CONNEAUT AREA SCHOOL DISTRICT MATHEMATICS		
UNIT OF STUDY: Measurements of three dimensional shapes and figures	COURSE/GRADE: Applied Geometry	# WEEKS: 6
Module 5		
Focus (emphasis) Standards/EC: **G.2.3.1.1** Calculate the surface area of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet. **CC.2.3.8.A.1** Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems. **CC.2.3.HS.A.12** Explain volume formulas and use them to solve problems. **CC.2.3.HS.A.14** Apply geometric concepts to model and solve realworld problems. **G.2.3.1.2** Calculate the volume of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet. **G.2.3.1.3** Find the measurement of a missing length given the surface area or volume. **G.2.3.2.1** Describe how a change in the linear dimension of a figure affects its surface area or volume **CC.2.3.HS.A.13** Analyze relationships between two-dimensional and three-dimensional objects.	Technology/manipulatives: Chromebook Smart board Electronic text book calculator Ruler 3 D figures Nets Dice CAD program Online videos for reinforcement Studyzone.org Studyisland Firstinmath National Library of Virtual Manipulatives Graph paper
Important (reinforced) Standards/EC: All items listed above to be reinforced throughout year. Tools of Geometry, circles and arcs, parallel and perpendicular lines, congruent polygons, right triangles, area	Reading, writing, speaking strategies: Word problems, journal writing, bell ringers, partner sharing, think aloud, paraphrasing, board work, sharing out to class, note taking skills development

Vocabulary: radius, diameter, sphere, cylinder, cone, surface area, cross sections, prism, pyramid, volume, lateral area, similar solids, altitude, edge, face, height, polyhedron	Questioning and discussion techniques: Real world problems/applications, bill ringers, exit tickets, journals, Frayer model, small group tasks
Real life application: graphic design, sports equipment, tool design, optics, engineering, architecture, astronomy, traffic signs, manufacturing, amusement parks, gears, bikes, astronomy, clocks, furniture, computer design, space probe, bridge design Career connections: www.xpmath.com/careers/lite.php	Performance assessment: quiz, test, Studyisland, 3D composite projects, homework, group discussion, self-generated 3D figures
Computation: One step algebraic equations Two step algebraic equations Ratio and proportions Pythagorean theorem Slope, distance, midpoint Area of various shapes Volumes of various shapes	Accommodations/adaptations: Limiting , homework problems, guided problem solving, peer groups, tutorial time, needs based on IEP
SAS Module Resources: http://www.pdesas.org/standard/PACore	