

# Catapult Project Rubric

Category	Sub-Category	4	3	2	1
Planning	Design	Design displays sufficient consideration of the subject matter and a high level of planning	Design displays sufficient detail or planning but lacks discussion of systems and their concepts	Design lacks details or lacks the underlying concepts	Design lacks both detail and the underlying concepts for catapult builds
	Blueprints	Fully completed and includes detailed measurements prior to build	Fully completed, including some details for measurements required for build	Completed but missing some parts, lacking detailed measurements	Not fully completed, work is rushed and shows no detailed measurements
Catapult Construction	Overall Design	The catapult has been constructed to a high quality and is well suited to the task	The catapult is well constructed but there is some evidence of rushed construction	The catapult has been put together in a rushed manner and may not be well suited to the task	The catapult was rushed and ill-suited to the task, it was unable to fulfill the designated task
	Quality of Construction	The catapult has been constructed to withstand multiple trials and has not broken	Withstands multiple trials and has not broken beyond minor repair	The catapult broke during the trial runs prior to competition heat	The catapult broke prior to the trial runs and the competition heat
	Application of knowledge	The design displayed effective application of systems and their concepts, in many cases there is evidence of high level thinking and application	The design displayed effective application of knowledge but lacked signs of much high level thinking	There is little evidence of systems or their concepts being deliberately utilized in the design	The design is ill conceived and clearly shows little or no appreciation for systems, math or their applicable concepts
	Safety	Safety was clearly a factor in the design process. The design has no obvious unsafe aspects and it was operated with care at all times	The catapult was generally safe but was operated in an unsafe manner	The catapult was designed in a safe manner but was utilized in an unsafe way on more than one occasion	The design is clearly unsafe or was utilized in an unsafe manner resulting in avoidable injury
Trial	Trial Logs	The table is neat and organized, completing all 10 trials and recording data with great care and accuracy	The table has been partially produced with care and attention, completing the 10 trials and recording some observations	The table is recorded in a manner that is unclear, results were not organized	The student was caught falsifying results or did not construct a table
	Analysis of Design	Made insightful observations regarding the effectiveness of the design and made significant alterations	Some observations of performance were made, the design was altered somewhat, still leaving room for improvement	Minor changes were made following observations but they did not benefit the performance, they were strictly design appeal	No attempt was made to make alterations to improve upon the performance or design of the catapult

Design Meeting

Date: \_\_\_\_\_

Design Complete: Y / N

Meets Size requirements: Y / N