

Project 1.1.6 Compound Machine Design Rubric

Design

Topic	Very Proficient	Proficient	Partially Proficient	Below Proficient
Brainstorming Ideas (10 points)	Generates at least three viable concepts. Selects most appropriate concept and clearly justifies the choice using the appropriate criteria.	Generates three concepts. Selects an appropriate concept and is somewhat able to justify the choice using marginally acceptable criteria.	Generates two concepts. Selects one concept using inadequate criteria.	Generates one concept.
Final Design (15 points)	Produces accurate pictorial sketches or electronic 3D models that meet the design concepts.	Produces marginally sufficient pictorial sketches or electronic 3D models of design concepts.	Produces pictorial sketches or electronic 3D models that are difficult to visualize. Sketches lack details.	Produces incomplete pictorial sketch or electronic 3D model. Does not present concept.
Final Design Written Communication (15 points)	Is properly detailed for effective communication including labels, descriptions, signatures, and dates.	Is marginally detailed for effective communication including labels, descriptions, signatures, and dates.	Lacks many details for effective communication; has missing labels, descriptions, signatures, and dates.	Lacks most details for effective communication; has missing labels, descriptions, signatures, and dates.
Design Requirements (10 points)	Fully meets design requirements.	Meets most design requirements and supports the design function.	Meets some requirements but not enough to support the design function.	Does not meet any requirements.
Teamwork (10 points)	Team members worked well together and settled differences in a positive manner.	Demonstrated good team working skills most of the time.	Demonstrated good team working skills part of the time.	Demonstrated few team working skills.

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Class Time (on task) (10 points)	Student used class time effectively and efficiently to complete the project.	Student used class time well to complete the project.	Student needed reminders to complete tasks and to get project completed in timely manner.	Student rarely on task and teacher needed to intervene to get project completed.
Quality, Functionality, and Creativity/Complexity (20 points)	Mechanism functions consistently, and the chosen parts are appropriate. Design shows use of more than minimum number of simple machines with creativity.	Mechanism functions most of the time, and the chosen parts are appropriate. Design uses minimum number of simple machine and shows some creativity.	Mechanism sometimes functions, and the parts are not chosen appropriately. Design uses minimum number of simple machine and doesn't show much creativity.	Mechanism rarely functions, and the parts are not chosen appropriately. Design show creativity.
Presentation (10 points)	Presentation provided more than required including board	Presentation was effective and audience understood.	Presentation was mostly effective and audience mostly was able to understand.	Little or no effort to present design