

## Homeschool Community of the Upstate Science Fair

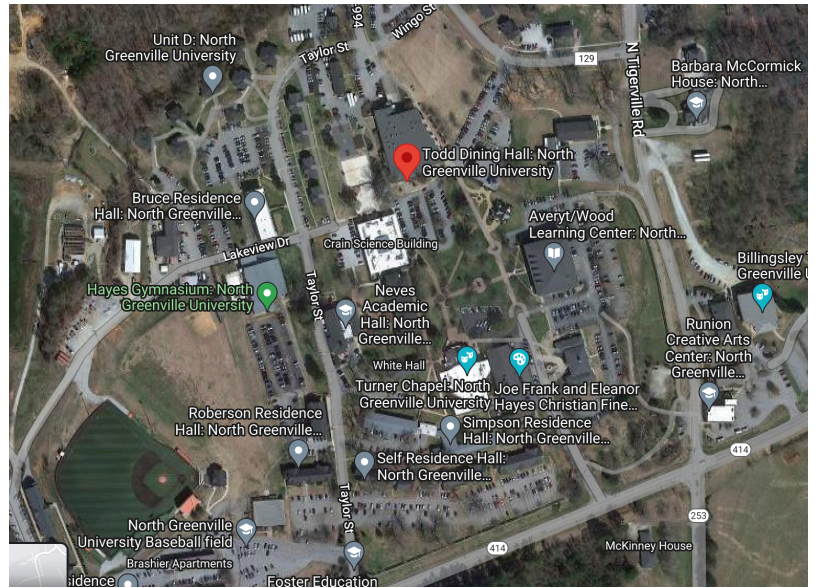
**Date:** March 16th

**Check-in & Set-Up Time:** Anytime between 3-5pm

**Showcase Time:** 6:30-8pm, please arrive on time.

**Location:** North Greenville University • Todd Dining Hall. Dining Hall is located on the North side of the campus. There will be directional signs in the parking areas.

**Participants:** homeschool students, all grade level & ages



**Day of Event Set-Up Info:** Bring all materials necessary to display or demonstrate science project or experiment, making sure to abide by all safety rules. Table covers will not be provided, please bring one if your project has potential for mess, or is something that shouldn't be in contact with an eating area. After set-up, participants are welcome to break for dinner, returning by showcase time. Nothing may be hung up on campus property, everything in your experiment must be displayed on your table.

**Event Safety Rules:** No hazardous chemicals, no open flames, no explosives, & torches and burners may not be used. Cultures of mold and bacteria must be thoroughly sealed. Animals (live or otherwise) are not permitted at the fair. No live insects; dead insects are allowed when mounted & in sealed containers. Do not bring anything very likely to spill without a tray to sit the project in that can hold spills, do not bring anything hard to clean-up; any spills are your responsibility to clean up. Table cloths are required for projects that have the possibility of spills, or for other reasons shouldn't have direct contact with an eating surface (you will need to provide your own).

**Purpose of Science Fair:** This event is to showcase science projects created at home. Students will likely need support from parents or guardians to complete the project, what this mean is up to the homeschool teacher. But, please do not do all the work for the students in judged categories, to keep it fair.

**Project Safety Rules:** All projects involving humans as subjects must involve minimal risk. Unacceptable risks include ingestion of any substance or physical contact with any potentially hazardous materials, as well as unnecessary physical, psychological, or emotional stress, including invasion of privacy. Live animals should be housed, cared for, and observed in a safe and humane manner (they are not allowed at the fair, but documentation for a project is).

## **Entry Categories**

Grade ranges are for reference, and level placement is at the parent's discretion.

All levels will include the judges giving out “compliment cards,” encouraging each student on an aspect of their project. Levels 2 & 3 can enter a traditional scientific method project, or a project in our STEM Project/Demo category. Levels 2 & 3 also have the option to enter for competition.

*Unless you specifically request for your student's projects to be near each other, the age group (levels) will be grouped together*

### **Level 1 Science/STEM Show and Share**

This will be ANYTHING related to science that the student wants to do and share with others. It can be a simple experiment (does not have to follow the full scientific method), a model or illustration of something STEM related, a demonstration, or a collection.

### **Level 2: Scientific Method Project Elementary Science Fair Project**

This will be a project that asks a question and follows the scientific method to test and answer the question. These groups may be subdivided into life sciences, earth sciences, and physical sciences depending on the number of entries.

*Option to select judged, or not judged.*

### **Level 2: STEM Project/Demo**

Projects under this category do NOT have to ask a question and follow the scientific method, carry out testing, and find results. These projects can be anything related to science, math, engineering, or technology, including a demonstration, presentation, model, or collection.

### **Level 3: Scientific Method Project Secondary Science Fair Project**

This will be a project that asks a question and follows the scientific method to test and answer the question. These groups may be subdivided into life sciences, earth sciences, and physical sciences depending on the number of entries.

*Option to select judged, or not judged.*

### **Level 3: STEM Project/Demo**

Projects under this category do NOT have to ask a question and follow the scientific method, carry out testing, and find results. These projects can be anything related to science, math, engineering, or technology, including a demonstration, presentation, model, or collection. This group may be subdivided into science, math/computer science, and engineering depending on the number of entries.

## Science Topics

### **Life Science**

The study of life; the behavior of living things, and how living things come into existence.

### **Earth Science**

The scientific study of earth and all its processes.

### **Physical Science**

The study of the physical universe and the forces within it.

### Life Sciences

- Animals Living & Non-Living
- Plants
- Senses
- Vertebrates
- Invertebrates
- Plant Life
- The Human Body
- Life Cycles
- Habitats / Environment
- Food Chains
- Adaptations
- Food and Nutrition
- Inside Living Things

### Earth Sciences

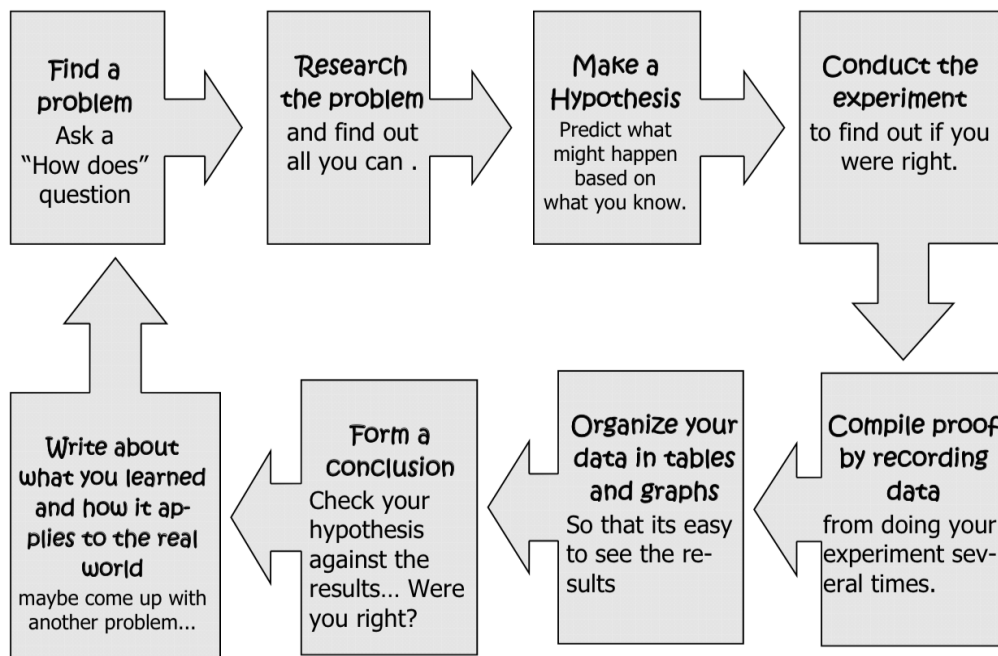
- Water Resources
- Water Cycle
- Solar System
- Earth, Moon, and Sun
- Weather
- Earth's Surface
- The Solar System
- Clouds, Wind, and Storms
- Minerals, Rocks, and Soil
- Outside the Solar System
- Atmosphere and Climate
- Changing Landforms

### Physical Sciences

- Atoms & Elements
- Chemical Compounds
- Doing Work
- Energy
- Light
- Properties
- Magnets
- Things Move
- Machines
- Heat Energy
- Sound
- Solids, Liquids, and Gases
- Force & Motion
- Energy Resources
- Light Energy
- Mixing Matter
- Electricity

*This portion of the packet is not necessary or mandatory, it is only for your reference for those wanting suggestions and projects using the Scientific Method.*

## **SCIENTIFIC METHOD**



My Topic

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Draw a checkmark next in the circle if the sentence is TRUE:

- My question cannot be answered with a “yes” or “no”.
- My project follows safety rules.
- I will be able to get permission from my parents to do this project at home.
- I know exactly which materials I will need for this project.
- I will be able to get the materials needed to complete this project.
- I do not know the answer to my question...YET!
- I will be able to complete this experiment at least one week before the Science Fair.

*If every statement is TRUE and every circle has a checkmark, then you have chosen a great Science Fair Topic & Question! If not, you may want to consider creating a new idea.*













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Observation One

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Observation Two

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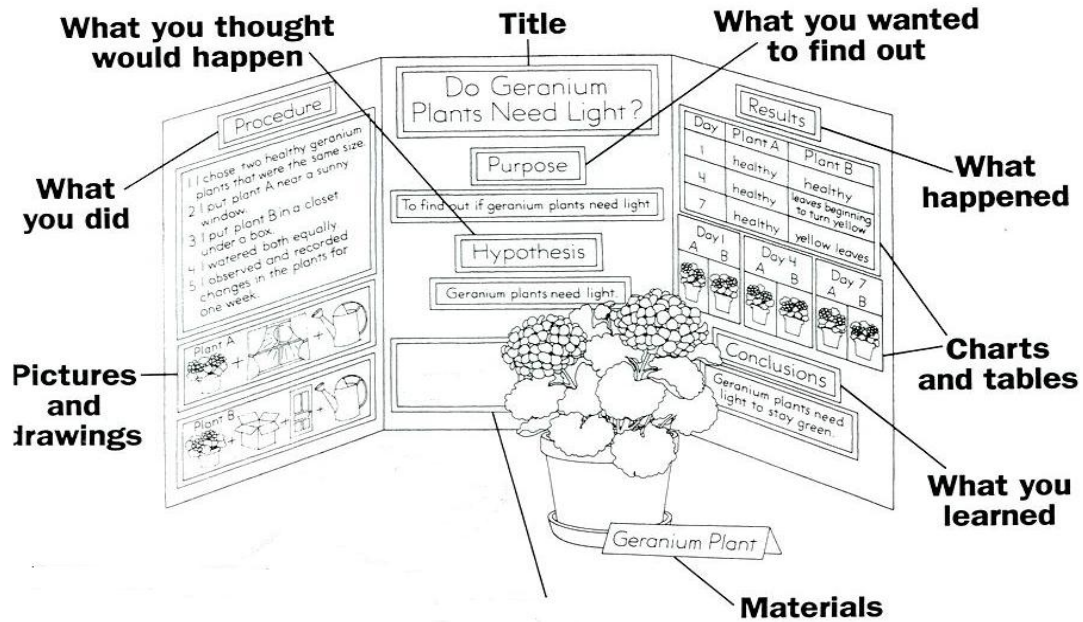
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## Resources

# Displaying a Science Fair Project



## Variables- Independent & Controlled

### Components of a COMPLETE Science Board:

- Title/Question
- Problem/Purpose
- Hypothesis
- Variable(s)
- Materials (or List)
- Procedures
- Pictures/Drawings
- Results
- Charts/Tables
- Conclusion

## Variables Example

<b>Question</b>	<b>Independent Variable</b> <b>(What I change)</b>	<b>Controlled Variables</b> <b>(What I keep the same)</b>
Does fertilizer make a plant grow bigger?	Amount of fertilizer measured in grams.	<ul style="list-style-type: none"><li>· Same size pot for each plant</li><li>· Same type of plant in each pot</li><li>· Same type and amount of soil in each pot</li><li>· Same amount of water and light</li><li>· Make measurements of growth for each plant at the same time</li></ul>

(The many variables above can each change how fast a plant grows, so to insure a fair test of the fertilizer, each of them must be kept the same for every pot.)

## Website Resources

Science A-Z Resources <https://www.sciencea-z.com/>

Topic Selection Wizard

[http://www.sciencebuddies.org/science-fair-projects/recommender\\_register.php](http://www.sciencebuddies.org/science-fair-projects/recommender_register.php)

Project Resource Guide

<http://www.ipl.org/div/kidspace/projectguide/choosingatopic.html>

Cool-Science-Projects

<http://www.cool-science-projects.com/Science-Fair-Project-Ideas.html>

Science Buddies Topic Selection Wizard

[http://www.sciencebuddies.org/mentoring/register\\_guest.php](http://www.sciencebuddies.org/mentoring/register_guest.php)

Search or Browse Topics <http://www.all-science-fair-projects.com/>

Science Fair Projects <http://www.terimore.com/>

56 Science Fair Projects and Experiments <https://www.weareteachers.com/8th-grade-science-projects/>