

## Course Outlines

<b>GEOMETRY</b>				coherence	Rigor	Focus	Date
<b>MEASUREMENT</b>			<b>Resources</b>				
<b>Introduction</b>	<b>Don't forget to mention</b>	<b>CCR</b>					
<p><b>Fractions</b>  <b>*If fractions are not a need for 70% of the total class, do not teach independently and start in Measurement. (Fractions are included in most of the concepts to be taught below, so you will need to explain in context)</b>  <b>*If factions are a need for the majority of the class, teach independently. Make sure do not spend more than 1 week in this concept.</b></p>	<p>What is a fraction                      Factorize/simplify                      Add, subtract                      Multiplication and Division                      Fractions in the calculator.</p>	<p><u>Fractions</u>  <b>Level B:</b>                      3.NF.1, 3.NF.2, 3.NF.2a, 3.NF.2b  <b>Level C:</b>                      4.NF.1, 4.NF.2, 4.NF.3c, 4.NF.3d, 4.NF.4, 4.NF.4a, 4.NF.4b, 4.NF.4c, 5.NF.1, 5.NF.3, , 5.NF.4, 5.NF.7, 5.NF.7a, 5.NF.7b, 6.RP.1, 6.RP.2  <u>Fractions:</u>  <b>Level D:</b>                      6.NS.7, 7.NS.1, 7.NS.1b, 7.NS.1c, 7.NS.1d, 7.NS.2, 7.NS.2a, 7.NS.2b, 7.NS.2c, 7.NS.2d, 7.NS.3,  <b>Level E:</b>                      N.RN.2,</p>					
<b>Measurement</b>	<p>What is measurement? Why is it important? Explain US Customary System and Metric system.                      Measure lengths                      Represent and interpret data                      Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects                      Convert measurements</p>	<p><u>Numbers base ten</u>  <b>Level A:</b>                      1.NBT., 1.NBT.3, 1.NBT.4, 1.NBT.5  <b>Level B:</b>                      2.NBT.1, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.7, 2.NBT.8, 2.NBT.9, 3.NBT.2, 3.NBT.3  <b>Level C:</b>                      4.NBT.4, 4.NBT.5, 4.NBT.6, 5.NBT.3, 5.NBT.3a, 5.NBT.3b, 5.NBT.5, 5.NBT.6, , 5.NBT.7, 6.NS.2, 6.NS.3  <u>Ratio and Proportion</u> <b>Level D:</b>                      7.RP.1  <u>Number and Quantity:</u>  <b>Level E:</b>                      N.Q.3</p>					
<b>Data analyses</b>	<p>Recognize, represent and interpret data                      Interpret charts and graphs                      Measure lengths on graphs and create accurate representation of data</p>	<p><u>Algebra and Functions</u>  <b>Level B:</b>                      2.OA.2  <u>Geometry</u>  <b>Level A:</b></p>					
<b>Statistical Data Set Mean, Median, Mode and range</b>	<p>Understand statistical variability                      Describe distributions                      Random samplers to draw inferences about population                      Comparative inferences about populations                      Probability models</p>						

	Patters of association in data Differentiate between statistical data and specific data Calculate probability form data and observe and compare provability.	1.MD.2, <b>Level B:</b> 2.MD.3, 2.MD.4, 3.MD.1, 3.MD.2, <u>Measurement and data</u> <b>Level C:</b> 6.SP.1, 6.SP.2, 6.SP.3, 6.SP.5, 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4, 7.SP.5, 7.SP.6, 8.SP.1, 8.SP.4 <u>Interpreting Data:</u> <b>Level E:</b> S.ID.5				
<b>Sample space and probability models</b>	Interpret linear models					
<b>Review</b>	Formative assessments, quizzes Lesson review					
<b>RATIO AND PROPORTION</b>						
<b>Introduction</b>	<b>Don't forget to mention</b>	<b>CCR</b>				
<b>Ratio</b>	Understand Ratios and proportional relationships Analyze ratio relationships and use it to real world mathematical problems	<u>Fractions</u> <b>Level B:</b> 3.NF.1, 3.NF.2, 3.NF.2, 3.NF.2a, 3.NF.2b <b>Level C:</b> 4.NF.1, 4.NF.2, 4.NF.3c, 4.NF.3d, 4.NF.4, 4.NF.4a, 4.NF.4b, 4.NF.4c, 5.NF.1, 5.NF.3, 5.NF.4, 5.NF.7, 5.NF.7a, 5.NF.7b, 6.RP.1, 6.RP.2 <u>Ratio and Proportional reasoning</u> <b>Level D:</b> 6.RP.3, 6.RP.3a, 6.RP.3b, 6.RP.3c, 6.RP.3d, 7.RP.1, 7.RP.2, 7.RP.3 <u>Expressions and equations</u>				
<b>Proportion</b>	Understand the equality of ratios Use proportions in real life					
<b>Percent</b>	What is a percent Part, whole and percent Understand the relationship between percent's, fractions and decimals. Use percent's in real life Read graphs/charts using percepts.	<b>Level D:</b> 6.RP.3, 6.RP.3a, 6.RP.3b, 6.RP.3c, 6.RP.3d, 7.RP.1, 7.RP.2, 7.RP.3 <u>Expressions and equations</u>				
<b>Review</b>	Formative assessments, quizzes Lesson review	<b>Level D:</b> 7.EE.3				
<b>PERIMETER</b>						
<b>Introduction</b>	<b>Don't forget to mention</b>	<b>CCR</b>				
<b>Perimeter</b>	What is perimeter Working with different 2 dimensional shapes Adding and subtraction fractions, decimals and using percent's to find out perimeter of shapes Real life applicable problems involving perimeters	<u>CCR- Fractions:</u> <b>Level C:</b> 4.NF.3d, 4NF.4, 4.NF.4a, 5.NF.1, 5.NF.4, 5.NF.7 <u>Algebra and Functions</u> <b>Level A:</b> 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6 <u>Geometry and geometry</u> <u>measurement</u>				
<b>Angles</b>	Draw and identify angles Classify shapes by their properties of lines and angles	<b>Level A:</b> 1.MD.2, <b>Level B:</b> 2.G.1, 2.G.3, 3.MD.7b, <b>Level D:</b> 7.G.5, 8.G.2, 8.G.4				
<b>Review</b>	Formative assessments, quizzes Lesson review					
<b>AREAS</b>						

Introduction	Don't forget to mention	CCR				
<b>Areas Polygons, triangles and circles</b>	Draw construct and describe geometrical figures and describe the relationships between them. Understand congruent and similar Graph points in a coordinate plan to solve real world mathematical problems Understand areas Area formulas by shape Use fractions and decimals as part of the problems to find areas Use percent's as part of the problems to find areas Solve real life problems using areas	<u>CCR-Fractions</u> <b>Level C:</b> 4.NF.4b, 4.NF.4c, 5.NF.3, 5.NF.4, 5.NF.7, <u>Ratio and proportional reasoning:</u> <b>Level D:</b> 7.RP.1 <u>Algebra and Functions level C:</u> 6.EE.2c <u>Geometry</u> <b>level A:</b> K.G.4, 1.G.2, 1.MD.2, <b>Level B:</b> 2.G.1, 2.G.3, 3.G.2, 2.MD.3, 3.MD.5, 3.MD.6, 3.MD.7, 3.MD.7a, 3.MD.7b, 3.MD.7c, 3.MD.7d <b>Level C:</b> 5.G.3, 6.G.1, 5.MD.3, 3.MD.4, 5.MD.5, 5.MD.5a, 5.MD.5b, 5.MD.5c, 7.G.6 <b>Level D:</b> 7.G.1, 7.G.4, 7.G.6, 8.G.7, 8.G.8 <b>Level E</b> G.SRT.5 <b>Level E:</b> G.GMD.3				
<b>Pythagorean Theorem</b>	What is the Pythagorean Theorem Formula Solve problems involving right triangles Find distance between 2 points on a coordinate graph using Pythagorean theorem					
<b>Surface areas</b>	Understand 3 dimensional figures What is surface areas Solve mathematical problems involving surface areas					
<b>Volumes, Cubes prism and pyramids Compose figures</b>	Understand volume, Formulas Solve mathematical problems involving volumes Solve mathematical problems involving compose figures Use fractions, decimals and percent's as part of the word problems to find areas.					
<b>Review</b>	Formative assessments, quizzes Lesson review					

ALGEBRA					
Number and Number operations		Resources			
<b>"Numbers base ten" and "Basic properties and operations"</b>	Understand place value Understand properties of operations to add, subtract, multiply and divide Perform multi digit arithmetic problems Represent numbers in multiple ways using greater than and less than symbols Introducing symbols in place of numbers Compute multi-digit numbers and find common factors Associative, distributive and commutative laws Applications				

<b>Signed Numbers</b>	What are signed number How we use signed numbers Plotting signed numbers into a graph Real life word problems					
<b>Integers and operations</b>	What are integers Working with integers Word problems including integers					
<b>Exponents and Scientific Method</b>	What are exponents, what exponents means Exponential functions Real life applications with exponents					
<b>Review</b>	Formative assessments, quizzes – lesson review					
<b>Algebra basics</b>						
<b>Linear expression</b>	Evaluate simple expressions Simplify expressions Basic equations	<u>Algebra and Functions</u> <b>Level A:</b> 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.8 <b>Level B:</b> 2.OA.1, 2.OA.3.OA.3, 3.OA.4, 3.OA.6 <b>Level C:</b> 6.EE.2, 6.EE.2a, 6.EE.2b <b>Level D:</b> 7.EE.1, <u>Functions</u> <b>Level E:</b> A.SSE.1, A.SSE.1a				
<b>Linear equations</b>	Linear equations of one variable Multi-step equations Graph linear equations Slopes Use slopes to write linear equations	<u>Ratio and Proportion</u> <b>Level D:</b> 7.RP.2a, 7.RP.2b, 7.RP.2c, 7.RP.2d, Level E- N.Q.1 <u>Operations and algebraic thinking</u> <b>Level B:</b> 2.OA.1, 2.OA.3.OA.3, 3.OA.4, 3.OA.6 <b>Level C:</b> 4.OA.1, 4.OA.5, 5.OA.2, 6.EE.2c <u>Functions</u> <b>Level D:</b> 8.F.1, 8.F.3 <u>Algebra</u> <b>Level E:</b> A.CED.2, A.CED.3 <u>Functions</u> <b>Level E:</b> 8.EE.7, 8.EE.7a, 8.EE.7b, F.IF.7 <u>Geometry</u> <b>Level C:</b> 4.G.1, 5.G.1, 5.G.2, 6.G.3				

		<p><b>Level D:</b> 8.G.2, 8.G.4</p> <p><b>Level D:</b> 8.SP.2, 8.SP.3, 8.SP.4</p> <p><b>Level E:</b> S.ID.7</p>				
<b>Systems of equations and linear equalities</b>	Solve and graph linear equations Write and solve linear inequalities Review	<p><u>Expressions and Equations</u></p> <p><b>Level D:</b> 7.EE.4, 7.EE.4a, 7.EE.4b</p> <p><b>Level E:</b> A.REI.3</p> <p><u>Functions</u></p> <p><b>Level E:</b> 8.EE.8, 8.EE.8a, 8.EE.8b, 8.EE.8c</p> <p><u>Interpreting Data</u></p> <p><b>Level E:</b> S.ID.1, S.ID.3 S.ID.5</p>				
<b>Patters and functions</b>	Recognize patters Compare functions in different presentations Review	<p><u>Operations and Algebraic Thinking</u></p> <p><b>Level C:</b> 4.OA.5</p> <p><u>Functions</u></p> <p><b>Level E:</b> F.1F.4, F.1F.5, F.1F.1, F.1E.1, F.1E.1b, F.1E.1c, F.1E.5</p> <p><u>Geometry</u></p> <p><b>Level D:</b> 8.SP.4</p>				
<b>Polynomials and rational expression</b>	Perform operations with polynomials Evaluate polynomials expressions Simplify, evaluate and write polynomial expressions Review	<p><u>Operations and Algebraic Thinking</u></p> <p><b>Level C:</b> 5.OA.1, 5.OA.2, 6.EE.1, 6.EE.2, 6.EE.2b,</p> <p><u>Algebra</u></p> <p><b>Level E:</b> A.APR.1, A.APR.6, A.CED.1</p>				
<b>Quadratic Equations</b>	Recognize, write and substitute with quadratic equations Evaluate quadratic equations Review	<p><u>Operations and Algebraic Thinking</u></p> <p><b>Level C:</b> 6.EE.2, 6.EE.2a, 6.EE.2b, 6.EE.2c</p> <p><u>Algebra</u></p> <p><b>Level E:</b> A.SSE.3, A.SSE.3a, A.CED.1, A.REI.4</p> <p><u>Functions</u></p> <p><b>Level E:</b> F.1F.9</p>				
<b>Review</b>	Formative assessments, quizzes – lesson review					