

Drafting III		Grades 9-12	
Standards		Benchmarks	Activities/Examples
2. Students will develop an understanding of the core concepts of technology.	W	Systems thinking applies logic and creativity with appropriate compromises in complex real-life problems.	Student will build a 3,000 square foot home to a ¼” scale.
9. Students will develop an understanding of engineering design.	I	Established design principles are used to evaluate existing designs, to collect data, and to guide the design process.	Student will build a 3,000 square foot home to a ¼” scale.
11. Students will develop the abilities to apply the design process.	N	Identify criteria and constraints and determine how these will affect the design process.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
	O	Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of the final product.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
	P	Evaluate the design solution using conceptual, physical, and mathematical models at various intervals of the design process in order to check for proper design and to note areas where improvements are needed.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
	Q	Identify criteria and constraints and determine how these will affect the design process.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
			Student will build a 3,000 square foot home to a ¼” scale. Student will draw a plot plan for their home on to the computer program “Revit.” Student will build a landscaped, three dimensional plot for their home to be placed on.
R	Evaluate final solutions and communicate observation, processes, and results of the entire design process, using verbal, graphic, quantitative, virtual, and written means, in addition to three-dimensional models.	Read, lecture, discuss, and demonstrate the techniques to build scaled models. Student will build a 3,000 square foot home to a ¼” scale. Student will draw a plot plan for their home on to the computer program “Revit.” Student will build a landscaped, three dimensional plot for their home to be placed on.	
16. Students will develop an understanding of and be able to select and use energy and power technologies.	N	Power systems must have a source of energy, a process, and loads.	Student will draw an electrical plan for their home on to the computer program “Revit.”

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17. Students will develop an understanding of and be able to select and use information and communication technologies.	Q	Technological knowledge and processes are communicated using symbols, measurement, conventions, icons, graphic images, and languages that incorporate a variety of visual, auditory, and tactile stimuli.	Students will apply knowledge and processes that communicate measurements, symbols, and graphic images. All of the assignments in Drafting III will have these elements in them.
20. Students will develop and understanding of and be able to select and use construction technologies.	J	Infrastructure is the underlying base or basic framework of a system.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
	K	Structures are constructed using a variety of processes and procedures.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.
			Student will build a 3,000 square foot home to a ¼” scale.
			Student will draw an electrical plan for their home on to the computer program “Revit.”
			Student will draw a plot plan for their home on to the computer program “Revit.” Student will build a landscaped, three dimensional plot for their home to be placed on.
L	The design of structures includes a number of requirements.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.	
N	Structures can include prefabricated materials.	Read, lecture, discuss, and demonstrate the techniques to build scaled models.	