Content Area: Math

Grade Level: 7th Grade

Curriculum Map/Scope & Sequence (2021)

Unit	BIG Ideas/Skills	IL Priority Learning Standards	NWEA Map	I CAN Statements	Introductory Skill Developing Skill Mastery Skill	Assessments	Semester
	Unit Topic of Study	Green: Priority Standards Blue: Supporting Content Standards Yellow: Additional Content Standards	**Map Test area of Focus**				
Unit 1	Numbers, and Fraction Concepts Decimals, Fractions, and Mixed Numbers Writing to Explain	CC.7.N.S.1 Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Complex Numbers	I can find equivalent fractions. I can convert fractions, decimals, improper fractions, and mixed numbers to an equivalent form. I can describe my mathematical process to solving problems in paragraph form.	Mastery Skill Introduction Skill	Paper Pencil homework. Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester
Unit 2	Adding and Subtracting Fractions and Mixed Numbers Writing to Explain	CC.7.N.S.1 Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Complex Numbers	I can add and subtract all forms of fractions. I can describe my mathematical process to solving problems in paragraph form.	Mastery Skill Introduction Skill	Paper Pencil homework. Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester

Unit 3	Multiplying Fractions and Mixed Numbers Writing to Explain	<mark>CC.7.N.S.2</mark> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. Apply and extend previous understanding of multiplication and division of fractions to multiply and divide rational numbers.	Complex Numbers	I can multiply proper fractions and mixed numbers. I can describe my mathematical process to solving problems in paragraph form.	Mastery Skill Introduction Skill	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester
Unit 4	Dividing Fractions and Mixed Numbers Writing to Explain	<mark>CC.7.N.S.</mark>2 Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. Apply and extend previous understanding of multiplication and division of fractions to multiply and divide rational numbers.	Complex Numbers **Algebraic Thinking**	I can divide fractions and mixed numbers. I can solve one step algebraic problems using multiplication and division. I can describe my mathematical process to solving problems in paragraph form.	Mastery Skill Introduction Skill	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester
Unit 5	**Integers and Rational Numbers** **Writing to Explain**	<mark>CC.7.N.S.1</mark> Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. <mark>CC.7.N.S.2</mark> Apply and extend previous understandings of	Complex Numbers **Algebraic Thinking**	**I can relate integers, their opposites, and their absolute values.** **I can recognize rational numbers and write them in decimal form.** **I can add and subtract integers.** **I can add and subtract rational numbers.**	Mastery Skill **Developing Skill** Mastery Skill **Developing Skill**	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester

		operations with fractions to add, subtract, multiply, and divide rational numbers. Apply and extend previous understanding of multiplication and division of fractions to multiply and divide rational numbers. CC.7.N.S.3 Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers. Solve real-world and mathematical problems involving the four operations with rational numbers. (Computation with rational numbers extends the rules for manipulating fractions to complex fractions.)		**I can multiply and divide integers.** **I can multiply and divide rational numbers.** **I can solve complex fractions.** **I can solve problems with rational numbers.**			
Unit 6	Ratios, Rates, and Proportions	CC.7.R.P.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and units.	Complex Numbers **Algebraic Thinking**	**I can compute ratios where quantities with different units of measure are being compared.** **I can find equal ratios and determine if two ratios form a proportion.** **I can compare unit rates or unit prices for easy comparison.** **I can calculate distance, rate, and time using a mathematical formula.** **I can describe my mathematical process to solving problems in paragraph form.**	**Developing**	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester

Unit 7	Solving Proportions	<mark>C.C. 7.R.P. 2</mark> Analyze proportional relationships and use them to solve real-world and mathematical problems. <mark>C.C.7.R.P.3</mark> Analyze proportional relationships and use them to solve real-world and mathematical problems. Use proportional relationships to solve multistep ratio and percent problems.	Complex Numbers **Algebraic Thinking**	**I can create and use a ratio table to solve proportions.** **I can use unit rates to solve proportions.** **I can use cross multiplication to solve proportions.** **I can mathematically explain real world problems using words, pictures, numbers or symbols. My explanation should be correct, concise, complete, and easy to understand.**	**Developing**	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester
Unit 8	Understanding Percents	<mark>C.C.7.R.P.3</mark> Analyze proportional relationships and use them to solve real-world and mathematical problems. Use proportional relationships to solve multistep ratio and percent problems.	Complex Numbers **Algebraic Thinking**	**I can convert a fraction and decimal to a percent form.** **I can estimate percentages.** **I can recognize the part and whole relationship of percents.** **I can apply percentages in situations involving tips, taxes, and discounts.**	**Developing**	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	1st Semester
Unit 9	Analyze and Use Proportional Relationships	<mark>CC.7.R.P.1</mark> Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and units. <mark>C.C. 7.R.P. 2</mark> Analyze proportional relationships	Complex Numbers **Algebraic Thinking**	**I can use ratio concepts and reasoning to solve multi-step problems.** **I can find unit rates with ratios of fractions**	**Developing** to Mastery	Paper Pencil homework. Spiral Reviews Test Cumulative Test Quiz Classroom	2nd Semester

		and use them to solve real-world and mathematical problems. `C.C.7.R.P.3` Analyze proportional relationships and use them to solve real-world and mathematical problems. Use proportional relationships to solve multistep ratio and percent problems.		**and use themes to solve problems.** **I can test equivalent ratios to decide whether quantities are in a proportional relationship.** **I can use the constant of proportionality in an equation to represent a proportional relationship.** **I can use a graph to determine whether two quantities are proportional.** **I can determine whether a relationship is proportional and use representations to solve problems.**		observations Math Labs Performance Tasks Star Freckle Freckle	
Unit 10	Analyze and Solve Percent Problems	`C.C.7.R.P.3` Analyze proportional relationships and use them to solve real-world and mathematical problems. Use proportional relationships to solve multistep ratio and percent problems.	Complex Numbers **Algebraic Thinking**	**I can understand, find, and analyze percentages of numbers.** **I can use proportions to solve percent problems.** **I can represent and solve percent problems using equations.** **I can solve problems using percent change and percent error.** **I can solve problems involving percent markup and markdown.**	**Developing**	Paper Pencil homework. Spiral Reviews Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	2nd Semester

				I can apply percent reasoning to solve simple interest problems.			
Unit 11	Generate Equivalent Expressions	C.C.7.EE.1 Use properties of operations to generate equivalent expressions. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. C.C. 7. E.E.2 Use properties of operations to generate equivalent expressions. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	Complex Numbers **Algebraic Thinking**	**I can write and evaluate algebraic expressions.** **I can write equivalent expressions for given expressions.** **I can use properties of operations to simplify expressions.** **I can expand expressions using the Distributive Property.** **I can use common factors and the Distributive Property to factor expressions.** **I can add expressions that represent real-world problems.** **I can subtract expressions using properties of operations.** **I can use an equivalent expression to find new information.**	Developing	Paper Pencil homework. Spiral Reviews Test Cumulative Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	2nd Semester
Unit 12	Solve Problems Using Equations and Inequalities	C.C.7.EE.3 Solve real-life and mathematical problems using numerical and algebraic expressions and equations. Solve multi-step real-life and mathematical problems posed with	Complex Numbers **Algebraic Thinking**	**I can represent and solve problems with two-step equations.** **I can use the distributive property to solve equations.**	**Developing**	Paper Pencil homework. Spiral Review Test Quiz Classroom observations	2nd Semester

		positive and negative rational numbers in any form(whole number, fractions, and decimals), using tools strategically. C.C.7.E.E. 4 Solve real-life and mathematical problems using numerical and algebraic expressions and equations. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.		**I can solve inequalities using addition, subtraction, multiplication, and division.** **I can write and solve two-step inequalities.** **I can solve inequalities that require multi-steps.**		Math Labs Performance Tasks Star Freckle	
Unit 13	Use Sampling to Draw Inferences About Populations	C.C.7.S.P.1 Use random sampling to draw inferences about a population. Understand that statistics can be used to gain information about a population by examining a sample population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. C.C.7.S.P.2 Use random sampling to draw inferences about a population. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or	Complex Numbers **Statistics and Probability**	**I can determine if a sample is representative of a population.** I can calculate measures of central tendency. **I can make inferences about population from a sample data set.** I can construct dot plots and box plots to display data. **I can draw comparative inferences about two populations using median or Interquartile range (IQR)** **I can compare**	**Developing Skill** **Mastery Skill** **Developing Skill** **Mastery Skill** **Introduction Skill**	Paper Pencil homework. Spiral Reviews Test Cumulative Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	2nd Semester

		predictions. C.C.7.S.P.3 Draw informal comparative inferences about two populations. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. C.C.7.S.P.4 Draw informal comparative inferences about two populations. Use measures of center and measures of variability for numerical data from random samples to draw inferences about two populations.		**populations using the mean, median, mode, range, IQR, and mean absolute deviation.**			
Unit 14	Probability	C.C.7.S.P.5 Investigating chance processes and developing, using, and evaluating probability models. Understand that the probability of a chance event is number between 0 and 1 that expresses the likelihood of the event occurring. C.C.7.S.P.6 Investigating chance processes and developing, using, and evaluating probability models. Approximate the probability of a chance event by collecting data onl the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the	Complex Numbers **Algebraic Thinking** **Statistics and Probability**	**I can describe the likelihood that an event will occur.** **I can determine the theoretical probability of an event.** **I can determine the experimental probability of an event.** **I can use probability models to find the probability of events.** **I can find all possible outcomes of a compound event.** **I can find the probability of a**	Mastery Skill **Developing Skill** **Introduction Skill**	Paper Pencil homework. Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	2nd Semester

		probability. C.C.7.S.P.7 Investigate chance processes and develop use and evaluate probability models. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of discrepancy. C.C.7.S.P.8 Investigate chance processes and develop, use, and evaluate probability models. Find probability of compound events.		**compound event.** **I can simulate compound events to approximate its probability.**			
Unit 15	Solving Problems Involving Geometry	C.C.7.G.1 Draw, construct, and describe geometrical figures, including computing actual lengths and areas from a scale drawing reproducing a scale drawing at a different scale. C.C.7.G.2 Draw, construct, and describe geometrical figures and describe the relationship between them. Draw geometric shapes with given conditions. Focus on constructing triangles, from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle. C.C.7.G.3 Draw, construct, and describe geometrical figures and describe the relationship between them.	Geometry	I can use the key in a scale drawing to find missing measures. I can draw figures with given conditions. **I can draw triangles when given information about their side lengths and angle measure.** **I can solve problems involving angle relationships.** **I can solve problems involving radius, diameter, and circumference of circles.** **I can solve problems involving the area of a**	**Mastery Skill** **Developing Skill**	Paper Pencil homework. Test Quiz Classroom observations Math Labs Performance Tasks Star Freckle	2nd Semester

| | | Describe the 2-D figures that result from slicing 3-D figures, as in the plane section of right rectangular prisms and right rectangular pyramids.

C.C.7.G.4 Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Know the formulas for the area and circumference of a circle and use them to solve problems; give informal derivation of the relationship between the circumference and area of the circle.

C.C.7.G.5 Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Use facts about supplementary angles, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for unknown angle figures.

C.C.7.G.6 Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Solve real world and mathematical problems involving area, volume and surface area of 2-D and 3-D objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | | **circle.**

I can determine what the cross section looks like when a 3D figure is sliced.

I can find the area and surface area of 2-D composite shapes and 3-D prism.

I can use the area of the base of a 3-D figure to find its volume. | | | |