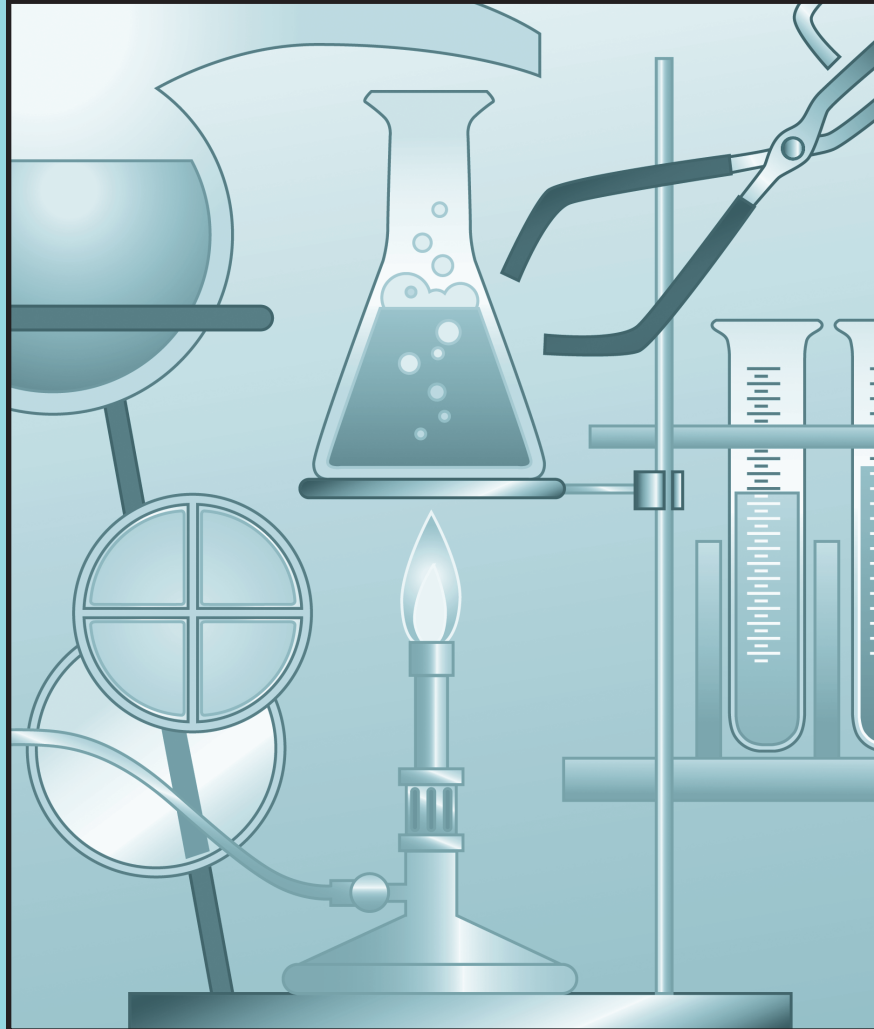


Anne Arundel County Public Schools



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



Office of Science

Updated August 2011

Websites

AACPS Science Fair

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

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

Intel International Science and Engineering Fair

www.societyforscience.org/page.aspx?pid=310

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
-

Science Buddies

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
-

Science Buddies Advanced Project Guide

http://www.sciencebuddies.org/science-fair-projects/competitions_index.shtml

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

Student Blogs from Advanced High School Competitions

Symantec-Science Buddies Special Computer Science

Award Winning Projects

What Makes A Good Science Fair Project

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.

Science Fair Studio

<http://school.discovery.com/sciencefaircentral/>

Soup to Nuts Handbook— Everything you need to know about creating a science fair project.

Project Ideas— A list of project topics to help you get started.

Links & Books— Web sites and books you can use for research.

Parents Guide 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?
-

Science Fair Organizer for Teachers

<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
-

Science Project Ideas

www.scienceproject.com

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

- Middle School project ideas
 - High School project ideas
-

Examples of Intermediate Projects by Topic

www.stemnet.nf.ca/sciencefairs/intermed.html

- Botany
 - Chemistry
 - Engineering/Physics
 - Meteorology
-

Examples of High School Projects by Topic

<http://www.stemnet.nf.ca/sciencefairs/senior.html>

- Biology
- Engineering
- Physical Science
- Earth Science/Meteorology
- Environmental Science
- Computer Science

Math Ideas for Science Fair Projects

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

http://mathforum.org/library/drmath/sets/high_projects.html

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

Science Fair Resource Guide

www.ipl.org/div/projectguide

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

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.

Science Fairs

<http://www.apa.org/education/k12/science-fairs.aspx>

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

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

Agricultural Ideas for Science Projects

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

Virtual Library—Science Fairs

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

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

Super Science Fair Projects

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

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

Resources from other Competitions

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.

The Dupont Challenge Science Essay Competition

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

Google Science Fair

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

- Science Project Resources
- Partner Resources- especially Scientific American

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



ANNE ARUNDEL
COUNTY PUBLIC SCHOOLS

**Kevin M. Maxwell, Ph.D.,
Superintendent of Schools**

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Mr. Leslie N. Stanton, Specialist in Human Relations, Anne Arundel County Public Schools, 2644 Riva Road, Annapolis, Maryland 21401.

(410) 222-5318; TDD (410) 222-5500

www.aacps.org

AACPS Educational Television
Comcast & Broadstripe Channel 96
& Verizon Channel 36

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*.

EBSCOhost Databases:

User Name: aacps

Password: profilib

EBSCO Science Reference Center

This comprehensive research database provides access to full-text science-oriented content. Topics covered include: biology, chemistry, earth & space science, environmental science, health & medicine, history of science, life science, physics, science & society, science as inquiry, scientists, technology and wildlife.

Middle Search Plus

Designed for middle school research, this database contains full-text articles from more than 140 popular middle school magazines. Included are biographies, primary source documents and an image collection of photos, maps and flags.

MAS Ultra

Designed for high school students, this database contains full-text articles from nearly 500 popular high school magazines. It also provides full text reference books, biographies, primary source documents and an Image Collection of photos, maps and flags.

Health Source

This is a database of consumer health information. Topics include the medical sciences, food sciences, nutrition, childcare, sports medicine and general health. Provides access to nearly 300 80 full text, consumer health periodicals magazines.

NewsBank:

Middle Schools:

User Name: ra-aacps2

Password: ra-middle

High Schools:

User Name: ra-aacps3

Password: ra-high

NewsBank ScienceSource Collection

(1987-Current) (High School Only): Articles, biographies, and digests explore science topics including diseases, mammals, the environment and physics.

SIRS

Customer #: aacps

Password: aacps

SIRS Discoverer

Elementary and middle school level general reference database of carefully selected full-text articles and images from newspapers, magazines and government documents. An activities section includes science and nature projects.

SIRS Discoverer WebFind

Elementary and middle school level database of Internet resources that provides access to quality websites on almost any subject. Each website is carefully selected for its research value, age-appropriateness, credibility, and reliability.

SIRS Issues Researcher

Researcher is a general reference database for middle and high school students. Full-text articles covering social, scientific, health, historic, business, economic, political and global issues are included. Articles and graphics are carefully selected from domestic and international publications with regard to content and age appropriateness.

SIRS SKS WebSelect

This online database of internet resources provides secondary school students carefully selected, reliable and credible Internet sources on many issues and topics.

World Book Online

User Name: aacps

Password: library

World Book Student

Includes articles of the World Book Encyclopedia, a Biography Center, dictionary, atlas, an extensive multimedia collection, thousands of editor-selected Web sites, correlations to curriculum standards, and much more.

World Book Advanced

Designed for high school and college students; includes encyclopedic, multimedia, e-book, and primary source databases, fully integrated in a single search.

World Book Discover

Includes reference articles, text-to-speech capabilities, learning and life skills activities, research tools, multimedia, and interactive video.