

2021 Meadows Science Fair Guidelines

Step 1: Choose a Category:

Choose a topic for your science fair project from a science category that you are interested in. Categories you may want to consider include, but are not limited to:

<i>Category</i>	<i>Description</i>
Astronomy	The study of the solar system, stars, planets and the universe.
Biology	The study of living things including Botany (plants), Zoology (animals) and Microbiology (microscopic plants and animals).
Chemistry	The study of matter, substances and chemicals.
Earth Science	The study of our Earth, including Geology (rocks and minerals), Meteorology (weather), Oceanography, Paleontology (prehistoric life) and Ecology (the environment).
Physical Science	The study of forms of energy and laws of motion.
Computer Science	The study of computer technology hardware or software
Engineering	Design and/or construction of devices, structures or machines.

Step 2: Ask a Question:

Your project should answer a question by conducting an experiment and/or research. A science fair project is all about finding out the answer to your question. Thus, your question becomes your problem to solve.

- *Important:* Make sure your question is something safe to research and/or experiment about on your own. *DO NOT* start a project if the experiment is not safe, the materials are too difficult to find or too expensive, it involves live animals, or if it will take more time than you have.

Step 3: Conduct Research

To help you answer your question, collect and read as much information as you can about your topic. Books, magazines, the Internet, people, etc. can all be good informational resources. Whether you conduct an experiment or research, your goal is to begin to answer your question based on the information you collected. Be sure to include what you learn on your display board (see below), including a bibliography of your research with a minimum of two sources.

Step 4: Develop a Hypothesis

Make a best guess as to what the answer to your question might be.

Step 5: Conduct an Experiment

(This step only applies if you have chosen to do an experimental project.)

Design and conduct a controlled experiment. This involves comparing measurements or groups of subjects to be sure that you have found the answer to your question. You should record the steps of your experiment, record materials used, and collect your data. Remember to provide an experiment summary.

Step 6: Evaluate Your Data

(This step only applies if you have chosen to do an experimental project.)

The data you obtain from your research/experiment should be organized into tables, graphs or charts. Tables are good for recording raw data. Bar graphs visually compare totals. Line graphs show how two factors change in relation to each other. Pie charts are used to show different percentages.

Step 7: Draw a Conclusion

The conclusion of your project is a summary of the results of your research and/or experiment, and how the results help to prove or disprove your hypothesis. Remember disproving your hypothesis can be just as important as proving it. What you discover is important – not whether or not you were “right” in your hypothesis.

- *Other things you may include in your conclusion are:* surprising things you learned; difficulties you encountered in your experiment; how you might change things if you continued your experiment in the future; and other questions that came to mind while conducting your research or experiment.

Step 8: Display Findings

Your project will be done on google slides. Your project should be presented in an organized manner. We suggest using 1-2 slides for each section, with the first slide being a title slide with Title of Project, Student’s Name, Grade and Teacher’s Name. Your project must include these sections:

- Title of Project, Student’s Name, Grade and Teacher’s Name
- Question
- Hypothesis
- Research Summary
- **For experiments:** Include materials, methods/steps/procedures, experiment summary, analyze data
- Results/Conclusions
- Bibliography of resources used, at least 2
- 2-3 minute video presentation (optional)

Step 9: Video Presentation

Create a video and upload it into Google drive. In google slides, use the “Insert” menu to add the video to your google slide presentation. In the video, you should be able to state your question and hypothesis, explain your experiment procedures (if applicable), research, data and results/conclusions. The science fair judges will review your presentation. Make sure to let them know what you learned.

Note: All digital science fair projects to be turned in by April 29, 2021 in Google Class.

Science Fair Rules

1. Participants must be Meadows Elementary School students grades TK-6.
2. Participants may submit individual projects.
3. NO store bought kits or models will be accepted as exhibits.
4. NO prior year science projects may be used or revised.
5. NO dangerous or flammable chemicals may be used.
6. NO open flames are permitted as part of an exhibit.
7. NO exposed electrical contacts will be allowed.
8. NO live animals are allowed in any experiment.
9. Projects and all exhibits must be the student's own work. In addition, a grade-appropriate topic should be selected.
10. The parents' role is to guide and encourage the student. In addition, parents should assist in aspects of an experiment where safety is an issue (i.e. using a stove, etc.).