B. Apply appropriate techniques, tools, and formulas to determine measurements.</i></p>	<p>4.A.2. [Use changes in measurement units (e.g., square inches, cubic feet) to perform conversions from one-, two-, and three-dimensional shapes. ] <b>Introduce</b> / <b>[Review]</b></p> <p>4.B.5. Perform conversions with multiple terms between metric and U.S. standard measurement systems. <b>Introduce</b></p>	<p><b>Participate</b> with a partner to <b>construct</b> a worksheet of various geometric figures with dimensions.</p> <p><b>Incorporate</b> the formulas from your journal that you have used to date for computing perimeter, area, and volume.</p> <p>Switch your worksheet with another set of partners and <b>evaluate</b> for the perimeter, area and volume of each figure.</p> <p><b>Perform</b> conversions from the given units to another unit as indicated.</p> <ul style="list-style-type: none"> <li>• inches to centimeters</li> <li>• inches to feet</li> <li>• inches to yards</li> <li>• feet to inches</li> <li>• feet to yards</li> <li>• feet to miles</li> <li>• yards to miles</li> <li>• yards to centimeters</li> </ul> <p>You must have at least three conversions from metric to standard or standard to metric.</p> <p>*Communication/Problem Solving/Connections/Representation</p> <p><b>Assessment:</b></p> <p>Given solid objects (cereal boxes, prisms, balls, etc.) the student will <b>create</b> a diagram of the object, <b>label</b> the measurements, and then <b>evaluate</b> for the volume of each object.</p> <p><b>Perform</b> conversions of the units of measurement of one object from standard to metric and of a second object from metric to standard.</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>Teacher generated worksheets</p> <p>Related <i>McDougal Littell Course 2 Best Practices Toolkit</i> pg 382-383</p>

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

<b>Subject:</b>	Mathematics	<b>May 2009</b>	<b>Grade Level:</b>	Eighth Grade
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Calendar	Strand/Standard/ Benchmark	Performance Standard/ Essential Question	Suggested Student Activities/Assessments	Resources/Materials
4 <sup>th</sup> Nine Weeks	<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>4.B.7. Solve simple problems involving rates and derived measurements for such properties as velocity and density. <b>Introduce</b></p>	<p>Density is a measurement of how much mass is packed into a given volume. In B-movies of the 1950's, Hercules would toss large rocks through the air, fending off attackers or simply impressing the ladies. Of course, the actor playing Hercules couldn't really toss large rocks around. The fake rocks were large in volume and painted to look like rocks; but in fact, they were made of a very low-density material: Styrofoam. Thus, although they had the same volume, shape, and color as rocks, they had the mass of, perhaps, a baseball; so the actor could toss the "rock" through the air and appear to have the strength of many men. The density of an object is defined to be its mass divided by its volume.</p> $D (\text{density}) = M (\text{mass}) / V (\text{volume})$ <p><b>Collaborate</b> with your class in <b>devising</b> a plan then implementing that plan to <b>evaluate</b> the following problem.</p> <p>A king is afraid that his pure gold crown has been stolen and replaced with a gold-lead alloy crown. <b>Substitute</b> the density of gold (19.3 g/cm<sup>3</sup> or 0.019 kg/cm<sup>3</sup>), then <b>determine</b> the volume of a 2-kg pure gold crown.</p> <p>A vector is simply any measured quantity that has both a direction and size. Velocity is a change in distance (in a given direction) divided by a change in time. The Greek letter delta (<math>\Delta</math>) is used to represent the concept of "change." Therefore, the equation, <math>\text{Velocity} = \Delta x / \Delta t</math>, is read as "velocity equals the change in x divided by the change in t." Velocity is expressed in meters/second.</p> <p><b>Evaluate</b> the average velocity if a car traveled a distance of 300 miles in 6 hours. Be sure to convert your answer.</p> <p>*Communication/Problem Solving/Connections</p> <p><b>Assessment:</b></p> <p>If the king's crown was made of a gold-lead alloy, use <b>substitution</b> and <b>evaluate</b> the volume. <b>Decide</b> if the gold-lead alloy crown is greater or less than the gold crown. <b>Support</b> your solution? (Note: the density of lead is 11.3 g/cm<sup>3</sup> or 0.0113 kg/cm<sup>3</sup>)</p> <p><b>Rearrange</b> the density formula in terms of mass, and then in terms of volume.</p> <p><b>Evaluate</b> the average velocity if a car traveled a distance of 455 miles in 6.5 hours. Be sure to convert your answer.</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><i>Physics made Simple</i> by Pree, Christopher</p>