

Engineering Design Challenge Grading Rubric

Elements	Weight	4 Points	3 Points	2 Points	1 Points	Total
Step 1- ASK	20%	Clearly understands and can explain the problem. Identifies all requirements and all constraints. Shows outstanding proof of completion.	Understands the problem. Identifies most of the requirements and most of the constraints. Shows acceptable proof of completion.	Does not completely understand the problem. May identify some requirements and constraints. Does not show adequate proof.	Does not show adequate proof of completing this step.	
Step 2- IMAGINE	20%	Shows excellent documentation of extensive brainstorming. (≥ 5 ideas) Includes a description of each idea that clearly explains it. Uses a formal comparison to choose between ideas.	Shows good documentation of sufficient brainstorming. (3-4 ideas) Has some description of each idea. May use a formal comparison to choose between ideas.	Shows some proof of sufficient brainstorming. (3-4 ideas) Has little to no description of ideas. May use some type of comparison to choose between ideas.	Does not show adequate proof of completing this step.	
Step 3- PLAN	20%	Provides excellent drawing(s) and description(s) which clearly show how to build the design as well as all materials needed to do so.	Provides adequate drawing(s) and description(s) which show how to build the design as well as most materials needed to do so.	Provides some type of drawing(s) and/or description(s), but they are unclear. Materials needed are not adequately listed.	Does not show adequate proof of completing this step.	
Step 4- CREATE	20%	Follows the plan closely to complete the chosen design. Makes excellent notes of problems that arise and changes that are made from the plan. Conducts thorough and relevant tests.	Mostly follows the plan to complete the chosen design. Makes some notes of problems that arise and changes that are made from the plan. Conducts some type of test.	May or may not follow the plan to complete the chosen design. May or may not make notes. Conducts little to no testing.	Does not show adequate proof of completing this step.	
Step 5- IMPROVE	20%	Shows excellent proof of comparing the design to all original requirements and constraints, as well as provides suggestions for possible improvements to future designs.	Shows adequate proof of comparing the design to original requirements and constraints. Provides some suggestions for possible improvements to future designs.	Shows little to no proof of comparing the design to original requirements and constraints. Provides no suggestions for future designs.	Does not show adequate proof of completing this step.	