Month	IB Unit/Topic	Assessments and	Approaches to Learning	Curriculum Standards and IB
		Activities		Criterion and Strands
September Week One 1-3 days	Expectations Group Work Instruction Benchmark Measures Balanced Math Activities	Activities: PRIDE for Math Classroom. PowerPoint on Teacher Expectations 3 Ring Binder Organization Scramble Squares Numbers 1-100 AIMS testing will happen on a monthly basis for proficiency monitoring. Review Practice Mental Math	In order for students to communicate complete and coherent mathematical lines of reasoning, students must negotiate ideas and knowledge with peers and teachers(Communication/comm unication) In order for students to use different forms of mathematical representation to present information, students must Help others to create success for themselves during group work. (Social/Collaboration)	IB Criterion/Strands: Criterion C: Communicating i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations ii. use different forms of mathematical representation to present information iv. communicate complete and coherent mathematical lines of reasoning
	The Number	Activities:	In order for students to	

(Chapter 1 book) I. Rational Numbers II. Powers an Exponents III. Multiply a Divide Monomials IV. Powers o Monomials V. Negative Exponents VI. Scientific Notation VII. Compute with Scientif Notation VIII. Roots IX. Estimate Roots X. Compare Numbers	inAre you ready? U1 Chapter 1: L1-10 Notes Packet: Students are provided note sheets for the whole unit and are expected to keep in their 3 ring binder. Pre-typed outline copied as a packet for each student. ( Modified version for special education students)videos from youtube reinforcing some of the lessonsGuided Practice modeled by the teacher Present material, provide examples, encourage independent practice with support, allow the independent practiceRealRealRealGroup Rotations (TEACHER-10 minutes) to practice the concept with teacher's direction and help - Lesson SKILLS sheets - Book Assignments (ACTIVITY-10 minutes) to	successfully when solving problems, students must demonstrate persistence and perseverance (Self-Management/Affective) In order for students to select appropriate mathematics when solving problems in both familiar and unfamiliar situations, students must interpret data (Thinking/Critical Thinking) In order for students to describe patterns as relationships and/or general rules consistent with findings, students must evaluate evidence and arguments (Thinking/Critical Thinking) In order for students to verify and justify relationships and/or general rules, students must Organize and depict information logically(Communication/Commu nication skills)	CCSS.MATH.CONTENT.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. CCSS.MATH.CONTENT.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., $\pi$ 2). For example, by truncating the decimal expansion of V2, show that V2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations. CCSS.MATH.CONTENT.8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3-5 = 3-3 = 1/33 = 1/27. CCSS.MATH.CONTENT.8.EE.A.2: Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that V2 is irrational. CCSS.MATH.CONTENT.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 much one is than the other. For example, estimate the population of the United States as 3 times 108 and the
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participate in activities to	population of the world as 7 times 109, and
reinforce the concept	determine that the world population is more
-Number System Ice	than 20 times larger.
Cream Task L1	
-Sort 4	CCSS.MATH.CONTENT.8.EE.A.4: Perform
-KarJam	operations with numbers expressed in
-Exponents A Math	scientific notation, including problems where
Computation Activity	used Lise scientific notation and choose
-Crack the Code L2	units of appropriate size for measurements
-Exponents Expressions	of very large or very small quantities (e.g.,
-Various Maze Activities	use millimeters per year for seafloor
Scientific Notation	spreading). Interpret scientific notation that
Square Roots/Cube -	has been generated by technology
Roots	
( <b>REVIEW</b> -10 minutes) to	
review past concepts that	IB Criterion and Strands
may prepare for future	
concepts	Criterion A: Knowing and understanding
-Math Tag Relay	students should be able to:
-ComputationNation.com	i.select appropriate mathematics when
-Various Pizzazz puzzles	solving problems in both raminal and
-Minute Reviews	ii apply the selected mathematics
(GAME-10 minutes) fun	successfully when solving problems
way to work on math facts	,
-Farkle	
-Math skills Games	Criterion B: Investigating patterns:
-Prodigygame com	ii.describe patterns as relationships and/or
-Yahtzee	general rules consistent with findings
-Math Facts Bingo	iii.verify and justify relationships and/or
	general rules.
Formative:	
-PreTest	
-U1 Ch 1 L2 Powers and	
Exponents Table	
-Homework Slips - 5	
question review	
-Minute Reviews (GAME-10 minutes) fun way to work on math facts -Farkle -Math skills Games -Prodigygame.com -Yahtzee -Math Facts Bingo Formative: -PreTest -U1 Ch 1 L2 Powers and Exponents Table -Homework Slips - 5 question review	<ul> <li>ii.apply the selected mathematics successfully when solving problems</li> <li>Criterion B: Investigating patterns:</li> <li>ii.describe patterns as relationships and/or general rules consistent with findings</li> <li>iii.verify and justify relationships and/or general rules.</li> </ul>

		Exit Ticket <b>Summative:</b> -U1 Mid Chapter Quiz -U1 Ch 1 L8 Perfect Square Quiz UNIT 1 TEST(CriterionA) PerformanceTask Scientific Notation Operations StellarPerformance (1) (CriterionB)		
Month	IB Unit/Topic	Assessments and Activities	ATL SKILLS	Curriculum Standards and IB Criterion and Strands
October	Equations in One Variable (Chapter 2) Lesson 1: Solve Equations with Rational Coefficients Inquiry Lab: Solve Two-Step Equations Lesson 2: Solve Two-Step Equations	Activities: Vocabulary Word Study Are you ready? -Join khanacademy.com for resource -L1-5 Notes Packet -Students are provided note sheets for the whole unit and are expected to keep in their 3 ring binder. Pre-typed outline copied as a packet for each student. (Modified version for special education students) Videos from youtube	In order for a students to identify relevant elements of authentic real-life situations students must apply existing knowledge to generate new ideas, products, or processes. (Thinking/Creative) In order for a students to select appropriate mathematical strategies when solving authentic real-life situations students must apply skills and knowledge in unfamiliar situations (Thinking/Transfer)	<ul> <li>Standards:</li> <li>8.EE.7 Solve linear equations in one variable.</li> <li>a. 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).</li> <li>b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.</li> </ul>
	Lesson 3: Write Two-Step Equations Lesson 4: Solve Equations with	reinforcing some of the lessons Guided Practice modeled by the teacher Present material, provide	In order for a students to apply the selected mathematical strategies successfully to reach a solution students must demonstrate persistence and	IB Criterion/Strands: Criterion D: i. identify relevant elements of authentic real-life situations ii. select appropriate mathematical
	Equations with Variables on Each	Present material, provide examples, encourage	demonstrate persistence and perseverance	ii. select appropriate mathematical strategies when solving authentic real-

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Side Lesson 5: Solve Multi-Step Equations	independent practice with support, allow the independent practice Additional exercises and discussion are engaged in to learn and reinforce the	(Self-Management/ Affective) In order for a students to explain the degree of accuracy of a solution students must practice flexible thinking- develop	life situations iii. apply the selected mathematical strategies successfully to reach a solution iv. explain the degree of accuracy of a solution
	to learn and reinforce the skills needed. <b>Group Rotations</b> ( <b>TEACHER</b> -10 minutes) to practice the concept with teacher's direction and help - Lesson SKILLS sheets - Lesson Homework sheets - Book Assignments ( <b>ACTIVITY</b> -10 minutes) to participate in activities to reinforce the concept - One Step Dance - Maze Two step - Face-It Multistep - Equation Pairs - 2 Step Toucan ( <b>REVIEW</b> -10 minutes) to review past concepts that may prepare for future concepts - Math Tag Relay - ComputationNation.com - Various Pizzazz puzzles	flexible thinking- develop multiple opposing, contradictory and complementary arguments. (Thinking/Creative) In order for a students to describe whether a solution makes sense in the context of the authentic real-life situation students must propose and evaluate a variety of solutions. (Thinking/Critical Thinking)	solution v. explain whether a solution makes sense in the context of the authentic real-life situation.
	-Minute Reviews -ESCAPE ROOM Review (GAME-10 minutes) fun way to work on math facts		

		-Farkle -Math skills Games -Prodigygame.com -Yahtzee -Math Facts Bingo Formative; -PreTest Homework Slips - 5 question review Prodigygame.com Exit Tickets Summative: Mid-Chapter Quiz Chapter 2 Test Performance Task:		
		Minecraft		Curriculum Standards and ID Oritorian and
Wonth	IB Unit/ I opic	Assessments and Activities	Approaches to Learning	Strands
November	Equations in Two Variables (chapter 3) Lesson 1: Constant Rate of Change Inquiry Lab: Graphing on marker boards: Rate of Change Lesson 2: Slope Lesson 3: Equations in y =	Activities: Vocabulary Word Study Are you ready? Notes Packet -Students are provided note sheets for the whole unit and are expected to keep in their 3 ring binder. Pre-typed outline copied as a packet for each student. (Modified version for special education students)	In order for a students to use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations students must keep an organized and logical system of information files/notebooks. (Self-Management/ Organization) In order for a students to use different forms of mathematical	Standards: <u>CCSS.MATH.CONTENT.8.EE.B.5</u> Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed. <u>CCSS.MATH.CONTENT.8.EE.B.6</u> Use similar triangles to explain why the slope

Lesson 4: Slope- Intercept Formreinforcing some of the lessonsinformation students must combine knowledge, understanding, and skills to create products or solutions.points on a non-vertical line in the coo plane; derive the equation y = mx for a through the origin and the equation y b for a line intercepting the vertical axis	dinate line mx + at b.
Intercept Formlessonscombine knowledge, understanding, and skills to create products or solutions.plane; derive the equation y = mx for a through the origin and the equation y b for a line intercepting the vertical axiLesson 5: Graphby the teachercreate products or solutions.b for a line intercepting the vertical axi	<i>mx</i> + at <i>b</i> .
Guided Practice modeled       understanding, and skills to       through the origin and the equation y         Lesson 5: Graph       by the teacher       create products or solutions.         A bins the inservence       Descent products or solutions.       b for a line intercepting the vertical axis	of two
Lesson 5: Graph by the teacher create products or solutions.	of two
- Line Heiner Dursent wertendel wurdte (Thinking /Tursenfer)	of two
a Line Using Present material, provide (Thinking/Transfer) CCSS.MATH.CONTENT.8.EE.C.8.A	of two
Intercepts examples, encourage	of two
Lesson 6: Write independent practice with In order for a students to Understand that solutions to a system	
Linear Equations support, allow the communicate complete and linear equations in two variables	
Inquiry Lab: independent practice coherent mathematical lines of correspond to points of intersection	ion of
Graphing Model Additional exercises and reasoning students must their graphs, because points of	
Linear Behavior discussion are engaged in organize and depict information	IS
Inquiry Lab: to learn and reinforce the logically.	
Graphing skills needed. (Communication/	
Technology: Whole Group Activity Communication)	
Systems of Marker Boards Solve systems of two linear equations i	n two
Equationy = mx + bIn order for a students tovariables algebraically, and estin	ate
Lesson 7: Solve Investigative Lesson organize information using a solutions by graphing the equation	ons.
Systems ofPoint-Slope Formlogical structure students mustSolve simple cases by inspection	For
Equations by <b>Reflective Activity</b> collect and analyse data to $example, 3x + 2y = 5$ and $3x + 2y$	= 6
Graphing Following investigation identify solutions and make nave no solution because 3x + 2y cannot simultaneously be 5 and	-
Group Rotations informed decisions.	·•
Lesson 8: Solve (TEACHER-10 minutes) to (Research/Information Literacy) CCSS.MATH.CONTENT.8.EE.C.8.C	
Systems of practice the concept with	
Equations teacher's direction and Solve real-world and mathematical pro	olems
Algebraically help leading to two linear equations i	i two
- Lesson SKILLS sheets variables. For example, given	
Inquiry Lab: -Lesson Homework sheets coordinates for two pairs of point	S,
Analyze Systems - Book Assignments determine whether the line through the second secon	gh the
of Equations (ACTIVITY-10 minutes) to first pair of points intersects the	ne
participate in activities to	
Chapter Review reinforce the concept	
-Tis the Season Graphing IB Criterion/Strands:	
-Proportional Ornaments Criterion C: Communicating	
-Airplane Folding from	
y=mx=b language (notation, symbols and	

-Chasing Elves	terminology) in both oral and written
-Stained Glass	explanations
-Equation Matching	
	ii use different forms of mathematical
( <b>REVIEW</b> -10 minutes) to	representation to present information
review past concents that	representation to present information
may prepare for future	iii move between different forms of
concents	mathematical representation
Moth Tag Delay	mathematical representation
-Matin Tag Relay	
-ComputationNation.com	iv. communicate complete and conerent
-various Pizzazz puzzies	mathematical lines of reasoning
-Graphing Pumpkins	
-JEOPARDYLAB.COM for	v. organize information using a logical
lest Review	structure.
-Billybug.com	
-Mobeymax.com	
-Minute Reviews	
( <b>GAME</b> -10 minutes) fun	
way to work on math	
facts	
-Farkle	
-Math skills Games	
-Prodigygame.com	
-Yahtzee	
-Math Facts Bingo	
- New Line Game	
-Integer Spoons	
Formative:	
-PreTest	
Quiz on Slope	
Mid-Chapter Check	
Homework Slips - 5	
question review	
Fxit Tickate	

		Summative:		
		Mid-Chapter Check		
		Unit 3 TEST		
		Performance Task:		
		-Choose Your Own		
		Journey		
Month	IB Unit/Topic	Assessments and	ATL SKILLS	Curriculum Standards and IB Criterion and
		Activities		Strands
December	Functions	Activities:	In order for a students to select	Standards:
	(Chapter 4)	Notes Packet	appropriate mathematics when	CCSS.MATH.CONTENT.8.F.A.1
		-Students are provided	solving problems in both familiar	Understand that a function is a rule that
	Lesson 1:	note sheets for the whole	and unfamiliar situations	assigns to each input exactly one output. The
	Represent	koop in their 2 ring hinder	(Thinking (Critical Thinking)	graph of a function is the set of ordered pairs
	Relationships	Pre-typed outline conjed	(Thinking/Chucal Thinking)	consisting of an input and the corresponding
		as a packet for each	In order for a students to apply	output.1
	Lesson 2:	student. (Modified	the selected mathematics	COSS MATH CONTENT 9 F A 2
	Relations	version for special	successfully when solving	CC35.MATH.CONTENT.8.F.A.2
		education students)	problems students must combine	Compare properties of two functions each
	Inquiry Lab:	Videos from youtube	knowledge, understanding and	represented in a different way (algebraically,
	Relations and	reinforcing some of the	skills to create products or	graphically, numerically in tables, or by
	FUNCTIONS	lessons	solutions	verbal descriptions). For example, given a
	Lesson 3.	Guided Practice modeled	(Thinking /Transfer)	values and a linear function represented by
	Functions	by the teacher		an algebraic expression, determine which
		Present material, provide	In order for a students to solve	function has the greater rate of change.
	Lesson 4: Linear	examples, encourage	problems correctly in a variety of	
	Functions	support allow the	evisting knowledge to generate	CCSS.MATH.CONTENT.8.F.A.3
		independent practice	new ideas products or	Interpret the equation $y = mx + h$ as defining
	Lesson 5:	Additional exercises and	processes.	a linear function, whose graph is a straight
	Compare	discussion are engaged in	(Thinking/Creative Thinking)	line; give examples of functions that are not
	Properties of	to learn and reinforce the		linear. For example, the function A = s2giving
	Functions	skills needed.		the area of a square as a function of its side
	Losson G	Investigative Lesson		the points $(1,1)$ , $(2,4)$ and $(3,9)$ , which are not
	Lesson b:	Graphing quadratics		on a straight line.
	Construct			-

Functions	Group Rotations	Use functions to model relationships
	(TEACHER-10 minutes) to	between quantities.
Lesson 7: Linear	practice the concept with	CCSS.MATH.CONTENT.8.F.B.4
and Nonlinear	teacher's direction and	
Functions	help	Construct a function to model a linear
	- Lesson SKILLS sheets	relationship between two quantities.
Lesson 8:	-Lesson Homework sheets	value of the function from a description of a
Quadratic	- Book Assignments	relationship or from two $(x, y)$ values
Functions	(ACTIVITY-10 minutes) to	including reading these from a table or from
	participate in activities to	a graph. Interpret the rate of change and
Lesson 9:	reinforce the concept	initial value of a linear function in terms of
Qualitative	-Solving Equations	the situation it models, and in terms of its
Graphs	Coloring	graph or a table of values.
	-Domain/Range Coloring	
	-Function Dot to Dot	CCSS.MATH.CONTENT.8.F.B.5
	-Cut/paste function sort	Describe qualitatively the functional
	-Finding functions(green)	relationship between two quantities by
		analyzing a graph (e.g., where the function is
	(REVIEW-10 minutes) to	increasing or decreasing, linear or nonlinear).
	review past concepts that	Sketch a graph that exhibits the qualitative
	may prepare for future	features of a function that has been
	concepts	described verbally.
	-Math Tag Relay	
	-Graphing Turkeys	
	-ComputationNation.com	IB Criterion/Strands:
	-Various Pizzazz puzzles	Criterion A: Knowing and understanding
	-Graphing Pumpkins	citerion A. Knowing and understanding
	-ESCAPE ROOM Review	i select appropriate mathematics when
	-Billybug.com	solving problems in both familiar and
	(GAME-10 minutes) fun	unfamiliar situations
	way to work on math	
	facts	ii apply the selected mathematics
	-Multiply by Numbers	successfully when solving problems
	BoxesLines	successfully when solving problems
	-Divide by Numbers	iii, solve problems correctly in a variety
	BoxesLines	of contexts
		UI CUITEALS.

		-Farkle -Math skills Games -Prodigygame.com -Yahtzee -Math Facts Bingo -Integer Facts Spoons -Over the River Game Formative: -PreTest Homework Slips - 5 question review Poster Projectpairs Comparing Functions SPEED REVIEW for test study Exit Tickets Summative: Mid-Chapter Check Chapter 4 Test Performance Task: Twittering		
Month	IB Unit/Topic	Assessments and Activities	ATL SKILLS	Curriculum Standards and IB Criterion and Strands
January	Scatter Plots and Data Analysis (Chapter 9) Book: Glencoe Math Common Core Edition(CCSS) Course 3 Inquiry Lab:	Activities: Notes, Students are provided note sheets for the whole unit and are expected to keep in their 3 ring binder. Pre-typed outline copied as a packet for each student. ( Modified version for special education students)	In order for students to select appropriate mathematics when solving problems in both familiar and unfamiliar situations, students must combine knowledge understanding and skills to create products or solutions. (Thinking/Transfer). In order for students to apply the selected mathematics	Standards: 8.SP.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.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that

Scatter Plots	Videos from youtube	successfully when solving	suggest a linear association, informally fit a
Lesson 1: Scatter	reinforcing some of the	problems, students must apply	straight line, and informally assess the model
Plots	lessons including but not	existing knowledge to generate	fit by judging the closeness of the data points
Lesson 2: Lines of	limited to:	new ideas products or processes.	to the line.
Best Fit	Learn Scatter Plots and	(Thinking/Creative Thinking).	<b>9 CD 2</b> Use the equation of a linear model to
Lesson 3: Two-	Best Fitting Lines -	In order for students to Describe	solve problems in the context of hivariate
Way Tables	YouTube	Dettorns as Polationships and or	measurement data, interpreting the slope
Lesson 4:	Khanacademy.com	patients as Relationships and of	and intercept. For example, in a linear model
Descriptive	Guided Practice modeled	findings, students must interpret	for a biology experiment, interpret a slope of
Statistics	by the teacher	data (Thinking/Critical Thinking)	1.5 cm/hr as meaning that an additional hour
Lesson 5:	Present material, provide		of sunlight each day is associated with an
Measures of	examples, encourage	In order for student to Verify and	additional 1.5 cm in mature plant height.
Variation	independent practice with	justify relationships and/or	8 SP 4 Understand that natterns of
Lesson 6:	support, allow the	general rules, students must	association can also be seen in bivariate
Analyze Data	independent practice	collect and analyze data to	categorical data by displaying frequencies
Distributions	Additional exercises and	identify solutions and make	and relative frequencies in a two-way table.
	discussion are engaged in	informed decisions.	Construct and interpret a two-way table
	to learn and reinforce the	(Research/Information Literacy)	summarizing data on two categorical
	skills needed.		variables collected from the same subjects.
	Group Rotations		Use relative frequencies calculated for rows
	(TEACHER-10 minutes) to		or countries to describe possible association between the two variables
	practice the concept with		
	teacher's direction and		IB Criterion and Strands
	help		
	- Lesson SKILLS sheets		Criterion A.Knowing and Understanding
	-Lesson Homework sheets		i. Select appropriate mathematics when
	- Book Assignments		solving problems in both familiar and
	(ACTIVITY-10 minutes) to		unfamiliar situations
	participate in activities to		ii.Apply the selected mathematics
	reinforce the concept		successfully when solving problems.
	(REVIEW-10 minutes) to		
	review past concepts that		Criterion B.Investigating Patterns
	may prepare for future		i.Describe Patterns as Relationships and
	concepts		or general rules consistent with findings
	-Math Tag Relay		ii.Verify and justify relationships and/or
	-computationNation.com		general rules

Month February	IB Unit/Topic Triangles and the Pythagorean Theorem (Chapter 5 )	Assessments and Activities Activities: Notes Packet -Students are provided note sheets for the whole unit and are expected to keep in their 3 ring binder. Pre-typed outline copied	ATL SKILLS In order for a students to identify relevant elements of authentic real-life situations students must apply existing knowledge to generate new ideas, products, or processes. (Thinking/Creative)	Curriculum Standards and IB Criterion and Strands Standards: 8.G.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 or that the three angles
Month	IB Unit/Topic	Performance Task -Monopoly Mania Assessments and	ATL SKILLS	Curriculum Standards and IB
		<ul> <li>-Various Pizzazz puzzles</li> <li>-Graphing Pumpkins</li> <li>-ESCAPE ROOM Review</li> <li>-Billybug.com</li> <li>(GAME-10 minutes) fun</li> <li>way to work on math</li> <li>facts</li> <li>-Farkle</li> <li>-Math skills Games</li> <li>-Prodigygame.com</li> <li>-Yahtzee</li> <li>-Math Facts Bingo</li> <li>Formative:</li> <li>-Homework Slips - 5</li> <li>question review</li> <li>-Inquiry Lab: Scatter Plots</li> <li>Exit Tickets</li> <li>Summative:</li> <li>-Mid-Chapter Check</li> </ul>		

	reinforcing some of the	apply skills and knowledge in	0.0.7 Apply the Dutherson Therman to
Lesson 3: Angles	lessons	untamiliar situations	<b>a.u.</b> Apply the Pythagorean Theorem to
ot Triangles	Guided Practice modeled	(Thinking/Transfer)	triangles in real-world and mathematical
	by the teacher		nrohlems in two and three dimensions
Lesson 4:	Present material, provide	In order for a students to apply	
Polygons and	examples, encourage	the selected mathematical	8.G.8 Apply the Pythagorean Theorem to find
Angles	independent practice with	strategies successfully to reach a	the distance between two points in a
	support, allow the	solution students must	coordinate system.
	independent practice	demonstrate persistence and	
Inquiry Lab: Right	Additional exercises and	perseverance	IB Criterion and Strands
Triangle	discussion are engaged in	(:Self-Management /Affective)	
Relationships	to learn and reinforce the		Criterion D:
	skills needed.	In order for a students to explain	i, identify relevant elements of authentic
Lesson 5: The	Whole Group Activity	the degree of accuracy of a	real-life situations
Pythagorean	Triangle Ripping to 180	solution students must practice	
Theorem	Highlighting Angles	flexible thinking- develop	ii. select appropriate mathematical
	Investigative Activity	multiple opposing, contradictory	strategies when solving authentic real-
Inquiry Lab:	Finding Exterior Angle	and complementary	life situations
Proofs About the	Group Rotations	arguments.(Thinking/ Creative)	iii apply the selected mathematical
Pythagorean	(TEACHER-10 minutes) to	· - ·	strategies successfully to reach a
Theorem	practice the concept with	In order for a students to	solution
	teacher's direction and	describe whether a solution	Solution
Lesson 6: Use the	help	makes sense in the context of	iv. explain the degree of accuracy of a
Pythagorean	- Lesson SKILLS sheets	the authentic real-life situation	solution
Theorem	-Lesson Homework sheets	students must propose and	y explain whether a solution makes
	- Book Assignments	evaluate a variety of solutions.	v. explain whether a solution makes
Lesson 7:	(ACTIVITY-10 minutes) to	(Thinking/Critical Thinking)	real-life situation
Distance on the	participate in activities to		
Coordinate Plane	reinforce the concept		
	-Pythagorean Puzzle		
	-Angle Pairs Matching		
	-Parallel/Trans Maze		
	-Parallel/Trans Coloring		
	-Missing Angles of Triangle		
	-Quadrilateral Card Sort		
	-Pythagorean Partner		
	,		

		may prepare for future concepts -Math Tag Relay -ComputationNation.com -Various Pizzazz puzzles -Graphing Pumpkins -Pairs of Angles -Billybug.com (GAME-10 minutes) fun		
		way to work on math facts -Farkle -Math skills Games -Prodigygame.com -Yahtzee -Math Facts Bingo <b>Formative:</b>		
		-PreTest -Homework Slips - 5 question review -ESCAPE ROOM Review Exit Tickets <b>Summative:</b> -Mid-Chapter Check -Chapter 5 Test -Performance Task: Speed Tiling		
Month	IB Unit/Topic	Assessments and Activities	ATL SKILLS	Curriculum Standards and IB Criterion and Strands
March	Transformatio	Activities:	In order for a student to apply	Standards:

	1			
	ns (Chapter 6)	Notes Packet -Students are provided	mathematical problem-solving techniques to recognize patterns	<b>8.G.1</b> Verify experimentally the properties of rotations, reflections, and translations:
-	Inquiry Lab: Transformations	note sheets for the whole unit and are expected to keep in their 3 ring binder	students must apply existing knowledge to generate new	<ul> <li>a. Lines are taken to lines, and line segments to line segments of the same length.</li> <li>b. Angles are taken to angles of the same</li> </ul>
-	Lesson 1: Translations	Pre-typed outline copied as a packet for each	(Thinking/ Creative Thinking)	measure. <b>c.</b> Parallel lines are taken to parallel lines
	Lesson 2: Reflections	student. ( Modified version for special education students) <b>Videos</b> from youtube	In order for a student to describe patterns as relationships or general rules consistent with correct findings students must	<b>8.G.2</b> Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations;
	PSI: Act it Out	reinforcing some of the lessons	evaluate evidence and arguments	given two congruent figures, describe a sequence that exhibits the congruence between them.
	Inquiry Lab: Rotational Symmetry	<b>Guided Practice</b> modeled by the teacher Present material, provide examples, encourage	(Thinking/Critical Thinking) In order for a student to verify whether the pattern works for	<b>8.G.3</b> Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.
1	Lesson 3: Rotations	independent practice with support, allow the independent practice	other examples. students must test generalizations and conclusions(Thinking/Critical	<b>8.G.4</b> Understand that a two-dimensional figure is similar to another if the second can
	Inquiry Lab: Dilations	Additional exercises and discussion are engaged in to learn and reinforce the	Thinking )	obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the
	Lesson 4: Dilations	skills needed. Group Rotations (TEACHER-10 minutes) to		similarity between them.
		practice the concept with teacher's direction and help		IB Criterion/Strands: Criterion B: Investigating patterns i. apply mathematical problem-solving
		<ul> <li>Lesson SKILLS sheets</li> <li>Lesson Homework sheets</li> <li>Book Assignments</li> </ul>		techniques to recognize patterns
		(ACTIVITY-10 minutes) to participate in activities to reinforce the concept		general rules consistent with correct findings
		(REVIEW-10 minutes) to		iii. verify whether the pattern works for

		review past concepts that may prepare for future concepts -Math Tag Relay -ComputationNation.com -Various Pizzazz puzzles -Graphing Pumpkins -ESCAPE ROOM Review -Billybug.com (GAME-10 minutes) fun way to work on math facts -Farkle -Math skills Games -Prodigygame.com -Yahtzee -Math Facts Bingo <b>Formative:</b> -PreTest Homework Slips - 5 question review Exit Ticket <b>Summative:</b> Mid-Chapter Check Chapter 6 Test Performance Tasks:		other examples.
		Picture Transformations		
Month	IB Unit/Topic	Assessments and Activities	ATLSKILLS	Curriculum Standards and IB Criterion and Strands
April	Congruence	Activities:	In order for students to select	Standards:
	and Similarity (Chapter 7)	Notes Packet -Students are provided note sheets for the whole unit and are expected to	appropriate mathematics when solving problems in both familiar and unfamiliar situations, students must combine	<u>CCSS.MATH.CONTENT.8.G.A.1</u> Verify experimentally the properties of rotations, reflections, and translations:
	Congruence and	Pre-typed outline copied	knowledge understanding and skills to create products or	CCSS.MATH.CONTENT.8.G.A.1.A

Transformations	as a packet for each	solutions. (Thinking/Transfer).	Lines are taken to lines, and line
Inquiry Lab:	student. ( Modified version for special	In order for students to apply the selected mathematics	segments to line segments of the same length.
Investigate	education students)	successfully when solving	CCSS.MATH.CONTENT.8.G.A.1.B
Congruent	Videos from youtube	problems, students must apply	
Triangles	reinforcing some of the	existing knowledge to generate	Angles are taken to angles of the same
	lessons	new ideas products or processes.	measure.
Lesson 2:	Guided Practice modeled	(Thinking/Creative Thinking)	
Congruence	by the teacher		
	Present material, provide		
Inquiry Lab:	examples, encourage	In order for a students to use	CCSS.MATH.CONTENT.8.G.A.2
Similar Triangles	independent practice with	appropriate mathematical	Understand that a two dimensional figure is
	support, allow the	language (notation, symbols and	congruent to another if the second can be
Lesson 3:	independent practice	terminology) in both oral and	obtained from the first by a sequence of
Similarity and	Additional exercises and	written explanations students	rotations, reflections, and translations; given
Transformations	discussion are engaged in	must keep an organized and	two congruent figures, describe a sequence
	to learn and reinforce the	logical system of information	that exhibits the congruence between them.
Lesson 4:	skills needed.	files/notebooks.	
Properties of	Group Rotations	(Self-Management/	CCSS.MATH.CONTENT.8.G.A.4
Similar Polygons	(TEACHER-10 minutes) to	Organization)	
	practice the concept with		Understand that a two-dimensional figure is
Lesson 5: Similar	teacher's direction and	In order for a students to use	similar to another if the second can be
Triangles and	help	different forms of mathematical	obtained from the first by a sequence of
Indirect	- Lesson SKILLS sheets	representation to present	dilations: given two similar two-dimensional
Measurement	-Lesson Homework sheets	information students must	figures, describe a sequence that exhibits the
	- Book Assignments	combine knowledge,	similarity between them.
Lesson 6: Slope	(ACTIVITY-10 minutes) to	understanding, and skills to	,
and Similar	participate in activities to	create products or solutions.	CCSS.MATH.CONTENT.8.G.A.5
Triangles	reinforce the concept	(Thinking/Transfer)	
	(REVIEW-10 minutes) to		Use informal arguments to establish facts
Lesson 7: Area	review past concepts that	la andar far a students to	about the angle sum and exterior angle of
and Perimeter of	may prepare for future	In order for a students to	triangles, about the angles created when
Similar Figures	concepts	communicate complete and	angle-angle criterion for similarity of
-	-Math Tag Relay	concrement mathematical lines of	triangles. For example, arrange three conies
	-ComputationNation.com	reasoning students must	of the same triangle so that the sum of the
	-Various Pizzazz puzzles	organize and depict information	three angles appears to form a line, and give
	-	logically.	

		-Graphing Pumpkins	(Communication/	an argument in terms of transversals why this
		-ESCAPE ROOM Review	Communication)	is so.
		-Billybug.com	,	
		(GAME-10 minutes) fun		
		way to work on math		
		facts		IB Criterion and Strands
		-Farkle		
		-Math skills Games		Criterion A.Knowing and Understanding
		-Prodigygame.com		I. Select appropriate mathematics when
		-Yahtzee		solving problems in both familiar and
		-Math Facts Bingo		untamiliar situations
		Formative:		II.Apply the selected mathematics
		-PreTest		successfully when solving problems.
		Homework Slips - 5		
		question review		Criterion C: Communicating
		Exit Tickets		i. use appropriate mathematical
		Formative:		language (notation, symbols and
		-PreTest		terminology) in both oral and written
		-Homework Slips - 5		explanations
		question review		
		Summative:		ii. use different forms of mathematical
		Mid-Chapter Check		representation to present information
		Chapter 7 Test		
		Performance Task:		iv. communicate complete and coherent
				mathematical lines of reasoning
Month	IB Unit/Topic	Assessments and	ATL SKILLS	Curriculum Standards and IB
		Activities		Criterion and Strands
May	Volume and	Activities:	In order for a students to identify	Standards:
	Surface Area	Notes Packet	relevant elements of authentic	8.G.9 Know the formulas for the
	(Chanter 8)	-Students are provided	real-life situations students must	volume of cones, cylinders, and
		note sheets for the whole	apply existing knowledge to	spheres and use them to solve real-
	the section of a last	unit and are expected to	generate new ideas, products, or	world and mathematical problems.
	Inquiry Lab:	keep in their 3 ring binder.	processes.	
	Dimensional	Pre-typed outline copied	(Thinking/Creative)	
	Dimensional	as a packet for each		IB Criterion/Strands:
	Figures	student. ( Modified	In order for a students to select	is criteriony stranus.

# Course: 8th Grade Math Curriculum Guide Grade Level: 8th Grade

## Textbook/Instructional Materials: GlencoeMath Common Core Edition(CCSS) Course 3

Losson 1: Volume	version for special	appropriate mathematical	Criterion D:
Lesson 1. volume		sualegies when solving authentic	i identify relevant elements of outbartic
of Cylinders	videos from youtube	real-life situations students must	i. identify relevant elements of authentic
	reinforcing some of the	apply skills and knowledge in	real-life situations
Lesson 2: Volume	lessons	untamiliar situations	ii. select appropriate mathematical
of Cones	Guided Practice modeled	(Thinking/Transfer)	strategies when solving authentic real-
	by the teacher		life situations
Lesson 3: Volume	Present material, provide	In order for a students to apply	
of Spheres	examples, encourage	the selected mathematical	iii. apply the selected mathematical
	independent practice with	strategies successfully to reach a	strategies successfully to reach a
Lesson 4: Surface	support, allow the	solution students must	solution
Area of Cylinders	independent practice	demonstrate persistence and	iv, explain the degree of accuracy of a
	Additional exercises and	perseverance	solution
Lesson 5: Surface	discussion are engaged in	(:Self-Management /Affective)	
Area of Cones	to learn and reinforce the		v. explain whether a solution makes
	skills needed.	In order for a students to explain	sense in the context of the authentic
Lesson 6:	Group Rotations	the degree of accuracy of a	real-life situation.
Changes in	(TEACHER-10 minutes) to	solution students must practice	
Dimensions	practice the concept with	flexible thinking- develop	
	teacher's direction and	multiple opposing, contradictory	
	help	and complementary	
	- Lesson SKILLS sheets	arguments.(Thinking/ Creative)	
	-Lesson Homework sheets		
	- Book Assignments	In order for a students to	
	(ACTIVITY-10 minutes) to	describe whether a solution	
	participate in activities to	makes sense in the context of	
	reinforce the concept	the authentic real-life situation	
	(REVIEW-10 minutes) to	students must propose and	
	review past concepts that	evaluate a variety of solutions.	
	may prepare for future	(Thinking/Critical Thinking)	
	concepts		
	-Math Tag Relay		
	-ComputationNation.com		
	-Various Pizzazz puzzles		
	-Graphing Pumpkins		
	-Billybug.com		

		(GAME-10 minutes) fun		
		way to work on math		
		facts		
		-Farkle		
		-Math skills Games		
		-Prodigygame.com		
		-Yahtzee		
		-Math Facts Bingo		
		Formative:		
		PreTest		
		Homework Slips - 5		
		question review		
		Exit Slips		
		Summative:		
		Mid-Chapter Check		
		Chapter 8 Test		
		Performance Task:		
		Cone Conundrum		
Month	IB Unit/Topic	Assessments and	ATL SKILLS	Curriculum Standards and IB
		Activities		Criterion and Strands
June		Activities:		Standards:
		Formative:		IB Criterion and Strands
		Summative		
		Summative.		
	1			