BELVIDERE CLUSTER CURRICULUM MAP - Updated July 2019

SUBJECT: Math GRADE: Grade 8

PACING>	UNIT #1	UNIT #2	UNIT #3	UNIT #4
	5 Weeks	4 Weeks	5 Weeks	2 Weeks
	(SEPTEMBER/OCTOBER)	(OCTOBER/NOVEMBER)	(DECEMBER/JANUARY)	(JANUARY)
TOPIC/THEME AND	Numbers and Operations	Solving Equations	Functions	Bi-Variate Data and
TOPIC/THEME AND OBJECTIVES	Numbers and Operations Know that there are numbers that are not rational, and approximate them by rational numbers. Expressions and Equations work with radicals and integer exponents. Find the squares and square roots of both rational and irrational numbers. Know the perfect squares. They will also be able to simplify perfect square radical expressions as well as non- perfect square radicands. Use the perfect squares to approximate square roots. Understand the properties of exponents and will use them to solve equations with perfect square and cube roots. Use their understanding of square roots to simplify roots of variables. Evaluate square and cube roots of perfect square and cubes to solve equations. Expressions and equations work with radicals and integer exponents. Express numbers using scientific notation. Recognize the difference between scientific notation and standard form. Distinguish the difference between different numbers written in scientific notation. Solve equations with addition, subtraction, multiplication, and division using numbers	Solving Equations Analyze and solve linear equations and pairs of simultaneous linear equations. Solve two-step equations. Solve multiple-step equations. Solve equations that contain fractions. Solve equations that contain the same variable on both sides of the equation. Simplify and compare algebraic expressions that contain the same variable. Translate word problems into equations and solve them. • Expressions and Equations work with radicals and integer exponents.	Functions Define, evaluate, and compare functions. Use functions to model relationships between quantities. Understand what a function is and its corresponding graph. Compare properties of different functions and relate the information to real world situations. Graph slope-intercept form of a line. Construct a function and determine the rate of change and initial value. Describe a functional relationship by examining a graph.	Bi-Variate Data and Scatterplots Investigate patterns of association in bivariate data. Graph scatter plots. Interpret and examine data to come to a conclusion. Know about line of best fit and two variable data relationships. Understand patterns of association in bivariate categorical data. Use frequency to solve real life problems and make predictions for future ones.

			T	,
	in scientific notation.			
ESSENTIAL QUESTIONS & ENDURING UNDERSTANDINGS	 What is the difference between rational and irrational numbers? Squares and Radicals can help solve real world problems. Squares and Radicals affect the numbers that are being used within an operation. Squares and Radicals affect the numbers that are being used within an operation. The rules for radicals can be applied to variable expressions. How will scientific notation help when writing numbers and equations? How is scientific notation used in real world application problems? How numbers are compared and manipulated using scientific notation? Scientific notation will help demonstrate very large and very small numbers when solving real world application problems. Numbers can be represented in scientific notation, and still be manipulated using operations such as addition, subtraction, multiplication, and division. 	 How can the value of an unknown variable be found? How to solve an equation in one variable for that variable. How to translate word problems into an equation. How do radicals and squares help solve real world problems? How are radicals and squares useful for solving equations and manipulating numbers? Squares and Radicals can help solve real world problems. 	 What is a function? How are functions represented? What can a relationship between numbers tell about a problem? Properties of functions and their graphs are similar but not identical. Slope-intercept form is an easy way of graphing functions. Are properties of functions and graphs the same for all functions? The definition of a function and what it's graph represents. The ability to graph a function and write a function from a graph. 	 How can information from a problem be represented in a way to see a pattern or a frequency? What is a line of best fit and how can it simply a conclusion? Are interpretation and prediction an accurate conclusion for a problem? Scatter plots, line of best fit, and frequencies all help interpret data within a problem. Patterns can be modeled using different graphs. Straight lines are widely used to model relationships.

STANDARDS

8.NS.A.1

Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

8.NS.A.2

Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., p²). For example, by truncating the decimal expansion of Ö2, show that Ö2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

8.EE.A.1

Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.

8.EE.A.2

Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that \ddot{O}_2 is irrational.

8.EE.A.3

Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as

8.EE.C.7

Solve linear equations in one variable.

8EE.C.7a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).

8.EE.C.7b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

8.EE.A.2

Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that \ddot{O}_2 is irrational.

8.F.A.1

Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

8.F.A.3

Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function A = s² giving the area of a square as a unction of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.

8.F.B.5

Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8.F.A.2 Compare properties (e.g. rate of change, intercepts, domain and range) of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.

8.SP.A.1

Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

8.SP.A.2

Know that straight lines are widely used to model positive or negative association, linear association, and nonlinear association.

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Know that straight lines are widely used to model positive or negative association, linear association, and nonlinear association.

8.F.B.4

Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

much one is than the other.		
For example, estimate the		
population of the United		
States as 3 × 10 ⁸ and the		
population of the world as 7 ×		
10°, and determine that the		
world population is more than		
20 times larger.		
20 times larger.		
8.EE.A.4		
Perform operations with		
numbers expressed in		
scientific notation, including		
problems where both decimal		
and scientific notation are		
used. Use scientific notation		
and choose units of		
appropriate size for		
measurements of very large		
or very small quantities (e.g.,		
use millimeters per year for		
seafloor spreading). Interpret		
scientific notation that has		
been generated by		
technology.		
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INSTRUCTIONAL PROCEDURES	Whole Group -Introduction to check for previous understanding -Class Discussion -Structured Notes and Examples	Whole Group -Introduction to check for previous understanding -Class Discussion -Structured Notes and Examples	Whole Group -Introduction to check for previous understanding -Class Discussion -Structured Notes and Examples	Whole Group -Introduction to check for previous understanding -Class Discussion -Structured Notes and Examples
	Individual -Provide opportunity for individual practice -Tiered level questions	Individual -Provide opportunity for individual practice -Tiered level questions	Individual -Provide opportunity for individual practice -Tiered level questions	Individual -Provide opportunity for individual practice -Tiered level questions
	Small Groups Partner work Mini Lesson Use of manipulatives Centers Investigations	Small Groups Partner work Mini Lesson Use of manipulatives Centers Investigations	Small Groups Partner work Mini Lesson Use of manipulatives Centers Investigations	Small Groups Partner work Mini Lesson Use of manipulatives Centers Investigations
INSTRUCTIONAL AND	<u>Materials</u>	<u>Materials</u>	<u>Materials</u>	<u>Materials</u>
SUPPLEMENTAL MATERIALS/ LEVELED TEXTS	Belvidere Envision 2.0 IXL First in Math Teacher created materials and assessments	Belvidere Envision 2.0 IXL First in Math Teacher created materials and assessments	Belvidere Envision 2.0 IXL First in Math Teacher created materials and assessments	Belvidere Envision 2.0 IXL First in Math Teacher created materials and assessments
	Hope: -Teacher created materials and assessments -nwea MAP testing -kahnacademy.com	Hope: -Teacher created materials and assessments -nwea MAP testing -kahnacademy.com	Hope: -Teacher created materials and assessments -nwea MAP testing -kahnacademy.com	Hope: -Teacher created materials and assessments -nwea MAP testing -kahnacademy.com
	Harmony GoMath text books GoMath consumable workbooks Personal Math Trainer Animated Math IXL Teacher created materials and assessments Scholastic Math Reads White: -Pearson -Mathematics course 3	Harmony GoMath text books GoMath consumable workbooks Personal Math Trainer Animated Math IXL Teacher created materials and assessments Scholastic Math Reads White: -Pearson -Mathematics course 3	Harmony GoMath text books GoMath consumable workbooks Personal Math Trainer Animated Math IXL Teacher created materials and assessments Scholastic Math Reads White: -Pearson -Mathematics course 3	Harmony GoMath text books GoMath consumable workbooks Personal Math Trainer Animated Math IXL Teacher created materials and assessments Scholastic Math Reads White: -Pearson -Mathematics
	Course 3	course 3	Course 3	course 3

	Leveled Questions Problems to be tiered and assigned based on students' readiness level.	Leveled Questions Problems to be tiered and assigned based on students' readiness level.	Leveled Questions Problems to be tiered and assigned based on students' readiness level.	Leveled Questions Problems to be tiered and assigned based on students' readiness level.
ASSESSMENTS	Formative Quizzes	Formative Quizzes	Formative Quizzes	Formative Quizzes
	Homework/classwork Q and A Labs/Projects	Homework/classwork Q and A Labs/Projects	Homework/classwork Q and A Labs/Projects	Homework/classwork Q and A Labs/Projects
	IXL.com Firstinmath.com	IXL.com Firstinmath.com	IXL.com Firstinmath.com	IXL.com Firstinmath.com
	Summative Unit Test Benchmark	Summative Unit Test Benchmark	Summative Unit Test Benchmark	Summative Unit Test Benchmark
	Unit Assessment MAP Assessment Easy CBM	Unit Assessment MAP Assessment Easy CBM	Unit Assessment MAP Assessment Easy CBM	Unit Assessment MAP Assessment Easy CBM
	ADAM Alternative	ADAM Alternative	ADAM Alternative	ADAM Alternative
	Choice boards - projects Skit Demonstration	Choice boards - projects Skit Demonstration	Choice boards - projects Skit Demonstration	Choice boards - projects Skit Demonstration
	Journaling Self Assessment	Journaling Self Assessment	Journaling Self Assessment	Journaling Self Assessment
	Conferencing Special Education Printed copy of board	Conferencing Special Education Printed copy of board	Conferencing Special Education Printed copy of board	Conferencing Special Education Printed copy of board
	work/notes provided Extended time on tests/ quizzes Behavior management plan Highlighted text visual	work/notes provided Extended time on tests/ quizzes Behavior management plan Highlighted text visual	work/notes provided Extended time on tests/ quizzes Behavior management plan Highlighted text visual	work/notes provided Extended time on tests/ quizzes Behavior management plan
	presentation Modified test content, format, or length Multi-sensory presentation Preview of content, concepts,	presentation Modified test content, format, or length Multi-sensory presentation Preview of content, concepts,	presentation Modified test content, format, or length Multi-sensory presentation Preview of content, concepts,	 Highlighted text visual presentation Modified test content, format, or length Multi-sensory presentation
	and vocabulary Shortened assignments Use open book, study guides,	and vocabulary Shortened assignments Use open book, study guides,	and vocabulary Shortened assignments Use open book, study guides,	Preview of content, concepts, and vocabulary Shortened assignments
	test prototypes Flexible grouping Goal setting with students Mini workshops to re-teach or	test prototypes Flexible grouping Goal setting with students Mini workshops to re-teach or	test prototypes Flexible grouping Goal setting with students Mini workshops to re-teach or	 Use open book, study guides, test prototypes Flexible grouping Goal setting with students
	extend skills Open-ended activities Think-Pair-Share	extend skills Open-ended activities Think-Pair-Share	extend skills Open-ended activities Think-Pair-Share	 Mini workshops to re-teach or extend skills Open-ended activities

Varied supplemental materials

ELL

Allowing students to correct errors (looking for understanding) Teaching key aspects of a topic Eliminate nonessential information Using videos, illustrations, pictures, and drawings to explain or clarify allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slideshows, videos, etc.) to demonstrate student's learning Decreasing the amount of work presented or required Having peers take notes or providing a copy of the teacher's notes Reducing the number of answer choices on a multiple choice test Using true/false, matching, or fill in the blank tests in lieu of essay tests

At Risk

Allowing the use of notes or open-book during testing Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test decreasing the amount of work presented or required. Providing study guides Tutoring by peers Using authentic assessments with real-life problem-solving Using true/false, matching, or fill in the blank tests in lieu of essav tests using videos, illustrations, pictures, and drawings to explain or clarify Flexible grouping Goal setting with students Mini workshops to re-teach or extend skills Open-ended

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Think-Pair-Share Varied supplemental materials

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activities

Varied supplemental materials

Gifted and Talented

Alternative formative and summative assessments Choice boards Games and tournaments Group investigations Independent projects Learning contracts Multiple intelligence options Personal agendas Project-based learning Problem-based learning Stations/centers Varying organizers for instructions

504

Printed copy of board work/notes provided Behavior management plan Check work frequently for understanding Extended time on tests/ guizzes Preview of content, concepts, and vocabulary Secure attention before giving instruction/directions Shortened assignments Student working with an assigned partner Teacher initiated weekly assignment sheet Use open book, study guides, test prototypes Flexible grouping Goal setting with students Varied supplemental materials

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Mini workshops to re-teach or extend skills Open-ended activities Varied supplemental materials

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INTERDISCIPLINARY CONNECTIONS

21ST CENTURY **SKILLS/THEMES** (P21.ORG)

TECHNOLOGY INTEGRATION

CAREER EDUCATION (NJDOE CTE Clusters)

Interdisciplinary Connections

 English Language Arts -Science and Scientific Inquiry (Next Generation) -Social Studies, including American History, World History, Geography, Government and Civics, and Economics -Technology -Visual and Performing Arts -World languages

21st Century Skills/ **Themes**

Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy Environmental Literacy Creativity and Innovation Critical Thinking Problem Solving Communication Collaboration Information Literacy Media Literacy ICT (Information, Communication and Technology) Literacy

Technology Integration

IXL First in Math Kahn Academy Online Resources provided through textbook Math on the Spot Videos Animated Math Coolmath

Career Education

Agriculture, Food & Natural Resources **Architecture & Construction** Arts, A/V Technology & Communications Business Management & **Administration Education & Training**

Interdisciplinary **Connections**

Science and Scientific Inquiry (Next Generation) Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing

English Language Arts

World languages

Arts

21st Century Skills/ **Themes**

Global Awareness Financial, Economic, **Business and Entrepreneurial Literacy** Civic Literacy Health Literacy Environmental Literacy Creativity and Innovation Critical Thinking

Communication Collaboration **Information Literacy** Media Literacy

Problem Solving

ICT (Information, Communication and Technology) Literacy

Technology Integration

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English Language Arts Science and Scientific Inquiry (Next Generation) Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing Arts

World languages

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Technology Integration

Technology) Literacy

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	Finance	Career Education	- Agriculture, Food &	
	Government & Public	- Agriculture, Food &	Natural Resources	Career Education
	Administration	Natural Resources	- Architecture &	- Agriculture, Food &
	Health Science			
	Hospitality & Tourism	- Architecture &	Construction	Natural Resources
	Human Services Information Technology	Construction	- Arts, A/V Technology &	- Architecture &
	Law, Public Safety, Corrections	- Arts, A/V Technology &	Communications	Construction
	& Security	Communications	- Business Management &	 Arts, A/V Technology &
	Manufacturing Manufacturing	 Business Management & 	Administration	Communications
	Marketing	Administration	 Education & Training 	- Business Management &
	 Science, Technology, Engineering & Mathematics 	 Education & Training 	- Finance	Administration
	(STEM)	- Finance	- Government & Public	 Education & Training
	Transportation, Distribution &	 Government & Public 	Administration	<mark>- Finance</mark>
	<u>Logistics</u>	Administration Administration Administration Administration	- Health Science	 Government & Public
		- Health Science	 Hospitality & Tourism 	Administration
		 Hospitality & Tourism 	- Human Services	- Health Science
		- Human Services	 Information Technology 	 Hospitality & Tourism
		 Information Technology 	- Law, Public Safety,	- Human Services
		- Law, Public Safety,	Corrections & Security	 Information Technology
		Corrections & Security	- Manufacturing	- Law, Public Safety,
		- Manufacturing	- Marketing	Corrections & Security
		- Marketing	Science, Technology,	- Manufacturing
		Science, Technology,	Engineering &	- Marketing
		Engineering &	Mathematics (STEM)	- Science, Technology,
		Mathematics (STEM)	- Transportation,	
				Engineering &
		- Transportation,	Distribution & Logistics	Mathematics (STEM)
		Distribution & Logistics		- Transportation,
		111177 // 6		Distribution & Logistics
PACING>	UNIT #5	UNIT #6	UNIT #7	
	3 Weeks	6 Weeks	6 Weeks	
	(FEBRUARY)	(MARCH/APRIL)	(APRIL/MAY)	
TOPIC/THEME AND	Systems of Equations	Transformations and Angle	Measurement	
OBJECTIVES	Analyze and solve linear equations and pairs of	Relationships Understand congruence and	 Solve real-world and mathematical problems 	
	simultaneous linear equations.	similarity using physical	involving volume of	
	Graph systems of linear	models, transparencies, or	cylinders, cones, and	
	equations to find a solution.	geometry software.	spheres.	
	Solve a system of equations by	Transform figures on a	Identify what a 3-	
	using substitution and	coordinate plane.	dimensional figure is. • Use a formula to find the	
	elimination. Translate real world problem	Use their understanding of angle relationships to find	volume of a prism and	
	into a system.	unknown angles.	cylinder.	
	, , , , , , , , , , , , , , , , , , , ,	Describe a sequence of	 Use a formula to find the 	
		transformations that will result	volume of pyramids,	
		in congruent figures.	cones & spheres.	
		Describe a sequence of transformations and dilations	 Understand the Pythagorean Theorem and 	
		that will result in similar	its converse.	
		figures.	Given two sides of a right	
		Identify relationships between	triangle, use the	
		angles formed when two	Pythagorean THeorem to	
	1	parallel lines are cut by a	find the third side.	

		transversal. Determine the measures of angles formed by parallel lines cut by a transversal Write and solve algebraic equations to find missing angle measures	 Use the Pythagorean Theorem to determine if a given triangle is a right triangle. Apply the Pythagorean Theorem to solve problems that involve three dimensions Apply the Pythagorean Theorem to solve real- world problems Find the distance between two points on coordinate plane Find perimeter of 2-d figures on coordinate plane using Pythagorean theorem. 	
ESSENTIAL QUESTIONS & ENDURING UNDERSTANDINGS	How can real world situations be modeled by systems? How can solutions be found to a system? The point at which lines intersect is the solution to the system with those lines.	 How can you use models of one and two-dimensional figures to show congruent figures? How can you use models of one and two-dimensional figures to show similar figures? Congruent figures can be formed by a series of transformations. Similar figures can be formed by a series of transformations. Understand angle relationships in one and two-dimensional figures. How are angle relationships effected by parallel lines and a transversal. 	 What is a 3-dimensional figure? How can I find the volume of a 3-dimensional figure? How can the volume of a 3-dimensional figure help me solve real world problems? There are different formulas that can be used when solving for the volume of a 3-dimensional figure. How would you use the Pythagorean Theorem to solve problems, find unknown side lengths of right triangles. 	
STANDARDS	8.EE.C.8 Analyze and solve pairs of simultaneous linear equations. 8.EE.C.8a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. 8.EE.C.8b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y	8.G.A.1 Verify experimentally the properties of rotations, reflections, and translations: 8.G.A.1a. Lines are transformed to lines, and line segments to line segments of the same length. 8.G.A.1b. Angles are transformed to angles of the same measure. 8.G.A.1c. Parallel lines are transformed to parallel lines. 8.G.A.2 Understand that a two-dimensional figure is congruent to another if the	8.G.C.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. 8.SP.A.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an	

= 5 and 3x + 2y = 6 have no second can be obtained from additional 1.5 cm in mature solution because 3x + 2y cannot the first by a sequence of plant height. rotations, reflections, and simultaneously be 5 and 6. translations; given two 8.8.G.B congruent figures, describe a 8.EE.C.8c. Solve real-world and **Understand and apply** mathematical problems leading to sequence that exhibits the Pythagorean Thereom. two linear equations in two congruence between them. variables. For example, given coordinates for two pairs of 8.G.B6 8.G.A.3 points, determine whether the Explain a proof of the Describe the effect of line through the first pair of Pythagorean Theorem and its dilations, translations, points intersects the line through converse. rotations, and reflections on the second pair. winner of a school two-dimensional figures using election based on randomly coordinates. 8.G.B7 sampled survey data. Gauge how Apply the Pythagorean far off the estimate or prediction Theorem to determine might be 8.G.A.4 unknown side lengths in right Understand that a twotriangles in real world and dimensional figure is similar mathematical problems in 2 to another if the second can and 3 dimensions be obtained from the first by a sequence of rotations, 8.G.B8 reflections, translations, and dilations; given two similar Apply the Pythagorean two-dimensional figures, Theorem to find the distance describe a sequence that between 2 points in a exhibits the similarity coordinate system between them. 8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so. **INSTRUCTIONAL** Whole Group Whole Group Whole Group -Introduction to check for -Introduction to check for -Introduction to check for previous **PROCEDURES** previous understanding previous understanding understanding -Class Discussion -Class Discussion -Class Discussion -Structured Notes and Examples -Structured Notes and Examples -Structured Notes and Examples

Individual

- -Provide opportunity for individual practice
- -Tiered level questions

Individual

- -Provide opportunity for individual practice
- -Tiered level questions

Individual

- -Provide opportunity for individual practice
- -Tiered level questions

	Small Groups	Small Groups	Small Groups	
	Partner work	Partner work	Partner work	
	Mini Lesson	Mini Lesson	Mini Lesson	
	Use of manipulatives	Use of manipulatives	Use of manipulatives	
	Centers	Centers	Centers	
	Investigations	Investigations	Investigations	
INSTRUCTIONAL	Materials	Materials	Materials	
AND				
SUPPLEMENTAL	Belvidere	Belvidere	Belvidere	
MATERIALS/	Envision 2.0	Envision 2.0	Envision 2.0	
LEVELED TEXTS	IXL	IXL	IXL	
	First in Math	First in Math	First in Math	
	Teacher created materials	Teacher created materials	Teacher created materials	
	and assessments	and assessments	and assessments	
	Hope:	Hope:	Hope:	
	-Teacher created materials	-Teacher created materials	-Teacher created materials	
	and assessments	and assessments	and assessments	
	-nwea MAP testing	-nwea MAP testing	-nwea MAP testing	
	-kahnacademy.com	-kahnacademy.com	-kahnacademy.com	
	Harmony	Harmony	Harmony	
	GoMath text books	GoMath text books	GoMath text books	
	GoMath consumable	GoMath consumable	GoMath consumable	
	workbooks	workbooks	workbooks	
	Personal Math Trainer	Personal Math Trainer	Personal Math Trainer	
	Animated Math	Animated Math	Animated Math	
	IXL	IXL	IXL	
	Teacher created materials	Teacher created materials	Teacher created materials	
	and assessments	and assessments	and assessments	
	Scholastic Math Reads	Scholastic Math Reads	Scholastic Math Reads	
	White:	White:	White:	
	-Pearson -Mathematics	-Pearson -Mathematics	-Pearson -Mathematics	
	course 3	course 3	course 3	
			554156 5	
	Leveled Questions	Leveled Questions	Leveled Questions	
	Problems to be tiered and	Problems to be tiered and	Problems to be tiered and assigned	
	assigned based on students'	assigned based on students'	based on students' readiness level.	
	readiness level.	readiness level.		
ASSESSMENTS	Formative Programme Transfer of the Programm	Formative Formative	Formative	
ASSESSMENTS	Quizzes	Quizzes	Quizzes	
	Homework/classwork		Homework/classwork	
		Homework/classwork		
	Q and A	Q and A	Q and A	
	Labs/Projects	Labs/Projects	Labs/Projects	

	IVI com	IVI som	IXL.com	\neg
	IXL.com	IXL.com		
	Firstinmath.com	Firstinmath.com	Firstinmath.com	
	Summative	Summative	Summative	
	Unit Test	Unit Test	Unit Test	
	Benchmark	Benchmark	Benchmark	
	Unit Assessment	Unit Assessment	Unit Assessment	
	MAP Assessment	MAP Assessment	MAP Assessment	
	Easy CBM	Easy CBM	Easy CBM	
	ADAM	ADAM	ADAM	
	<u>Alternative</u>	<u>Alternative</u>	<u>Alternative</u>	
	Choice boards - projects	Choice boards - projects	Choice boards - projects	
	Skit	Skit	Skit	
	Demonstration	Demonstration	Demonstration	
	Journaling	Journaling	Journaling	
			g	
	Self Assessment	Self Assessment	Self Assessment	
	Conferencing	Conferencing	Conferencing	
ACCOMMODATIONS	Special Education	Special Education	Special Education	
	 Printed copy of board work/notes provided 	 Printed copy of board work/notes provided 	Printed copy of board work/notes provided	
	Extended time on tests/ quizzes	Extended time on tests/ quizzes	Extended time on tests/ quizzes	
	Behavior management plan	Behavior management plan	Behavior management plan	
	Highlighted text visual	Highlighted text visual	Highlighted text visual	
	presentation	presentation	presentation	
	Modified test content, format,	Modified test content, format,	Modified test content, format, or	
	or length Multi-sensory presentation	or length Multi-sensory presentation	length Multi-sensory presentation	
	Preview of content, concepts,	Preview of content, concepts,	Preview of content, concepts,	
	and vocabulary	and vocabulary	and vocabulary	
	Shortened assignments	Shortened assignments	Shortened assignments	
	Use open book, study guides,	Use open book, study guides,	Use open book, study guides,	
	test prototypes Flexible grouping	test prototypes Flexible grouping	test prototypes Flexible grouping	
	Goal setting with students	Goal setting with students	Goal setting with students	
	Mini workshops to re-teach or	Mini workshops to re-teach or	Mini workshops to re-teach or	
	extend skills Open-ended	extend skills Open-ended	extend skills Open-ended	
	activities	activities	activities	
	Think-Pair-Share	Think-Pair-Share	Think-Pair-Share	
	Varied supplemental materials	Varied supplemental materials	Varied supplemental materials	
	ELL		ELL	
	Allowing students to correct	ELL	Allowing students to correct	
	errors (looking for	Allowing students to correct	errors (looking for	
	understanding)	errors (looking for	understanding)	
	 Teaching key aspects of a topic Eliminate nonessential 	understanding)	Teaching key aspects of a topic Eliminate nonessential	
	information Using videos,	Teaching key aspects of a topic Eliminate nonessential	information Using videos,	
	illustrations, pictures, and	information Using videos,	illustrations, pictures, and	
	drawings to explain or clarify	illustrations, pictures, and	drawings to explain or clarify	
	allowing products (projects,	drawings to explain or clarify	allowing products (projects,	
	timelines, demonstrations, models, drawings, dioramas,	allowing products (projects,	timelines, demonstrations,	
	poster boards, charts, graphs,	timelines, demonstrations,	models, drawings, dioramas, poster boards, charts, graphs,	
	slideshows, videos, etc.) to	models, drawings, dioramas,	slideshows, videos, etc.) to	
		•		

demonstrate student's learning Decreasing the amount of work presented or required Having peers take notes or providing a copy of the teacher's notes Reducing the number of answer choices on a multiple choice test Using true/false, matching, or fill in the blank tests in lieu of essay tests

At Risk

Allowing the use of notes or open-book during testing Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test decreasing the amount of work presented or required. Providing study guides Tutoring by peers Using authentic assessments with real-life problem-solving Using true/false, matching, or fill in the blank tests in lieu of essay tests using videos, illustrations, pictures, and drawings to explain or clarify Flexible grouping Goal setting with students Mini workshops to re-teach or extend skills Open-ended activities Varied supplemental materials

Gifted and Talented

Alternative formative and summative assessments Choice boards Games and tournaments Group investigations Independent projects Learning contracts Multiple intelligence options Personal agendas Project-based learning Problem-based learning Stations/centers Varying organizers for instructions

poster boards, charts, graphs, slideshows, videos, etc.) to demonstrate student's learning Decreasing the amount of work presented or required Having peers take notes or providing a copy of the teacher's notes Reducing the number of answer choices on a multiple choice test Using true/false, matching, or fill in the blank tests in lieu of essay tests

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		Varying organizers for		
	<u>504</u>	instructions	<u>504</u>	
	Printed copy of board	F0.4	-Printed copy of board work/notes provided	
	work/notes provided Behavior management plan	Printed copy of board	-Behavior management plan	
	Check work frequently for	work/notes provided	-Check work frequently for	
	understanding	Behavior management plan	understanding	
	Extended time on tests/ quizzes	Check work frequently for	-Extended time on tests/ quizzes	
	Preview of content, concepts,	understanding	-Preview of content, concepts, and	
	and vocabulary Secure attention before giving	Extended time on tests/ quizzes	vocabulary -Secure attention before giving	
	instruction/directions	 Preview of content, concepts, and vocabulary 	instruction/directions	
	Shortened assignments	Secure attention before giving	-Shortened assignments	
	Student working with an	instruction/directions	-Student working with an assigned	
	assigned partner	Shortened assignments	<mark>partner</mark>	
	Teacher initiated weekly	Student working with an	-Teacher initiated weekly	
	assignment sheet	assigned partner Teacher initiated weekly	assignment sheet	
	Use open book, study guides, test prototypes	assignment sheet	 -Use open book, study guides, test prototypes 	
	Flexible grouping	Use open book, study guides,	-Flexible grouping	
	Goal setting with students	test prototypes	-Goal setting with students	
	 Varied supplemental materials 	Flexible grouping	-Varied supplemental materials	
		Goal setting with students		
		Varied supplemental materials		
INTERDISCIPLINARY	Interdisciplinary	Interdisciplinary	Interdisciplinary	
CONNECTIONS	Connections	Connections	Connections	
	- English Language Arts	- English Language Arts	- English Language Arts	
21ST CENTURY	- Science and Scientific	- Science and Scientific	Science and Scientific	
SKILLS/THEMES				
J.:,	Inquiry (Novt	Inquiry (Novt	Inquiry (Novt Congration)	
_	Inquiry (Next	Inquiry (Next	Inquiry (Next Generation)	
(P21.ORG)	Generation)	Generation)	- Social Studies, including	
(P21.ORG)	Generation) - Social Studies, including	Generation) - Social Studies, including	Social Studies, including American History, World	
(P21.ORG) TECHNOLOGY	Generation) - Social Studies, including American History, World	Generation) - Social Studies, including American History, World	- Social Studies, including American History, World History, Geography,	
(P21.ORG)	Generation) - Social Studies, including American History, World History, Geography,	Generation) - Social Studies, including American History, World History, Geography,	- Social Studies, including American History, World History, Geography, Government and Civics,	
(P21.ORG) TECHNOLOGY INTEGRATION	Generation) - Social Studies, including American History, World History, Geography, Government and Civics,	Generation) Social Studies, including American History, World History, Geography, Government and Civics,	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics	Generation) Social Studies, including American History, World History, Geography, Government and Civics, and Economics	 Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology 	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology	 Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing 	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology Visual and Performing	 Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing Arts 	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology Visual and Performing Arts	 Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing 	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology Visual and Performing	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology Visual and Performing Arts	 Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing Arts 	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology Visual and Performing Arts	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages	Generation) Social Studies, including American History, World History, Geography, Government and Civics, and Economics Technology Visual and Performing Arts World languages	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness	
(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes	
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(P21.ORG) TECHNOLOGY INTEGRATION CAREER EDUCATION (NJDOE CTE	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness - Financial, Economic, Business and	Generation) - Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness - Financial, Economic, Business and	- Social Studies, including American History, World History, Geography, Government and Civics, and Economics - Technology - Visual and Performing Arts - World languages 21st Century Skills/ Themes - Global Awareness - Financial, Economic, Business and Entrepreneurial Literacy	
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Critical Thinking
Problem Solving
Communication
Collaboration
Information Literacy
Media Literacy
ICT (Information,
Communication and
Technology) Literacy

Technology Integration

IXL
First in Math
Kahn Academy
Online Resources provided
through textbook
Math on the Spot Videos
Animated Math
Coolmath

Career Education

Agriculture, Food & Natural Resources

- Architecture & Construction
- Arts, A/V Technology & Communications
- Business Management &
- Administration
- Education & Training
 Finance
- Government & Public
- Administration
 Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Manufacturing Marketing
- Science, Technology,
- Engineering &
- Mathematics (STEM)
- Transportation,
- **Distribution & Logistics**

Critical Thinking

- Problem Solving Communication
- Collaboration
- Information Literacy
- Media Literacy
 ICT (Information,
- Communication and Technology) Literacy

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- Manufacturing
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- Corrections & Security Manufacturing
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- Science, Technology,
- Engineering &
- Mathematics (STEM)
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- Distribution & Logistics