CONNEAUT AREA SCHOOL DISTRICT
MATHEMATICS

UNIT OF STUDY: graph points on the coordinate plane to solve problems	COURSE/GRADE: 5	# WEEKS: 6

- MODULE 6

Focus (emphasis) Standards/EC:

CC.2.2.5.A.4 – Analyze patterns and relationships using two rules

-Eligible Content:

***M05.B-O.2.1.1:** generate two numeric patterns using two given rules
(Given the rule "add 3" and the starting number 0 and given the rule "add 6" and the starting number 0, generate terms in the resulting sequences.)

***M05.B-O.2.1.2:** identify apparent relationships between corresponding terms of two patterns with the same starting numbers that follow different rules
(Given two patterns in which the first pattern follows the rule "add 8" and the second pattern follows the rule "add 2", observe that the terms in the first pattern are 4 times the size of the terms in the second pattern.)

CC.2.3.5.A.1 – Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems

-Eligible Content:

***M05.C-G.1.1.1:** identify parts of the coordinate plane (x-axis, y-axis, and the origin) and the ordered pair (x-coordinate and y-coordinate). Limit the coordinate plane to quadrant 1.

***M05.C-G.1.1.2:** represent real-world and mathematical problems by plotting points in quadrant 1 of the coordinate plane and interpret coordinate values of points in the context of the situation.

Technology/manipulatives:

(see Grade 5 Module 6 attachment for examples of usage)

Grid/graph paper

From the National Council of Teachers of Mathematics, Illuminations:

Finding Your Way Around (students explore 2D space via an activity in which they navigate the coordinate plane)

Describe the Way (students review plotting points and labeling axes; students generate a set of random points all located in the first quadrant)

Frayer Model graphic organizer (note-taking)

Dry-erase boards, eno-board

studyzone.org (resources and interactive practice)
www.studyisland
www.firstinmath.com
xpmath.com

Important (reinforced) Standards/EC:

CC.2.4.5.A.2 – represent and interpret data using appropriate scale

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: Axis (axes), coordinate plane, coordinate system, coordinates, corresponding terms, data, fraction, intersect, interval, line graph, line plot, ordered pair, origin, perpendicular, plane, quadrants, scale, sequence, unit fraction, X-axis, X-coordinate, Y-axis, Y-coordinate	**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: Video game designer (designing maps), air traffic controller, tracking transports Career options: http://www.xpmath.com/careers/topicsresult.php?subjectID=3&topicID=14	**Performance assessment:** http://www.sandi.net/Page/62252
Computation: Generate two numerical patterns using two given rules; identify apparent relationships between corresponding terms of two patterns with the same starting numbers that follow different rules; identify parts of the coordinate plane (x-axis, y-axis, and the origin) and the ordered pair – quadrant 1 only (x-coordinate and y-coordinate); represent real-world and mathematical problems by plotting points in quadrant 1 of the coordinate plane, and interpret coordinate values of points in the context of a situation; solve problems involving computation of fractions by using information presented in line plots; display and interpret data shown in tallies, tables, charts, pictographs, bar graphs, and line graphs; display and interpret data using a title, appropriate scale, and labels	**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)	