CONNEAUT AREA SCHOOL DISTRICT MATHEMATICS—Module 1		
UNIT OF STUDY: Ratios and Proportional Relationships	**COURSE/GRADE:** Grade 7	**# WEEKS:** 20 days

Focus (emphasis) Standards/EC **CC.2.1.7.D.1** Analyze proportional relationships and use them to model and solve real-world and mathematical problems… **M07.A-R.1.1.1** Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Example: If a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2 / 1/4 miles per hour, equivalently 2 miles per hour. **M07.A-R.1.1.2** Determine whether two quantities are proportionally related (e.g., by testing for equivalent ratios in a table, graphing on a coordinate plane and observing whether the graph is a straight line through the origin). **M07.A-R.1.1.3** Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. **M07.A-R.1.1.4** Represent proportional relationships by equations. Example: If total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn. **M07.A-R.1.1.5** Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r), where r is the unit rate.	**Technology/manipulatives** Calculators, Smartboard, Study Island, rulers, white boards, highlighters, colored pencils
Important (reinforced) Standards/EC	**Reading, writing, speaking strategies** Journaling, read aloud, persuasive/informational/expository writing,

CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers.	graphic organizers, Frayer model, lecture, cooperative learning, board work, demonstration, Think-Pair-Share, note-taking, crossword puzzles
Vocabulary Complex fractions, constant of proportionality/variation/change, coordinate plane, cross products, direct variation, equivalent ratios, non-proportional, proportional , ordered pair, origin, quadrants, rate, rate of change, slope, unit rate, x-axis, x-coordinate, y-axis, y-coordinate	**Questioning and discussion techniques** Bellringers, Exit tickets, discovery, small/large groups, peer tutoring, games, homework review, dry erase boards
Real life application Not limited to: maps, scale drawings, formulas (i.e. d = rt, y = kx), similar polygons, any applications involving proportional relationships.	**Performance assessment** Test, Quiz, Performance Task, Homework, Projects, Notebooks, Study Island
Computation Operations involving real numbers	**Accommodations/adaptations** Differentiation strategies, small group instruction, cooperative learning, guided practice, peer tutoring, limited problems/choices, manipulatives and models, clarity checks, diagrams and graphs
SAS Module Resources www.pdesas.org: *Grade 7 Mathematics Assessment Anchors and Eligible Content *Mathematics Glossary *PA Core Mathematics, Grades PreK-12 *PA Standards Instructional Frameworks: Math (Go to Teacher Tools then Curriculum Mapping) *Math Cluster Matrix – Tri-folds 6-7-8	
