

AutoCAD II: Modeling Unit

Stage 1 Desired Results		
<p>ESTABLISHED GOALS:</p> <p><u>Competencies:</u></p> <ul style="list-style-type: none"> Students will demonstrate the ability to use AutoCAD software in order to create 3D models. Students will demonstrate the ability to create technical drawings in order to communicate a design. Students will demonstrate the ability to analyze and summarize text and integrate knowledge to make meaning of discipline-specific materials. Students will demonstrate the ability to produce coherent and supported writing in order to communicate effectively for a range of discipline-specific tasks, purposes, and audiences. Students will demonstrate the ability to speak purposefully and effectively by strategically making decisions about content, language use, and discourse style. <p><u>Content Standards:</u></p> <p>New Hampshire Vocational Curriculum Guide</p> <ul style="list-style-type: none"> Standard 1: Students will develop an understanding of the characteristics and scope of technology. Standard 2: Students will develop an understanding of the core concepts of technology. Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study. Standard 8: Students will develop an understanding of the attributes of design. Standard 12: Students will develop the abilities to use and maintain technological products and systems. Standard 17: Students will develop an understanding of and be able to select and use information and communication technologies. 	Transfer	
	<i>Students will be able to independently use their learning to create a model.</i>	
	Meaning	
	<p>ENDURING UNDERSTANDINGS Students will understand that...</p> <ul style="list-style-type: none"> AutoCAD software facilitates the creation of virtual three-dimensional (3D) models of designs. 	<p>ESSENTIAL QUESTIONS</p> <ul style="list-style-type: none"> How can we use technology to make the design and construction of a product more efficient and less prone to error?
Acquisition		
<p>Students will know...</p> <ul style="list-style-type: none"> that AutoCAD is a tool that can be used for design and drafting activities. that AutoCAD can be used to create three-dimensional (3D) wireframe, surface and solid models. the characteristics, scope and core concepts of the technologies that are used. <p><u>vocabulary:</u> alternate view, auxiliary view, isometric, section view, solid, solid modeling, surface modeling, three-dimensional, wire-frame modeling</p>	<p>Students will be skilled at...</p> <ul style="list-style-type: none"> constructing isometric drawings with AutoCAD. creating alternate views using AutoCAD. creating, inserting and editing blocks with AutoCAD. creating three-dimensional (3D) models of designs within AutoCAD <ul style="list-style-type: none"> using appropriate geometric and dimensional constraints and 3D features. evaluating the relationships among technologies and other field of study. 	

Content Area Literacy Standards	21st Century Skills
<p>RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 11-12 texts and topics.</i></p> <p>RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.</p>	<ul style="list-style-type: none"> <i>Apply technology effectively</i> <i>Reason effectively</i> <i>Solve problems</i> <i>Think creatively</i>

WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Science and Engineering Practices

- S&E P 1. Asking questions (for science) and defining problems (for engineering)
- S&E P 2. Developing and using models
- S&E P 4. Analyzing and interpreting data
- S&E P 5. Using mathematics and computational thinking
- S&E P 6. Constructing explanations (for science) and designing solutions (for engineering)
- S&E P 8. Obtaining, evaluating, and communicating information

Stage 2 - Evidence

<i>Evaluative Criteria</i>	<i>Assessment Evidence</i>
	PERFORMANCE TASK(S):
	OTHER EVIDENCE:

Stage 3 – Learning Plan

Summary of Key Learning Events and Instruction

<i>Science Integration</i>	<i>College, Career, and Civic Life Integration</i>	<i>Technology Integration</i>
<i>District Materials</i>	<i>Distance Learning/Field Trips</i>	<i>Technology Resources</i>