

# SCIENCE FAIR AT THE

# MAGIC OF SCIENCE FESTIVAL

## SUBMISSION INSTRUCTIONS

**STEP ONE:** Save your spot now at the science fair by visiting <https://apgdiscovery.com/magicofscience/science-fair/> and "Click Here to Save Your Spot." Fill out this form to reserve a space at the science fair.

**STEP TWO:** Choose your topic and submit the application form on page 2 of this document no later than September 13, 2020. Email application forms to [info@apgdiscovery.com](mailto:info@apgdiscovery.com). More information about topic selection found on page 3 of this instruction document.

**STEP THREE:** Work on your project and prepare your final presentation. Bring it to the Magic of Science Fair and Festival at 8 a.m. Saturday, October 17, 2020.

Oct. 17, 2020 • Leidos Field at Ripken Stadium  
Science Fair Begins at 8 am • Festival Begins at 11 am



APG  
Discovery  
Center

Where Education, Technology, and Heritage come together



# SCIENCE FAIR SUBMISSION INSTRUCTIONS

## APG Discovery Center Science Fair Application

NAME: \_\_\_\_\_

MIDDLE SCHOOL NAME/GRADE: \_\_\_\_\_

MIDDLE SCHOOL ADVISOR NAME/EMAIL: \_\_\_\_\_

PROJECT SUBMISSION AREA: \_\_\_\_\_

PROJECT STATEMENT: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WHAT YOU HOPE TO DISCOVER OR DEMONSTRATE: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

IF WORKING WITH A PARTNER, PARTNER NAME: \_\_\_\_\_

### PARENT AND/OR GUARDIAN APPROVAL:

PARENT SIGNATURE: \_\_\_\_\_

PARENT EMAIL AND PHONE: \_\_\_\_\_

DATE: \_\_\_\_\_

PARTNER PARENT SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## SCIENCE FAIR SUBMISSION INSTRUCTIONS

# Science Project Steps

1. Choose a topic. Be sure it interests you. Don't pick one because you think it will be easy. Talk it over with your parents and teacher. Get your Registration form from the packet on the web and have your parent sign.
2. State your project goal. What is it that you want to discover, develop, create by doing this project?
3. Research your problem. Look at any books/websites that might help you, make observations by simply looking at things, talk to people, and find out as much as possible about your topic. Write down any ideas you have and where you got them. Also, keep note of all information needed for citing your resources.
4. Form a plan of action. What do you think is going to happen or what do you want to engineer? Based on what you know or found out from step #3, what do you think the results of your project will be? After doing the project, it may turn out that your guess was wrong. It is okay if this happens.
5. Plan your project. How will you demonstrate your results? How will you measure the results? Where will you keep your information? Be sure to keep notes and write down everything you do and what happens.
6. Collect all your materials. Find a place to keep things where others won't bother them. Let other family members know what you are doing so they do not throw your materials away by mistake.
7. If you are conducting an experiment. Remember, the more times you do an experiment the more reliable and accurate the results will be. Do each experiment at least three times and get an average of the results for your graph. Use something to measure your experiments: a ruler or yardstick if you are measuring distance, a clock to measure time, etc. Check the measurements to be sure you are correct.
8. Record your data/outcomes. As you do your project, you will want to write down what you saw or found out. Organize this information in an orderly manner. Put the date, time, and any other useful information. Write your observations clearly.
9. Draw conclusions. What did you learn from your project? Have you proved or disproved your hypothesis or demonstrated your engineering solution? You made a guess about what you thought would happen. Now tell what really did happen. You don't lose points if your guess turned out to be wrong.
10. Prepare your titles, charts, graphs, drawings, and diagrams. Make them large enough to see, neat, and colorful.
11. Construct your science fair display. Get a trifold cardboard display board so you can show all your work and have your hands free to point to sections when you give your presentation.
12. Prepare and practice your presentation. Be able to tell about what you used what you did in your experiments, and what you found out. Know it well enough that you don't have to read it from the display.
13. Plan a time line so you don't leave everything until the last minute. If you need help, tell your parents and your teacher, the earlier the better.
14. Relax and Enjoy yourself. You will do a GREAT job!

# SCIENCE FAIR SUBMISSION INSTRUCTIONS

## Science Fair Rules

1. Number one rule. . . think safety first before you start. Make sure you have recruited your adults to help you.
2. Never eat or drink during a project or experiment and always keep your work area clean.
3. Wear protective goggles when doing any experiment that could lead to eye injury.
4. Do not touch, taste, or inhale chemicals or chemical solutions.
5. Respect all life forms. Animals are not allowed to be used in experiments. Do not perform an experiment that will harm a person.
6. All experiments, science and engineering projects should be supervised by an adult.
7. Always wash your hands after doing the experiment, especially if you have been handling chemicals.
8. Dispose waste properly.
9. Any project that involves animals, drugs, firearms, or explosives are NOT permitted.
10. Any project that breaks district policy, and/or local, state, or federal laws are NOT permitted.
11. Use safety on the Internet! NEVER write to anyone without an adult knowing about it. Be sure to let an adult know about what websites you will be visiting, or have them help you search.
12. If there are dangerous aspects of your experiment, like using a sharp tool or experimenting with electricity, please have an adult help you or have them do the dangerous parts. That's what adults are for so use them correctly. (Besides, it makes them feel important!)

## SCIENCE FAIR SUBMISSION INSTRUCTIONS

# Presentation Instructions

Each contestant will be allowed one trifold poster to present their project. The contestant will be allotted one half of an 8x3 ft. table for a presentation area of 4x3 feet. Please confine your poster and demonstration hardware to the provided table space. The poster is required to have the following sections:

1. Title of the project
2. Name of the project partners
3. Contributions of the partners; list the contributions of each participant
4. Goals of the research and design; what did you try to understand or achieve
5. You will list and describe the steps you took to complete the project. Usually this is listed in a numbered sequence. This part shows the stages of the project so that another person can carry out the experiment or build your engineering project.
6. Observations/Results of the research and/or demonstration
7. Conclusions; What you proved or demonstrated. What you learned. What can you do better next time
8. Acknowledgments: who helped you make the project a success such as your parents, teacher, friends, mentors etc.

***Remember the poster and your presentation of the poster is an important part in how you present yourself to the world and the judges. Take some care and time to put it together. A well organized poster also makes it much easier for you to effectively tell your story.***

# Judging Criteria

## *Project*

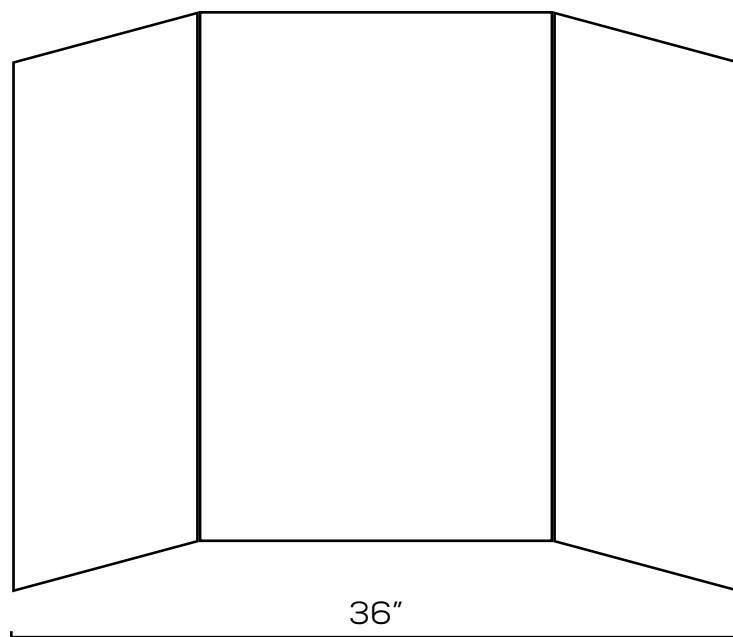
- I. Research Question/Problem Statement (15 pts.)
- II. Design and Methodology (25 pts.)
- III. Execution: Data Collection, Analysis, Interpretation, Construction, Testing (25 pts.)
- IV. Creativity (20 pts.)
- V. Board/Poster Presentation (15 pts.)

# SCIENCE FAIR SUBMISSION INSTRUCTIONS

## Science Fair Poster Layout

<b>GOALS OF THE PROJECT</b>	<b>TITLE</b> Names of Participants	<b>OBSERVATIONS</b>
<b>CONTRIBUTIONS OF THE PARTNERS</b> If sole participant, state your work contribution. If a partnership, state name of each contributor and their contribution.	<b>RESEARCH PROCEDURE OR DESIGN PLAN</b>	<b>CONCLUSIONS</b>
<b>ACKNOWLEDGMENTS</b>		

*All posters must be self standing and no more than 36" wide/standard trifold.*



## SCIENCE FAIR SUBMISSION INSTRUCTIONS

# Reference Materials

## *Science Fair Websites*

1. California State Science Fair: Read about this science fair which has been going on since 1952! You can learn how to enter, get help with your own project, or see a directory of past projects. <http://www.usc.edu/CSSF/>
2. Cyber Fair: See sample fair projects, look through other student's examples, and see the steps involved in judging projects. <http://www.globalschoolnet.org/gsnf/>
4. Science Buddies: Use the topic selection wizard to help you figure out what science projects interest you most. Once you have a topic, get help doing research, setting up the experiments, and completing them. <http://www.sciencebuddies.org/>
5. Science Fair Central: Includes cool project ideas, a science fair handbook, reviews of students' experiments, and more from Discovery Channel School. <https://www.sciencefaircentral.com>
6. Science Fair Project Resource Guide: Samples, ideas, magazines, resources, and more. Includes a list of sites that explain the Scientific Method. <https://www.ipl.org/div/projectguide/>
7. Scientific Method: Describes the five steps of the Scientific Method that are helpful when creating a science fair project. Includes examples of wording and sample projects to explain certain steps. <https://www.discoveryeducation.com>
8. Super Science Fair Projects: Guide to projects, topics, experiments, and tips for successfully completing a science project, including the six steps of the Scientific Method. <http://www.super-science-fair-projects.com/>
9. What Makes a Good Science Fair Project?: Short guide written by a group of experienced judges for the California State Science Fair. [http://csef.usc.edu/Resources/Good\\_Project.html](http://csef.usc.edu/Resources/Good_Project.html)