CONNEAUT AREA SCHOOL DISTRICT MATHEMATICS		
UNIT OF STUDY: addition and subtraction of fractions	COURSE/GRADE: 5	# WEEKS: 7
• MODULE 3	• Addition and subtraction of fractions	
Focus (emphasis) Standards/EC: **CC.2.1.5.C.1** – Use the understanding of equivalency to add and subtract fractions **-Eligible Content:** * **M05.A-F.1.1.1:** add and subtract fractions (including mixed numbers) with unlike denominators. (May include multiple methods and representations) (2/3 + 5/4 = 8/12 + 15/12 = 23/12)	**Technology/manipulatives:** Number lines, area models, fraction bars/strips (see Grade 5 Module 3 attachment for examples of usage) Frayer Model graphic organizer (note-taking) Dry-erase boards, eno-board National Library of Virtual Manipulatives (Fraction Bars; Fractions – Adding; Number Line Bars) Illuminations: Fractions in Every Day Life studyzone.org (resources and interactive practice) www.studyisland www.firstinmath.com xpmath.com	
Important (reinforced) Standards/EC: **CC.2.4.5.A.4** – Solve problems involving computation of fractions using information provided in a line plot **-Eligible Content:** * **M05.D-M.2.1.1:** solve problems involving computation of fractions by using information presented in line plots * **M05.D-M.2.1.2:** display and interpret data shown in tallies, tables, charts, pictographs, bar graphs, and line graphs, and use a title, appropriate scale, and labels. A grid will be provided to display data on bar graphs or line graphs	**Reading, writing, speaking strategies:** Journaling, read aloud, lecture, word problems, persuasive/informational/expository writing, graphic organizers, Frayer model, cooperative learning, board work, demonstration, Think-Pair-Share, note-taking, crossword puzzles, bell-ringers	
Vocabulary: Associative/commutative property of addition; benchmark/equivalent/unit fractions; mixed number; numerators; denominators; like/unlike/common denominators; common multiples; fraction greater than/less than 1; simplify; simplest form; lowest terms; addend; minuend; difference; sum; reasonableness; line plot	**Questioning and discussion techniques:** Bell-ringers; exit tickets; journals; Frayer Model; highlighting key terms; small group/ whole group; demonstrations; homework review; dry-erase checks	
Real life application:	**Performance assessment:** http://www.sandi.net/Page/62252	

Career options: http://www.xpmath.com/careers/topicsresult.php?subjectID=3&topicID=14	
Computation: Add and subtract fractions (including mixed-numbers) with unlike denominators; forming units to solve word problems where units are equal in size (referring to the same whole); solve problems using computation of fractions by using information presented in line plots; explain operations as they pertain to fractions; mental computations and estimation to determine reasonableness of answers; using a number line to solve multiplication and division problems with whole numbers	**Accommodations/adaptations:** Agendas,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: pdesas.org *Teacher Tools-Curriculum Mapping-Instructional Frameworks Math-PA Standards: Focus and Important Standards * Math Cluster Matrix grades 4,5,6 (prior and future learning)	