

# Mastodon Art/Science Regional Fair

## 6<sup>th</sup> -12<sup>th</sup> Grade Engineering Science Scoring Rubric

Project Elements	Description of Criteria	Possible Score	Score	Judge's Comments
<b>SCIENTIFIC PROCESS:</b>				
Title & Description	Title of project and overview of project.	0-5		
Problem Statement	Problem: Clearly state the need for an engineered item that will perform or accomplish a specified function. Define engineering problem to be solved. Statement clearly predicts how the engineered device will operate to perform a specific function.	0-5		
Background	<ul style="list-style-type: none"> <li>◆ History – highlights important people or discovery.</li> <li>◆ Significance – explain importance of this project.</li> <li>◆ Facts-tells what is known about the topic and explains major terms &amp; definitions.</li> <li>◆ Method-tells how this topic has been studied before (steps, equipment, measurement).</li> <li>◆ Bibliography-Includes at least 3 sources.</li> </ul>	0-10		
Trials	At least 3 trials are indicated if outcome is not as predicted. Failure of prediction does not indicate low score. If flaw in design - student will indicate in conclusion.	0-5		
Procedure & Conditions	Describe design for device. Includes step-by-step description of construction including listing of all materials, quantities needed and any modifications. Developed the solution refining and improving it during the construction of a prototype. Includes when, where and how of study. High score would indicate that the project can be repeated after reading.	0-15		
Data and Identification	<ul style="list-style-type: none"> <li>◆ Use photos/illustrations/graphs to show device.</li> <li>◆ All data should be clearly labeled and identify the device.</li> <li>◆ Describe how the device operates to specification.</li> <li>◆ Graphs should contain title, x and y axis labeled and intervals are equal.</li> <li>◆ Demonstrates appropriate mathematical &amp; statistical methods.</li> <li>◆ High score shows data is clear, accurate, detailed, &amp; parts are well labeled. <i>(Note to student: Items that are valuable or valued by the student are not to be displayed – use photos/illustrations instead.)</i></li> </ul>	0-15		
Conclusion & Reflection	Reflects what the student has learned. Were there any surprises? What would you do differently or to continue the project? Statement describing how the device performed to successfully complete the designed task compared to the hypothesis and design specifications OR indicate if flaw in product design was discovered. Describe the impact this topic may have on society or the environment.	0-10		
Skill	<ul style="list-style-type: none"> <li>◆ No spelling errors?</li> <li>◆ Clean presentation?</li> <li>◆ Accurate information?</li> <li>◆ Age appropriate?</li> </ul>	0-10		
Logbook	High score indicates that student has written process, observations, & data in logbook during experiment. Clearly written with dates and comments.	0-15		
<b>OVERALL CREATIVITY/INNOVATION/ENGAGEMENT:</b>				
Creativity/Innovation/Engagement	Student demonstrates an understanding of the subject matter or innovative/creative way of approaching their project.	0-10		
Possible Total Score		0-100		
<b>Total Score: _____</b>				

Exhibit ID #: \_\_\_\_\_

Judge #: \_\_\_\_\_