Science Fair

Hosted by the STEM Guild

Thank you for your interest in submitting a project into the Science Fair hosted by the STEM Guild. This is an entree level fair designed for people to become interested in STEM. As such our rules differ from the Minnesota State Science and Engineering Fair as well as the National Science Fair.

What is a Science Fair?

For the STEM Guild, we plan to host multiple types of project fairs, this project fair is specifically a Science Fair. For the STEM Guild, a science fair project is one that demonstrates an understanding of what a variable is, how to test a variable, clear display of data collected, and a conclusion drawn from collected data. The project involves experimenting, testing, and gathering data to interpret into a conclusion. Please read our rules below to know if you are eligible and how our classifications work.

RULES for Eligibility -

1. All participants must be a resident of Minnesota.
2. All participants must be 17 and under unless participants are entering under the family category.
3. Any participant CANNOT have placed at a science or engineering fair at the State, national, or international level in the past.
   a. We wish you the best luck at your next endeavor to place at state, national or international competitions, this fair is not intended for your skill level.

Entry

The contest is May 29th, 2025
The deadline for submission is May 26, 2025
The cost to enter the Science Fair is $25. The money goes towards renting an event space and prizes for top science fair entrees.

On the STEM Guild's website under Project Fairs, submit a form of **intent to participate**. This tells us you are working on a project, who will be working together and the topic you are thinking of.
When you have completed your project, submit your **Science Fair Project Form.** There you will submit the title of your project, who worked on it, and submit payment.

The contest will take place on May 26 from 4-8pm
       Doors open at 5:00pm for board set up
       Judging starts at 6:00pm
       Prizes are award at 7:30

Location
Phenow Pavilion at Central Park of Maple Grove
12000 Central Park Way,
Maple Grove, MN 55369

How to Enter

Age Categories

- Family
  - Enter the fair as a family! This is recommended for all kids who are 10 and under. Work together on one project and submit it under your family name.
  - Family's can have as many kids working on it as they want, but we recommend limiting it to 4. If you have more than 4 kids in your family, we recommend submitting a second project under another team name.
  - Participants entering in the family category must have 1 and up to 2 people supervising the project who are over the age of 17.
  - Participants cannot be a part of a family project if submitting another project under the youth division.

- Youth
  - Youth can submit a project as an individual or as a team of up to 3 youth
  - Youth projects are expected to be 85% youth lead and completed.
    - Parents, educators, tutors or older family members can assist with project ideas, typing or other recording means for the project, and other small support tasks, but the bulk of the work should be the work of the youth.
    - Any projects where this is called into question, further action may be taken accordingly
  - Youth cannot submit a project under the youth category if participating in the family category as well.

Project Rules:

1. Project must be on a project board taking up no more than 3ft X 3ft X 3ft in space
    1.1. If the project includes a model or display, the weight of the model cannot exceed 40 lbs or be larger than the project board.
2. Project must include the 7 judging criteria in project board
    2.1. The question the project is answering
    2.2. A hypothesis of what you think will happen
    2.3. The materials used for the experiment
    2.4. What is the variable?
    2.5. Step by step process of how the experiment was conducted or carried out
    2.6. Images, graphs, charts, or other forms of displaying data that was gathered
    2.7. A conclusion about what happened that answers the question
3. Participants CANNOT create a project that knowingly would endanger the safety of participant(s) before, during, or after the experiment.
    3.1. If judges feel any participants were in danger of being injured or worse because of the experiment performed, the experiment will be disqualified.
    3.2. Projects that have the ability to harm others, such as rocket launching or baseball throwing, **must have and follow** the disclaimer on the board "Nobody was hurt during the experiment and all precautions were taken to make sure the area was safe during testing"
4. Projects CANNOT involve the harm of animals including but not limited to their physical wellbeing, feeding food inappropriate for the animal, or harming their mental ability.
    4.1. This includes but is not limited to mammals, birds, reptiles, fish, amphibians, insects, crustaceans, spiders, worms, and centipedes.
5. Projects CANNOT include any materials that would be illegal for a child under 10 years old to purchase or own.
    5.1. This includes but is not limited to illegal substances, legal substances that require an id to purchase, weapons, chemicals that require special certification to own, or medical equipment that require special certification to operate or use.

"Science Themed" Projects that likely would <u>NOT</u> meet the 7 judging criteria and so would be disqualified.

The STEM guild plans to hold multiple types of project fairs, each project fair has its own set of guidelines for success. Examples of other fairs include technology fair, engineering fair, and inventors fair. We do this because there are multiple systems in STEM to practice, this system we are practicing is for doing an experiment. "Science themed" projects are easy to confuse, so we have outlined projects that may seem to fit a "science" and may be allowed in other Science fairs, but would likely not meet the 7 judging criteria set. It is important to note, these projects are not banned, as long as your project meets the 7 judging criteria it is a success, but it is more difficult to meet the requirements. Projects that are likely to not meet all science fair judging criteria:

1. Engineering projects
    a. Engineering projects have a difficult time following the *Variable* component of a science fair. Engineering projects usually involve changing multiple variables at once to be successful which is why the engineering fair was created with different judging criteria.
    b. Some science experiments have engineering in them, as long as all judging criteria are met, the engineering-themed science experiment is still a science experiment and will not be disqualified.
2. Projects that involve computers, coding, Raspberry Pis, or other code-able technology.
    a. Coding and understanding software is impressive for any age. The technology fair will have its own criteria for success that will be a better fit than what is required for the science fair.
    b. This does not include using technology such as a computer to help you record data, create images, slides, and simulations during the project creation phase or for the final board.
3. Theoretical inventions and inventions by participants
    a. Original inventions that participants go through the design process to create should be saved for the Inventors fair which is judged on different criteria.
    b. Sometimes doing a science fair project ends up creating what some might call an invention, as long as all 7 judging criteria were met, the project is not disqualified.
4. Research projects
    a. Model solar systems and volcano dioramas are educational research projects, they do not require the participant to go through the 7 judging criteria and will be disqualified because they don't meet the judging criteria.

Judging:

As an introductory Science Fair, the goal for all individuals is to have a successful science fair project. A successful science fair project is one follows all 5 project rules including the 7 points for the judging criteria:

- The question the project is answering
- A hypothesis of what you think will happen
- The materials used for the experiment
- What the variable is
- Step by step process of how the experiment was conducted or carried out
- Images, graphs, charts, or other forms of displaying data that was gathered
- A conclusion about what happened that answers the question

Projects that follow the 5 project rules and all 7 judging components met are considered successful projects.

All successful projects will then be considered for how well the criteria were met, the merit of the project, time and effort put into the experiment and project board, and how well the board informs the audience. Prizes will be given to top participants in both youth and family categories.

Prizes

All successful science fair projects will receive a small prize.
Stand out science fair projects as decided by the judges will receive a large prize in addition to the small prize. Larger prizes include: microscopes, magnify lenses, STEM toys, Strawbeez and Make Do, and more.

At the STEM Guild we understand just having a science fair project that is able to be successful is a challenge in its own. This is a skill that takes time to understand and requires practice. The rest of the sections in this document are here to help you be successful.