MAKERA
Lesson Plans

Sample Evaluation Rubric

Criteria	4	3	2	1
Brainstorm Ideas	Student effectively research existing solutions, then work to develop multiple possible ideas of a unique solution under the specifications and constraints of the design challenge.	Student research existing solutions, then work to develop at least two possible ideas for a unique solution under the specifications and constraints of the design challenge.	With some support, student develop at least two possible ideas for a unique solution under the specifications and constraints of the design challenge.	Student struggles to effectively develop more than one possible idea for a unique solution under the specifications and constraints of the design challenge.
Fabricate a Prototype	Student effectively uses CAD and CAM software to design and prepare a manufacturable model, before then manufacturing their designs safely and effectively using CNC machinery.	Student uses CAD and CAM software to design and prepare a manufacturable model, before then manufacturing their designs safely and effectively using CNC machinery.	Student uses CAD and CAM software to design and prepare a partially manufacturable model, before then manufacturing their designs safely using CNC machinery with some support.	Student struggles to effectively utilize CAD and CAM software to develop a model that is manufacturable using CNC machinery.
Test and Evaluate	Student effectively tests and evaluates their prototype solution under the specification and constraints of the design challenge, and effectively communicates their results through a presentation.	Student tests and evaluates their prototype solution under the specification and constraints of the design challenge, and effectively communicates their results through a presentation.	Student tests and evaluates their prototype solution under the specification and constraints of the design challenge, and communicates their results.	Student is able to test and evaluate their prototype under some of the constraints, and communicates their results with support.
Redesign	Student effectively evaluates their design solution and develops a clear redesigned iteration with multiple changes made communicated through a labeled sketch or 3D model.	Student evaluates their design solution and develops a clear redesigned iteration with a few changes made communicated through a labeled sketch or 3D model.	Student evaluates their design solution and develops a clear redesigned iteration communicated through a sketch or 3D model.	Student's redesigned iteration is unclear or demonstrates few elements of evaluation or redesign.