Lehighton Area School District
Curriculum Framework

Course Title:	Math 8 (Applied and Academic)
Content Area:	Mathematics
Grade Level(s):	8th Grade
Course Overview:	Applied and Academic Math 8 focuses on three critical areas: (1) Applying equations in one and two variables; (2) Understanding the concept of a function and using functions to describe quantitative relationships; and (3) Applying the Pythagorean Theorem and the concepts of similarity and congruence.
PA Core Standards:	PA Core Standards Mathematics PK-12
Key Course Text and Materials:	Glencoe Math Course 3 Volume 1 and 2, IXL, Delta Math, Wayground
Key Assessments/Projects:	There is one test per chapter with one or two quizzes. In-class assignments (ICA) happen independently or with a partner to review class material . There are also IXL assignments assigned weekly utilized as spiral review.

Big Idea/Unit: Numbers and Operations
Pacing: 8 days

Standards	Objective/Skill	Vocabulary	Additional Resources	Assessment/Project
CC.2.1.8.E.1 M08.A-N.1.1.1 M08.A-N.1.1.2 A1.1.1.1.1 A1.1.1.1.2	Distinguish between rational and irrational numbers using their properties.	Rational number Repeating decimal Terminating decimal Base Exponent Power Monomial Scientific notation Cube root Perfect cube Perfect square Radical sign Square root Irrational numbers Real number	Glencoe Math Course 3 Chapter 1 Lessons 1, 8, 10 Google Drawing Jamboard Perfect Squares Table Kahoot Wayground IXL	Kahoot results Wayground results
CC.2.1.8.E.4 M08.A-N.1.1.3 M08.A-N.1.1.4 M08.A-N.1.1.5 A1.1.1.1.1	Estimate irrational numbers by comparing them to rational numbers.		Glencoe Math Course 3 Chapter 1 Lessons 8 and 9 Perfect Squares Table IXL	

Big Idea/Unit: Algebraic Concepts
Pacing: 42 days

Standards	Objective/Skill	Vocabulary	Additional Resources	Assessment/Project
CC.2.2.8.B.1 M08.B-E.1.1.1 M08.B-E.1.1.2 M08.B-E.1.1.3 M08.B-E.1.1.4 A1.1.1.3.1	Apply concepts of radicals and integer exponents to generate equivalent expressions.	Base Exponent Power Monomial Scientific Notation	Glencoe Math Course 3 Chapter 1 Lessons 2-5, 7, 8 Laws of Exponents Foldable PSSA Math Formula Sheet White boards Brain Pop Wayground IXL	Quiz White boards assessment Problem Solving Practice Worksheet

CC.2.2.8.B.2 M08.B-E.2.1.1 M08.B-E.2.1.2 M08.B-E.2.1.3 A1.2.1.2.2	Understand the connections between proportional relationships, lines, and linear equations.	Constant Rate of change Linear relationship Rise Run Slope Constant of proportiona Constant of variation Direct variation Slope-intercept form y-intercept Linear equation Continuous data Discrete data	Glencoe Math Course 3 Chapter 3 Lessons 1-4 and Chapter 4 Lessons 1 and 4 Worksheet for Slope Formula Game Graphing a line Using an x/y table Worksheet Slope-Intercept Form Foldable Worksheet 149 Kahoot IXL	Kahoot results Quiz Worksheets Chapter assessment
CC.2.2.8.B.3 M08.B-E.3.1.1 M08.B-E.3.1.2 M08.B-E.3.1.3 M08.B-E.3.1.4 M08.B-E.3.1.5 A1.1.2.1.1 A1.1.2.2.1 A1.1.2.2.2	Analyze and solve linear equations and pairs of simultaneous linear equations.	Coefficient Multiplicative inverse Properties Two-step equation Identity Null set System of equations	Glencoe Math Course 3 Chapter 2 Lessons 1-5, and Chapter 3 Lessons 7 and 8 White Boards Wayground Worksheet 101, 103, 104 Lesson 3 Worksheets IXL BINGO with Google Slides Review packet	White board assessment Chapter assessment
CC.2.2.8.C.1 M08.B-F.1.1.1 M08.B-F.1.1.2 M08.B-F.1.1.3 A1.1.2.1.1 A1.2.1.1.2 A1.2.1.2.1 A1.2.1.2.2	Define, evaluate, and compare functions.	Domain Range Relation Dependent variable Function Function table Indpendent variable Linear function	Glencoe Math Course 3 Chapter 4 Lesson 2-6 Kahoot ConnectEd Algebra: Is this a Function video Wayground IXL	Quiz Chapter assessment
CC.2.2.8.C.2 M08.B-F.2.1.1 M08.B-F.2.1.2 A1.1.2.1.3 A1.2.1.1.1 A1.2.1.2.2 A1.2.2.1.3 A1.2.2.1.4	Use concepts of functions to model relationships between quantities.	Nonlinear function	Glencoe Math Course 3 Chapter 4 Lesson 7 IXL	Quiz Chapter assessment

Big Idea/Unit: Geometry **Pacing:** 37 days				
Standards	**Objective/Skill**	**Vocabulary**	**Additional Resources**	**Assessment/Project**
CC.2.3.8.A.1 M08.C-G.3.1.1 G.2.3.1.2	Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Composite solids Cylinder Polyhedron Volume Cone Hemisphere Sphere Similar solids	Glencoe Math Course 3 Chapter 8 Lessons 1-3, 6 Brain Pop IXL	Quiz
CC.2.3.8.A.2 M08.C-G.1.1.1 M08.C-G.1.1.2 M08.C-G.1.1.3 M08.C-G.1.1.4 G.1.2.1.1 G.1.2.1.4 G.2.2.1.1	Understand and apply congruence, similarity, and geometric transformations using various tools.	Congruent Image Preimage Transformation Translation Line of reflection Reflection Centor of rotation Rotation Rotational symmetry Composition of transfo Corresponding parts Dilation Similar Indirect measurement	Glencoe Math Course 3 Chapter 6 Lessons 1-4 and Chapter 7 Lessons 1-5 Rotation and Personal Tutor videos Foldable Geoboard Kahoot Brain Pop Nearpod Decoder worksheets IXL	Quizzes Kahoot results Chapter assessment
CC.2.3.8.A.3 M08.C-G.2.1.1 M08.C-G.2.1.2 M08.C-G.2.1.3 G.2.1.1.1 G.2.1.2.1	Understand and apply the Pythagorean Theorem to solve problems.	Converse Hypotenuse Legs Pythagorean theorem Distance	Glencoe Math Course 3 Chapter 5 Lessons 5-7 Worksheet for Check Your Understanding Jamboards Kahoot IXL	Worksheet Quiz

Big Idea/Unit: Measurement, Data, and Probability **Pacing:** 7 days				
Standards	**Objective/Skill**	**Vocabulary**	**Additional Resources**	**Assessment/Project**

CC.2.4.8.B.1 M08.D-S.1.1.1 M08.D-S.1.1.2 M08.D-S.1.1.3 A1.2.2.2.1	Analyze and/or interpret bivariate data displayed in multiple representations.	Bivariate data Relative frequency Two-way table	Glencoe Math Course 3 Chapter 9 Lessons 1, 3 Personal Tutor Videos Brain Pop IXL	Chapter assessment
CC.2.4.8.B.2 M08.D-S.1.2.1	Understand that patterns of association can be seen in bivariate data utilizing frequencies.	Scatter plot Line of best fit	Glencoe Math Course 3 Chapter 9 Lesson 2 Nearpod IXL	Chapter assessment