

2024 Science Fair Helpful Hints

Turn on your thinking cap! Get creative! Learn something new! *Most importantly, HAVE FUN!*

Entering the Science Fair is an exciting way to introduce your child to scientific concepts such as the hypothesis, the experiment, and the conclusion while helping them expand their imagination.

Make sure you ask your child a lot of questions about their project so he/she understands WHY and HOW an experiment can provide an answer to a scientific question.

Here are some fun ideas <https://www.sciencebuddies.org/science-fair-projects/science-projects> to help you get started!

What to Expect in Grades K-2

Simple projects are best! Students at this age group are just learning to observe, measure, cut, connect, switch, turn on and off, pour, hold, tie and hook.

Discuss with the scientist:

- 1) What may happen.
- 2) Observe what happened.
- 3) Reflect and discuss the outcome.

- Take photos of the preparation, the activity, and the outcome. This can help with communicating about the project for those scientists developing writing skills.
- Some ideas to consider: Student demonstrations (like exploding volcanoes), Explore certain categories (grouping kinds of trees, bugs, etc.), Research collections (identifying different types of leaves), Reports with measurements (measuring rainfall, plant growth, etc.)

What to Expect in Grades 3-4

Students need to understand the concept of the 6-Step Scientific Method. See more on the Scientific Method below. They can define a specific question, propose the answer (hypothesis), organize the testing and measuring, gather data and make a conclusion. Students can use thermometers, watches, balances, magnifiers, microscopes and calculators.

On the display board, include the following categories:

- * Title
- * Question/Problem - What do you want to find out?
- * Hypothesis - What do you think will happen?
- * Procedure - What did you do?
- * Results/Answer – What *ACTUALLY* happened?
- * Conclusion - What did you learn? *Helpful tip: use visual aids to describe your experiment and results.*

Scientific Method Grades 3-4

1. Title: Choose a title for your experiment. Use your imagination and think of a fun and informative title. For example: “Would you eat this cheese for lunch?”
2. Question: Example: “How long does it take for mold to grow on yellow cheese?”
3. Hypothesis: Your hypothesis is your best educated guess of the answer to the question you are trying to solve. For example: “I am estimating that it will take at least 3 weeks to grow mold on yellow cheese.”
4. Procedure: In this step, you define your plan of action. List all your steps and give all your details. Your procedure should be clear and specific enough for someone to easily follow and perform the experiment themselves. For example: “I will put the cheese on a plate and put it in a dark closet. I will check the cheese twice each day. I will make sure that the temperature of the closet is between 65 and 75 degrees each time I check. I will mark down my findings each time I check.”
5. Results: List all your observations and all your results. The use of graphs and charts is recommended.
6. Conclusion: What *ACTUALLY* happened? Did you get the answer you expected? If no, why not? Were you surprised by any of your results? Why?