

ENGINEERING MACHINE DESIGN CONTEST

WHO:

Teams of 3 - 12 students in the 5th - 12th grades.

WHAT:

A low-cost opportunity for youth to explore science, technology, engineering, and mathematic (STEM) principles while having fun in a collaborative environment.

WHEN: Regional Contests are generally in February and March. Teams can then advance to the Championship in April.

WHERE: Currently, Regional Contests are offered in Iowa, Minnesota, and Wisconsin with new locations added every year. Teams can also compete in the Virtual Open where they showcase their machine to judges in an online setting.

DIVISIONS:

Junior Division - 5th-8th Grade
Senior Division - 9th-12th Grade



MACHINE: Teams design and build a chain reaction machine using everyday objects. The completed machine will use multiple steps to complete a simple task. Each year a competition theme is chosen to guide the machine build and allow for whimsical creativity to flourish.

ADVANCED COMPONENTS: Senior Division teams must have at least one of each advanced component including a chemical reaction, electrical, fluid power, and mechanical components. Junior Division teams are encouraged to incorporate Advanced Components, but not required.

SCORING:

Teams are scored on a Team Journal, Team Presentation, and Machine Design and Operation.

A product of:



MINNESOTA STATE
Engineering Center of Excellence

September, 2021

EVIDENCE-BASED STEM PROGRAMMING



"What an awesome event for students to participate in."

This STEM program is the WHOLE package!

It not only hits on engineering and science, but strengthens skills in public speaking, writing (journal), creativity, problem-solving, and artistic abilities.

You will not find a better low-cost STEM program for students to get excited about!"

Devin
Senior Division Coach
Science & Technology Teacher

Addressing the needs of **STUDENTS, EDUCATORS, and FUTURE EMPLOYERS...**

- Aligned to **Next Generation Science Standards** and National Academy of Engineering **Grand Engineering Challenges**.
- Connects the dots of **engineering and engineering technology** learning and **real-world** application.
- Contributes to students achieving their **career goals**.
- Equips students with **skills** that will help prepare them for **future careers**.
- Increases student **knowledge** and equips them with new and/or **advanced skills**.
- Students gain knowledge upon which to base their **decisions** related to engineering design.
- 100% of coaches would **recommend this program** to others!



ENGINEERING.MNSU.EDU/ENGINEERING-MACHINE-DESIGN-CONTEST

