

**Dallas Christian Academy
Science Fair
Elementary**



Information for the Families of Science Fair Participants

Your child has an opportunity to explore the world of science through a school science fair project. With your support, this can be a positive, hands-on experience for your family.

The purpose of a science fair project is to encourage students to develop their skill in critical thinking, research, and problem solving. As modern technology continues to develop students need to learn these methods as well. Our hope is that students will gain an increased awareness of an interest in science and scientific methods.

These pages will advise parents and students on the available categories and acceptable formats for our Science Fair. While the initiative and responsibility belongs to the students, assistance from families and other adults is welcomed on a limited basis.

Students in **Pre-K-1st** are encouraged to do a student appropriate family project. Each family project is limited to 3 participants.

Some Pointers:

- Help students choose a topic they are interested in and on which they are capable of completing research.
- Steer students away from topics that experiment with animals or use dangerous chemicals, explosives, high-voltage power, or open flames in the exhibit.
- Avoid simply building models or replicas unless they demonstrate a scientific principle.
- Science Fair projects should use the scientific method: ask questions, research, experiment, and draw a conclusion.
- Help students with the technical aspects of the project, but remember that each student must be able to demonstrate, explain and understand the project.
- Assist as a timekeeper and organizer to be sure that each step of the project is completed by the due date.
- Encourage students to perform their best. Positive reinforcement and praise inspire children.
- Remember, the students are supposed to do the majority of the work!

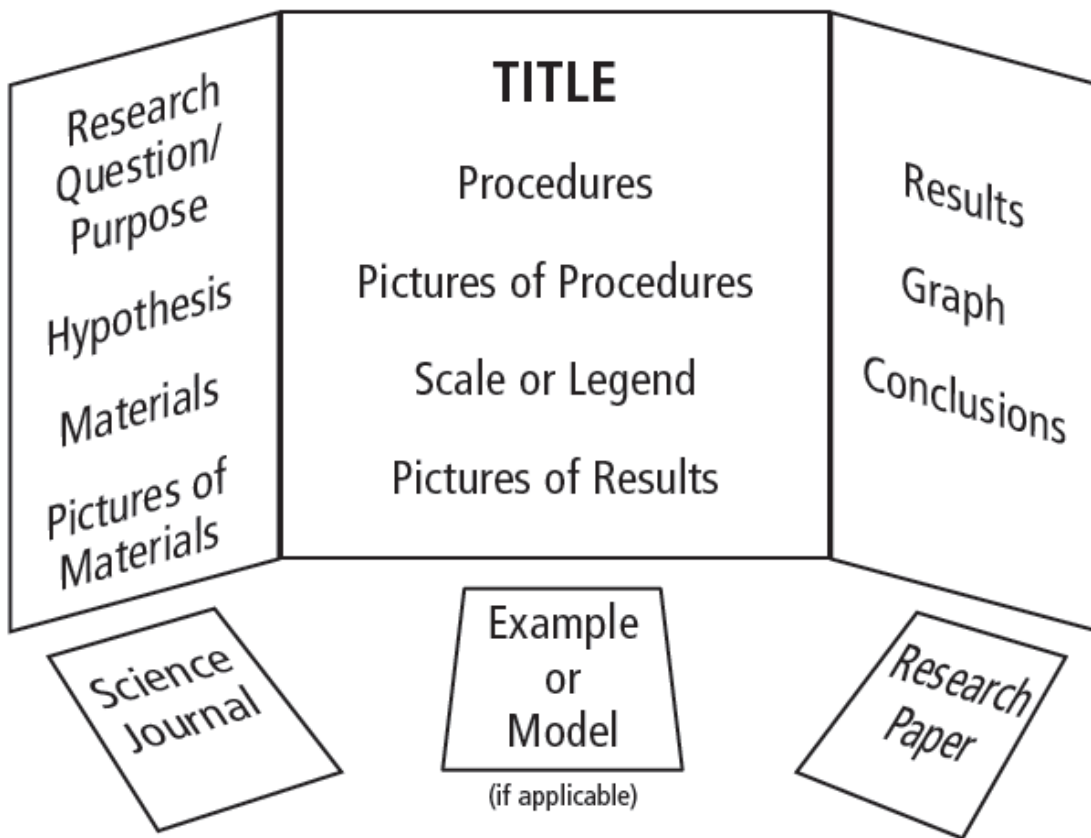
SCIENCE FAIR

Categories:

- A – Earth, Environment, Astronomy
- B – Mechanical, Electrical, Computers
- C – Chemical, Biological, Medical

Exhibit Size:

Standard bi-fold or tri-fold display board



Science Fair Rules

All exhibits must conform to the following rules and regulations to qualify for the Dallas Christian Academy Science Fair. These rules and regulations should be considered as your project is developed. They also apply to the Texas State Science Fair.

- The project to be presented must be the work of a single student and must concern itself with a single subject. **Exception:** Family projects are limited to 3 participants.
- Students are expected to keep a step-by-step notebook recording the development of the project, including references, original date, etc. Original data are of great value in all projects.
- No exhibit should be larger than 122 cm wide, by 76 cm deep, by 274 cm. high from the floor. No oversized projects are allowed to exhibit.
- Wall space for posters, tape, tacks, etc. is not available. Students should construct their exhibits so that wall space is not necessary. Exhibitors must supply their own thumb-tacks, tape, and other tools.
- Because of space limitations, antenna lines and other long leads are prohibited.
- No lighting is permitted on displays.
- No running water is available.
- After a project is inspected for compliance with these rules and regulations, no changes are permitted.
- Students may be asked by judges to explain/clarify their project if necessary.

HINTS

- Many projects can take a while to do, so plan well in advance.
- Be original, try exploring some topic that is new and of interest to you. You can find many ideas by simply questioning ideas you hear from your family, friends, reading and TV. Your textbooks may have a lot of good ideas. Feel free to modify any ideas to suit your needs.
- Choose a topic that's sophisticated enough for your grade level. You may or may not know the results of the project ahead of time.
- When experimenting use as many tests and trials as needed (seldom is once enough). To base the results of an experiment on only one trial is seldom scientific. Just because something happens once does not mean that you will get the same exact results each time. To help verify your results you should make many trials (minimum of three trials) and average your results.

- When experimenting, there is no right or wrong answers. You get the results you get. It is okay to disprove a hypothesis. It is your interpretation of these results that counts the most.
- Be neat and well organized. Give yourself plenty of time for experimentation.

Visual Display:

You want to attract and inform. Make it easy for interested spectators and judges to assess your study and the results you have obtained. Make the most of your space using clear and concise displays. Make headings stand out, and draw graphs, diagrams, and pictures clearly and label them correctly.

Helpful Hints for Display:

- A Good Title: Your title is an extremely important attention-grabber. A good title should simply and accurately present your research. The title should make the casual observer want to know more.
- Take Photographs: You may want to take photographs of important parts of your research or project to use in your display. Photographs or other visual images of the subject must add to the attractiveness of your display. **Do not use a picture of yourself or family members in the display. We do not want the judges to know who you are.**
- Be Organized: Make sure your display is logically presented and easy to read. A glance should permit anyone (particularly the judges) to locate quickly the title, experiments, results, and conclusions. When you arrange your display, imagine that you are seeing it for the first time.
- Eye-catching: Make your display stand out. Use neat, colorful headings, charts, and graphs to present your topic. Home-built equipment, construction paper, and colored markers are excellent for project displays. Pay special attention to the labeling of graphs, charts, diagrams, and tables. Each item must have a descriptive title. Anyone should be able to understand the visuals without further explanation.
- Be Creative: No project will be chosen as outstanding if it lacks creativity. Make your exhibit neat, attractive, and easily understood. Organize it well so that there is a definite and obvious flow pattern from one part of the exhibit to another. Arrangement should be logical and easily followed. Use color where you can, particularly in the background, but don't let it be too outlandish.
- Be Neat: Write grammatically, spell correctly, and letter neatly. It is appalling to see bad grammar, misspelled words, and sloppy lettering. The judges will be influenced negatively by these mishaps. There are lettering guides and cutout letters that you can use if your own work is not up to par.

Things Not To Have In Display:

- Preserved animals or their body parts
- Human body parts
- Microbial cultures and fungi
- Food
- Pipettes
- Hypodermic needles
- Drugs
- Dangerous chemicals
- Materials that are combustible (easily catch fire) or explosive
- Radioactive materials
- Batteries with open-top cells
- Syringes
- Working gas or electric motors

Your project should include the following items:

- Exhibit that can stand by itself
- Material necessary for the exhibit
- Oral presentation as needed (3-5 minutes)
- Logbook of daily work
- Abstract
- Acknowledgments

The Science Fair Written Report

ABSTRACT

- **ASSIGNED NUMBER, AGE, GRADE, AND CATEGORY**

The assigned number will be given by the teacher.

- **STATEMENT OF PURPOSE**

A two or three sentence statement explaining what you expected to discover by investigating the chosen topic. It should also give the reason why you chose to learn more about the subject.

- **THE HYPOTHESIS**

A hypothesis is an educated guess about what you think will occur as a result of conducting the selected experiment.

- **PROCEDURE**

List and describe steps you undertook to complete the project, numbering them sequentially. Fully describe each variable and control. Explain its role in the experiment and show how it was managed and/or monitored.

- **OBSERVATIONS & RESULTS**

Tell what you learned from the project. What new information was provided as a result of pursuing the topic? What do you know now that you didn't know before? Include raw, smooth and analyzed data, in all forms including charts, graphs, tables, photographs, and diagrams you've created or collected in the course of the project. Be sure that all results, in whatever format are neat and legible. Accurately and clearly label and title all material.

- **CONCLUSION**

This is a brief statement explaining why a project turned out the way it did. Why did the events you observed occur? If an experiment was chosen, begin your conclusion by restating your hypothesis. Next, compare the results to your original hypothesis. The result data may concretely establish your theory to be true or false. However, it is also possible that the results were inconclusive, which means that although there may be a trend in your data, it is not strong enough to prove or disprove your hypothesis.