MES 2026 Science Fair Guide

What is a Science Fair?

A science fair is an event where students present experiments they have conducted and share their results. Science fairs in the U.S. began in the early 1900s with the Science Service organization, founded in 1921 to make science easier to understand and more engaging for students. The first national science fair was in 1950.

Why Participate in the Science Fair?

Participating in the science fair helps students build important skills while having fun exploring their interests. It encourages curiosity, creativity, and critical thinking by allowing students to learn through hands-on experiments. Students develop problem-solving abilities as they ask questions and test ideas, gain experience collecting and understanding data, and improve communication skills by presenting their projects.

MES Science Fair Themes

All science fair project ideas are welcome, and students should choose topics that interest them. However, we offer recommendations for project categories based on grade level below.

- **Kindergarten:** Forces and motion
- **1st Grade:**- Space (sun/moon), plant life cycles, seasons.
- **2nd Grade:**- Sound waves, how sound travels, light.
- **3rd Grade:**- Plant, insect, animal life cycles, weather and climate, forces (gravity and friction), static electricity, matter (solids, liquids, gases).
- **4th Grade:** Earth systems, such as the rate of erosion by water, ice, wind, and vegetation, how different surfaces affect erosion speed, and how weather impacts the earth's surface.
- **5th Grade**:- Space/planets/moon/shadows, plant and animal adaptations, water cycle, earth's spheres.

How to Create a Science Fair Project

- **Choose a Topic You Enjoy:** Students should pick a topic that interests them and that sparks curiosity.
- **Ask a Question:** Students should create a testable question about your topic. An example of a testable question: "How does sunlight affect plant growth?"
- **Develop a Hypothesis:** Students should make an educated guess about what they think will happen in their experiment.
- **Design a Procedure**: Students should plan an experiment to evaluate their hypothesis.
- **Gather Materials**: Students should collect everything needed to perform the experiment.
- **Record Results:** Students should observe what happens in their experiment and keep notes to support their data collection.
- **Draw a Conclusion**: Students should decide if their hypothesis was correct and what they learned from their experiment.

Creating the Science Fair Board

Most science fair boards are tri-fold displays so that they stand on a table. The board should clearly explain the students' project. Information on the board may include the following sections:

- **Title** – The name of the project.
- **Question** – What the student wanted to find out or the focus of the experiment.
- **Hypothesis** – the student's prediction of the outcome of the experiment.
- **Procedure** – The steps the student followed to get to an outcome.
- **Materials** – The materials the students used to conduct the experiment.
- **Results/Data** – What happened during and after the experiment (charts, graphs, photos help!)
- **Conclusion** – What are the results of the experiment, and what do they mean.
- **References** – Sources you used during the experiment.
- **Student Information** – The student's name and grade (placed on the board of the board).

Helpful Presentation Tips

- Students should keep a notebook to document their work (photos, charts, or tables are also welcome).
- For the tri-fold boards, students/families should label the board in large, readable text.
- Students could use color to make their board stand out.
- Parents should let their students do most of the work (with adult guidance).

How Judging Works

At elementary science fairs, judges often focus on encouragement rather than competition. Students may receive ribbons or feedback highlighting the strengths of their projects. The volunteer judges for the MES Science Fair will have a discussion with students about their projects and will score projects on the labeling of the board (title, purpose, procedure, etc.), if there is a clear hypothesis, if the data results are easy to understand, and the discussion around the results and lessons learned.

The judges understand that the students are learning to design their own experiments and will provide supportive, constructive feedback.

<u>Students will be judged on the following components:</u>

- Title and Purpose: Is there an appropriate title and a description of the project?
- Hypothesis: Is there a clear hypothesis?
- Procedure: Is the procedure shown? Are materials listed?
- Data/Results: Are the results available and easy to understand? Is there a visual representation of the data?
- Discussion: Is there a discussion of the results? Is the hypothesis addressed?
- Suitability: Does this project appear to be appropriate for the age of the student? Is it something that could be completed with minimal parent involvement?