

SEVENTH GRADE TRANSITION MATHEMATICS CURRICULUM
VENTNOR SCHOOL DISTRICT

Time Line	Essential Questions and Unit Content	NJCCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
<p>Transition Math Introduction</p> <p>Chapter1 <i>Decimal Notation</i></p> <p>September</p>	<p>What are the real life applications of mathematics that affect our daily lives?</p>	<p>4.1.7 A 1, 4, 5, 6 4.1.7 B 1 4.1.7 C 1 4.3.7 A 1 4.3.7 D 1 4.5 A, B, C, D</p>	<p>-To preview text and link to real life applications</p>	<p>Pre-Test Comprehensive Chapters 1-3</p>	<p>Whole Class Differentiated Instruction</p>	<p>Video: "Wide World of Mathematics"</p>
	<p>What couldn't we do if we didn't understand the translation of English into the decimal system?</p>		<p>Lesson 1-1 -To translate back and forth from English into the decimal system. -To give rough dates for key ideas in the development of arithmetic.</p>	<p>Lesson Masters</p>	<p>Guided Practice</p>	<p>Discussion</p>
	<p>How would our daily lives be different if we couldn't estimate?</p>		<p>Lesson 1-2 -To order decimals. - To give a number that is between two decimals. -To graph and read numbers on a number line.</p>	<p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems</p>
	<p>What are the real world uses for rounding decimal</p>		<p>Lesson 1-3 -To round any decimal up or down. -To deal with estimates in real situations.</p> <p>Lesson 1-4 -To round any decimal to the nearest value of a decimal place. -To deal with estimates in real situations.</p>	<p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning Technology</p>	<p>Respond to Problems</p>

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September	<p>In what types of situations would a calculator be a better method of computation than paper and pencil or mental math?</p> <p>What is the value of studying decimal and fraction equivalences?</p>		<p>Lesson 1-5 -To use a calculator to perform arithmetic operations.</p> <p>Lesson 1-6 -To order decimals and fractions. -To convert simple fractions to decimals. -Correctly use the raised bar symbol for repeating decimals. -To know by memory the common decimals and fractions between 0 and 1.</p> <p>Lesson 1-7 -To order decimals and fractions. -To convert mixed numbers to decimals. -To graph and read numbers on a number line.</p>	<p>Quiz (lessons 1-4)</p> <p>Activity Kit</p> <p>Activity Kit Teacher observation</p>	<p>Technology</p> <p>Differentiated Instruction</p> <p>Direct Instruction Cooperative Learning Technology</p>	<p>Technology Centers</p> <p>Activity 1: To find equivalent decimals and fractions using a decimal strip. (Activity Aid A)</p> <p>Activity 2: To convert, graph, and compare mixed numbers and decimals using a partners' heart rate.</p>

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September	How do positive and negative numbers come into play in the business world?		Lesson: 1-8 - Give a number that is between two negative numbers. - Round any decimal place up or down or to the nearest value of a decimal place. - Use a calculator to perform arithmetic operations. - Convert simple fractions and mixed numbers to decimals. -Correctly interpret situations with two directions as positive, negative, or corresponding to zero. - Graph and read numbers on a number line.	Lesson Masters	Direct Instruction Cooperative Learning Technology Graphic Organizers	

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September	Why is the use of fractions in lowest terms more efficient in real life?		<p>Lesson: 1-9 - Order decimals and fractions. - Use the < and > symbols correctly between numbers.</p> <p>Lesson: 1-10 - Use the Equal Fractions Property to rewrite fractions.</p>	<p>Activity Kit</p> <p>Quiz (Lessons 4-8)</p>	<p>Direct Instruction Cooperative Learning Flexible Grouping Graphic Organizers</p> <p>Direct Instruction Cooperative Learning</p>	<p>Activity 3: To compare fractions using square decimal models. (Aid B)</p>
September						- Review / Project
September				Chapter 1 Test		
<p>Chapter 2 <i>Large and Small Numbers</i></p> <p>September</p>	What is a general rule for multiplying a decimal by 1000?	<p>4.1.7 A 1, 2, 5 4.1.7 B 1, 2 4.3.7 A 1 4.2.7 A 1,2 4.2.7 D 1, 2,3 4.2.7 E 1 4.5A,B, C, D</p>	<p>Lesson: 2-1 - Multiply by 10, 100, 1000, ... - Convert word names for numbers to decimals.</p> <p>Lesson: 2-2 - Multiply by 10, 100, 1000, ... - Convert powers to decimals. - Give decimals and English word names for positive and negative integer powers of 10.</p>	<p>Lesson Masters</p> <p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning Technology</p>	<p>Respond to Problems</p> <p>Respond to Problems</p>

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September	<p>Why are there so many ways to write numbers?</p> <p>How is a terminating decimal converted into a fraction?</p> <p>How are circle graphs used and applied in the real world?</p>		<p>Lesson: 2-5 - Convert and operate with percents as decimals. - Know and apply the Substitution Principle. - Find percents of quantities in real situations.</p> <p>Lesson: 2-6 - Convert terminating decimals to fractions, and either of these to percents.</p> <p>Lesson: 2-7 - Identify the center, radius, and diameter of a circle. - Interpret circle graphs.</p>	<p>Activity Kit</p> <p>Lesson Masters</p> <p>Activity Kit</p> <p>Quiz (Lessons 4-6)</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Flexible Grouping</p>	<p>Activity 4: To use grid paper to illustrate the percent of a quantity.</p> <p>Respond to Problems</p> <p>Activity 5: To create circle graphs.</p>

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October	<p>What is the zero power of a number?</p> <p>How could the key sequence on a calculator be compared to the directions on a board game?</p>		<p>Lesson: 2-8 - Convert word names for numbers to decimals. - Give decimals and English word names for positive and negative integer powers of 10.</p> <p>Lesson: 2-9 - Convert large and small positive numbers into scientific notation. - Identify numbers as being written in scientific notation. - Indicate key sequences and displays for large and small positive numbers on a calculator.</p>	<p>Lesson Masters</p> <p>Teaching Aid 23</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Partners</p>	<p>Respond to Problems Discussion</p> <p>In-Class Activity: Writing small numbers in Scientific Notation.</p>
October						- Review / Project Based Learning
October				Chapter 2 Test		
<p>Chapter 3 <i>Measurement</i></p> <p>October</p>	How did standardized units come to be and where would we be today without them?	<p>4.2.7.D.2 4.2.7.E.1 4.3.7.B.1 4.3.7.C.2 4.5.7.A,B,C,D</p>	<p>Lesson: 3-1 - Measure lengths to the nearest inch, half inch, quarter inch, or eighth of an inch, or to the nearest centimeter, or tenth of a centimeter. - Draw a line segment of a given length.</p>	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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October	Is it possible to measure everything in the same type of unit?		Lesson: 3-2 - State and apply the Multiplication Property of Equality. - Give appropriate units for measuring mass, length, and capacity in the U.S. or metric system of measurement. - Convert within the U.S. system of measurement. - Convert between different systems.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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October	<p>What will it be like on your first trip to another country when you find that everything is measured in metric units?</p>		<p>Lesson: 3-3 - Give appropriate units for measuring mass, length, and capacity in the U.S. or metric system of measurement. - Convert within the U.S. system of measurement.</p>	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	<p>Why was the metric system developed?</p>		<p>Lesson: 3-4 - Give appropriate units for measuring mass, length, and capacity in the U.S. or metric system of measurement. - Convert within the metric system. - Give countries and approximate dates of origin of current measuring ideas.</p>	Quiz (Lessons 1-3)	Direct Instruction Cooperative Learning Graphic Organizers (Conversion Chart)	Respond to Problems Discussion
	<p>In terms of measurement, what is an approximate relationship you have with the person next to you?</p>		<p>Lesson: 3-5 - Convert between different systems.</p>	Lesson Masters	Direct Instruction Cooperative Learning Graphic Organizers (Conversion Charts)	Respond to Problems Discussion
	<p>How would the use of angles be an important part of an air traffic controller's job?</p>		<p>Lesson: 3-6 - Measure angles to the nearest degree using a protractor. - Draw an angle with a given measure. - Give countries and approximate dates of origin of current measuring ideas.</p>	Lesson Masters	Guided Practice Teacher Modeling	

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October	<p>How are angles used by engineers in the creation of city street plans?</p> <p>What is the relationship between capacity and volume?</p>		<p>Lesson: 3-7 - Distinguish between acute, right, and obtuse angles by sight. - Read, make, and interpret circle graphs.</p> <p>Lesson: 3-8 - Find areas of squares and volumes of cubes given the length of one side or edge. - Find areas of squares or volumes of cubes in real contexts.</p> <p>Lesson: 3-9 - Find areas of squares and volumes of cubes given the length of one side or edge. - Find areas of squares or volumes of cubes in real contexts.</p>	<p>Teaching Aid 34</p> <p>Activity Kit</p> <p>Activity Kit</p> <p>Quiz (Lessons 4-8)</p>	<p>Flexible Grouping</p> <p>Partners</p> <p>Flexible Grouping</p>	<p>In-Class Activity: Using survey results to create circle graphs.</p> <p>Activity 6: To measure area using grid paper.</p> <p>Video: Wide World of Mathematics-examines the importance of area in real life.</p> <p>Activity 7: To measure volume using centimeter cubes.</p>

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October						- Review / Project
October				Chapter 3 Test		
October				Post Test Comprehensive Chp.1-3		
November				Pre Test Comprehensive Chp.1-6		
November	What would happen to real life jobs, such as building a house, if the order in which the tasks were completed was changed?	4.1.7 B 1,2,3,4 4.3.7 B 1 4.3.7 A 1 4.3.7 C 2 4.3.7 D 1, 3 4.4.7 B 1, 2, 3 4.4.7 C 1, 3 4.2.7 A 1, 2 4.2.7 D 1, 2, 3 4.2.7 E 1 4.1.7 A 5	Lesson: 4-1 -Use order of operations to evaluate numerical expressions. - Know the correct order of operations. - Give rough dates and names of people for key ideas in arithmetic.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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November	What are some examples of patterns that change or vary in your everyday life?		Lesson: 4-2 - Given instances of a pattern, write a description of the pattern using variables. - Given instances of a pattern described with variables. - Given instances of a real-world patter, write a description of the pattern suing variables. - Give rough dates and names of people for key ideas in arithmetic and algebra notation.	Activity Kit	Direct Instruction Cooperative Learning Partners	Activity 8: To use patterns to predict the value of variables.
	How can algebraic expressions be used to describe real life situations?		Lesson: 4-3 - Write a numerical or algebraic expression for an English expression involving arithmetic operations.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
			Lesson: 4-4 - Evaluate algebraic expressions given the values of fall variables.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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November	Why is it important in real life that we follow a certain order of doing things?		Lesson: 4-5 - Use order of operations to evaluate numerical expressions. - Evaluate algebraic expressions given the values of all variables. - Know the correct order of operations.	Quiz (Lessons 1-4)	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	If you are given several directions to complete a task, why would it be easier to group the instructions before carrying them out?		Lesson: 4-6 - Use order of operations, with brackets and parenthesis, to evaluate numerical expressions. - Evaluate algebraic expressions given the values of all variables. - Know the correct order of operations.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	What assumptions can be made about the relative frequency of a coin toss that leads to a certain probability?		Lesson: 4-7 - Calculate the value of a variable, given the values of other variables in a formula.	Teaching Aid 45	Direct Instruction Cooperative Learning	In-Class Activity: To learn about relative frequency using the toss of a coin

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November			Lesson: 4-8 - Calculate probabilities and relative frequencies in a situation with known numbers of outcomes.	Activity Kit	Flexible Grouping	Activity 9: To estimate probability using a relative frequency experiment.
November				Teaching Aid 45	Direct Instruction Cooperative Learning	In-Class Activity: To learn relative frequency using the outcomes of multiple coin tosses. - Projects
November						- Technology
						- Technology / Study Island
November			Lesson: 4-9 - Find solutions to equations and inequalities involving simple arithmetic	Quiz (Lessons 4-8)	Direct Instruction Cooperative Learning	Respond to Problems Discussion
November	What is an inequality? What words are used to describe things that are not equal?		Lesson: 4-10 - Find solutions to equations and inequalities involving simple arithmetic. - Graph the solutions to any inequality of the form $x < a$ and similar inequalities, and identify such graphs.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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November						- Review for Test
November				Chapter 4 Test		
December	<p>What method of addition would I be most comfortable using to solve algebraic expressions?</p>	<p>4.1.7.A.1,4 4.1.7.B.1 4.2.7.A.1 4.2.7.E.1 4.3.7.C.1,2 4.3.7.D.1,2,3,4 4.4.7.B.1,3 4.5.7.A,B,C,D</p>	<p>Lesson: 5-1 - Add positive and negative numbers. - Use the Putting-Together Model for Addition to form sentences involving addition. -Use the Slide Model for Addition to form sentences involving addition. - Picture addition of positive and negative numbers using arrows on a number line.</p>	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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December	<p>How are the terms inverse and opposite related?</p> <p>In what situations would positive and negative numbers need to be combined?</p>		<p>Lesson: 5-2 - Apply properties of addition to simplify expressions. - Identify the following properties of addition: Commutative Property of Addition, Associative Property of Addition, Additive Identity Property of Zero, Addition Property of Equality, Property of Opposites, Opposite of Opposites Property.</p> <p>Lesson: 5-3 - Add positive and negative numbers. - Calculate absolute value.</p> <p>Lesson: 5-4 - Calculate magnitudes of turns given angle measures or revolutions.</p> <p>Lesson: 5-5 - Add positive and negative numbers.</p>	<p>Lesson Masters</p> <p>Activity Kit</p> <p>Answer Master 5-4</p> <p>Quiz (Lessons 1-4)</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning Flexible Grouping</p> <p>Direct Instruction Cooperative Learning Guided Practice</p> <p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p> <p>Activity 10: To use models to add positive and negative integers.</p> <p>In Class Activity: To practice using absolute value and magnitude by combining turns.</p>

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December	<p>In what real life situations would events be considered “Mutually Exclusive”?</p>		<p>Lesson: 5-6 - Tell whether events are mutually exclusive or not. - Calculate the probability of mutually exclusive events or complements of events.</p>	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	<p>Can numbers in an addition problem be switched around into a different order?</p>		<p>Lesson: 5-7 - Apply properties of addition to simplify expressions. - Identify the following properties of addition: Commutative Property of Addition, Associative Property of Addition, Additive Identity, Property of Zero, Addition Property of Equality, Property of Opposites, Opposite of Opposites Property.</p>	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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						lesson 5-9
Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
December	When using a map, why would it be a benefit to be able to add lengths?		Lesson: 5-10 - Find the perimeter of a polygon. - Use the Putting-Together Model for Addition to from sentences involving addition.	Lesson Masters	Direct Instruction Cooperative Learning	
December						- Review for Test
December				Chapter 5 Test		
December						- Project based learning
Chapter 6 <i>Problem Solving Strategies</i> January	What is the algorithm for making a peanut butter and jelly sandwich? How do pictures and diagrams make math problems easier to solve?	4.1.7.A.1,4 4.2.7.A.2 4.3.7.A.1 4.3.7.C.1,2 4.3.7.D.2,3,4 4.4.7.A.2 4.5.7.A,B,C,D	Lesson: 6-1 - Know the general strategies used by good problem solving. Lesson: 6-2 - Determine whether a number is prime or composite. - Find the meaning of unknown words. Lesson: 6-3 - Use drawings to solve real problems. - Draw a diagram to solve geometric problems.	Lesson Masters Lesson Masters Lesson Masters	Direct Instruction Cooperative Learning Direct Instruction Cooperative Learning Differentiated Instruction	Respond to Problems Discussion

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January	<p>Why would the trial and error not be a good strategy for a problem with multiple possible answers?</p> <p>How can a table help you make a generalization about a problem?</p> <p>What is the difference between a special case and a general pattern?</p>		<p>Lesson: 6-4 - Determine solutions to sentences by trial and error.</p> <p>Lesson: 6-5 - Make a table to find patterns and make generalizations.</p> <p>Lesson: 6-6 - Use a spreadsheet to answer questions in real situations.</p> <p>Lesson: 6-7 - Work with a special case to determine whether a pattern is true. - Use special cases to determine that a property is false or to give evidence that it is true. - Use simpler numbers to answer a question requiring only one operation.</p>	<p>Activity Kit</p> <p>Activity Kit</p> <p>Activity Kit</p> <p>Lesson Masters</p>	<p>Partners</p> <p>Flexible Grouping</p> <p>Flexible Grouping</p> <p>Direct Instruction Cooperative Learning</p>	<p>Activity 13: To solve problems using the trial and error strategy.</p> <p>Activity 14: To complete a table using generalizations from patterns.</p> <p>Activity 15: To use simpler numbers to describe a pattern and determine if a pattern is true.</p>

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January						- Review for Test
January				Chapter 6 Test		
<p data-bbox="94 604 220 722">Chapter 7 <i>Patterns Leading to Subtraction</i></p> <p data-bbox="115 1060 199 1088">January</p>	<p data-bbox="262 909 556 998">In what ways are addition and subtraction considered opposites?</p>	<p data-bbox="609 604 766 812">4.1.7.A.1,4 4.1.7.B.1,3 4.2.7.A.1,2,3 4.3.7.C.1,2 4.3.7.D.1,3,4 4.4.7.C.2 4.5.7.A,B,C,D</p>	<p data-bbox="819 604 1102 868">Lesson: 7-1 - Use the Take-Away Model for Subtraction to form sentences involving subtraction. - Use the Comparison Model for Subtraction to form sentences involving subtraction.</p> <p data-bbox="819 909 1102 1323">Lesson: 7-2 - Subtract any numbers written as decimals or fractions. - Apply the properties of subtraction. - Use the Slide Model for Subtraction to form sentences involving subtraction. - Picture subtraction of positive and negative numbers on a number line.</p>	<p data-bbox="1144 604 1344 690">Post Test Comprehensive Chp. 1-6</p> <p data-bbox="1165 909 1323 933">Activity Kit</p> <p data-bbox="1144 974 1344 1055">Pre Test Comprehensive Chp. 1-9</p>	<p data-bbox="1386 633 1585 722">Direct Instruction Cooperative Learning</p> <p data-bbox="1386 909 1585 1031">Direct Instruction Cooperative Learning Flexible Grouping</p>	<p data-bbox="1722 633 1963 690">Respond to Problems Discussion</p> <p data-bbox="1638 909 2037 998">Activity 16: to use manipulatives to make a rule for subtracting negative integers</p>

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January	<p>How can a Venn Diagram be used to illustrate the solution to a probability problem with an overlap?</p> <p>What are some real life applications of vertical angles?</p>		<p>Lesson: 7-5 - Use the Putting-Together with Overlap Model to solve sentences involving subtraction. - Use Venn diagrams to describe or determine overlap.</p> <p>Lesson: 7-6 - Find measures of angles in figures with linear pairs, vertical angles, or perpendicular lines. - Know relationships among angles formed by intersecting lines, or by two parallel lines and a transversal.</p>	<p>Lesson Masters</p> <p>Question #8, pg. 377</p>	<p>Direct Instruction Cooperative Learning</p> <p>Flexible Grouping</p>	<p>Respond to Problems Discussion</p> <p>In Class Activity: To find the sum of measures in a linear pair.</p>

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January	How would you draw two intersecting lines the form four angles? How would you draw a set of railroad tracks crossing a road?		Lesson: 7-7 - Find measures of angles in figures with parallel lines and transversals. - Know relationships among angles formed by intersecting lines, or by two parallel lines and a transversal.	Activity Kit	Flexible Grouping	Activity 17: To learn about the relationship of angles and parallel lines using transversals.
	Can you think of any opposite objects on a baseball field that may be equal in measurement?		Lesson: 7-8 - Find measures of angles and sides in special quadrilaterals without measuring.	Activity Kit	Flexible Grouping	Activity 18: To create a Mobius Strip using manipulatives to make predictions about parallel lines.

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January				Quiz (Lessons 4-8)		
February	What is the sum of any three angles within a triangle?		Lesson: 7-9 - Use the Triangle-Sum Property to find measures of angles. - Explain consequences of the Triangle-Sum Property.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
						-Review for Test
				Chapter 7 Test		
Chapter 8 Displays February	How do graphic illustrations make reading a newspaper easier? Which would be easier to read, a spreadsheet or a bar graph?	4.1.7.A.1,3,4 4.1.7.B.3 4.2.7.A.1,2,3 4.2.7.B.1 4.2.7.C.1,2 4.3.7.B.1 4.3.7.C.1,2 4.3.7.D.3,4 4.4.7.A.1,2 4.5.7.A,B,C,D	Lesson: 8-1 - Determine the median, range, and mode of a set of numbers. - Know reasons for having graphs. - Represent numerical data in a stem-and-leaf display. Lesson: 8-2 - Interpret and display information in bar graphs.	Lesson Masters Lesson Masters	Direct Instruction Cooperative Learning Direct Instruction Cooperative Learning	Respond to Problems Discussion

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February	<p>If an object were to slide from one place to another, would it change in size?</p> <p>When you stand in front of an ambulance, how are the letters read across the front...AMBULANCE or ECNALUBMA?</p>		<p>Lesson: 8-3 - Interpret and display information in coordinate graphs. - Plot and name points on a coordinate graph.</p> <p>Lesson: 8-4 - Plot and name points on a coordinate graph. - Graph equations for lines of the form $x + y = k$ or $x - y = k$.</p> <p>Lesson: 8-5 - Apply the relationships between figures and their reflection, rotation, and translation images. - Interpret reflections and translations on a coordinate graph.</p> <p>Lesson: 8-6 - Draw the reflection image of a figure over a timeline. - Apply the relationships between figures and their reflection, rotation, and translation images. - Interpret reflections and translations on a coordinate graph.</p>	<p>Lesson Masters</p> <p>Activity Kit</p> <p>Teaching Aid 89</p> <p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p> <p>Partners</p> <p>Individual</p> <p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p> <p>Activity 19: To measure angles and use T-charts to begin describing linear equations. (Activity aid F)</p> <p>In-Class Activity: To create translations (slides) on a coordinate grid using manipulatives.</p> <p>Respond to Problems Discussion</p>

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	<p>What are some geometric shapes that have reflection symmetry?</p> <p>What would happen if the pieces in a puzzle did not tessellate?</p>		<p>Lesson: 8-7 - Given a figure, identify its symmetry lines.</p> <p>Lesson: 8-8 - Make a tessellation using a given figure as a fundamental region.</p>	<p>Activity Kit</p> <p>Activity Kit</p>	<p>Partners</p> <p>Individual</p>	<p>Activity 20: To draw figures with reflection symmetry.</p> <p>Activity 21: To use translations (slides) and rotations (turns) to create Tessellations.</p>
February						- Review for Test
				Chapter 8 Test		
<p>Chapter 9 <i>Patterns Leading to Multiplication</i></p> <p>February</p>	How is the area of a rectangle found using multiplication?	4.1.7.A.5,6 4.1.7.B.1,3 4.2.7.A.1,2,3 4.2.7.B.1 4.2.7.C.1,2 4.2.7.D.1,2 4.2.7.E.1 4.3.7.C.1,2 4.3.7.D.1,2,3,4 4.5.7.A,B,C,D	<p>Lesson: 9-1</p> <ul style="list-style-type: none"> - Find the area of a rectangle or a right triangle, given its dimensions. - Identify properties of multiplication. -Use properties of multiplication to simplify expressions and check calculations. - Find areas of right triangles and rectangles and the number of elements in rectangular arrays in applied situations. - Picture multiplication using arrays or area. 	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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February	How would you describe the geometric characteristics of a box?		Lesson: 9-2 - Find the volume of a rectangular solid, given its dimensions. - Identify properties of multiplication. -Use properties of multiplication to simplify expressions and check calculations. - Find the volume of a rectangular solid in real contexts.	Activity Kit	Flexible Grouping	Activity 22: To use centimeter cubes to find the volumes of rectangular solids and record it in tables.

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February	<p>In what ways could a birthday cake be cut in order to get even pieces for 20 people?</p> <p>Would you consider an athlete winning a sport in two different states to be independent events?</p>		<p>Lesson: 9-3 - Multiply fractions. - Identify properties of multiplication. -Use properties of multiplication to simplify expressions and check calculations. - Picture multiplication using arrays or area.</p> <p>Lesson: 9-4 - Calculate probabilities of independent events.</p>	<p>Lesson Masters</p> <p>Teacher guided questions</p>	<p>Direct Instruction Cooperative Learning</p> <p>Whole class differentiated instruction</p>	<p>Respond to Problems Discussion</p> <p>Video: Wide World of Mathematics shows how statistics are calculated in sports today.</p>
March	<p>What is a rate? Name some rates that you see in everyday life.</p>		<p>Lesson: 9-5 - Apply the Rate Factor Model for Multiplication. - Use conversion factors to convert from one unit to another.</p>	<p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p>

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
March	<p>Which operation, addition or multiplication, would be considered a size change factor?</p> <p>What type of number could be used to make another number smaller using multiplication?</p>		<p>Lesson: 9-6 - Multiply positive and negative numbers. - Identify properties of multiplication. -Use properties of multiplication to simplify expressions and check calculations.</p> <p>Lesson: 9-7 - Apply the Size Change Model for Multiplication in real situations. - Perform expansions or contractions on a coordinate graph.</p> <p>Lesson: 9-8 - Apply the Size Change Model for Multiplication in real situations. - Perform expansions or contractions on a coordinate graph.</p>	<p>Activity Kit</p> <p>Activity Kit</p> <p>Lesson Masters</p>	<p>Flexible Grouping</p> <p>Partners</p> <p>Direct Instruction Cooperative Learning</p>	<p>Activity 23: To use integer tiles to model multiplication of negative integers.</p> <p>Activity 24: To use multiplication of graphed coordinates to model size change (expansions). (Activity aid F)</p> <p>Respond to Problems Discussion</p>

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
March			Lesson: 9-9 - Perform expansions or contractions on a coordinate graph.	Post Test Comprehensive Chp.1-9	Direct Instruction Cooperative Learning	Respond to Problems Discussion
						- Review for Test
				Chapter 9 Test		
Chapter 10 <i>Multiplication and Other Operations</i> March	What would be easier than adding the price of five identical items?	4.2.7.A.1,2,3 4.2.7.D.2 4.2.7.E.1 4.3.7.A.1 4.3.7.C.1,2 4.3.7.D.2,3,4 4.5.7.A,B,C,D	Lesson: 10-1 - Apply properties of multiplication to simplify expressions. - Recognize and use the Distributive Property, the Repeated Addition Property of Multiplication, and the Multiplication Property of Equality. Lesson: 10-2 - Solve and check equations of the form $ax = b$. - Recognize and use the Distributive Property, the Repeated Addition Property of Multiplication, and the Multiplication Property of Equality. - Represent equations of the form $ax = b$ and $ax + b = c$ with a balance scale diagram.	Pre Test Comprehensive Chapters 1-13 Activity Kit	Direct Instruction Cooperative Learning Partners	Respond to Problems Discussion Activity 25: To use manipulatives to illustrate solutions to equations in the form of $ax=b$.

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
March	If a rectangle was split into 3 regions and you only had the area of two of those regions, how could the area of the third region be found?		<p>Lesson: 10-3 - Find unknown in real situations involving multiplication.</p> <p>Lesson: 10-4 - Solve and check equations of the form $ax + b = c$ - Find unknown in real situations involving multiplication. - Represent equations of the form $ax = b$ and $ax + b = c$ with a balance scale diagram.</p>	<p>Lesson Masters</p> <p>Activity Kit</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p> <p>Activity 26: To use manipulatives to illustrate solutions to equations in the form of $ax + b=c$.</p>

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
March	What type of number do you think would counteract the value of a negative number?		<p>Lesson: 10-5</p> <ul style="list-style-type: none"> - Solve and check equations of the form $ax = b$. - Solve and check equations of the form $ax + b = c$ - Find unknown in real situations involving multiplication. 	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	What mathematical formula would best relate to the word distribute?		<p>Lesson: 10-6</p> <ul style="list-style-type: none"> - Apply properties of multiplication to simplify expressions. - Recognize and use the Distributive Property, the Repeated Addition Property of Multiplication, and the Multiplication Property of Equality. - Represent the Distributive Property by areas of rectangles. 	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
March	<p>What are some real life uses for finding the surface area of an object?</p> <p>How could you find the area of a triangle if it was drawn inside of a rectangle?</p> <p>What simple shape could a trapezoid be divided into in order to find it's area?</p>		<p>Lesson: 10-7 - Find the surface area of a rectangular solid in real contexts.</p> <p>Lesson: 10-8 - Pick appropriate units in measurement situations.</p> <p>Lesson: 10-9 - Find the area of a triangle.</p> <p>Lesson: 10-10 - Find the area of a trapezoid.</p>	<p>Lesson Masters</p> <p>Activity Kit</p> <p>Lesson Masters</p> <p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p> <p>Partners/Flexible Grouping</p> <p>Direct Instruction Teacher Modeling</p> <p>Direct Instruction Teacher Modeling</p>	<p>Respond to Problems Discussion</p> <p>Activity 27: To estimate dimensions using polygons on grid paper.</p> <p>Cooperative Learning</p> <p>Cooperative Learning</p>
March						-Review for Test
				Chapter 10 Test		
<p>Chapter 11 <i>Patterns Leading to Division</i></p> <p>April</p>	<p>What is real number division?</p> <p>What are some common examples of rates we see in our daily lives?</p>	<p>4.1.7.A.3,5,6 4.1.7.B.1 4.5.7.A,B,C,D</p>	<p>Lesson: 11-1 - Use integer division in real situations.</p> <p>Lesson: 11-2 - Use the Rate Model for Division.</p>	<p>Lesson Masters</p> <p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p>

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
April	What do you think would happen if you divided a negative number by a positive number?		Lesson: 11-3 - Divide fractions with numbers or variables. - Use the Rate Model for Division.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
	What are some examples of ratios within your classroom?		Lesson: 11-4 -Divide positive and negative numbers. - Know the general properties for dividing positive and negative numbers. - Use the Rate Model for Division.	Activity Kit	Flexible Grouping	Activity 28: To use integer tiles to model division of negative numbers.
	How can a proportion be compared?		Lesson: 11-5 - Use the Ratio Comparison Model for Division.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
			Lesson: 11-6 - Solve proportions. - Recognize and solve problems involving proportions in real situations.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
April	<p>What are some similar mathematical terms you can relate to the words means and extremes?</p> <p>How do similar figures arise in real life?</p>		<p>Lesson: 11-7 - Solve proportions. - Recognize the Means-Extremes Property and know why it works. - Recognize and solve problems involving proportions in real situations.</p> <p>Lesson: 11-8 - Find missing lengths in similar figures.</p> <p>Lesson: 11-9 - Solve proportions. - Recognize and solve problems involving proportions in real situations.</p>	<p>Lesson Masters</p> <p>Teacher Observation</p> <p>Lesson Masters</p>	<p>Direct Instruction Cooperative Learning</p> <p>Partners</p> <p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p> <p>In-Class Activity: To determine size-change factors in similar figures.</p> <p>Respond to Problems Discussion</p>
April						- Review for Test
April				Chapter 11 Test		

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
<p>Chapter 12 <i>Real Numbers, Area, and Volume</i></p> <p>April</p>	<p>What is the difference between a repeating and a terminating decimal?</p> <p>How do square roots relate to actual geometric squares in regards to area?</p> <p>What do the words rational and irrational mean in real life? Name some things, people, ideas, that are rational or irrational.</p>	<p>4.1.7.A.1,2,5,6 4.1.7.B.1 4.2.7.A.1,2,3 4.2.7.E.1,2 4.4.7.A.2 4.5.7.A,B,C,D</p>	<p>Lesson: 12-1 - Find a simple fraction equal to any terminating or repeating decimal.</p> <p>Lesson: 12-2 - Estimate square roots of a number without a calculator. - Know how square roots and geometric squares are related.</p> <p>Lesson: 12-3 - Use the Pythagorean Theorem to find unknown lengths of third sides in right triangles.</p> <p>Lesson: 12-4 - Find the circumference and area of a circle or sector, given its radius or diameter. -Identify numbers as rational, irrational, or real. - Apply formulas for the circumference of a circle and area of a circle or sector and surface area and volume of a sphere in real situations.</p>	<p>Activity Kit</p> <p>Activity Kit</p> <p>Teaching Aid 125</p> <p>Teaching Aid 126</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Partners</p>	<p>Activity 29: To practice square roots by measuring manipulatives and calculating the <i>Golden Ratio</i>.</p> <p>Activity 30: To use a diagram puzzle to model the relationship of the <i>Pythagorean Theorem</i>.</p> <p>In-Class Activity: To calculate the length of a hypotenuse using manipulatives and the Pythagorean theorem.</p> <p>In-Class Activity: To use ratios of various objects to calculate the approximate value of π.</p>

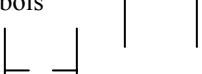
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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
April	In a sphere, is the length of the radius the same at every point on the surface of the sphere?		Lesson: 12-8 - Find the surface area and volume of a sphere, given its radius or diameter. - Apply formulas for the circumference of a circle and area of a circle or sector and surface area and volume of a sphere in real situations.	Lesson Masters	Direct Instruction Cooperative Learning	Respond to Problems Discussion
						- Review for Test
April				Chapter 12 Test		
May				Post Test Comprehensive		

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Timeline	Essential Questions and Content	NJCC Standards	Instructional Objectives	Assessment	Instructional Domain	Instructional Activities
<p>Chapter 13 <i>Coordinate Graphs and Equations</i></p> <p style="text-align: center;">May</p>	<p>How are linear equations, data, and graphs related?</p> <p>Do you believe it is possible to solve every problem with only one operation?</p> <p>How are coordinates found on a coordinate grid?</p>	<p>4.1.7.B.1,3 4.2.7.A.3 4.3.7.B.1 4.3.7.D.1,2,3,4 4.4.7.A.2 4.5.7.A,B,C,D</p>	<p>Lesson: 13-1 -Graph equations of the form $y = ax + b$.</p> <p>Lesson: 13-2 - Translate situations of constant increase or decrease that lead to sentences of the form $ax + b = cx + d$. - Interpret the solution to $ax + b = cx + d$ graphically.</p> <p>Lesson: 13-3 - Solve equations of the form $ax + b = cx + d$. - Translate situations of constant increase or decrease that lead to sentences of the form $ax + b = cx + d$.</p> <p>Lesson: 13-4 - Find the line on which or near which the numerators and denominators of equal fractions or relative frequencies lie. -Graph equations of the form $y = ax + b$.</p>	<p>Lesson Masters</p> <p>Lesson Masters</p> <p>Activity Kit</p> <p>Activity Kit</p>	<p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p> <p>Direct Instruction Cooperative Learning</p>	<p>Respond to Problems Discussion</p> <p>Respond to Problems Discussion</p> <p>Activity 31: To use manipulatives to illustrate solutions to equations in the form of $ax + b = cx + d$.</p> <p>Activity 32: To learn about probability by using the relative frequency of events.</p>

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May	Can graphing be used in situations in which the solution has been rounded up or down?		<p>Lesson: 13-5 - Graph formulas for perimeter, area, and other quantities that involve two variables.</p> <p>Lesson: 13-6 - Evaluate expressions using the symbols for rounding up or rounding down. - Interpret graphs of equations using the symbols or </p>	Lesson Masters Lesson Masters	Direct Instruction Cooperative Learning Direct Instruction Cooperative Learning	Respond to Problems Discussion Respond to Problems Discussion
May						- Review for Test
May				Chapter 13 Test		
May 16 – June 13					Technology	Project Based Learning