**Self-donning Design Challenge Design Brief Guidelines and Rubric**

*In your design brief, include the following:*

1. **Names** of your Design Team Members.
2. **Rationale for the design** (10 pts. total)
* In one paragraph, explain why this design challenge is important to society.
* Summarize information and data from the infographics in Part I that supports your explanation.
1. **Describe your second-generation prototype** (15 pts. total)
	* Describe the features of your design and the intended functions of those design features. You can include pictures or sketches of your prototype if you like.
	* Explain how you changed your prototype from the first-generation to the second-generation.
	* Justify the changes you made to improve your prototype. Cite data from testing of your first-generation prototype and peer feedback to justify your changes.
2. **Explain how your second-generation prototype met (or not) the design criteria** (10 pts. total)
* Cite data from testing of your second-generation prototype and explain how these data justify your explanation.
1. **Describe how to improve your second-generation prototype** (5 pts. total)
* In 1-2 sentences, describe how you would improve your second-generation prototype if you were given the chance.
1. Before turning in your report, **staple or copy/paste at the end of your report the testing data** you gathered from your second-generation prototype. (1 pt.)

**Rubric**

|  |  |
| --- | --- |
| **Dimension** | **Levels of Performance** |
| **Proficient** | **Developing** | **Needs Improvement** |
| Design rationale (10 pts. total) | Provides one paragraph explanation that sufficiently describes the importance of design challenge. (4-5 pts.) **and**Provides at least two pieces of information from infographics to justify rationale. The data support the explanation. (4-5 pts.) | Provides one paragraph explanation that partially describes the importance of design challenge. (2-3 pts.) **and/or** Provides at least 1-2 pieces of information from infographics to justify rationale. The data may or may not support the explanation (2-3 pts.) | Explanation of the importance of the design challenge is nearly **or** completely missing and/or there is no info from the infographics to justify the design project. (0-1 pts.) |
| Description of 2nd gen prototype (15 pts. total) | All major features and functions of those features of the 2nd gen prototype are described (4-5 pts.) **and** A complete description of the prototype change from the 1st to 2nd generation (4-5 pts.) **and** Sufficient data are cited to justify the changes from the 1st to 2nd generation (4-5 pts.) | Some major features and functions of those features of the 2nd gen prototype are described (2-3 pts.) **and/or** A partial description of the prototype change from the 1st to 2nd generation (2-3 pts.) **and/or** Some data are cited to justify the changes from the 1st to 2nd generation (2-3 pts.) | Major features and functions of those features of the 2nd gen prototype are missing (0-1 pts.) **and** No or nearly incomplete description of the prototype change from the 1st to 2nd generation (0-1 pts.) **and** no or insufficient data are cited to justify the changes from the 1st to 2nd generation (0-1 pts.) |
| Explanation and justification of whether 2nd gen prototype met criteria and constraints (10 pts. total) | A complete explanation of whether or not the 2nd gen prototype met each of the design criteria is included (4-5 pts.) **and** Data from testing are correctly cited from testing the prototype against each criterion (4-5 pts.) | A partial explanation of whether or not the 2nd gen prototype met design criteria (may be some but not all explained) is included (2-3 pts.) **and /or**Data from testing are partially cited from testing the prototype against each criterion (2-3 pts.) | No explanation of whether or not the 2nd gen prototype met each of the design criteria is included (0-1 pts.) **and** Data from testing are incorrectly or not cited (0-1 pts.) |
| Description of how 2nd gen prototype could be improved (5 pts. total) | Report includes how the prototype could be improved **and** these recommendations follow logically from the testing data. (4-5 pts.) | Report does not include how the prototype could be improved **and/or** these recommendations don’t follow logically from the testing data. (2-3 pts.) | Report does not include logical recommendations **and** cited recommendations are not supported by data (0-1 pts.)  |
| Testing data from 2nd gen prototype | Included at the end of the design report (1 pt.) |  | Not included in the design report. (0 pts.) |
| **Teacher feedback on this design brief:** |
|  |