



## CENTRAL SCHOOL PTO

# Science Fair Planning Guide

Participating in the Science Fair is fun for everyone! To get started, come up with a question you'd like to solve and decide on your Project Name. Register & submit your project name at [CentralPTONews.org/Science-Fair](https://CentralPTONews.org/Science-Fair).

### IMPORTANT DATES:

- **Registration and Project Name Submission Deadline:** Friday, Oct. 29th
- **Science Fair:** Wednesday, Nov. 17 p.m.

### IMPORTANT THINGS TO KNOW BEFORE YOU GET STARTED:

- Participation in Central's non-competitive Science Fair is optional and open to all K-5 students
- Students can work independently or team up with a Central sibling or student
  - If pairing up outside of your household, please be mindful of all COVID safety protocols
- Students, under the supervision of a parent or guardian, will conduct their own experiments at home using the 5 steps of the Scientific Method. More on that below!
- Display boards will be provided to students who register by Oct. 29th
- Once you've selected your Science Fair Question or Project Name, please update the registration form here: <https://forms.gle/r5cnBHqaL1ZKWbaw6>

### WHAT'S INSIDE:

- An explanation of the difference between a Model and Experiment. Our hope is that most students will choose Experiments!
- A quick overview of the steps of the Scientific Method (everything you need to know to get through your experiment!)
- A summary of what you need to do to prepare your actual display for the Science Fair.
- A worksheet to help come up with your Science Fair Question and Topic.

***Just follow the instructions in this Planning Guide and you will be a real scientist in no time!***

### WHAT'S AN EXPERIMENT?

The first thing to do is learn the basics about different types of science projects. There are two main types of science projects: (1) a model and (2) an experiment.

- Models (or displays) show how something works, but they don't really test anything.
  - Examples: "Types of Dinosaurs" or "Baking Soda & Vinegar Volcano."
- Experiments are more like testing (the fun kind!) because you are testing something several times and changing a variable to see what happens.
  - Examples: "The Effect of Detergent on the Growth of Plants" or "What Type of Shoes Are Best for Playing Soccer."

Even though you can learn a lot from building a model or researching for a display, we recommend that you do an Experiment. Why you ask? It allows your young scientist to learn more about the Scientific Method!

## WHAT'S THE SCIENTIFIC METHOD?

Get ready to have some fun young scientists! Follow the 5 simple steps below and you'll have completed an experiment using the Scientific Method. Use the **Scientific Method Worksheet** at the end of this packet to record your progress through each step OR use your own paper - either works just as well! Your final display should include these 5 sections that correspond to the 5 steps of the Scientific Method.

### FIVE STEPS TO THE SCIENTIFIC METHOD:

1. **Question:** What's a *Question* you can ask that can be tested in an experiment?
2. **Hypothesis:** Now that you have your question, do you have a *smart guess*, or *Hypothesis*, of the answer?
3. **Experiment:** It's time to create an *Experiment* that will answer your question!
4. **Results:** Things are really getting interesting! Perform your experiment and record your *Results*!
5. **Conclusion:** You're almost done! The last step is to check your Hypothesis against your Results and document your *Conclusion* for the Science Fair!

### Need help with the first step? Let's decide what your question will be.

Start by asking yourself a question that interests you. Do you have a question about something? What can you test? The question can be a simple one such as, "What kind of paper makes the best paper airplane?"

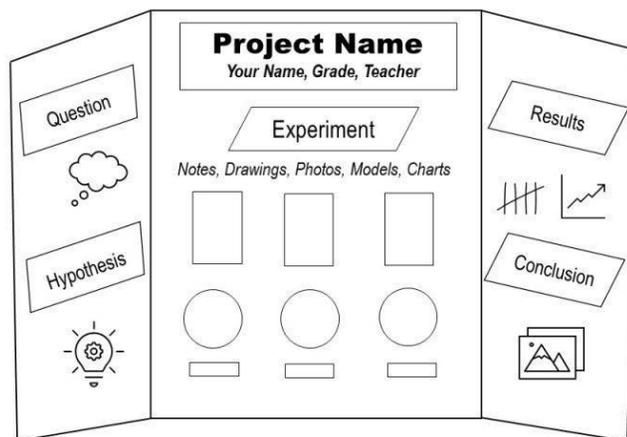
If it helps, try using one of these approaches:

- "Effect Question": What is the effect of **sunlight** on **the growth of plants**?
- "How does" Question": How does **the color of light** affect **the growth of plants**?
- "Which/What" Question": Which/What **paper towel** is **most absorbent**?

### DISPLAY BOARDS:

Once you've completed the Scientific Method, you're ready to prepare your *Conclusion* on a display board.

## Sample Display Board Model



- Display boards will be provided to all students or teams who register by Oct. 25<sup>th</sup>
- Try to show your work in a way that's easy to read and flows from top to bottom and left to right.
- Include the following:
  - Project Name
  - Your name, grade and teacher
  - The 5 steps of the Scientific Method you followed
  - Notes, drawings, photos, models, charts, etc.!
- Most important – have fun! And remember, there are no wrong answers!

### ONLINE RESOURCES:

- [ScienceBuddies.com](http://ScienceBuddies.com)
- [Education.com](http://Education.com)
- [Wow In the World Podcast:](http://WowIntheWorldPodcast.com)  
[Scream for Science!](http://ScreamforScience.com)

**Note to parents:** these online resources are provided as a guide, do encourage your child to use their own curiosity or interests as the motivation for the question. Don't worry if the question or resulting experiment doesn't seem sophisticated enough. The best type of question for an elementary school Science Fair, is one for which your child yearns for the answer!

### MORE QUESTIONS? WE HAVE ANSWERS!

Have fun, be safe, and contact your Science Fair Committee if you have any questions! Please contact Rachel Schrier ([rachelschrier@hotmail.com](mailto:rachelschrier@hotmail.com)) and Kate Geletka ([KB2880@gmail.com](mailto:KB2880@gmail.com)) with any questions!

# Scientific Method Worksheet

NAME \_\_\_\_\_

Grade: \_\_\_\_\_ Teacher: \_\_\_\_\_

**1. Ask a Question**



**2. Make a Hypothesis**



**3. Experiment: Test the Hypothesis**



**4. Record the Results**



**5. Draw a Conclusion**

