

Standards Correlations

Drafting: Advanced (8562)

Tasks/Competencies	SOL Correlations
Practicing Safety	
Follow general safety procedures.	English: 11.5, 12.5 History and Social Science: WHII.8, VUS.8
Adjust equipment for maximum comfort and usability.	
Describe ergonomic considerations.	English: 11.5, 12.5
Performing Mechanical Drafting and Design Operations with Extensive Use of CADD	
Prepare primary auxiliary views.	English: 11.3, 11.5, 12.3, 12.5
Prepare secondary auxiliary views.	English: 11.3, 11.5, 12.3, 12.5
Prepare sectional views (removed, revolved, aligned, and broken-out).	English: 11.5, 12.5
Prepare drawings of threads and fasteners.	
Use reference materials.	English: 11.5, 11.8, 12.5, 12.8
(Optional) Develop patterns, including radial, parallel line, and triangulation patterns.	English: 11.1, 12.1 Mathematics: MA.6
Apply mechanical symbols to a drawing.	English: 11.5, 12.5
Apply dual dimensioning to a drawing.	English: 11.5, 12.5
Apply datum (ordinate) dimensioning to a drawing.	English: 11.5, 12.5
Identify symbols for geometric dimensioning and tolerancing.	English: 11.5, 12.5
(Optional) Apply Geometric Dimensioning and Tolerancing (GD&T) to a drawing.	English: 11.5, 12.5
Apply formulas for gear design.	English: 11.5, 12.5 Mathematics: AII.3

Tasks/Competencies	SOL Correlations
Prepare a drawing of a gear.	Mathematics: AII.3
(Optional) Prepare a drawing of a cam.	
(Optional) Prepare a drawing of a linked mechanism.	
Identify welding symbols and processes.	English: 11.5, 12.5
Apply welding symbols to a drawing.	English: 11.5, 12.5
Identify manufacturing processes.	English: 11.5, 12.5
Prepare a parts list for an assembly drawing.	English: 11.5, 11.6, 11.7, 12.5, 12.6, 12.7
Prepare an orthographic assembly drawing.	English: 11.5, 12.5
Prepare an exploded assembly drawing.	
Prepare a working drawing, including assembly-and-detail drawings, of a multi-component mechanical device.	
Identify the difference between parametric and non-parametric CADD models.	English: 11.3, 11.5, 12.3, 12.5
(Optional) Prepare an electrical schematic.	
Reproduce drawings.	
Create a 3D model, using CADD.	English: 11.1, 11.2, 11.5, 12.1, 12.2, 12.5
Document a 3D CADD model.	English: 11.2, 11.5, 12.2, 12.5
Plot a documented 3D CADD model.	English: 11.5, 12.5
Create a 3D printed model.	English: 11.2, 12.2
Performing Architectural Drafting and Design Operations with Extensive Use of CADD	
Describe key developments in the history of architecture.	English: 11.5, 12.5 History and Social Sciences: WHII.8, VUS.8
Use reference materials.	English: 11.5, 11.8, 12.5, 12.8
Identify reasons for building codes.	English: 11.5, 12.5
Describe sustainability considerations in architecture and design.	English: 11.5, 12.5
Apply symbols to a drawing.	
Identify items which comprise a set of working drawings.	English: 11.5, 12.5
Design a site plan.	English: 11.1, 11.5, 12.1, 12.5

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Prepare a site plan.	English: 11.1, 11.5, 12.1, 12.5
(Optional) Apply erosion and sedimentation (E and S) measures to a site plan.	English: 11.5, 12.5 Science: ES.7, ES.8
(Optional) Demonstrate the use of surveying techniques.	
Design a floor plan.	English: 11.1, 11.5, 12.1, 12.5
Prepare a floor plan.	English: 11.1, 11.6, 12.1, 12.6
Design a foundation/basement plan.	English: 11.1, 11.6, 12.1, 12.6
Prepare a foundation/basement plan.	English: 11.1, 12.1
Design a wall section.	English: 11.1, 12.1 Mathematics: G.3
Prepare a wall section.	
(Optional) Design a roof plan.	English: 11.1, 12.1 Mathematics: G.3
(Optional) Prepare a roof plan.	English: 11.6, 11.7, 12.6, 12.7 Mathematics: G.3
Design an electrical plan.	English: 11.1, 11.5, 12.1, 12.5
Prepare an electrical plan.	
(Optional) Design a plumbing plan.	English: 11.5, 12.5
(Optional) Prepare a plumbing plan.	English: 11.5, 12.5
Select doors and windows to match the style of the house.	English: 11.5, 12.5
Prepare a door and window schedule.	English: 11.5, 12.5
Design interior elevations.	English: 11.5, 12.5
Prepare interior elevations.	
Design a set of stairs.	English: 11.5, 12.5

Tasks/Competencies	SOL Correlations
	Mathematics: G.3
Prepare a detailed drawing of a set of stairs.	Mathematics: G.3
(Optional) Design a fireplace.	
(Optional) Prepare a detailed drawing of a fireplace.	English: 11.5, 12.5
Design exterior elevations.	English: 11.5, 12.5
	Mathematics: G.3
Prepare exterior elevations.	English: 11.5, 12.5
	Mathematics: G.3
(Optional) Estimate material quantities.	English: 11.5, 12.5
	Mathematics: G.13
Prepare a rendered presentation drawing.	English: 11.5, 12.5
(Optional) Design an HVAC plan.	English: 11.5, 12.5
(Optional) Prepare an HVAC plan.	English: 11.5, 12.5
(Optional) Create a physical or 3D CADD presentation model.	English: 11.5, 12.5
	Mathematics: G.3
Prepare a title sheet.	
Preparing a Career Portfolio	
Complete a professional drafting portfolio.	English: 11.5, 12.5
Gather material for a portfolio.	English: 11.1, 11.5, 12.1, 12.5
Organize a portfolio.	English: 11.1, 11.5, 12.1, 12.5
Present a portfolio.	English: 11.1, 12.1
Obtaining an Industry Certification by Examination	
Prepare for an industry certification exam.	English: 11.5, 11.6, 12.5, 12.6
Take an industry certification exam.	English: 11.1, 11.5, 12.1, 12.5

