

**Anne Arundel County Public Schools**



**The Secondary  
Science Fair Resource Guide**  
for Parents, Teachers, and Students



**Office of Science**

**Updated August 2014**

## Websites

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### AACPS Science Fair

<http://www.aacps.org/science>

Information and forms supporting the Anne Arundel County Regional Science and Engineering Fair

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### Intel International Science and Engineering Fair

<http://student.societyforscience.org/forms>

Contains a Rules Wizard for students beginning research projects. The wizard helps identify what forms are required.

- Completing a Science Fair Project
- Searchable Finalist Abstracts
- Student Handbook
- Master the Abstract Writing Process
- Creating an Effective Project Display
- Rules and Guidelines

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### Science Buddies

[www.sciencebuddies.org](http://www.sciencebuddies.org) (choose the Project Ideas tab)

Science Buddies offers detailed guidance and examples for serious students who want to do the best possible project.

- “How-to” information
- Ask an expert online mentoring
- Teacher resources

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### Science Buddies Advanced Project Guide

[http://www.sciencebuddies.org/science-fair-projects/competitions\\_index.shtml](http://www.sciencebuddies.org/science-fair-projects/competitions_index.shtml) (choose the Advanced Project Guide tab)

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### Preparing for Advanced High School Science Competitions

- Overview of the Top Science Competitions
- Nine Reasons to Do a High School Science Project
- How to Be Successful at a Top Science Competition
- Roadmap: How to Get Started On an Advanced Science Project
- How to Find a Mentor
- Mentoring & Coaching Advanced High School Student Research
- Roundtable on Finding an Idea for an Advanced Project
- Sample Projects from Advanced Competitions
- How to Read a Scientific Paper
- Resources for Finding and Accessing Scientific Papers
- Scientific Review Committee (SRC)
- Experimental Design for Advanced Science Projects
- Increasing the Ability of an Experiment to Measure an Effect
- Data Analysis for Advanced Science Projects
- Data Presentation Tips for Advanced Science Competitions
- Big Display Boards for Top Fairs
- Judging Tips for Top Science Competitions
- From a Judge's Perspective: Tips for a Successful Scientific Interview
- When Competition Doesn't Turn Out the Way You Want
- Documenting an Experiment with an Electronic Lab Notebook

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### Student Blogs from Advanced High School Competitions

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### What Makes A Good Science Fair Project

[www.usc.edu/CSSF/Resources/Good\\_Project.html](http://www.usc.edu/CSSF/Resources/Good_Project.html)

A website from USC that gives a lot of good tips and ideas to think about regarding what makes a good science fair project. Advice for students as well as teachers and parents is included.

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### Parent Resources to Science Fair Projects

<http://school.discoveryeducation.com/sciencefaircentral/Parent-Resources.html>

- What is the parent's role?
- How do I help my student come up with a project idea?
- How much time will we need?
- How do I help with the project?
- What are the main sticking points for students?
- What should the final project look like?
- What else can I do to help?
- Where do I get supplies?

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### Science Fair Organizer for Science Fair Coordinator

<http://school.discoveryeducation.com/sciencefaircentral/Coordinating-a-Science-Fair.html>

Find a wealth of resources for a successful science fair, from getting students on track to judging the final experiments.

- Why do a Science Fair?
- Types of Projects: Investigations and Inventions
- Science Fair Coordinator's Checklist – What should I do?
- Parent letter
- Science Fair judging criteria
- Project display checklist
- Science Fair Shopping List

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### Science Project Ideas

[www.scienceproject.com](http://www.scienceproject.com)

World's largest web site for Science Project ideas, information and support.

- Middle School project ideas (Intermediate projects)
- High School project ideas (Senior projects)

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### Science Fair Adventure

<http://www.sciencefairadventure.com/>

Science Fair projects ideas by topic.

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### Science Fair Projects

<http://www.terimore.com/>

Hundreds of science fair project ideas:

- Quick and easy science fair projects
- Science fair projects with interesting results
- Science fair project winners
- Everyone's favorite science fair projects!

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### Math Ideas for Science Fair Projects

<http://mathforum.org/teachers/mathproject.html>

[http://mathforum.org/library/drmath/sets/high\\_projects.html](http://mathforum.org/library/drmath/sets/high_projects.html)

- Includes tips on finding interesting ideas
- Topics arranged by math subjects

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### Science Fair Resource Guide

[www.ipl.org/div/projectguide](http://www.ipl.org/div/projectguide)

Resources for science fair projects. Includes tips, explanation of the scientific method, and help choosing a topic.

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### Successful Science Fair Projects

<http://faculty.washington.edu/chudler/fair.html>

Includes an overview of how to do a science fair project and additional science fair websites.

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### Science Fairs

<https://www.apa.org/education/k12/science-fair.aspx>

Information about research methods and statistics that is particularly useful for high school students.

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### Students discuss various aspects of a science fair project.

<http://www.archimedesinitiative.org/themes.html>

Student interviews on an array of insightful projects providing excellent advice from conquering fears to working through unforeseen results

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### Agricultural Ideas for Science Projects

[www.ars.usda.gov/is/kids/fair/ideasframe.htm](http://www.ars.usda.gov/is/kids/fair/ideasframe.htm)

This website offers suggestions for a wide variety of science fair projects with an agricultural theme.

- Botany
- Chemistry
- Environmental Science
- Medicine and Health
- Microbiology
- Zoology

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### Virtual Library—Science Fairs

<http://physics.usc.edu/%7Egould/ScienceFairs/>

A comprehensive list of every science fair accessible through the Web.

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### Super Science Fair Projects

[www.super-science-fair-projects.com/](http://www.super-science-fair-projects.com/)

Complete Guide to Science Fair Projects, Topics and Experiments

- Steps for Doing a Science Fair Project
- Science Fair Idea: Winning Strategies
- Science Fair: How Judges Think
- School Science Fair Projects: How to keep a Timeline
- Science Project Ideas: Science Category Outline
- Science Fair Project Ideas: Science Topic Outline
- High School Science Fair Projects: How to do Project Research
- Kids Science Fair Projects: How to Write a Project Report
- Middle School Science Fair Projects: How to Do a Presentation
- Cool Science Fair Projects: Day of the Science Fair
- Best Science Fair Projects

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### Science Fair Resource Center

<http://homeworkspot.com/sciencefair/>

Project ideas, information, books and kits

- General Science Fair Project Ideas
- Ideas by Subject
- Help
- Middle School Science Resources
- High School Science Resources

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## Resources from other Competitions

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### Junior Science & Humanities Symposia (JSHS) Program

<http://www.jshs.org/>

JSHS is sponsored by the research arm of the Department of Defense and administered in cooperation with nationwide colleges and universities. JSHS aims to prepare and support students to contribute as future scientists and engineers -- conducting STEM research on behalf of or directly for the Department of Defense, the Federal research laboratories, or for the greater good in advancing the nation's scientific and technological progress.

Contains a variety of excellent resources including preparation and presentation tips. A list of awards and scholarships is also included.

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### The Dupont Challenge Science Essay Competition

<http://thechallenge.dupont.com/>

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### Google Science Fair

<http://www.google.com/events/sciencefair/>

- Science Project Resources
- Partner Resources- especially Scientific American

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### Maryland BioGENEius Challenge

<http://www.biotechinstitute.org/go.cfm?do=Page.View&pid=71>

The premier competition for high school students that recognizes outstanding research in biotechnology.

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### Toshiba ExploraVision

<http://www.exploravision.org/>

ExploraVision is a science competition that goes beyond the typical student science competition and into what it takes to bring ideas to reality. A teacher will sponsor and lead his/her students as they work in groups of 2–4 to simulate real research and development. A teacher will guide his or her students as they pick a current technology, research it, envision what it might look like in 20 years, and describe the development steps, pros & cons, and obstacles.

## Books

### **Scientific American's The Amateur Scientist**

**Date:** 2002

For over 70 years, Scientific American's "The Amateur Scientist" have been a reliable source of winning science fair projects. Now you can get all of these columns, plus pages of supplementary material on a CD-Rom.

**Bright Science Lic; CD-Rom edition**

**ISBN:** 0970347626

### **Strategies for Winning Science Fair Projects**

**Date:** 2002 **Grades** 6–12

This resource is packed with strategies and pointers for putting together a winning science fair project. Here you'll get the nitty-gritty on a wide variety of topics, from the fundamentals of the science fair process to the last-minute details of polishing your presentation.

**John Wiley & Sons Inc.**

**ISBN:** 0471419575

## AACPS Library Media Services

To access the online databases listed below from home or a remote location go to <http://opac.aacps.org>

Click *Online Databases*.

### **EBSCO**

A collection of magazine and newspaper articles, books, and documents. Has primary sources, photos and videos.

### **ERIC documents on-line**

### **Grolier Amazing Animals**

Short articles about more than 1,000 animals of the world. Has pictures and games.

### **Image Quest**

Contains approximately three million rights-cleared images from all over the world.

### **Infobase Learning**

The World Almanac for Kids has information about many subjects: animals, people, countries, career ideas, geography, astronomy, American and world history, and many others. Includes pictures, games and puzzles.

### **PebbleGo**

Includes two science related database; PebbleGo Animals and PebbleGo Earth and Space. PebbleGo Animals is designed specifically for emergent readers and features more than 200 animal articles correlated to life science standards, animal audio and video, carefully leveled text, educational games, and innovative read-aloud capabilities. PebbleGo Earth and Space includes concepts like weather, seasons, Earth science, and space — all with the built in reading and research tools made popular with PebbleGo Animals. Leveled text, educational games, and videos support science concepts for your youngest researchers.

### **ProQuest Research Resources**

Interactive pictures of historical newspapers from the 1800s to today.

### **Sailor Research Databases**

Links to all of the Maryland public library's online databases. A wide variety of information from magazines, reference books, journals, documents, videos, and pictures.

### **SIRS Researcher & SKS WebSelect**

Encyclopedia and magazine articles, pictures, videos, biographies, general topics, current events, people, and the arts. Good primary sources. "Pro v. Con" explores both sides of current issues. Translates articles into Spanish.

### **SIRS Discoverer & Discoverer WebFind**

Good for beginning learners and researchers. Includes activities, biographies, fiction, country facts, maps, charts, pictures, science fair ideas, and lots of information about the arts, math, science, language arts, social studies, health.

### **Thomson Gale Resource Center**

Encyclopedia and magazine articles, videos, pictures, and primary sources for information on U.S. and world history, science, and literature. Translates articles into Spanish.

### **World Book Online**

English and Spanish encyclopedia, atlas, dictionary. Articles on a lot of different topics, including current and historical events, with primary sources including videos and photos.



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[www.aacps.org](http://www.aacps.org)

**Watch us on AACPS Educational Television** | Comcast & Broadstripe Channel 96 & Verizon Channel 36