



(T-shirt design)

Welcome to State Science Day 2009 Registration *Booklet

Print out and read this entire booklet BEFORE
you complete your registration for State Science Day.

In this order you will find:

- 1.** A **flow chart** to help you register. Also available online at
<http://www.ohiosci.org/ssdflowchart2009.htm>
- 2.** Critical background information that you must print out and read.
- 3.** A listing of **judging categories** with codes and sub-codes that you must use
- 4.** A link to the roster of the \$2.5 million in **Scholarships and Sponsored Awards**
<http://www.ohiosci.org/SSDspAwdBooklet2009.pdf>
- 5.** A letter to print out and give to your school's principal by Tuesday to recruit judges.

*Please **print out and bring this booklet to State Science Day.**

Continue to watch the State Science Day website
for updates including maps:

<http://www.ohiosci.org/ssd.htm>

How to Register for State Science Day

May 9, 2009
Hosted by The Ohio State University

GOTO: <http://ohiosci.org/ssdflowchart2009.htm>

Step 1.

Open, print out and READ the ENTIRE document:
<http://www.ohiosci.org/SSDReg2009.pdf>

Please ... READ SEVERAL TIMES.

Step 2.

Then go to this website
<http://www.ohiosci.org/SSDRegForm2009.pdf>
fill out the forms online and then PRINT OUT THESE FORMS.

Mail your
application,
payment and all
forms

to the Academy
postmarked by
TUESDAY
after your
District Science
Day.

**QUESTIONS
for The Ohio
Academy of
Science?**

Call 614-488-2228
or email
oas@iwaynet.net

Step 3. Assemble (DO NOT STAPLE) the following information

IN THIS ORDER:

1. Registration Form. GOTO <http://www.ohiosci.org/SSDRegForm2009.pdf> Fill in online and print out.
Be sure to consider signing up for Scholarships and Sponsored Awards and ordering a T-Shirt.
2. Consent & Release Form with original signature(s). GOTO <http://www.ohiosci.org/consent.pdf>
3. Abstract (Have your English teacher proof.)
4. Form 1: Checklist for Adult Sponsor / Safety Assessment Form
5. Form 1A: Student Checklist (including Research Plan)
6. Form 1B: Approval Form
7. Form 1C: Regulated Research Institutional/Industrial Setting Form if needed
8. Form 2: Qualified Scientist Form if needed
9. Form 3: Designated Supervisor Form if needed

Additional forms may be required IF YOUR PROJECT INVOLVES ANY OF THE FOLLOWING. Human Subjects; Nonhuman vertebrate animals including observation projects; Potentially hazardous biological agents including microorganisms, recombinant DNA technologies, or human or animal fresh tissues, blood or body fluids; Controlled substances and alcohol and tobacco; Hazardous substances or devices including chemicals, equipment, firearms, radioactive substances and radiation.

10. Form 4: Human Subjects and Informed Consent Form if needed
11. Form 5: Vertebrate Animal Form (5A and 5B) if needed
12. Form 6A: Potentially Hazardous Biological Agents Form if needed
13. Form 6B: Human and Vertebrate Animal Tissue Form if needed
14. Form 7: Continuation Projects if needed
15. **\$50 registration fee** plus T-shirt order payable to The Ohio Academy of Science.
You may pay by credit card online at: http://www.ohiosci.org/store/state_science_day.html
16. Self-addressed, stamped postcard for acknowledgement of receipt of registration.

You will have completed
Forms 1, 1A, 1B etc. and others if
needed BEFORE your research.

SEE:

<http://www.societyforscience.org/isef/document/>

Please KEEP ORIGINALS.
MAIL COPIES.

Step 4.

Mail
to the Academy
postmarked by
TUESDAY
after your
District Science Day.

NOTE:

To acknowledge receipt
of your registration, please
enclose a stamped, self-
addressed postcard and return
with your registration.

WE CANNOT verify your
registration
by phone.

Your registration will not be accepted without
payment, ALL REQUIRED forms, and signatures.

**DEADLINE: *Mail FIRST CLASS only,
POSTMARKED by TUESDAY after your District Science Day to:**

SSD Registration
The Ohio Academy of Science
P.O. Box 12519
Columbus OH 43212-0519

***ABSOLUTELY DO NOT USE**
Express, Certified or Registered Mail

**QUESTIONS? or
payment problems?**

Call 614-488-2228
or email oas@iwaynet.net

More than \$2.5 Million in Scholarship and Awards ...



Congratulations!

You have been selected to exhibit
your student research or technology design project
on
Saturday, May 9, 2009
at
State Science Day

WHAT IS STATE SCIENCE DAY? First held in 1949, the 61st Annual State Science Day is sponsored by The Ohio Academy of Science, American Electric Power, The Ohio Environmental Education Fund and Boehringer Ingelheim Roxane, Inc. State Science Day will be hosted by **The Ohio State University**, Columbus, on May 9, 2009. The academic equivalent of a State athletic championship, this year's event is one of the largest of its kind in the nation. *State Science Day is the pinnacle of student-originated, inquiry- and technology-designed based education for STEM students.*

When & Where: Friday, May 8 for optional project setup encouraged. Saturday, May 9 for final project setup, judging and awards at the French Field House and St. John Arena, The Ohio State University. See the following website:

<http://ohiosci.org/ssd.htm>

Advance Registration REQUIRED. POSTMARKED by Tuesday!

Advance registration is required. Registration for State Science Day will be accomplished by use of "type in the blank" online Adobe PDF forms posted on the Academy's website. **YOU MUST GO TO THE WEBSITE** (at home, school or public library) **TO REGISTER**, but **BEFORE you go to the "online form"**, go to this site, print it out and read carefully:

<http://www.ohiosci.org/SSDReg2009.pdf>

THEN, access the **Registration Form** at the following site:

<http://www.ohiosci.org/SSDRegForm2009.pdf>

Registration by mail must be POSTMARKED by Tuesday, immediately after your District Science Day. Mail registration and payment to the Academy. **REMINDER:** An abstract and several special forms **MUST BE ENCLOSED**. **Please do not staple or paperclip your information together.** Mail flat, **FIRST CLASS only**. Do not fold. **DO NOT USE EXPRESS, CERTIFIED, REGISTERED or RECEIPTED MAIL.** Be certain to sign up for sponsored awards and scholarships. You may also purchase T-shirts or sweatshirts. See the directions on the website and on the following pages for completing your registration form.

Fees: Individual Registration fee is **\$50.00 per person**. Each team member must pay \$50. **Make checks payable to The Ohio Academy of Science** (Returned check fee: \$30.00.) or charge fees on VISA or MasterCard only at the Academy's online store:

http://www.ohiosci.org/store/state_science_day.html

When to Arrive: French Field House will be open on Friday, May 8 from 3:00-8:00 PM. If you are staying nearby on Friday night or if you live near Columbus, please set up your project on Friday **BEFORE 8:00 PM** to avoid the long lines on Saturday. Please do not arrive prior to 3:00 PM on Friday. To help reduce long unloading lines for those arriving on Saturday, please arrive during the time period specified: See map at <http://www.ohiosci.org/dsd1.htm>

7:00-7:45 AM: Districts 3, 6, 7, 8 & 10
7:45-8:15 AM: Districts 4, 9, 12 & 17
8:15-8:45 AM: Districts 2, 5, 11, 13, 14, 15 & 16

Brief Schedule

Friday, May 8th

3:00-8:00 PM Optional project set-up time

Saturday, May 9th

7:00-8:45 AM Final project set-up
9:00 AM Judging begins
12:30-2:00 PM Open to the Public
2:00-5:00 PM Award ceremonies

Scholarship & Sponsored Awards: Academy volunteers will place judging receipts on your project after you have been judged. The judges may not talk with each student who registered for the award. Students may be eliminated for consideration by a sponsored awards judging team based on the team's interpretation of their criteria. Sponsored awards judges may also make awards to students who have NOT registered for their award. *The Ohio Academy of Science is not responsible for disqualification of any project by a sponsor, for a student NOT being interviewed, for any sponsor who does not appear to judge, or for any printing errors in the listing.* See <http://www.ohiosci.org/SSDRegForm2009.pdf>

Official State Science Day T-Shirts: Be sure to order your State Science Day T-shirt or sweatshirt when you register and include payment. The color design is sure to be a real hit. T-shirts \$15; sweatshirts \$20. Onsite prices: T-shirts \$20; sweatshirts \$25. Shirts will not be mailed; they **MUST** be picked up at State Science Day.

How to get to the French Field House and St. John Arena at The Ohio State University: See maps and directions on a link at the following website: <http://www.ohiosci.org/ssd.htm>

Unloading & Parking: The students should unload their projects on the south side of the arena off Woody Hayes Drive. Look for a sign. Judges should park on the north side of the arena off Lane Avenue. Parents can park in the parking garages across from Woody Hayes Drive for a fee or in the surface lot surrounding the OSU stadium free of charge.

Space Assignment: Space assignments will be emailed and posted on the web after April 27th. See <http://www.ohiosci.org/ssd.htm>

Housing: Information on hotels and motels in Columbus is available at: <http://www.experiencecolumbus.com/>

School Awards: Schools with four or more registrants will be considered for the Harold C. Shaw Memorial Outstanding School Award. If you register and are unable to exhibit your project, your school will be ineligible for this award unless you are excused from participation by calling Mrs. Jaimie Crawford at 614-488-2228 by Monday, April 20, 2009.

Parents, Siblings, Teachers: Judging is from 9:00 AM until 12:30 PM. During that time the exhibit area is reserved for students and judges. A **special meeting for parents** is planned for **10:00 AM** in St. John Arena.

Special Judging Requests: Occasionally students have conflicting events. Although we cannot accommodate requests for judging on other days, we will try to judge projects early (9-10 AM) or late (11-12 noon) if you let us know in advance. Call Mrs. Jaimie Crawford at 614/488-2228. **Please call by Monday noon, April 20.** Please note that you will not be eligible for sponsored awards or scholarships if you are not present the entire time, but we will see that you receive regular judging.

Emergency Number

Please bring these pages to State Science Day, but leave the following number at home in case of an emergency and someone needs to reach you at State Science Day:

614-292-2121
The Ohio State University
Public Safety Office

Visit the State Science Day Web Site:

<http://www.ohiosci.org/ssd.htm>

Email questions only to: oasresponse@iwaynet.net

Excerpt from Science Day Standards

<http://www.ohiosci.org/sds.htm>

ELIGIBILITY FOR STATE SCIENCE DAY:

The Junior Academy Council assigns State Science Day participation quotas for each District science day based equally on the percent superiors earned by projects of that district at the most recent State Science Day and on the number of District science day participants at the previous year's District science day. Team scores shall be converted to the 40-point scale. Projects of students that have received a superior rating at the District level will fill the District quotas to attend State Science Day by the following policy: 40 points for grades 12 through 7; 39 points for grades 12 through 7; 38 points for grades 12 through 7; 37 points for grades 12 through 7; 36 points for grades 12 through 7.

Lottery: If there are more student projects than spaces available within the quota, a lottery shall be used to determine the projects selected. E.g. if you have twenty (20) 7th graders each with 37 points but only ten (10) slots, you would hold a lottery to determine the ten (10) projects to fill the quota.

Alternates shall be selected according to the above policy too. The District quota shall be filled equally based on the above policy for both individuals and teams participating in the District Science Day. Duplicate projects from the same school will not be accepted.

REGISTRATION:

Registration forms must be typed on-line and printed using the online Adobe PDF file. Fill out all sections of the registration form. Illegible or improperly completed forms may be disqualified. Hand-written registration forms will not be accepted and will be disqualified.

See: <http://www.ohiosci.org/SSDRegForm2009.pdf>

Registration forms with payment to The Ohio Academy of Science must be mailed **FIRST CLASS** (POSTMARKED) by the TUESDAY immediately after your District Science Day.

ABSOLUTELY DO NOT USE EXPRESS, CERTIFIED, REGISTERED or RECEIPTED MAIL.

Late postmark entries are ineligible and will be returned.

Use your formal name. No nicknames, please. Individuals commonly using their middle name should give their first initial and follow it with their middle name in the first name field.

ALL students MUST complete a Checklist for Adult Sponsor (1), Student Checklist including Research Plan (1A), and Approval

Form (1B) in advance of their research. Copies of these FORMS MUST BE ENCLOSED with the registration form. Students with a project involving research risks or issues and special protocols MUST ALSO ENCLOSE ALL ADDITIONAL REQUIRED FORMS. See required research forms: <http://www.sciserv.org/isef/students/wizard/index.asp>

A one-page (8 1/2 x 11) abstract of your project MUST BE ENCLOSED. See how to write an Abstract, below. Make sure your name is on your abstract. Have your English teacher proof.

A consent and release form MUST BE COMPLETED, SIGNED AND ENCLOSED.

FEES: The registration fee is \$50.00 per person (each team member must pay \$50). A fee of \$30.00 will be charged for returned checks. Checks should be made payable to The Ohio Academy of Science. Fees may also be charged on VISA or MasterCard at the Academy's online store:

http://www.ohiosci.org/store/state_science_day.html

REQUIRED RESEARCH FORMS:

See: <http://www.societyforscience.org/isef/document/>

All student research projects require a research plan. Research plans and certain special protocols must be approved before experimentation if the student research projects involve one or more of the following: Human Subjects; Non-human vertebrate animals including observation projects; Potentially hazardous biological agents including microorganisms, recombinant DNA technologies, or human or animal fresh tissues, blood or body fluids; Controlled substances and alcohol and tobacco; Hazardous substances or devices including chemicals, equipment, firearms, radioactive substances and radiation.

The Intel International Science and Engineering Fair forms [<http://www.societyforscience.org/isef/document/>] and procedures of a particular year must be used by all students who participate in District and State Science Days of the same year.

HOW TO WRITE AN ABSTRACT:

Abstracts of 250 or fewer words are required and must be submitted with applications for both District and State Science Days. The abstract must contain a heading that includes a project title and name(s) of the author(s). The heading does not contribute to the word count.

The purpose of an abstract is to provide a summary of the project that will inform interested individuals of the contents. The wording must be written in a manner that any scientifically minded individual, who may not be familiar with the topic, can quickly understand the project's important points.

Summarize in a few sentences:

1. Background information necessary to understand the project and its importance
2. The problem that was investigated and the hypothesis
3. Outline of the materials and methods used in the actual experimentation
4. Summary of the results obtained from experimentation
5. The conclusions drawn from results
6. The importance or potential applications that the research offers

Do not be concerned with including all of the details in the abstract. The key point to remember when writing an abstract is to keep the wording brief and concise. Use complete sentences. Use simple declarative sentences. ***Avoid personal pronouns like "I" and "My."** Abstracts should provide only information essential to understand the project's basic points and importance. Omit needless words, especially adjectives and adverbs that have no statistical reference or validity. ***Have your English teacher proof your abstract.**

Oral Presentation

He or she must be able to give a clear and concise oral presentation of his/her project, to answer questions, and to define any terms used. This brief oral presentation should completely summarize the project. The quantity and quality of knowledge attained will be evaluated by this speech. If a question is not clear, the participant should ask the judge to rephrase it. Although the student

participant should practice his or her presentation several times, he or she should not attempt to memorize a formal speech.

Research Report Required

Each project must include a research report covering in detail all of the work, references consulted, and acknowledgment of assistance received. The Ohio Academy of Science recommends the following format for sections of the research report: Title page including the date and name of student; Table of contents [optional for reports fewer than 10 pages]; A single paragraph abstract with project title and name of student (250 words or fewer); Introduction-(background, problem and hypothesis); Methods and materials used to study problem; Results including an analysis of collected data with graphs, tables, photographs and diagrams to illustrate investigation; Discussion including conclusions and implications for further research; References or Literature Cited. Do not use the term bibliography.

DISPLAY AND SAFETY REGULATIONS.

Projects may be set up between 3:00 PM and 8:00 PM, Friday, or 7:00 AM and 8:45 AM, Saturday morning. Projects must be in place for judging by 9:00 AM. Many students should plan to arrive Friday, since nearly 1,200 projects are expected.

Projects must remain on display until 2:00 PM on Saturday.

Please do not bring your own table; table space will be provided for all students. **FREESTANDING FLOOR PROJECTS ARE NOT PERMITTED AT DISTRICT OR STATE SCIENCE DAYS.**

Chairs are not permitted unless you have a medical excuse.

Do not use cell phones, headphones, iPods® or similar electronic devices during judging from 8:45 AM-12:30 PM or until a public announcement is made that judging is done. Not only is it rude to judges, you may be disqualified.

The student exhibitor's name must be displayed on the project. School identification is permitted.

Expectations of Physical Display

A display consists of one lightweight, usually tri-panel, bi-fold, single-sided poster board with appropriate information (including graphs, data tables, drawings, sketches, diagrams or photographs), extra copies of an abstract for judges, project research notebook, research reports, research plans and documentation of research protocols. **Displays at District and State Science Days are strictly poster format only.** Each project shall be limited to one, single-sided poster board. This means that the physical models, samples of research materials and/or purely advertising/decorative items (whether glued or affixed in any manner to the poster or not) **cannot be displayed** and shall not be brought to District and State Science Days.

Tabletop display dimensions shall not exceed 36" (91 cm) wide by 30" (76 cm) deep. The top of the display shall not be more than 85" (216 cm) above floor level or 55" (140 cm) above a 30" high table. Freestanding floor projects are not permitted at District and State Science Days. Extension of a project beyond the stated limits will result in dismantling or severe modification of the display, and may disqualify the student's participation. Note that the physical display size at District and State Science Days is smaller than the size allowed at the International Science and Engineering Fair.

Safe Project Displays

Project displays shall not involve materials or elements that might be dangerous to exhibitors, judges or onlookers. Explosives, toxic elements, injurious chemicals or gases, open flames, or any unprotected moving parts, etc. may be necessary in the research project. The experimenter should always exercise the greatest care and conduct these phases of the work under qualified supervision and follow all protocols required by the Rules of the Intel International Science and Engineering Fair. However, these materials or elements cannot be on the display poster, on the display table, or under the table, at a science day.

Expectations of Display: Present Results

Students are expected to present the results of research. They are not expected to perform, demonstrate or repeat an experiment

for judges or visitors. Students should have already done an experiment or conducted many research trials and thus have adequate results in the form of charts, graphs, data tables, and a research notebook—all recorded with dates—which should be with the project display. **Equipment used in research is not needed for a presentation and must be left in the laboratory or at home.** Use photographs or drawings of equipment on the poster boards, in the technical report and in the research notebook to document and explain the equipment used. Items on the display backdrop, or poster boards, should be used as visual cues to keep the student's oral presentation to the judges on track or to refer to when responding to questions. The whole project, in simple form, should be visible on the poster boards. Abstracts, a research notebook, technical reports, and additional data should be in folders or for immediate reference.

Equipment

Use commercial equipment especially when it would be impossible to conduct the research without it. However, if such equipment is used, the participant must be prepared to describe its operation, function and the reason(s) for its use. **Research equipment may not be displayed at District and State Science Days.** You may use only drawings, sketches, diagrams or photographs.

Items Allowed at Project with the Restrictions Indicated

Posters should display an abstract and data tables, diagrams, charts, photographs and graphs that *summarize results*. Research notebooks, ***research reports**, research plans and documentation of research protocols are expected and may be in notebooks or folders on the table for use by science day officials and judges. Information such as postal, web and e-mail addresses, telephone and fax numbers is allowed only for the exhibitor. The only photographs or visual depictions of identifiable or recognizable people allowed are photographs of the exhibitor, photographs taken by the exhibitor (with permission of individuals received), or photographs for which credit is displayed (such as from magazines, newspapers, journals, etc.). ***REQUIRED**

Battery-powered computers may be used only for simulation, modeling, animation or data display integral and essential to the project results and not for general PowerPoint™ presentations.

Items not allowed at Project Display

If an item is not listed in the paragraphs above it is not permitted at District or State Science Days. Scientific equipment and supplies, other apparatus or research paraphernalia are not permitted at a display at District or State Science Days.

[See <http://www.ohiosci.org/not.htm>]

Neat Displays

Displays should be neat, attractive, and stable but readily portable. Refrain from using metal, plywood, pegboard, Masonite™, string, wire, thin tape, metal or plastic pipe, flimsy construction materials or props. Light weight, tri-fold foam core or poster board, for example, joined securely with tape or Velcro™ strips makes a lightweight yet rigid, readily portable display. Avoid the use of small print, indefinite colors, and crowded elements. These detract from the effectiveness of the project.

Avoid Vague or Cute Project Titles and Trick Names

Project titles should be succinct, *descriptive of the project* and reflect the research objective or question. Project titles should enable the reader to determine what was studied in the project. Often colonated titles work well for student research projects. Colonated titles use one to five short, attractive words first, followed by a colon and an added descriptive phrase.

[For example: Artificial wetlands: A model for microbial sequestration of copper; Battle of the brains: Which gender has the most effective short-term memory?; Bottled spring water: Can you taste the difference?; Breaking the mold: The effects of pozzolanic admixtures on the compressive strength of concrete; Bursting the bubble: Antibacterial soap vs. regular soap; Corrosion: The effects of certain liquids on metals; Cryogenics: Determination of the cell membrane breaking point; Feathers, fur or fat: which will keep an animal the warmest?; Golf balls: Rebound height vs. distance; Get a grip: Hand grip strength versus forearm circumference; Handedness: why we choose our left or right hand]

✓ REGISTRATION CHECKLIST

___ 1. Print out the following booklet and READ SEVERAL TIMES.

See: <http://www.ohiosci.org/SSDReg2009.pdf>

___ 2. Registration forms must be typed on-line and printed using the "type in the blank" Adobe PDF form. Fill out all sections of the registration form. Illegible or improperly completed forms may be disqualified. Hand-written registration forms will not be accepted and may be disqualified. Print out the form after filling out all parts.

See: <http://www.ohiosci.org/SSDRegForm2009.pdf>

___ 3. Sign up for Scholarships and Sponsored Awards. See list at: <http://www.ohiosci.org/SSDspAwdBooklet2009.pdf>

___ 4. Enclose Form 1 Checklist for Adult Sponsor, Form 1A Research Plan and Research Plan Attachment, and Approval Form (1B). These **FORMS MUST BE ENCLOSED** with the registration form. Students with a project involving research with one of the seven risks or issues and special protocols **MUST ALSO ENCLOSE ALL ADDITIONAL REQUIRED FORMS**. See required research forms. **DO NOT SEND ORIGINALS** except for the signed Consent & Release Form and basic application form.

___ 5. A one-page abstract with project title and your name.

___ 6. A consent and release form **MUST BE COMPLETED, SIGNED AND ENCLOSED**. Form available online at: <http://www.ohiosci.org/consent.pdf>

___ 7. Pay registration fee and purchase shirts if desired. The registration fee is \$50.00 per person (each team member must pay \$50). A fee of \$30.00 will be charged for returned checks. Checks should be made payable to The Ohio Academy of Science. Fees may also be charged on VISA or MasterCard. See the Academy's online store at http://www.ohiosci.org/store/state_science_day.html

___ 8. Mail Registration forms **FIRST CLASS**, flat with payment to The Ohio Academy of Science **POSTMARKED by the TUESDAY immediately after your District Science Day**.

ABSOLUTELY DO NOT USE EXPRESS, CERTIFIED, REGISTERED or RECEIPTED MAIL. Only use FIRST CLASS.

Late postmarked entries are ineligible and will be returned.

The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519

Do not use short, vague, trick, pet, "cute or comic" names for project titles, experimental organisms, or specimens. Identify research subjects or individuals in sampled populations by letters or numbers.

JUDGING:

Judging will begin at 9:00 AM on Saturday, May 9, 2009.

Students must remain with projects until receiving a card from the office stating that the judging of their project has been completed. Since projects may be rejudged, exhibitors should not assume that their judging has been completed until this notification has been received. If a student is absent when the judges arrive, the project may be disqualified.

Projects will be judged according to the following criteria: knowledge achieved, use of the scientific method, clarity of expression, originality and creativity, and teamwork (teams only).

Ratings will be as follows:

Individual: Superior 36-40, Excellent 24-35, Good 12-23 points
Teams: Superior 45-50, Excellent 30-44, Good 15-29 points

Two judges will judge each project for the Ohio Academy of Science rating. If each judge grants a total score within any one rating category (Superior, Excellent, or Good), that specific rating (Superior, Excellent, or Good) will be granted to the student and no rejudging is permitted.

Rejudging is automatic and is permissible only if all three of the following conditions apply:

1. the judges' final ratings are in different rating categories,
2. the average is in the lower category, and
3. if the judges differ in their total points by more than five points.

ADDITIONAL INFORMATION:

Please bring ten **extra copies** of your abstract. These should be kept in a folder at your project and offered to all judges.

Electricity will NOT be available.

Team Projects

Team Projects shall be accepted at all District Science Days. A revised 50-point rating scale will be used to evaluate team projects. Individual and team projects shall be considered equally when District science day directors select projects to fill quotas to attend State Science Day.

A team shall consist of a maximum of three students. A District science day may allow a maximum of two students per team due to local limitations. In addition, teams may not have more than three members at a local science day and then eliminate members

to qualify for District or State Science Day. In a given academic year, a team project cannot be converted to an individual project or vice versa. In a subsequent academic year, a continuing project may add or delete members as long as at least one student from the original project is retained and the maximum number of team members is not exceeded. In a subsequent academic year, a continuing team project may be converted to an individual project or vice versa.

All currently active team members must be present to be judged at District and State Science Days or the project will be disqualified. All team members are required to belong to the same school and same grade brackets (a) grades 5-6, (b) grades 7-8, and (c) grades 9-12. Each team shall appoint a team leader to coordinate the work and act as the primary spokesperson. However, each member of the team should be able to serve as spokesperson, be fully involved with the project, and be familiar with all aspects of the project. The final work should reflect the coordinated efforts of all team members.

A supplemental sheet of the contribution each member made toward the team project shall be signed by each member and shall be displayed with the project and included in the research notebook, project report and with applications to attend District and State Science Days. Full names of all team members must appear on the abstract and registration forms. The judges should ask each team member for a one or two sentence description of what they consider to be their most important contribution.

ANY QUESTIONS?

Please read the rules first, THEN CALL THE ACADEMY: 614-488-2228 or email oasresponse@iwaynet.net

This **excerpt** from the general STANDARDS FOR SCIENCE DAYS incorporates all actions of the Junior Academy Council as of September 2008.

The COMPLETE standards are available on the web at: <http://www.ohiosci.org/sds.htm>

Please direct all **policy** questions to Mr. Lynn E. Elfner- oas@iwaynet.net
614-488-2228

Please direct all **administrative detail** questions to Mrs. Jaimie Crawford - oasresponse@iwaynet.net
614-488-2228

LIST OF JUDGING CATEGORIES

AND SUBCATEGORIES WITH CODES

Please use these **codes** and subcodes on the Registration Form.

BEH—Behavioral and Social Sciences (Human)

CLIN—Clinical Psychology
COGN—Cognitive Psychology and Learning
PHYS—Physiological Psychology
SOCI—Sociology

HAZA—Hazardous and Solid Waste
NOIS—Noise Pollution
TOXI—Environmental Toxicology
WATE—Water Pollution and Water Quality

BIO—Biochemistry

CELL—Cell and Molecular Biology
GENE—Genetics, Genomics, Biotechnology
META—Metabolism
STRU—Structural Biochemistry
GBIO—General Biochemistry

MAT—Mathematics

ALGE—Algebra
ANAL—Analysis
COMP—Computer Mathematics
GEOM—Geometry
PROB—Probability and Statistics

BOT—Botany

ECOL—Plant Ecology
MORP—Plant Morphology and Development
PHYS—Plant Physiology (Molecular, Cellular, Organismic)
SYST—Plant Systematics and Evolution

MED—Medicine and Health Sciences

ANAT—Anatomy
CONS—Consumer Products Testing
DENT—Dentistry, Dental Health, Teeth
DISE—Disease Diagnosis and Treatment
EARS—Ear, Eye, Nose, Throat
EPID—Epidemiology
FORE—Forensics
GENE—Genetics, Genomics, Biotechnology
MOLE—Molecular Biology of Disease
NUTR—Nutrition, Eating, Food, Vitamins, and Supplements
PHYS—Physiology and Pathophysiology

CHE—Chemistry

ANAL—Analytical Chemistry (including Consumer Products)
INOR—Inorganic Chemistry
ORGA—Organic Chemistry
PHYS—Physical Chemistry
GENE—General Chemistry

COM—Computer Science

ALGO—Algorithms, Data Bases
ARTI—Artificial Intelligence
BIOI—Bioinformatics
NETW—Networking and Communications
SCIE—Computational Science, Computer Graphics
SOFT—Software Engineering, Programming Languages
SYST—Computer Systems, Operating Systems

MIC—Microbiology

ANTI—Antibiotics, Antimicrobials
BACT—Bacteriology
GENE—Genetics, Genomics, Biotechnology
IMMU—Immunology
MOLE—Molecular Biology
VIRO—Virology

EAR—Earth and Space Sciences

ASTR—Astronomy and Planetary Science
CLIM—Climatology, Weather
GEOC—Geochemistry, Mineralogy, and Soils Science
HIST—Historical, Paleontology
PHYS—Geophysics
TECH—Tectonics

PHY—Physics

ACOU—Acoustics and Sound
ATOM—Atoms, Molecules and Solids
BIOL—Biological Physics
ELEC—Electronics
ENER—Energy
INST—Instrumentation
MAGN—Magnetics and Electromagnetics
MOTI—Motion, Machines, Action/Reaction, and Friction
NUCL—Nuclear and Particle Physics
OPTI—Optics, Lasers, and Masers
THEO—Theoretical Physics

ENG—Engineering

AERO—Aerospace & Aeronautical Eng. and Aerodynamics
BIOM—Biomedical Engineering
CHEM—Chemical Engineering
CIVI—Civil Engineering and Construction Engineering
CONS—Consumer Products Testing
ELEC—Elec. Eng., Computer Eng., Controls, and Robotics
MATE—Materials, Composites, Polymers, and Membranes
MECH—Mechanical Eng., Thermodynamics, Dynamics, and Solar
MFG—Manufacturing

ZOO—Zoology

ANAT—Anatomy, Development, and Evolution
BEHA—Behavioral (Animal) and Neural Biology
CELL—Cell Biology
ECOL—Ecology and Population Biology
ENTO—Entomology, Insects, and Other invertebrates
PHYS—Physiology

ENV—Environmental Sciences

AIRP—Air Pollution and Air Quality
ECOL—Ecology
ENGR—Environmental Engineering



Over \$2.5 Million in Scholarships and Sponsored Awards

STATE SCIENCE DAY 2009

The Ohio Academy of Science expresses its appreciation to the more than **100 sponsors** of scholarships and awards at State Science Day. Valued at **\$2,545,201**, this list includes college scholarships, trips, cash, and bond prizes for students.

Find the complete roster at:

<http://www.ohiosci.org/SSDSpAwdBooklet2009.pdf>

You must go to the above link and print out the eight page booklet in order to sign up for awards and/or scholarships.



Please print this page and give to your Principal by Tuesday.

The OHIO ACADEMY of SCIENCE

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Fostering curiosity, discovery and innovation to benefit society.

March 2009

Dear Principal:

CONGRATULATIONS!

At least one your students has been selected to exhibit at **State Science Day** on Saturday, May 9, 2009, at The Ohio State University. **This is equivalent to participation in a State-level athletic competition.** This is an honor for your student(s), you, your school and community. The success of this event depends on the recruitment of hundreds of qualified judges. **We expect participation of teachers as judges as outlined in our policy below.** Teachers will judge with a partner from industry, higher education, or government.

All schools should take this event as seriously as they do State basketball finals. Except this event has more influence on the future success of students than basketball.

Please assure us that teachers from your school will judge this year by having them sign up online at

<http://www.ohiosci.org/ssdjudge.htm>

The first judge should be a science or math teacher, and at least one half of the required judges supplied should be teachers of science or math. This policy may be interpreted as follows:

Number of Students

Number of Judges from Participating Schools

1-5

one science or math teacher

6-10

one science or math teacher and one other professional who may be a teacher

11-15

two science or math teachers and one other professional who may be a teacher

Full details on State Science Day, including the space assignments for students, will be posted after April 27 at <http://www.ohiosci.org/ssd.htm>

We look forward to seeing your teachers and your students at State Science Day on Saturday, May 9, 2009, at The Ohio State University.

Sincerely,

Lynn E. Elfner

Mr. Lynn E. Elfner
Chief Executive Officer