Lesson Title:	**3D Computer Aided Design**
Subject Area:	Math/Science/Computers
Grade Level:	7th/8th
Duration	2 - 4 weeks
Format	Groups of 2 - 3 students
Overview:	Lesson focuses on how engineers use computer aided design software to make a 3D drawing/model.
Educational Standards:	MS-ETS1-4 - Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. MP.4 Model with mathematics. (MS-PS1-1) CCSS.MATH.CONTENT.7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
Unit Question:	How can the use of CAD and 3D modeling be useful in the design process?
Focus Question/Purpose	*What are the advantages of using CAD software?
Desired Outcomes:	Students will *produce various basic drawings using SketchUp CAD or the Web based Tinkercad software. *understand and utilize the Cartesian coordinate plane. *understand that engineers think in 3 dimensions (length, height, depth)
Activity Details/ Instructions:	Go through the online tutorials and practice with the shapes and objects they give the class. Students will then build a simple shed. Students will then build a design of their choice.