

MAGLEV Contest Student Design Portfolio Judging Rubric **SPEED CATEGORIES**

| **Criteria** | **3** | **2** | **1** | **0** |
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| **Investigation** | Thorough research. 4 or more questions and answers. | Sufficient research with 2 or 3 questions and answers. | Little research with 1 answered question. | No background research or questions. |
| **Brainstorming for Solutions** | 3 or more sketches on attached paper. Written design ideas, materials. | 2 design sketches with written ideas. | 1 sketch with a few written ideas. | No design sketches or ideas. |
| **Optimum Design** | Thoroughly describes vehicle design choice and lists several reasons to support their decision. | Describes design choice and gives a few reasons for their decision. | Describes design choice and gives 1 reason. | No choice listed. |
| Testing and Analysis | Testing was performed many times, problems were identified and logical changes were made to improve the vehicle. Performance chart or graph is included. | Testing was performed a few times, at least 1 problem was identified and an improvement was made. Performance chart or graph is included. | Testing was minimal. No chart or graph is included. | No testing was done.  |
| **Final Design** | Improvements to the initial design were made, if needed, and results were listed with detailed descriptions. | Improvements were made, if needed. Results were listed. | Improvements were made, if needed, no reasons listed. | No improvements or results were listed. |
| **Evaluation** | Detailed description/sketch of the final vehicle. | Description/ sketch of vehicle included.  | Description/sketch is minimal. | No description or sketch is included. |