


Principles of Technology

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September 2020

Content	Skills	Learning Targets	Standards	Assessment	Resources & Technology
<p>CEQ: How are traditional and new technologies/processes used?</p> <p>UEQ: •What the different types of drafting? •What are the different types of measurements?</p> <p>A: Drafting</p> <p>A1. Measurements A2. Drawing Styles</p> <p>UEQ: •What is Computer Aided Drafting? •How is a CAD program utilized? •How can I use the laser as an output device?</p> <p>B: AutoCAD B1. 2-D Drafting</p>	<p>A: Drafting</p> <p>A1. Reading a Ruler A2. Drawing Isometrics Multiview Drawings Oblique Drawings</p> <p>B: AutoCAD B1. Learning the AutoCAD interface B2. Patterns B3. Utilizing the laser.</p> <p>C: PhotoShop C1. Changing Photo size/resolution C1. Cropping C2. Creating and navigating Layers C3. Adjusting Color Balances C4. Employing tools from the toolbar.</p>	<p>A: Drafting</p> <p>1. I can accurately read a ruler in 1/16" increments. 2. I can draw an isometric shape. 3. I can draw a multiview drawing. 4. I can draw an oblique drawing. 5. I can use visible, hidden and center lines.</p> <p>B: AutoCADD</p> <p>1. I can create a .dxf file using AutoCAD 2. I can create a 3 view drawing using AutoCAD. 3. I can draw a pattern.</p> <p>C: PhotoShop</p> <p>1. I can resize and crop an image.</p>		<p>A: Drafting</p> <p>A1: CFA-The Ruler Game A2: CFA-Checklist Isometrics A2: CFA-Checklist Multiviews A2: CFA-Obliques A2: CFA-Proper use of lines A2: CSA-Drawing Packet</p> <p>B: AutoCADD B1-B3: CSA-Paper Pattern Project B1: CFA-STMA Drawing B2: CFA- Print off drawing B3: CFA-Hand in practice pattern.</p> <p>C: PhotoShop C1-4: CSA-Baseball Collage Project C1: CFA-Photoshop checklist</p>	<p>A: Drafting</p> <p>A1: http://www.rickyspears.com/rul...</p> <p>B: AutoCADD B1-2: AutoCADD B3: CorelDRAW</p> <p>C: PhotoShop C1-4. Adobe Photoshop CS2</p>

 <p>UEQ: •How can I edit pictures? •How do I utilize Photoshop tools?</p> <p>C: PhotoShop C1. Photo size C2. Layers C3. Color Balance C4. Tools</p>		<p>2. I can create and manipulate layers 3. I can adjust Hues and Tones 4. I can use multiple selection techniques. 5. I can use the Dodge/Burn tool. 6. I can use the Stamp tool.</p>		<p>C2: CFA-Photoshop checklist C3: CFA-Photoshop checklist C4: CFA-Photoshop checklist</p>	
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October

Content	Skills	Learning Targets	Assessment	Resources & Technology
<p>UEQ: •How is CorelDRAW program utilized? •How can I use CorelDRAW and the laser together?</p> <p>D: CorelDRAW D1. Workspace D2. Tools D3. Raster vs. Vector D4. Printing</p> <p>UEQ: •How can I create 3-D shapes?</p> <p>E: Inventor</p>	<p>D: CorelDRAW D1. Adjusting Workspace sizes D1. Using Rulers D2. Drawing shapes and text D3. Creating or editing raster/vector images. D4. Print driver settings</p> <p>E: Inventor E1. Learning the Inventor Sketch interface E2. Learning the Inventor Features interface E3. Learning how to edit existing shapes E4. Different printing</p>	<p>D: CorelDRAW 1. I can change my workspace size. 2. I can adjust rulers/guidelines to my project size 3. I can create/edit shapes and text 4. I can create/edit a raster image 5. I can create/edit a vector image 6. I can create a .dxf file using CorelDRAW 7. I can adjust laser settings depending on the type of material used.</p>	<p>D: CorelDRAW D1-4: CFA-Name Card Project D1-4: CSA- Logo Project</p> <p>E: Inventor E1-4: CSA-Shapes Packet E1: CFA-Inventor Checklist E2: CFA-Inventor Checklist E3: CFA-Inventor Checklist E4: CFA-Inventor Checklist</p>	<p>D:CorelDRAW</p> <p>E: Inventor Autodesk Inventor</p> <p>F: Metals</p>

<p>E1. Sketching E2. Modeling E3. Editing E4. Printing</p> <p>UEQ: •<i>How are metals used?</i></p> <p>F: Metals F1. Safety F2. Sheetmetal F3. Plasma cutting F4. Welding F5. Finishing</p>	<p>options.</p> <p>F: Metals F1. Operating tools safely F2. Creating a sheet metal layout/pattern. F2. Using sheet metal tools. F3. Utilizing plasma software F3. Setup and operation of CNC plasma machine F4. Setting up and utilizing MIG welder F5. Performing grinding and finishing processes</p>	<p>E: Inventor 1. I can draw and dimension lines. 2. I can draw and dimension circles and arcs. 3. I can use the trim/extend command 4. I can use the extrude command 5. I can edit the geometry of an existing extrusion/shape 6. I can print on a title block (.idw)</p> <p>F: Metals 1. I can always wear safety glasses. 2. I can use all 8 sheet metal tools properly. 3. I can cut a part/project on the CNC. 4. I can import a .dxf into CNC Plasma software. 5. I can setup the MIG welder. 6. I can weld a bead 7. I can remove burrs or slag 8. I can paint, powdercoat or polish my project.</p>	<p>F: Metals F1-2: CSA-Sheet Metal Project F3-5: CSA-Metal Sign Project F1, F4-5: CFA-Teacher observation F2: CFA-Metals Checklist F3: CFA-Metals Checklist</p>	
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November

Content	Skills	Learning Targets	Assessment	Resources & Technology
UEQ: •How can I create a woodworking project ? G: Woodworking G1. Safety G2. Hand Tools G3. Stationary Tools G4. Glue-ups G5. Assembly G6. Finishing	G: Woodworking G1. Operating tools safely G2-5. Creating accurate parts G6. Performing sanding, staining and varnishing processes.	G: Woodworking 1. I can always wear safety glasses. 2. I can use hand tools properly. 3. I can use stationary tools properly 4. I can glue up boards 5. I can put my project together 6. I can sand, stain and varnish my project.	G: Woodworking G1-6: CSA-Woodworking Project. G1-2: CFA-Teacher observation G3: CFA-Safety Test G4-6: CFA-Woods Checklist	G: Woodworking

<p>UEQ: •How can I create a project with the TEE skills I have acquired?</p> <p>H: Composition Project</p> <p>H1. Inventor H2. 3-D Printing H3. Woodworking H4. Corel Draw H5. Packaging</p>	<p>H: Composition Project</p> <p>H1. Drawing Parts H1. Assembling parts H1. Adding custom decals and text H2. Creating a 3D printer file H2. Printing to and preparing a file to print. H3. Cut and prepare wood parts H4. Design a logo H5. Design a package to hold your project H5. Laser cut a box for your project.</p>	<p>H: Composition Project</p> <ol style="list-style-type: none"> 1. I can apply Inventor skills to make my Composition Project. 2. I can 3-D print a part for my project. 3. I can make wooden parts. 4. I can design a logo 5. I can create a custom package 	<p>H: Composition Project</p> <p>H1: CSA-The Basketball Game (virtual model)</p> <p>H2-4: CSA- The Basketball Game (physical model)</p> <p>H 4-5: CSA- The Basketball Game (packaging)</p>	<p>H: Composition Project</p> <p>Autodesk Inventor Makerbot 3D Printer Woodworking tools Corel Draw Vinyl Cutter Universal Laser</p>
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