Educational Level:
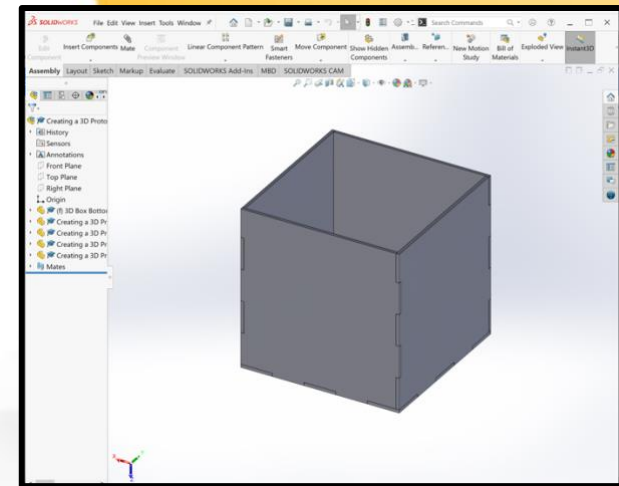Higher Education

Subject Area(s):
Design, Science and Engineering

Creating a 3D Prototype

Rubric

	High Distinction	**Distinction**	**Credit**	**Pass**	**Unsatisfactory**
Criteria 1 Making a drawing from Solidworks components	Student successfully can export Solidworks components to a Solidworks Drawing. The sheet is set to a custom scale of 1200mm x 700mm and the parts are nested as closely as possible (with at least a 1mm gap).	Student successfully can export Solidworks components to a Solidworks Drawing. The sheet is set to a custom scale of 1200mm x 700mm and the parts are nested	Student successfully can export Solidworks components to a Solidworks Drawing. The sheet is set to a custom scale of 1200mm x 700mm and the parts are nested well but could nested a lot closer.	Student successfully can export Solidworks components to a Solidworks Drawing. The parts could be nested a lot closer.	Student is unable to successfully export Solidworks components to a Solidworks Drawing. .

			well but could be closer.			
Criteria 2 Convert Solidworks drawing to Illustrator file	Student can convert the Solidworks drawing to an Illustrator file. The Illustrator file is either the provided template or is set up correctly as 1200mm x 700mm. The document is correctly set up in mm, RGB and the settings for laser cutting are correct (red, blue and black settings, stroke weight 0.01mm).	Student can convert the Solidworks drawing to an Illustrator file. The document is correctly set up in mm, RGB and the settings for laser cutting are correct (red, blue and black settings, stroke weight 0.01mm).	Student can convert the Solidworks drawing to an Illustrator file. The document is correctly set up in mm, RGB and the settings for laser cutting are at least 75% correct (red, blue and black settings, stroke weight 0.01mm).	Student can convert the Solidworks drawing to an Illustrator file. The document is correctly set up in mm, RGB and the settings for laser cutting are at least 50% correct (red, blue and black settings, stroke weight 0.01mm). .	Student cannot convert the Solidworks drawing to an Illustrator file.
Criteria 3 Create 3D box out of laser cut pieces	Student can successfully assemble the laser cut parts into a neat 3D box.	Student can successfully assemble the laser cut parts into a 3D box.	Student can successfully assemble the laser cut parts into a 3D box.	Student can successfully assemble the laser cut parts into a 3D box but the glue is a bit messy.	Student cannot assemble the laser cut parts into a 3D box.

| Criteria 4

Alter the original box and make improvements	Student was able to repeat the process and make iterations to the box. The improvements are innovative and creative.	Student was able to repeat the process and make iterations to the box. The improvements are creative.	Student was able to repeat the process and make iterations to the box. The improvements are slightly creative.	Student was able to repeat the process and change the box slightly.	Student was unable able to repeat the process.