

Grade 7 Math

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
1. Ups & Downs What can you learn about a situation from algebraic representations?	1. Make comparisons using estimations or direct calculations with ratios, fractions, decimals, and percents [CS-2]	Section A- Differences in Growth	Section A Try This Section B Try This Section C Try This Section D Try This Section E Try This	MiC- Ups and Downs Teacher Guide & Student Edition
	2. Understand that all of the solutions to a linear equation lie on a line [CS-9]	Section C (Decision Making Sec B & D)	"Taxi" problem "Growth" problem "Bacteria in Food" problem	
	3. Identify linear patterns in tables and graphs	Section C	CMT 4 CMT 23	
	4. Use algebraic models to represent realistic situations [CS-9]	Section B Section C Section D Section E		
	5. Solve simple linear equations using informal and formal techniques [CS-9]	Section C		
	6. Contrast exponential growth with linear growth	Section D & E		
	7. Make connections between situation, tables and graphs	All Sections		
	8. Describe patterns using recursive and direct numbers [CS-8]	Section C		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
II. Decision Making How can algebraic models help us to find the solution to a problem with various constraints?	1. Plot points and draw graphs [CS-6]	All sections	Section A Try This Section B Try This Section C Try This Section D Try This "Darts" problem CMT 23	MiC- Decision Making-Teacher Guide & Student Edition
	2. Understand the concept of fair exchange (in terms of the context and in terms of the graph) [CS-6]	Section B Section C Section D		
	3. Use fair exchange as a way to draw graphs and to find new combinations (informal introduction to slope) [CS-8]	Section B Section C		
	4. Recognize patterns and trends and make predictions based on data from tables, charts, and graphs [CS-7]	All Sections		
	5. Understand graphs of inequalities as regions	Section A Section B		
	6. Find and interpret meaning of intercept points	All sections		
	7. Use graphing calculators and spreadsheets to enhance the understanding of data [CS-7]	All sections		
	8. Combine different kinds of information (multiple constraints) in one graph and make decisions based on the information. [CS-8]	Section D		
	9. Interpret and organize information presented in a story in mathematical terms (expressions and graphs) [CS-8]	All Sections		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
III. Operations What does it mean to compute with positive and negative integers?	1. Locate, identify, and order numbers on number lines, scales and grids (include negative integers and positive rational numbers) [CS-1]	Section A Section E	Section A Try This Section B Try This Section C Try This Section D Try This Section E Try This Section F Try This	MiC- Operations- Teacher Guide & Student Edition
	2. Compare and order positive and negative numbers	Sections A, B, C, D, E	"Checking Account" problem "Chip Scores" problem	
	3. Model solutions to problems involving integers with manipulatives or illustrations	All Sections	CMT 4 CMT 18a, 18e CMT 23	
	4. Perform operations with positive and negative integers	Section B Section C Section D		
	5. Generalize rules for operating with positive and negative numbers	Section C Section D Section E		
	6. Name and plot ordered pairs on a coordinate system	Section F		
	7. Transform geometric figures on a coordinate plane	Section F		
	8. Use the Order of Operations [CS-2]	Section D		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
IV. Building Formulas How can a situation be represented by more than one algebraic expression?	1. Understand and use relationships among fractions, percents, decimals, and ratios [CS-2]	All sections	Section A Try This Section B Try This Section C Try This Section D Try This	MiC- Building Formulas- Teacher Guide & Student Edition
	2. Represent a visual pattern with words, symbols and numbers [CS-8]	Section A Section B	CMT 22 CMT 23	
	3. Generate and use a table of values and/or graph [CS-8]	Section C Section D		
	4. Use and construct recursive and direct formulas [CS-8]	All sections		
	5. Recognize the advantages and disadvantages of different representations [CS-8]	Section A Section B Section D		
	6. Recognize equivalent representations for the same situation [CS-9]	Section A		
	7. Use formulas to solve simple problems	All sections		
	8. Understand and use square and square root	Section C		
	9. Identify and use the Distributive Property	Section B		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
V. Cereal Numbers How do geometric properties enhance our understanding of the relationships between numbers?	1. Make comparisons using estimations or direct calculations with ratios, fractions, decimals, and percents [CS-1]	Section B Section D Section G	Section A Try This Section B Try This Section C Try This Section D Try This Section E Try This Section F Try This Section G Try This CMT 12	MiC- Cereal Numbers- Teacher Guide & Student Edition
	2. Understand and use relationships among fractions, percents, decimals, and ratios [CS-1]	Section D Section G Section F		
	3. Solve problems dealing with enlarging a volume by a factor	Section C		
	4. Extract information from tables and graphical representations	Section D		
	5. Estimate, measure and compute area and volume of rectangular prisms	Section A Section C		
	6. Estimate or compute the dimensions of a rectangular prism with a given volume	Section A Section C		
	7. Use a visual model to multiply fractions	Section E		
	8. Understand the effect of changes related to dimensions, area, and volume	Section C		
	9. Analyze and solve problems dealing with relative and absolute comparisons	Section B Section D		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
VI. Triangles and Beyond How do the properties of triangles help us understand other geometric shapes?	1. Describe geometric figures using words and/or diagrams	Section D Section E	Section A Try This Section B Try This Section C Try This Section D Try This Section E Try This Section F Try This Section G Try This CMT 15 CMT 16 CMT 17 CMT 18	MiC- Triangles and Beyond-Teacher Guide & Student Edition
	2. Identify and use properties of triangles (such as the sum of angles, side relationships, and the Hinge theorem)	Section B Section C Section D		
	3. Construct an accurate triangle with given side lengths	Section B		
	4. Identify properties of and name equilateral, isosceles, and scalene triangles	Section B		
	5. Understand and identify line symmetry	Section F		
	6. Identify properties of congruent and similar figures	Section G		
	7. Describe transformations using words and/or diagrams	Section F		
	8. Identify properties of and construct parallel lines	Section E		

Unit w/ Essential Questions	Learning Objectives CS= content standard	Activities	Assessment Strategies	Resources
VII. Looking at an Angle	1. Measure and construct angles using a protractor	Section C	Section C Try This Section D Try This CMT 15	MiC- Looking at an Angle- Teacher Guide & Student Edition
	2. Make a scale drawing	Section C Section D		
	3. Understand the relationship between steepness, angle, and height-to-distance ratio	Section C Section D		