**Lander Requirements:** Design and construct a Lander that will allow you to drop an egg from a height of about 30 feet without breaking the egg or the Lander.

* Complete Egg-Cellent Lander Order Form.
* Stay on or under budget of $1.00.
* Use only the materials provided on order form.
* Construct a lander that will keep an egg from breaking when dropped from about 30 feet
* Name your lander.
* The lander must stay together.
* Your lander should be attractive. We want people to fund future research!
* You must include a reflection after we drop the landers. Your reflection will be written on Google Docs and must include:
  + A calculation of your lander’s average velocity using the following equation: V = distance / time.
  + Response in complete sentences to the following prompts:
    - Describe why you designed and constructed your lander the way you did.
    - What part of your lander was designed to protect the egg?
    - Did you egg break? Why or why not?
    - Describe at least one change you would make to your Lander to make it work better.
    - What is a material you wish you could have used and how would you have used it?
    - Describe at least one good idea that one of the other teams had constructed on their lander. How would you modify or use that idea to enhance your lander?
    - What would you have done differently if you had not been limited by your budget?
    - How does this project mimic the work done by NASA scientists?
    - What was something that was difficult about this project?

**Use the provided rubric to guide your design and completion of the project.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name:** | | | | |
| **Team Members:** | | | | |
| **Lander Name:** | | | | |
| **CATEGORY** | **4** | **3** | **2** | **1** |
| **Order Form**  **(weight: 2)** | Turned in completed order form on time and was under budget. | Turned in completed order form on time and stayed on budget. | Turned in complete order form and stayed on budget. | Turned in incomplete order form OR exceeded budget. |
| **Attractiveness**  **(weight: 2)** | I would want to keep this lander because it’s so beautiful. | This lander is pretty cool. You definitely took time putting it together. | Meh, it could be a little more attractive. | What happened? |
| **Requirements**  **(weight: 4)** | All requirements are met and exceeded. | All requirements are met. | One requirement was not completely met. | More than one requirement was not completely met. |
| **Originality**  **(weight: 3)** | Product shows a large amount of original thought. Ideas are creative and inventive. | Product shows some original thought. Work shows new ideas and insights. | Uses other people’s ideas (giving them credit), but there is little evidence of original thinking. | Uses other people’s ideas, but does not give them credit. |
| **Height (weight: 2)** | Your lander safely dropped an egg from the tallest height. | Your lander safely dropped an egg from the 2nd tallest height. | Your lander safely dropped an egg from the 3rd or 4th tallest height. | Your lander safely dropped an egg from the 5th tallest height. |
| **Egg Survival (weight: 2)** | The egg survived a drop from about 30 feet with no cracks. | The egg survived a drop from about 30 feet with minor cracks. | The egg barely survived. | We’re calling your lander Humpty Dumpty. |
| **Reflection (weight: 2)** | Reflection addresses all prompts, is written in complete sentences, and has no grammatical or spelling errors. | Reflection addresses all prompts, is written in complete sentences, and has few grammatical or spelling errors. | Reflection addresses most (75%) prompts, is mostly written in complete sentences, and has some distracting grammatical or spelling errors. | No reflection, reflection addresses few prompts (< 50%), uses incomplete sentences, AND / OR has very distracting grammatical or spelling errors. |
| **Calculation of Velocity**  **(weight: 2)** | Velocity is correctly calculated and all work is clearly shown. | Velocity is correctly calculated and work is shown. | Velocity is correctly calculated but no work is shown. | Velocity is incorrectly calculated and no work is shown. |
| **Peer Review**  **(weight: 2)** | Your team members report that work was evenly shared and you were a valuable team member. | Your team members report that work was fairly evenly shared and that you did what you were assigned. | Your team members report that the work was not evenly divided and that you contributed only when specifically asked. | Your team members report that the work was not evenly divided and that you contributed very little. |
| **Total:** | | | | |