

Grading rubric for the *Rocket Lab* – your group will receive its grade for this assignment based on the following criteria:

	Excellent	Very Good	Good	Passable	Not Passable	Incomplete
Built Rocket[^]	(10 pts.) Rocket was completely built and ready to launch – Rocket did not have to launch; it just had to be ready to launch	-	-	-	-	(0 pt.) Rocket was not completely built and not ready to launch
Collected Data[^]	(10 pts.) All data was completely collected and recorded	-	-	-	-	(0 pt.) Data was not completely collected and recorded
Paper Organization	(10 pts.) All sections are clearly delineated and labeled as outlined in the lab description; report follows an obvious and logical progression with no unnecessary information included and no necessary information excluded – all sections flow into the next; all data are clearly presented in tables and/or graphs that they are easy to delineate and determine what they are from the rest of the text	(9 pts.) All sections are clearly delineated and labeled as outlined in the lab description; report follows a mostly logical progression with minimal amounts of unnecessary information – all necessary information is included in a mostly clear format that is easy to follow and delineate from the rest of the text	(7-8 pts.) All sections are delineated and labeled as outlined in the lab description; report follows a mostly logical progression with some unnecessary information – all necessary information is included in a mostly clear format that is in a format that allows it to be delineated from the rest of the text	(5-6 pts.) Sections are mostly able to be delineated from each other; sections follow a mostly logical progression, but unnecessary information is included and necessary information is excluded; data are presented, but not in clear, obvious formats that allow it to be delineated from the rest of the text	(1-4 pts.) Not all sections outlined in the lab description are included; various sections are not labeled or clearly marked; paper does not follow a logical progression; unnecessary information are included and/or necessary information are excluded	(0 pt.) Paper was not turned in or no part of the paper was structured as outlined in the lab description
Calculations	(10 pts.) All formulas are correct and presented and clearly delineated from the surrounding text; work from the calculations is presented and explained in a linear and coherent fashion; results from the calculations are correct and reproducible	(9 pts.) All formulas are correct and presented separate from the text and work is mostly explained in a coherent, linear fashion; results from the calculations are correct and reproducible	(7-8 pts.) All formulas are correct and presented, but may not be completely separated from the text such that it takes some effort to follow the calculations and the results; however, the results are correct and reproducible	(5-6 pts.) All formulas are correct and presented, but are not separated from the text; formulas are muddled throughout the text; calculations and formulas may be wrong, but the resulting answers are reproducible	(1-4 pts.) Formulas and calculations are muddled throughout the paper with no explanation; formulas and resultant calculations may not be correct; resultant calculations are not reproducible	(0 pt.) Calculations were not shown or it is impossible to follow any numerical work as presented in the report
Writing	(5 pts.) Clear, concise, and easy to follow; proper grammar and punctuation used throughout the report	(4 pts.) Writing was mostly clear and concise – there may be some rough patches in the writing; grammar was great with minimal issues with punctuation	(3 pts.) Writing was decent with minimal issues with grammar and punctuation – there may be some rough patches and difficult to follow passages in the writing.	(2 pts.) Writing was coherent, but there were issues with grammar and punctuation throughout the report to the point that it was distracting from the main ideas of the report; the report was still readable and understandable	(1 pt.) Report was littered with poor grammar; writing was difficult to nearly impossible to follow	(0 pt.) Paper was not turned in or writing was incoherent, illogical, and impossible to follow due to poor sentence structure/grammar
Rocket Comparison	(10 pts.) There was a clear, well-presented, logical, and detailed comparison between the model rocket and the real rocket; both rockets were fully described and the major details of both rockets were clearly summarized and presented in the report	(9 pts.) Comparison between the two rockets was well presented and detailed; the main details of the rockets were fully described and these details are coherently summarized and presented in the report	(7-8 pts.) Comparison between the two rockets was presented and detailed; the main details of the rockets were described and these details are coherently summarized and presented in the report	(5-6 pts.) A comparison was made between the two rockets as presented, but not detailed; the main points were presented in a coherent, but unclear fashion within the report	(1-4 pts.) Comparison between the rockets as muddled and/or not detailed; the main details of the rockets were not obviously presented in the report	(0 pt.) No obvious comparison was made between the model rocket and a real rocket.
Originality and scientific realism of mission	(10 pts.) Project was realistic in its design; there was a clearly defined scientific motivation for the mission; it was highly original in its scientific design and conception	(9 pts.) Project was realistic in its design; scientific motivation for the mission was obvious; it was mostly original in its scientific design and conception	(7-8 pts.) Project was mostly realistic in its design and there was a mostly clear scientific motivation for the project; it was somewhat original in its design and conception	(5-6 pts.) Project was only somewhat realistic in its design and there was only a minimal scientific motivation for the project; the project was not original, but was at least justified in its design and conception	(1-4 pts.) There was a project design, but it was not clearly stated or defined and there was no scientific motivation or it was not clearly defined, either; project was either not original or justified in its design and conception	(0 pt.) There was no realism and/or scientific motivation for this project
Conclusions	(10 pts.) The reported conclusions demonstrated thorough logical thought, comprehension, and understanding of all aspects of the project; all conclusions were clearly presented	(9 pts.) The reported conclusions were logical and mostly thorough and demonstrated comprehension and understanding of almost all aspects of the project; conclusions were mostly well presented	(7-8 pts.) The reported conclusions were logical and fairly thorough and demonstrated comprehension and understanding of most aspects of the project; conclusions were presented in a coherent fashion	(5-6 pts.) Logical conclusions were made from the data presented in the report, but were not clearly or coherently presented; the group shows only minimal amounts of comprehension and understanding of the project as a whole	(1-4 pt.) Conclusions were made about the data presented in the report, but the presented conclusions do not demonstrate that the group has any comprehension or understanding of the project; conclusions were not presented in a coherent fashion	(0 pt.) No conclusions were made on the data presented in the lab report
Payload	(10 pts.) Person or satellite was securely attached to rocket in a 'realistic' fashion; there was high originality with the inserting the payload and the person or object was recovered		(5 pts.) Person or satellite was somewhat attached the rocket in 'realistic' fashion; there was some originality with inserting the payload in the rocket and the person or satellite was recovered – if the person or payload was not recovered, it was not the designers' fault			(0 pt.) Person or satellite was not attached to the rocket; there was no originality with attempting to attach the payload

Grading rubric for the *Rocket Lab* – your group will receive its grade for this assignment based on the following criteria:

Oral presentation	(13-15 pts.) Mission was clearly defined and all data were clearly presented and supported; speakers did not read directly from the presentation slides – they showed complete command of the subject matter they were discussing	(11-12 pts.) Mission was mostly well defined and all data were presented and supported; speakers did not read directly from the presentation slides – they largely showed command of the subject matter they were discussing	(8-10 pts.) Mission was defined in an and most data and data were presented and supported; speakers spoke somewhat from the presentation slides - there was a solid knowledge of the subject matter presented	(5-7 pts.) Mission was somewhat defined and at least half of the data were presented and supported; speakers had to rely mostly by looking at their presentation to discuss their points – there was at least some understanding of the subject matter being presented	(1-4 pts.) Mission was not defined or discussed and only a minimal amount of data were presented and supported – there was only a minimal demonstration of the subject matter being presented	(0 pt.) Presentation was not given or the group showed absolutely no knowledge of what they were presenting
--------------------------	---	--	---	--	---	---

Total Points (100 possible):

- Built Rocket: _____
- Collected Data: _____
- Paper Presentation: _____
- Calculations: _____
- Writing: _____
- Rocket Comparison: _____
- Mission originality: _____
- Conclusions: _____
- Payload: _____
- Oral Presentation: _____

Total: _____

^Points for these categories are assigned based on your group’s participation in parts one and two of the rocket lab exercise