

Port Edwards School District Curriculum Map

Course: 8th Grade Math

Grade Level: 8

Unit: Expressions and Equations (8.EE)

Essential Questions	• How can you communicate mathematical ideas effectively? ❖ What is equivalence? ❖ Why are graphs helpful?
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Standard	Learning Targets		Common Assessments	Common Resources & Activities
	Concept / Content	Skills		
M.8.EE.A.1 M.8.EE.A.2 M.8.EE.A.3 M.8.EE.A.4 M.8.EE.B.5 M.8.EE.B.6 M.8.EE.C.7 M.8.EE.C.8	Coefficient Identity Multiplicative inverse Null set Properties Two-step equation Constant of proportionality Constant of variation Constant rate of change Direct variation Linear relationships Point-slope form Rise Run Slope Slope-intercept form Standard form Substitution Systems of equations X-intercept Y-intercept	• Solve equations with rational coefficients • Solve two-step equations • Write and solve two-step equations that represent real-life situations • Solve equations with variables on each side • Solve multi-step equations • Determine and justify the reasonableness of solutions • Identify proportional and nonproportional linear relationships by finding a constant rate of change • Use tables and graphs to find the slope of a line • Use direct variation to solve problems • Graph linear equations using the slope and y-intercept • Graph an equation using the x- and y-intercepts • Write an equation of a line • Solve real-life and mathematical systems of linear equations by graphing • Solve real-life and mathematical systems of equations algebraically	Glencoe Math—Chapter 2 Test Glencoe Math—Chapter 2 Vocabulary Quiz Glencoe Math—Chapter 3 Test Glencoe Math—Chapter 3 Vocabulary Quiz	Glencoe Math Course 3 , Chapters 2 and 3

Port Edwards School District Curriculum Map
Course: 8th Grade Math
Grade Level: 8
Unit: Functions (8.F)

Essential Questions	• How can you find and use patterns to model real-world situations? ❖ How can we model relationships between quantities?
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Standard	Learning Targets		Common Assessments	Common Resources & Activities
	Concept / Content	Skills		
M.8.F.A.1 M.8.F.A.2 M.8.F.A.3 M.8.F.B.4 M.8.F.B.5	Continuous data Dependent variable Discrete data Domain Function Function table Independent variable Linear equation Linear function Nonlinear function Quadratic function Qualitative graphs Range Relation	• Translate tables and graphs into linear equations • Represent relations using tables and graphs • Find function values and complete function tables • Represent linear functions using tables and graphs • Compare properties of functions represented in different ways • Find and interpret the rate of change and initial value of a function • Determine whether a function is linear or nonlinear • Graph quadratic functions • Sketch and describe qualitative graphs	Glencoe Math—Chapter 4 Test Glencoe Math—Chapter 4 Vocabulary Quiz	Glencoe Math Course 3, Chapter 4

Port Edwards School District Curriculum Map
Course: 8th Grade Math
Grade Level: 8
Unit: Geometry (8.G)

Essential Questions	• How can you use different measurements to solve real-life problems? ❖ How can algebraic concepts be applied to geometry? ❖ How can we best show or describe the change in position of a figure? ❖ How can you determine congruence and similarity? ❖ Why are formulas important in math and science?
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Standard	Learning Targets		Common Assessments	Common Resources & Activities
	Concept / Content	Skills		
M.8.G.A.1 M.8.G.A.2 M.8.G.A.3 M.8.G.A.4 M.8.G.A.5 M.8.G.B.6 M.8.G.B.7 M.8.G.B.8 M.8.G.C.9	Alternate exterior angles Alternate interior angles Converse Corresponding angles Distance formula Equiangular Exterior angles Hypotenuse Interior angles Legs Parallel lines Perpendicular lines Polygon Pythagorean Theorem Regular polygon Remote interior angles Theorem Transversal Triangle Angle of rotation Center of dilation Center of rotation Congruent Dilation	• Identify relationships of angles formed by two parallel lines cut by a transversal • Find missing angle measures in triangles • Find the sum of the angle measures of a polygon and the measure of one interior angle of a regular polygon • Use the Pythagorean Theorem to find missing side lengths in right triangles • Solve problems using the Pythagorean Theorem • Find the distance between two points on the coordinate plane • Graph translations on the coordinate plane • Graph reflections on the coordinate plane • Graph rotations on the coordinate plane • Use scale factors to graph dilations • Use a series of transformations to create congruent figures • Write congruence statements for	Glencoe Math—Chapter 5 Test Glencoe Math—Chapter 5 Vocabulary Quiz Glencoe Math—Chapter 6 Test Glencoe Math—Chapter 6 Vocabulary Quiz Glencoe Math—Chapter 7 Test Glencoe Math—Chapter 7 Vocabulary Quiz Glencoe Math—Chapter 8 Test Glencoe Math—Chapter 8 Vocabulary Quiz	Glencoe Math Course 3 , Chapters 5, 6, 7, and 8

	Image Line of reflection Preimage Reflection Rotation Rotational symmetry Transformation Translation Composition of transformations Corresponding parts Indirect measurement Scale factor Similar Similar polygons Composite solids Cone Cylinder Hemisphere Lateral area Nets Polyhedron Similar solids Sphere Lateral surface area Volume	congruent figures • Use transformations to create similar figures • Identify similar polygons and find missing measures of similar polygons • Solve problems involving similar triangles • Relate the slope of a line to similar triangles • Find the relationship between perimeters and areas of similar figures • Find the volume and surface area of cylinders • Find the volume and surface area of cones • Find the volume of spheres		
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Port Edwards School District Curriculum Map

Course: 8th Grade Math

Grade Level: 8

Unit: Statistics and Probability (8.SP)

Essential Questions	- Why is learning mathematics important? ❖ How are patterns used when comparing two quantities?
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Standard	Learning Targets		Common Assessments	Common Resources & Activities
	Concept / Content	Skills		
M.8.SP.A.1 M.8.SP.A.2 M.8.SP.A.3 M.8.SP.A.4	Bivariate data Distribution Five-number summary Line of best fit Mean absolute deviation Qualitative data Quantitative data Relative frequency Scatter plot Standard deviation Symmetric Two-way table Univariate data	- Use a scatter plot to investigate the relationship between two sets of data - Construct and make conjectures about scatter plots - Draw lines of best fit and use them to make predictions about data - Construct and interpret two-way tables - Find measures of center and variation - Find and interpret the mean absolute deviation for a set of data - Analyze data distributions	Glencoe Math—Chapter 9 Test Glencoe Math—Chapter 9 Vocabulary Quiz	Glencoe Math Course 3, Chapter 9

Port Edwards School District Curriculum Map

Course: 8th Grade Math

Grade Level: 8

Unit: The Number System (8.NS)

Essential Questions	- Why is learning mathematics important? - Why is it helpful to write numbers in different ways?
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Standard	Learning Targets		Common Assessments	Common Resources & Activities
	Concept / Content	Skills		
M.8.NS.A.1 M.8.NS.A.2	Base Cube root Exponent Irrational number Monomial Perfect cube Perfect square Power Radical sign Rational number Repeating decimal Scientific notation Square root Terminating decimal	- Write fractions as decimals and decimals as fractions - Write and evaluate expressions involving powers and exponents - Simplify real number expressions by multiplying and dividing monomials - Use the Laws of Exponents to find powers of monomials - Simplify expressions involving negative exponents - Use scientific notation to write large and small numbers - Use technology to compute with numbers written in scientific notation - Find square roots and cube roots - Estimate square and cube roots - Compare mathematical expressions	Glencoe Math—Chapter 1 Test Glencoe Math—Chapter 1 Vocabulary Quiz	Glencoe Math Course 3, Chapter 1