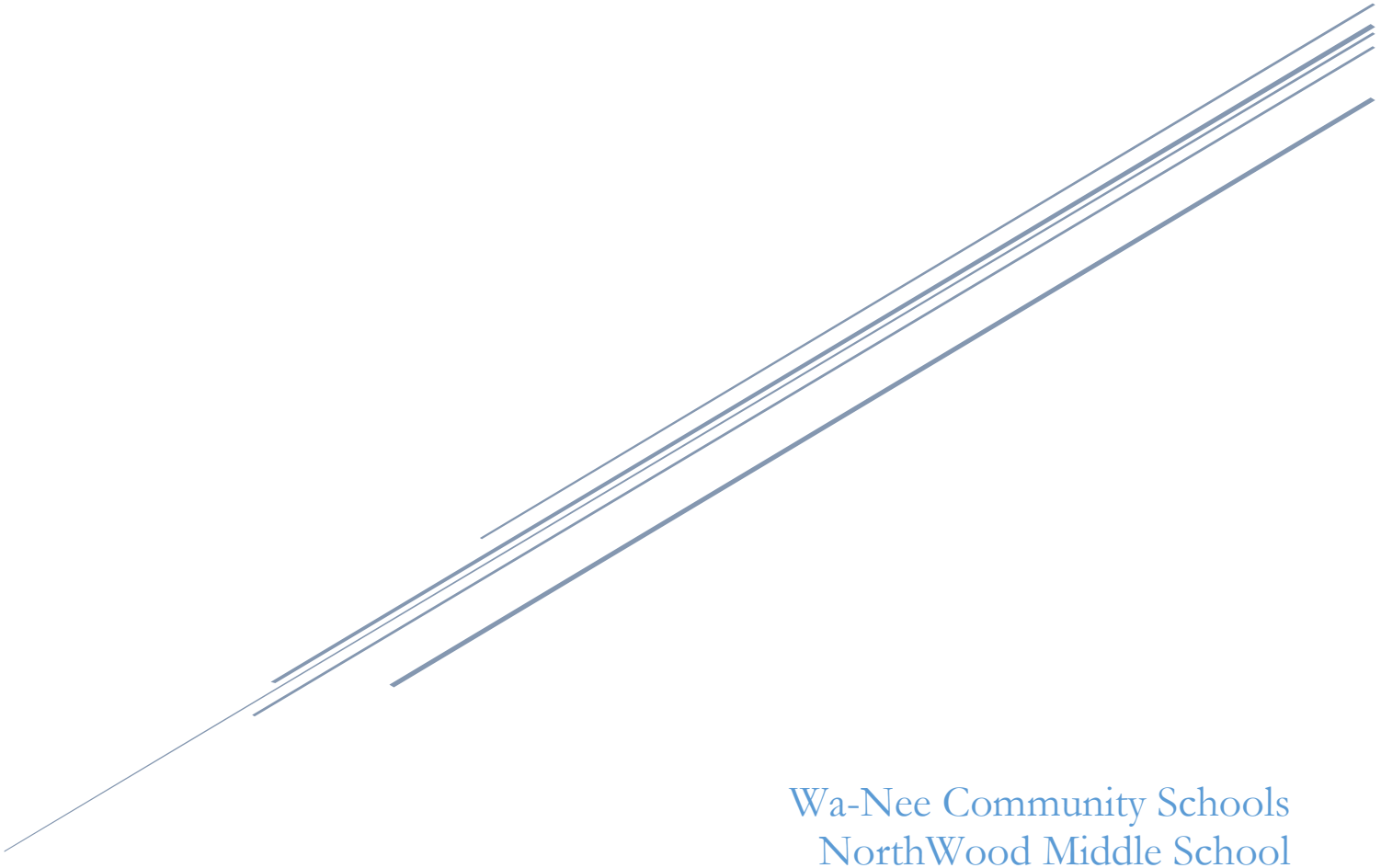
7TH GRADE PRE-ALGEBRA CURRICULUM MAP



Wa-Nee Community Schools
NorthWood Middle School

Nine Weeks	Units/Chapters	Standards
1st Nine Weeks	Ch. 1 (Algebra)	7.AF.1, 7.AF.2, 7.RP.3
	Ch. 2 (Integers)	7.NS.1, 7.NS.2, 7.NS.3, 7.NS.4, 7.NS.5, 7.NS.6, 8.NS.1, 8.NS.2, 7.RP.3
	Ch. 3 (Rational Numbers)	7.NS.7, 7.AF.2, 7.AF.3
2nd Nine Weeks	Ch. 4 (Powers and Roots)	7.NS.1, 7.NS.2, 7.NS.3, 8.NS.1
	Ch. 5 (Proportions)	7.GM.3, 7.RP.1, 7.RP.2
	Ch. 6 (Percents)	7.RP.2
3rd Nine Weeks	Ch. 7 (Expressions)	7.AF.1
	Ch. 8 (Equations & Inequalities)	7.AF.2, 7.AF.3, 7.AF.4
	Ch. 9 (Linear Functions)	7.AF.3, 7.AF.4, 7.AF.5, 7.AF.6, 7.RP.1, 7.RP.3
4th Nine Weeks	Ch. 11 (Geometry)	7.GM.1, 7.GM.2, 8.GM.1
	Ch. 12 (Measurement)	7.GM.1, 7.GM.2, 7.GM.3, 8.GM.2
	Ch. 10 (Probability & Statistics)	7.DSP.1, 7.DSP.2, 7.DSP.3, 7.DSP.4, 7.DSP.5
	Post-ILearn Topics	8.GM.1, 8.GM.2, 8.GM.3, 8.NS.3, 8.DSP.1, 8.DSP.3, 8.DSP.4

Chapter 1: The Language of Algebra			**Unit 1: Rational Numbers and Exponents**		
Essential Question: How can you use numbers and symbols to represent mathematical ideas?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Problem Solving (1 day)	7.AF.2: Solve real-world problems with rational numbers by using one or two operations. (E)	• Four-step plan	Pair and share	p.4-5	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Words and Expressions (1 day)	7.AF.2: Solve real-world problems with rational numbers by using one or two operations. (E)	• Numerical expression • Evaluate • Order of operations	Board problems	p.9-10	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 3: Variables and Expressions (1 day)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve	• Algebra • Variable • Algebraic expression • Defining a variable • Substitution property of equality	Online practice	p.16-18	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 1: The Language of Algebra			Unit 1: Rational Numbers and Exponents		
Essential Question: How can you use numbers and symbols to represent mathematical ideas?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)				
Lesson 4: Properties of Numbers (2 days)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)).	• Properties • Commutative property • Associative Property • Counterexample • Simplify • Deductive reasoning	Property theatre	p.22-24	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 1: The Language of Algebra			**Unit 1: Rational Numbers and Exponents**		
Essential Question: How can you use numbers and symbols to represent mathematical ideas?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	Justify each step in the process. (E)				
Lesson 5: Problem-Solving Strategies (1 day)	7.AF.2: Solve real-world problems with rational numbers by using one or two operations. (E)	• Look for a pattern • Guess, check, and revise • Make a table • Work backward	3-act math	p.28-30	Study guide Textbook All Things Algebra Dan Meyer's Three-Act Math Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Ordered Pairs and Relations Lesson 7: Words, Equations, Tables, and Graphs (2 days)	7.RP.3: Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent these proportional relationships. Apply the definition of	• Coordinate plane • x and y-axis • origin • ordered pair • x and y-coordinates • relation • domain • range • equation	Board graphing	Worksheet 6-7 Exit ticket	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 1: The Language of Algebra			Unit 1: Rational Numbers and Exponents		
Essential Question: How can you use numbers and symbols to represent mathematical ideas?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	unit rate to y = mx. (E)				
Mid-Chapter quiz: Study Guide p.13 Chapter test: 3A Review activities throughout chapter					

Chapter 2: Operations with Integers			Unit 1: Rational Numbers and Exponents		
Essential Question: What happens when you add, subtract, multiply, and divide integers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Integers and Absolute Value (1 day)	7.NS.1: Show on a number line that a number and its opposite have a sum of 0 (are additive inverses). Find and interpret sums of rational numbers in real-world contexts.	• Negative number • Positive number • Integer • Opposites • Coordinate • Inequality • Absolute value	Board examples Pair and Share Teach a partner	p. 49-50	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Adding integers (1 day)	7.NS.1: Show on a number line that a number and its opposite have a sum of 0 (are additive inverses).	• Additive inverse	Board examples Pair and share	p. 58-60	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket,

Chapter 2: Operations with Integers			**Unit 1: Rational Numbers and Exponents**		
Essential Question: What happens when you add, subtract, multiply, and divide integers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	Find and interpret sums of rational numbers in real-world contexts.				online digital resources IXL
Lesson 3: Subtracting integers (2 days)	7.NS.2: Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	• Inductive reasoning	Board examples Tile puzzles	p. 65-67	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Multiplying Integers (1 day)	7.NS.3: Use the properties of operations, particularly the distributive property, leading to products such as		Board examples	p. 74-76	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 2: Operations with Integers			**Unit 1: Rational Numbers and Exponents**		
Essential Question: What happens when you add, subtract, multiply, and divide integers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	(–1)(–1) = 1 and the rules for multiplying signed numbers. (E)				
Lesson 5: Dividing Integers (1 day)	7.NS.4: Explain that if p and q are integers, then –(p/q) = (–p)/q = p/(–q) for all nonzero integers. (E)		Board problems Pair and share	p. 80-82	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Graphing in Four Quadrants (1 day)	7.RP.3: Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent these proportional relationships. Apply the definition of unit rate to y = mx. (E)	• quadrants	Board examples Teach a partner	p. 85-87	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter quiz: Study Guide p.35 Chapter Test 3A Review activities throughout chapter					

Chapter 3: Operations with Rational Numbers			**Unit 1: Rational Numbers and Exponents**		
Essential Question: What happens when you add, subtract, multiply, and divide rational numbers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Fractions and Decimals (1 day)	8.NS.1: Give examples of rational and irrational numbers, and explain the difference between them. State decimal equivalents for any number. For rational numbers, show that the decimal equivalent terminates or repeats, and convert a repeating decimal into a rational number. 8.NS.2: Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.	• Repeating decimal • Terminating decimal • Bar notation	Board examples War	p.99-100	study guide textbook All Things Algebra war cards Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Rational Numbers (1 day)	8.NS.1: Give examples of rational and irrational numbers, and explain the difference between them. State decimal equivalents for any number. For rational numbers, show that the decimal equivalent	• Rational numbers	Board Examples	p.101-103	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 3: Operations with Rational Numbers			**Unit 1: Rational Numbers and Exponents**		
Essential Question: What happens when you add, subtract, multiply, and divide rational numbers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	terminates or repeats, and convert a repeating decimal into a rational number. 8.NS.2: Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.				
Lesson 3: Multiplying Rational Numbers (1 day)	7.NS.7: Compute fluently with rational numbers using an algorithmic approach. (E)		Board problems Create an instructional video	p.109-111	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Dividing Rational Numbers (1 day)	7.NS.7: Compute fluently with rational numbers using an algorithmic approach. (E)	• Multiplicative inverse • Reciprocal	Board problems Create an instructional video	p.117-119	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 3: Operations with Rational Numbers			**Unit 1: Rational Numbers and Exponents**		
Essential Question: What happens when you add, subtract, multiply, and divide rational numbers?					
Lesson & Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 5: Adding and Subtracting Like Fractions Lesson 6: Adding and Subtracting Unlike Fractions (1 day)	7.NS.7: Compute fluently with rational numbers using an algorithmic approach. (E)	• Unlike fractions	Board problems Create an instructional video	p.123-125 p.128-131	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-chapter quiz: Study Guide p.57 Chapter test 3A Review activities throughout chapter					

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Powers and Exponents (1 day)	7.NS.6: Apply the inverse relationship between squaring and finding the square root of a perfect square whole number. Find square roots of perfect	• Exponent • Power • Base	Board problems	p.138-140	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	square whole numbers.				
Lesson 2: Negative Exponents (2 days)	7.NS.6: Apply the inverse relationship between squaring and finding the square root of a perfect square whole number. Find square roots of perfect square whole numbers.	• Negative exponents	Board problems	p.143-146	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 3: Multiplying and Dividing Monomials (2 days)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number	• monomial	Board problems	p.150-152	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	(e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)				
Lesson 4: Scientific Notation (1 day)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)	• Standard form • Scientific notation	Board problems	p.155-158	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 5: Compute with Scientific Notation (2 days)	7.NS.7: Compute fluently with rational numbers using an algorithmic approach. (E)		Board problems	p.163-165	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Square Root and Cube Roots (1 day)	7.NS.6: Apply the inverse relationship between squaring and finding the square root of a perfect square whole number. Find square roots of perfect square whole numbers.	• Square root • Perfect square • Radical sign • Cube root • Perfect cube	Board problems	p.171-173	study guide textbook All Things Algebra square & cube list Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 7: The Real Number System (2 days)	8.NS.1 Give examples of rational and irrational numbers, and explain the difference between them. State decimal equivalents for any number. For rational numbers, show that	• Irrational number • Real numbers	Group work Line Up!	p.177-179	study guide textbook All Things Algebra Line Up cards Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	the decimal equivalent terminates or repeats, and convert a repeating decimal into a rational number. 8.NS.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.				
Prime Factorization	7.NS.5: Find the prime factorization of whole numbers and write the results using exponents.	• prime	Group work	worksheet	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter Assessment: Study Guide p.81 End of Chapter Assessment: 3A					

Chapter 4: Powers and Roots			**Unit 1: Rational Numbers and Exponents**		
Essential Question: Why is it useful to write numbers in different ways?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Chapter review games-various days throughout chapter					

Chapter 5: Ratio, Proportion, and Similar Figures			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you identify and represent proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Ratios (1 day)	7.RP.1: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.	• ratio	Board problems	185-188	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Unit rates (1 day)	7.RP.1: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.	• Rate • Unit rate	Board problems	191-193	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 5: Ratio, Proportion, and Similar Figures			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you identify and represent proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 3: Complex Fractions and Unit Rates (1 day)	7.RP.1: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.	• Complex fraction	Board problems	196-199	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Converting Rates (2 days)	7.RP.1: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.	• Dimensional analysis	Board problems	203-205 Exit ticket	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 5: Proportional and Nonproportional Relationships (1 day)	7.RP.1: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.	• Proportional • Constant of proportionality • Nonproportional	Board problems	208-210	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Graphing Proportional	7.RP.1: Identify the unit rate or		Group work	215-217	study guide textbook

Chapter 5: Ratio, Proportion, and Similar Figures			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you identify and represent proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Relationships (1 day)	constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationship.				All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 7: Solving proportions (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)	• Proportion • Cross products	Board problems	221-223	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 8: scale drawings and models	7.GM.1: Solve real-world and other mathematical	• Scale drawing • Scale model • Scale	Create scale models	227-229	study guide textbook

Chapter 5: Ratio, Proportion, and Similar Figures			Unit 2: Proportionality and Linear Relationships		
Essential Question: How can you identify and represent proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	• Scale factor			All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 9: similar figures	7.GM.1: Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	• Similar figures • Congruent • Corresponding parts	Board problems	234-237	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 5: Ratio, Proportion, and Similar Figures			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you identify and represent proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 10: indirect measurement (1 day)	7.GM.1: Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	• Indirect measurement	Conduct an indirect measurement outside	239-242	study guide textbook All Things Algebra measuring tape Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter Assessment: Study Guide p.107 End of Chapter Assessment: 3A Chapter review games- various days throughout chapter					

Chapter 6: Percents			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you use proportional relationships to solve real-world percent problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Using the Percent Proportion (1 day)	7.RP.2: Use proportional relationships to solve ratio and	• Percent proportion	Teach a partner	252-255	study guide textbook All Things Algebra Edulastic, Kahoot,

Chapter 6: Percents			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you use proportional relationships to solve real-world percent problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)				Gimkit, Blooket, online digital resources IXL
Lesson 2: Find a percent of a number mentally (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across		Board races	258-260	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 6: Percents			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you use proportional relationships to solve real-world percent problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	measurement systems, and percent increase and decrease). (E)				
Lesson 3: Using the percent equation (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)	• Percent equation	Board problems	264-266	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Percent of Change (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g.,	• Percent of change • Percent of increase • Percent of decrease	Spheros percent error lesson	272-274	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources

Chapter 6: Percents			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you use proportional relationships to solve real-world percent problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)	• Percent error			IXL
Lesson 5: Discount and Markup (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)	• Markup • Selling price • discount	Board problems	277-280	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 6: Percents			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How can you use proportional relationships to solve real-world percent problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 6: Simple and Compound Interest (1 day)	7.RP.2: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g., simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease). (E)	• Interest • Simple interest • Principal • Compound interest	Group work	283-285	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter Assessment: Study Guide p. 133 End of Chapter Assessment: 3A Chapter review games- various days throughout chapter					

Chapter 7: Algebraic Expressions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question(s): Why are algebraic rules useful?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: The Distributive Property (2 days)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)	• Equivalent • Expressions • Distributive Property	Board problems	294-296	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Simplifying algebraic expressions (2 days)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create	• Term • Coefficient • Like terms • Constant • Simplest form	Board problems	301-304	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 7: Algebraic Expressions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question(s): Why are algebraic rules useful?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)	• Simplifying the expression			
Lesson 3: Adding Linear Expressions (1 day)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10,	• Linear expression	Board problems	307-308	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 7: Algebraic Expressions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question(s): Why are algebraic rules useful?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	create an equivalent expression 2(x - 5)). Justify each step in the process. (E)				
Lesson 4: Subtracting Linear Expressions (1 day)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)		Board problems	312-313	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 7: Algebraic Expressions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question(s): Why are algebraic rules useful?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 5: Factoring Linear Expressions (2 days)	7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process. (E)	• Factor • Factored form	Board problems	318-320	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter Assessment: Study Guide p. 155 End of Chapter Assessment: 3A Chapter review games- various days throughout chapter					

Chapter 8: Equations and Inequalities			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are equations and inequalities used to describe and solve multi-step problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Solving Equations with Rational Coefficients (1 day)	7.AF.3: Solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)	• Solution • Inverse operations • Equivalent equations	Board problems	326-329	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Solving Two-Step Equations (2 days)	7.AF.3: Solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)	• Two-step equation	Board problems	335-338	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 8: Equations and Inequalities			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are equations and inequalities used to describe and solve multi-step problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 3: Writing Equations (1 day)	7.AF.3: Solve equations of the form px + q = r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)		Board problems	341-343	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: More Two-Step Equations (1 day)	7.AF.3: Solve equations of the form px + q = r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)		Board problems	349-351	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 8: Equations and Inequalities			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are equations and inequalities used to describe and solve multi-step problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 5: Solving Equations with Variables on Each Side (2 days)	7.AF.3: Solve equations of the form px + q = r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)		Board problems	358-360	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Inequalities (1 day)	7.AF.4: Solve inequalities of the form px + q (> or ≥) r or px + q (< or ≤) r, where p, q, and r are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems.		Board problems Group work	364-366	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 8: Equations and Inequalities			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are equations and inequalities used to describe and solve multi-step problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	Graph the solution set of the inequality and interpret it in the context of the problem.				
Lesson 7: Inequalities (1 day)	7.AF.4: Solve inequalities of the form px + q (> or ≥) r or px + q (< or ≤) r, where p, q, and r are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems. Graph the solution set of the inequality and interpret it in the context of the problem.		Board problems Group work	370-373	study guide textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 8: Solving Multi-Step Equations and Inequalities (1 day)	7.AF.4: Solve inequalities of the form px + q (> or ≥) r or px	• Null or empty set • Identity	Board problems Group work	377-379	study guide textbook All Things Algebra Edulastic, Kahoot,

Chapter 8: Equations and Inequalities			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are equations and inequalities used to describe and solve multi-step problems?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	+ q (< or ≤) r, where p, q, and r are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems. Graph the solution set of the inequality and interpret it in the context of the problem.				Gimkit, Blooket, online digital resources IXL
Mid-Chapter Assessment: Study Guide p. 177 End of Chapter Assessment: 2A Chapter review games- various days throughout chapter					

Chapter 9: Linear Functions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are linear functions used to model proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Functions (2 days)	7.AF.3: Solve equations of the form px + q = r and	• Function • Independent variable	Power point Board problems Group work	387-389	Study guide Textbook

Chapter 9: Linear Functions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are linear functions used to model proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)	• Dependent variable • Vertical line test • Function rule • Function notation			All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Representing Linear Functions (1 day)	7.AF.3: Solve equations of the form px + q = r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)	• Linear equation • Linear function • Function table • x-intercept • y-intercept	Board problems Group work	393-395	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 3: Constant Rate of Change and Slope (2 days)	7.AF.5: Define slope as vertical change for each unit of	• Rate of change • Linear relationship	Online practice	399-402	Study guide Textbook All Things Algebra Edulastic, Kahoot,

Chapter 9: Linear Functions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are linear functions used to model proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	horizontal change, and apply that a constant rate of change or constant slope describes a linear function. Identify and describe situations with constant or varying rates of change.	• Constant rate of change • Slope			Gimkit, Blooket, online digital resources IXL
Lesson 4: Direct Variation (2 days)	7.AF.5: Define slope as vertical change for each unit of horizontal change, and apply that a constant rate of change or constant slope describes a linear function. Identify and describe situations with constant or varying rates of change.	• Direct variation • Constant of variation	Board problems	408-410	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 9: Linear Functions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are linear functions used to model proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	7.RP.3: Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent these proportional relationships. Apply the definition of unit rate to y = mx. (E)				
Lesson 5: Slope-Intercept Form (2 days)	7.AF.6**:** Graph a line given its slope and a point on the line. Find the slope of a line given its graph. (E)	• Slope-intercept form	Board problems	414-417	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 6: Solve Systems of Equations by Graphing (0-1 day)	7.RP.3: Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw	• System of equations	Board graphing	422-424	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources

Chapter 9: Linear Functions			**Unit 2: Proportionality and Linear Relationships**		
Essential Question: How are linear functions used to model proportional relationships?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	graphs to represent these proportional relationships. Apply the definition of unit rate to $y = mx$. (E)				IXL
Lesson 7: Solve Systems of Equations Algebraically (0-1 day)	7.AF.3: Solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems. (E)	• Substitution	Board problems Group work	427-429	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter quiz: study guide p. 203 Chapter test: 2A Review activities throughout chapter					

Chapter 10: Statistics and Probability			**Unit 3: Introduction to Sampling and Inference**		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Measures of Center (1 day)	7.DSP.2: Find, use, and interpret measures of central tendency (mean and median) and measures of spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations. (E)	• Statistics • Measures of center	Pair and share	437-439	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Measures of Variability (1 day)	7.DSP.3: Make observations about the degree of visual overlap of two numerical data distributions represented in line plots or box plots. Describe how data, particularly outliers, added to a data set may	• Measures of variability • Range • Quartiles • First quartile • Third quartile • Interquartile range • Outlier	Board problems	444-446	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			Unit 3: Introduction to Sampling and Inference		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	affect the mean and/or median.				
Lesson 3: Mean Absolute Deviation (1 day)	7.DSP.2: Find, use, and interpret measures of central tendency (mean and median) and measures of spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations. (E)	• Mean absolute deviation	Online practice	449-451	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Compare Populations (1 day)	7.DSP.2: Find, use, and interpret measures of central tendency (mean and median) and measures of	• Box plot • Double box plot	Board graphing and discussion	457-460	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			Unit 3: Introduction to Sampling and Inference		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations. (E)				
Lesson 5: Using Sampling to Predict (1 day)	7.DSP.1: Understand that statistics can be used to gain information about a population by examining a sample of the population. Understand that conclusions and generalizations about a population from a sample are valid only if the sample is representative of that population and that random	• Sample • Population • Unbiased sample • Random • Simple random sample • Stratified random sample • Stratified random sample • Biased sample	Interview a Word	464-467	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			Unit 3: Introduction to Sampling and Inference		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	sampling tends to produce representative samples and support valid inferences. (E)	• Convenience sample • Voluntary response sample			
Lesson 6: Probability of Simple Events (1 day)	7.DSP.4: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Understand that a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. Understand that a probability of 1 indicates an event certain to occur	• Outcome • Simple event • Probability • Sample space • Complement	Board problems	472-474	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			Unit 3: Introduction to Sampling and Inference		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	and a probability of 0 indicates an event impossible to occur. Identify probabilities of events as impossible, unlikely, equally likely, likely, or certain. (E)				
Lesson 7: Theoretical and Experimental Probability (1 day)	7.DSP.5: Develop probability models that include the sample space and probabilities of outcomes to represent simple events with equally likely outcomes. Predict the approximate relative frequency of the event based on the model. Compare probabilities from the model to observed frequencies, evaluate the level of	• Uniform probability model • Theoretical probability • Experimental probability	Bracketology	479-481	study guide textbook All Things Algebra Bracketology unit Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			Unit 3: Introduction to Sampling and Inference		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	agreement, and explain possible sources of discrepancy. (E)				
Lesson 8: Probability of Compound Events (1 day)	7.DSP.5: Develop probability models that include the sample space and probabilities of outcomes to represent simple events with equally likely outcomes. Predict the approximate relative frequency of the event based on the model. Compare probabilities from the model to observed frequencies, evaluate the level of agreement, and explain possible sources of discrepancy. (E)	• Compound event • Tree diagram	Skunk	484-486	study guide textbook All Things Algebra dice Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 10: Statistics and Probability			**Unit 3: Introduction to Sampling and Inference**		
Essential Question: How are statistics used to draw inferences about and compare populations?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Mid-Chapter quiz: Study Guide p. 227 Chapter test: 3A Review activities throughout chapter					

Chapter 11: Congruence, Similarity, and Transformations			**Unit 4: Creating, Comparing, and Analyzing Geometric Figures**		
Essential Question: How can you determine congruence and similarity?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 3: Polygons (1 day)	8.GM.1: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane. (E)	• Polygon • Diagonal • Regular polygon • Tessellation	Board problems	516-518	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Chapter test: Quiz chapter 11 Review activities throughout chapter					

Chapter 12: Volume and Surface Area			**Unit 4: Creating, Comparing, and Analyzing Geometric Figures**		
Essential Question: How are two-dimensional figures used to solve problems involving three-dimensional figures?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Circles and Circumference (1 day)	7.GM.2: Understand the formulas for area and circumference of a circle and use them to solve real-world and other mathematical problems; give an informal derivation of the relationship between circumference and area of a circle.	• Circle • Center • Diameter • Radius • Circumference • Pi	Board problems	560-562	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Area of Circles (1 day)	7.GM.2: Understand the formulas for area and circumference of a circle and use them to solve real-world and other mathematical problems; give an		Board problems	565-567	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 12: Volume and Surface Area			Unit 4: Creating, Comparing, and Analyzing Geometric Figures		
Essential Question: How are two-dimensional figures used to solve problems involving three-dimensional figures?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	informal derivation of the relationship between circumference and area of a circle.				
Lesson 3: Area of Composite Figures (1 day)	7.GM.1: Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	• Composite figure	Group work	570-573	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Three-Dimensional Figures (1 days)	7.GM.3: Solve real-world and other mathematical problems involving volume of cylinders and three-dimensional objects composed of right	• Plane • Solids • Polyhedron • Edge • Vertex • Face • Skew lines • Prism	Guess My Solid	577-579	Study guide Textbook All Things Algebra Power Solids Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Chapter 12: Volume and Surface Area			**Unit 4: Creating, Comparing, and Analyzing Geometric Figures**		
Essential Question: How are two-dimensional figures used to solve problems involving three-dimensional figures?					
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	rectangular prisms. (E)	• Bases • Pyramid • Cylinder • Cone			
Lesson 5: Volume of Prisms Lesson 6: Volume of Cylinders (1 day)	7.GM.3: Solve real-world and other mathematical problems involving volume of cylinders and three-dimensional objects composed of right rectangular prisms. (E)	• Volume	Find the volume of a box and a can	582-585 588-590	Study guide Textbook All Things Algebra Boxes, cans, and measuring tape Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 8: Surface Area of Prisms Lesson 9: Surface Area of Cylinders (1 day)	8.GM.2: Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres. (E)	• Lateral faces • Lateral area • Surface area	Find the surface area of a box and a can	605-607 612-614	Study guide Textbook All Things Algebra Boxes, cans, and measuring tape Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Mid-Chapter quiz: Study Guide p. 283 Chapter test: 3A and Performance Task Review activities throughout chapter					

Post ILEARN Topics			**Unit 4: Creating, Comparing, and Analyzing Geometric Figures**		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Reflections	8.GM.1: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.	• Transformation • Reflection • Line of reflection • Congruent figures	Reflection Notes & Board problems	ATA HW 10: Reflections	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 2: Translations	8.GM.1: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.	• Translation • Rule • Horizontal slide • vertical slide • congruent figures	Translation Notes & Board problems	ATA HW 11: Translations	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 3: Rotations	8.GM.1: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.	• Rotation • Center of rotation • Clockwise • Counterclockwise • Congruent figures	Rotation Notes & Board Problems	ATA HW 12: Rotations	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 4: Dilations	8.GM.1: Explore dilations, translations, rotations, and reflections on two-	• Dilations • Enlargement • Reduction	Dilation Notes and Board Problems	ATA HW 13: Dilations	Study guide Textbook

Post ILEARN Topics			Unit 4: Creating, Comparing, and Analyzing Geometric Figures		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	dimensional figures in the coordinate plane.	• Scale factor • Similar figures			All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 5: Multiple Transformations	8.GM.1: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.	• Reflection • Translation • Rotation • Dilation • Similar • congruent	Congruence & Similarity: Sequence of Geometric Transformations	p. 547-550 Congruence & Similarity: Sequence of Geometric Transformations	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Review activities throughout chapter					

Post ILEARN Topics			Unit 4: Creating, Comparing, and Analyzing Geometric Figures		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 1: Three-Dimensional Figures	8.GM.2: Solve real-world and other mathematical problems	• Plane • Solids • Polyhedron • Edge • Vertex	ATA Classifying 3D Figures	ATA HW 5: Classifying and Slicing 3D Objects 577-579	Study guide Textbook All Things Algebra Power Solids Edulastic, Kahoot, Gimkit, Blooket,

Post ILEARN Topics			Unit 4: Creating, Comparing, and Analyzing Geometric Figures		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	involving volume of cones, spheres, and pyramids and surface area of spheres. (E)	• Face • Skew lines • Prism • Bases • Pyramid • Cylinder • Cone			online digital resources IXL
Lesson 2: Volume of Pyramids and Cones	8.GM.2: Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres. (E)	• Pyramid • Base • Cone • Radius • Diameter • Area • Volume • Height • Pi	ATA Volume of Pyramids and cones Notes	ATA HW 7: Volume of Pyramids and Cones	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 3: Volume and Surface Area of Spheres	8.GM.2: Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres. (E)	• Sphere • Circle • Diameter • Great Circle • Radius • Hemisphere • Pi	ATA Volume and Surface Area of Spheres Notes	ATA HW 10: Volume and Surface Area of Spheres	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Post ILEARN Topics			**Unit 4: Creating, Comparing, and Analyzing Geometric Figures**		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
Lesson 4: Pythagorean Theorem	8.GM.3: Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and other mathematical problems in two dimensions. (E)	• Pythagorean Theorem • Hypotenuse • Leg • Right Triangle	ATA Pythagorean Theorem Notes	ATA HW 6: Pythagorean Theorem	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 5: Compound Probability	8.DSP.3: Represent sample spaces and find probabilities of compound events (independent and dependent) using organized lists, tables, and tree diagrams. 8.DSP.4: Define the probability of a compound event, just as with simple events, as the fraction of outcomes in the sample space for which the compound event occurs. Use appropriate terminology to describe independent,	• Probability • Event • Independent event • compound event • tree diagram • Fundamental Counting Principle	ATA Compound Probability Notes	ATA HW 4: Compound Probability p. 484-486	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL

Post ILEARN Topics			Unit 4: Creating, Comparing, and Analyzing Geometric Figures		
Lesson & Approximate Duration	**Standards & Objectives**	**Key Terms**	**Activities (formative)**	**Assessment (summative)**	**Resources**
	dependent, complementary, and mutually exclusive events.				
Lesson 6: Compound Interest	8.NS.3: Given a numeric expression with common rational number bases and integer exponents, apply the properties of exponents to generate equivalent expressions.	• Simple interest • Principle • Rate • Compound • Quarterly • Annually • semiannually	Compound Probability Notes & Board problems	Compound Probability Practice & homework	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Lesson 7: Scatterplots & Line of Best Fit	8.DSP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	• Scatterplot • Extrapolation • Interpolation • Association • Linear • Nonlinear • Cluster • Outlier • Line of best fit • Positive • negative	ATA Scatterplots & Line of best fit notes & Board problems	ATA HW 10: Scatterplots & Line of Best Fit	Study guide Textbook All Things Algebra Edulastic, Kahoot, Gimkit, Blooket, online digital resources IXL
Review activities throughout chapter					