



STEM Wars 2025

Maker Event

Event Coordinator:

- Jim Pratt
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- Please contact him with any questions.

Directions:

Design and produce a custom project! Choose an interest of yours then design and build your project.

- As long as the project is school appropriate, almost any individual project will be accepted.
 - If the project is questionable or safety is a concern, it will not be accepted.
- A portfolio of in-process pictures encouraged to assist in scoring
- Extra points awarded for displayed CAD drawings, CAM simulations, G Code display, trial runs, etc.

Possible Project Ideas:

3D Printed Model and Drawing	Custom Quadcopter
Electronic Circuit-Digital/Analog	CNC Machined Product Innovation
Raspberry Pi Projects	Hardwood Furniture Design
Custom Robotics Build (Pneumatic, Hydraulics)	

See scoring on page 2 below:

Scoring:

	10	5	3
Originality	Student has a completely new idea or a new application.	Student created the project from tutorials and other individual's ideas.	
Difficulty	Students project is exceptionally difficult and took in excess of 10 hours to create. Student encountered many barriers and problems along the way.	Students project is relatively difficult to create and took up to 5 hours and most likely a good amount of troubleshooting.	Student project is simplistic and creation took up to 2 hours.
Process and Design Documentation	Student documented each step of the projects creation and you can easily see its evolution from the start. Student has sketches or drawings from when they begin the idea to the official end product.	Student documented the major processes of the design, but small windows are missing. The drawings or construction blueprints are present and are clearly similar to the project.	The student did not document the building process or the design. Student has no pictures, images, drawings, or wiring schematics.
Operation	The project functions flawlessly and is easy to use.	The project works, but there are a few quirks in order to get it working. May not work completely as expected, but sections do.	Project does not work as planned and is dead. However it is still worth bring to the exhibit.
Presentation	Student presented their creation in a professional manner and described & displayed its creation process perfectly. Student understands and can explain its operation.	Student did a good job explaining the project, but does not completely understand how or why it works.	Student did not understand how there project works and can't explain how they created it.
Neatness	The project is neat and care was taken during each and every step. Every aspect of the project was precise and neat. (Wiring, edges, fasteners, painting)	The project is relatively neat, but a few things were haphazardly put together.	The project looks rushed and things are assembled, but very untidy. The neatness of the project may cause a problem with its functionality.
Marketability	Effectively describes: Need filled by the project Real-world application or usefulness. why users would purchase Identifies potential buyers. Offers user purchase price.	Can describe: why the project is needed Real-world application or usefulness. why users would purchase	Can explain why the project was built.