



AMERICAN METEOROLOGICAL SOCIETY

45 BEACON STREET, BOSTON, MA 02108-3693 U.S.A.

TEL: 617-227-2425
FAX: 617-742-8718
E-MAIL: amsinfo@ametsoc.org
WEB: www.ametsoc.org

KEITH L. SEITTER, EXECUTIVE DIRECTOR
E-MAIL: kseitter@ametsoc.org

Dear Fair Director:

We are happy to support your upcoming Intel ISEF affiliated science fair. Enclosed please find two Certificates of Outstanding Achievement for creative scientific endeavor in the areas of atmospheric and related oceanic and hydrologic sciences. The Certificates should be awarded to student projects in grades 9, 10, 11, or 12 unless exhibits in those grades are less meritorious than junior division exhibits.

If there is an AMS local chapter in your area, you may contact them regarding selection of winners, signing certificates, and presenting them to the winners. An AMS Chapter Directory complete with contact information may be found on the AMS Web site at <http://apps.ametsoc.org/chapters.cfm>. You may appoint a local meteorologist to act as a judge when it is not possible for a local AMS chapter to sponsor a judge for your fair. The Certificates should be made available at the time of judging for the judges to sign, date, and fill in the name of each winning exhibitor.

Each year the AMS publishes the names of science fair winners in the December issue of the *Bulletin of the American Meteorological Society (BAMS)*. We encourage you to submit a summary of winners when your fairs have ended. The summary should include the name of the fair, name(s) of the fair winner(s), school and grade attended, and project title. Please mail or e-mail (preferred) the summary by August 1st to:

Erica Callahan

AMS
45 Beacon St.
Boston, MA 02108-3693
sciencefair@ametsoc.org
617-742-8718 fax

Best wishes for a successful science fair.

Sincerely,

Katelyn England

Member Services

Enclosure: two certificates



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

Fall 2017

Dear Science Fair Director,

In preparation for the 2018 ISEF-affiliated science fairs, the American Psychological Association (APA) Education Directorate is pleased to award one certificate recognizing outstanding research in psychological science under the category of behavioral and social sciences or any category related to psychology (e.g., animal sciences, biochemistry, computer science, environmental science, mathematical science, medicine and health). To provide guidance to your judges, we are also enclosing a scoring guide/rubric that offers some specific criteria they could consider when judging these projects. Should you need another certificate (e.g., if the winning project is a team project), please contact yhill@apa.org and we can send a PDF of the certificate for your use.

The Chair of the Awards Committee or the Regional Fair Director is asked to fill in the name of the award winner on the certificate, as well as the affiliated fair name and date, and present the certificate to the winner at the awards ceremony or during the awards announcement. An acceptance form can be found online at <http://forms.apa.org/ed/rsf/>; the form should be completed by either the fair director or the award recipient as soon as possible or no later than one month after the science fair.

APA, located in Washington, DC, is the world's largest association of psychologists. APA's membership includes more than 115,700 researchers, educators, clinicians, consultants and students. Through its divisions in 54 subfields of psychology and affiliations with 60 state, territorial and Canadian provincial associations, APA works to advance the creation, communication and application of psychological knowledge to benefit society and improve people's lives.

If you have any questions, please contact Yvonne Hill, Program Officer, Office of Precollege and Undergraduate Programs, at yhill@apa.org or (202) 336-6076.

Enclosures

Scoring Guide/Rubric
APA Award for Achievement in Research in Psychological Science
(ISEF Affiliated Regional Science Fairs)

Use the criteria below to score each science project. The total possible points for each project is **100** points. Use your best professional judgment to score each project.

CRITERIA FOR SCORING ENTRIES / PROJECTS

Creative Ability (30 points possible)

- Does the project show creative ability and originality in the questions asked?
- Does the research support the investigation and help answer a question in an original way?
- Does the research promote an efficient and reliable method for solving a problem?

Subtotal _____

Scientific Thought (30 points possible)

- Is the problem stated clearly and unambiguously?
- Is the problem sufficiently limited to allow plausible attack?
- Is there a procedural plan for obtaining a solution?
- Are the variables clearly recognized and defined?
- Are there adequate data to support the conclusions?
- Does the finalist/team recognize the data's limitations?
- Does the finalist/team understand the project's ties to related research?
- Does the finalist/team have an idea of what further research is warranted?
- Did the finalist/team cite scientific literature?

Subtotal _____

Thoroughness (15 points possible)

- Was the purpose carried out to completion within the scope of the original intent?
- How completely was the problem covered?
- Are the conclusions based on a single experiment or replication of an experiment?
- How complete are the project notes?
- Is the finalist/team aware of other approaches or theories?
- How much time did the finalist/team spend on the project?
- Is the finalist/team familiar with scientific literature in the studied field?

Subtotal _____

Skill (15 points possible)

- Does the finalist/team have the required observational and design skills to obtain supporting data?
- Where was the project performed? Did the student or team receive assistance from parents, teachers, or scientists?
- Was the project completed under adult supervision, or did the student/team work largely alone?
- Where did the equipment come from? Was it built independently by the finalist or team? Was it obtained on loan? Was it part of a laboratory where the finalist or team worked?

Subtotal _____

Continued on other side

Clarity (10 points possible)

- How clearly does the finalist discuss his/her project and explain the purpose, procedure, and conclusions?
- Does the written material reflect the finalist's or team's understanding of the research?
- Are the important phases of the project presented in an orderly manner?
- How clearly is the data presented?
- How clearly are the results presented?
- How well does the physical display explain the project?
- Did the finalist/team perform all the project work, or did someone help?

Subtotal _____

OVERALL POINTS SCORED (100 possible points) _____

ASSOCIATION FOR WOMEN GEOSCIENTISTS

The Association for Women Geoscientists (AWG) is pleased to provide an Award Certificate to female students whose projects, in the opinion of the judges, exemplify high standards of innovativeness and scientific excellence in the geosciences. Special consideration should be given to projects that increase the public awareness of the geosciences, illustrate the interdisciplinary nature of the geosciences, or promote the sensitivity to the earth as a global system.

Local members of the Association for Women Geoscientists may contact the fair if they are available for judging. The Awards Committee of the Intel ISEF regional science fair should delegate the judging, selection, and award presentation for AWG if local AWG members do not indicate that they are available.

This award is to recognize female students only. No cash or other prize is included with this Award Certificate. In the event of a tie or team project winner, please request additional certificate(s) from the AWG contact, Ms. Valerie Honeycutt. A limited number of additional certificates are available.

Responsibility of completing the Award Certificate is that of the Awards Committee representative of the regional science fair or the fair director. Please also complete the AWG acceptance form, or complete similar information in your own format and return to the AWG contact. Fair Directors or Awards Committees may complete their portion of the acceptance form and give to the winner to complete and send. Acceptance form or similar information in your own format may be emailed to the email address below instead of mailing. An email copy only is acceptable.

Included:

Certificate blank
Acceptance form

For additional information, contact Valerie Honeycutt, AWG Science Fair Coordinator, at 972-775-6029 (leave message) or jvhoney@sbcglobal.net.

ACCEPTANCE OF THE ASSOCIATION FOR WOMEN GEOSCIENTISTS CERTIFICATE

INSTRUCTIONS:

Complete and mail or email one copy of this form and keep one copy for your files. This form need not be used if your organization can provide the same information in your own format. You may email the relevant winner information to the address below. If the AWG **Student Awards for Geoscience Excellence (SAGE) certificate** is not included or if you have any questions, please contact Valerie Honeycutt.

NOTE: This award is a certificate only and does not include a cash prize.

DEADLINE: Please mail or email this form or the information on this form to the AWG contact within one month of, or as soon as possible after the closing of your fair.

MAIL TO: Ms. Valerie Honeycutt
309 Stiles Drive
Midlothian, TX 76065
Phone: (home) (972) 775-6029
E-mail: jyhoney@sbcglobal.net

Winner's name: _____ Winner's grade: _____

Winner's home address (optional): _____

City: _____ State: _____ Zip Code: _____

Winner's school: _____

Winner's school address: _____

City: _____ State: _____ Zip Code: _____

Teacher-Sponsor: _____

Title of Winner's project: _____

Fair Director's name: _____

Fair Director's address: _____

City: _____ State: _____ Zip Code: _____

Business phone: (_____) _____

Name of Fair: _____

Place where held: _____

Date(s) of Fair: _____

Dear Fair Director,

Rob and Melani Walton Sustainability Solutions Initiatives is a program of Arizona State University's Julie Ann Wrigley Global Institute of Sustainability. The Initiatives encourage, reward and celebrate inventors, social entrepreneurs, innovative designers and creative thinkers who develop solutions to sustainability challenges. We believe that students bring a fresh perspective to discovering solutions to the complex sustainability problems facing this and future generations.

ASU Rob and Melani Walton Sustainability Solutions Initiatives is pleased to recognize two high school projects in grades 9, 10, 11 or 12 (ages 15-20) who seek innovative solutions to humanity's most challenging problems. Winners can be selected from any category and should convey intent in their research to solve a complex problem that involves social justice, environmental and economic prosperity. Recognized students will receive a certificate and will be nominated to enter for a Grand Prize \$500 cash award. The certificate can be edited with the student name and printed, here is the web address for the certificate: <https://sustainability.asu.edu/sustainabilitysolutions/wp-content/gios-uploads/sites/15/2012/09/intel-regional-certificate-2018-form.pdf> **Three Grand Prize Winners** will be selected from all submitted nominations. Grand Prize Winners will be announced in email **July 1, 2018**.

The Judging Committee for the Intel ISEF affiliated science fair will complete the judging and selection for this ASU Rob and Melani Walton Sustainability Solutions Award. The responsibility of completing the nomination form and presenting the awards certificate is that of the awards committee or the fair director. Should you need an electronic printing template, please contact Kelly.R.Saunders@asu.edu or call 480-965-4353. Fair directors or the awards committee can complete their portion of the Award Nomination Form and give the form to winner(s) to complete and email in their submissions to Kelly.R.Saunders@asu.edu. Winners must complete the Award Acceptance Form and email it, along with a copy of their abstract and photograph of their research display, to ASU Rob and Melani Walton Sustainability Solutions via Kelly.R.Saunders@asu.edu by **May 1, 2018** in order to be eligible for the grand prize. All submissions will be **confirmed via email by May 1, 2018**. **Three Grand Prize Winners** will be announced via email on **July 1, 2018**.

Included:

Two Award Nomination Forms (one per project, teams are eligible to win)

Judging Rubric

Dear Finalist,

Congratulations on being recognized by the Rob and Melani Walton Sustainability Solutions Initiatives! The program is a part of Arizona State University's Julie Ann Wrigley Global Institute of Sustainability, and encourages, rewards and celebrates inventors, social entrepreneurs, innovative designers and creative thinkers who develop solutions to sustainability challenges.

You are now nominated to enter for the Rob and Melani Walton Sustainability Solutions Initiatives Grand Prize, a \$500 cash award. A total of three Grand Prize projects will be selected. In order to do this, please gather the following documents:

- The Award Nomination Form, given to you by the Fair Director or Awards Committee. The top part must be filled out by the Fair Director or a member of the Awards Committee.
- The Photo Release Form, given to you by the Fair Director or Awards Committee. If you are under age 18, the release form must be signed by your parent or guardian. If you are age 18 and over, you may sign and date the form yourself.
- A copy of the abstract you presented at your project.
- A photograph of your Project Board or Display.

Please email a copy of these items provided to you by your Fair Director to Kelly.R.Saunders@asu.edu. Your entry must be emailed by **May 1, 2018** to be considered. The three Grand Prize Winners will be announced via email on July 1, 2018.

If you are unable to email your entry please send the listed items via mail.

Arizona State University
Walton Sustainability Solutions Initiatives
Attn: Kelly Saunders
PO Box 878009
Tempe, AZ 85287-8009

Congratulations once again on being recognized by the Rob and Melani Walton Sustainability Solutions Initiatives! If you have any questions or concerns please email Kelly Saunders at Kelly.R.Saunders@asu.edu. All entries must be sent by May 18, 2018 to be considered for the Grand Prize.

**ASU Walton Sustainability Solutions Award
 Award Nomination Form**

Fair and Judge Information	
Judge's Name:	Judge's Address:
Judge's Phone Number:	Judge's Email:
Judge's Signature:	Date:
Name of Intel International Science and Engineering Fair Affiliated Regional Fair:	
Winner's Information	
Winner's Name(s):	
Title of Project:	
Phone number:	School Name:
Grade and Age:	School Address:
Email:	
What were you attempting to learn about and/or what problem(s) are you seeking to solve?	
How can your work have an impact in the future?	

Photo Release Form

I grant permission to the Arizona Board of Regents, on behalf of Arizona State University and its agents or employees, to copyright and publish all or any part of photographs and/or motion pictures and/or voice recordings and/or written/spoken statements taken of me on the date and at the location listed below for use in the ASU website on Self-Regulated Strategy Development for writing, and any related university publications, including those printed, moving, audio and electronic; and all exhibitions, public displays, publications, commercial art and advertising purposes in any media without limitation or reservation.

I hereby waive any right to inspect or approve the photographs, publications or electronic matter that may be used in conjunction with them now or in the future, whether that use is known to me or unknown, and I waive any right to royalties or other compensation arising from or related to the use of the photographs.

I hereby agree to release and hold harmless the Arizona Board of Regents and the developers and managers of the SRSD website, on behalf of Arizona State University, via electronic or media, from and against any claims, damages or liability arising from or related to the use of the photographs, including but not limited to any re-use, distortion, blurring, alteration, optical illusion or use in composite form, either intentionally or otherwise, that may occur or be produced in production of the finished product. It is the discretion of ASU to decide whether to use the image.

I am 18 years of age and I am competent to contract in my own name. I have read this release before signing below, and I fully understand the contents, meaning and impact of this release. I understand that I am free to address any specific questions regarding this release by submitting those questions in writing prior to signing, and I agree that my failure to do so will be interpreted as a free and knowledgeable acceptance of the terms of this release.

For those under the age of 18, this form must be signed by both the child and the parent or guardian. By signing, the parent or guardian attests that he/she is competent to contract in her/his own name; has read this release before signing below; fully understand the contents, meaning and impact of this release; and understands that he/she is free to address any specific questions regarding this release by submitting those questions in writing before signing, and that failure to do so will be interpreted as a free and knowledgeable acceptance of the terms of this release.

Print Name: _____ Signature: _____ Date: _____
(Individual age 18 or older, granting permission)

For those under age 18:

Full Name of Minor: _____

Print Name: _____ Signature: _____ Date: _____
(Parent or Guardian if minor)

Address: _____

Email: _____

Intel Excellence in Computer Science Award

2018 Domestic Affiliate Fairs
(9th – 12th grade winners only)

Intel is proud to announce the continuation of the Intel Excellence in Computer Science Award in the amount of two hundred dollars and a certificate.

Intel supports science fairs around the world because we recognize the importance of developing the talents of our most promising young minds. In particular, the company hopes to encourage increased participation in computer science, one of today's fastest growing fields and an important source of innovation for the 21st century.

Instructions:

1. Each domestic affiliate fair that has a computer science category may offer **one** Intel Excellence in Computer Science Award to the **top first place winner of the Computer Science category in the high school (9th-12th grades only) portion of the fair.**
2. The selection of the winner will be accomplished by the regular judging procedure at your fair. In the case of multiple first place awards in the Computer Science category, an overall winner must be selected to receive this award. A team consisting of no more than three team mates winning this award will split the award monies evenly. Each team member **MUST** complete their own W-9 (Request for Taxpayer Identification Number) form with their information and not that of their parent. Please submit TEAM documents together.
3. The enclosed Winner Application Sheet, W-9 (Request for Taxpayer Identification Number) form and certificate should be provided to the student with the proper authorizing fair director signature and contact information. **The student is responsible for returning all documentation to Society for Science & the Public.**
4. The Society **MUST** receive all of the documents by the **deadline of May 31, 2018**. Award checks will be sent Summer 2018.
5. Keep a copy for your records.

This award is being administered by Society for Science & the Public.

Send documents to:

June Kee, Intel ECS Award
Society for Science & the Public
1719 N Street, NW
Washington, DC 20036

Or fax to 202.785.1243.
sciedu@societyforscience.org

**Intel Excellence in Computer Science Award
Winner Application Sheet
2018 Domestic Affiliate Fairs**

Instructions: Mail completed Winner Application, W-9 Request for Taxpayer ID Number form (for each student) **and** a copy of your one-page abstract to Society for Science & the Public, Intel ECS Award, 1719 N Street, N.W. Washington, DC 20036 or via fax to June Kee at 202.785.1243. Send TEAM documents together. **Receipt deadline is May 31, 2018.**

Science Fair Director OR Special Award Coordinator (print legibly)

I verify that this student was selected for this award and the information is correct.

Fair ID #: _____ **Team:** No / Yes (how many members?) _____

Team Member Name(s): _____

Fair Name: _____

Print Fair Director Name: _____

Fair Director Signature: _____

Director's Email & phone: _____

Student Winner (print legibly). **Submit TEAM documents together.**

Name: _____

Address: _____

City, St, Zip: _____

Email: _____ **Phone:** _____

2nd Team Member Name: _____

Address: _____

City, St, Zip: _____

Email: _____ **Phone:** _____

3rd Team Member Name: _____

Address: _____

City, St, Zip: _____

Email: _____ **Phone:** _____



MU ALPHA THETA

c/o University of Oklahoma
3200 Marshall Avenue, Ste 190
Norman, OK 73019
Executive Director: Jennifer Pai

PH: 405-325-0144
Email: info@mualphatheta.org
www.mualphatheta.org

NATIONAL OFFICERS

President:

Kathy Mowers

Owensboro Community and
Technical College
4800 New Hartford Rd.
Owensboro, KY 42303
kathy.mowers@kctcs.edu

Past-President:

Betty Hood

Brentwood High School
5304 Murray Lane
Brentwood, TN 37027-6205
bettyh@wcs.edu

Treasurer:

Dr. John Albert

Department of Mathematics
University of Oklahoma
601 Elm Ave, RM 423
Norman, OK 73019
jalbert@math.ou.edu

Governor Region 1:

Dr. Deanna Wasman

Hickman High School
1104 N Providence Rd
Columbia, MO 65203
dwasman@cpsk12.org

Governor Region 2:

Olvin Carias

KIPP Generations Collegiate
500 Tidwell Rd
Houston, TX 77022
ocarias@kipphouston.org

Governor Region 3:

Rita Ralph

Columbus State C.C.
550 E Spring St
Columbus, OH 43215
rralph@csc.edu

Governor Region 4:

Kim Woolfenden

14220 N. HWY 301
Thonotosassa, FL 33592
woolfmath@aol.com

MAA Representative:

Dr. Chuck Garner

Rockdale County High School
930 Rowland Rd
Conyers, GA 30012
cgarner@rockdale.k12.ga.us

NCTM Representative:

Laura Entrek

Hoover High School
1000 Buccaneer Dr
Hoover, AL 35244
LEntrek@hoover.k12.al.us

SIAM Representative:

Dr. Terry Herdman

ICAM 0531
Blacksburg, VA 24061
Terry.Herdman@vt.edu

AMATYC Representative:

Paige Perry

Southern Union State C.C., AL
1701 Lafayette Parkway
Opelika, AL 36801
pperry@suscc.edu

Dear Science Fair Director:

Mu Alpha Theta, the National High School and Two-Year College Mathematics Honor Society, wishes to provide one award at each regional or state ISEF competition. The Mu Alpha Theta Award is for the individual or group project that demonstrates the most challenging, original, thorough, and creative investigation of a problem involving mathematics accessible to a high school student. The winner(s) must be in grades 9 through 12. This project does not necessarily have to be entered in the mathematics category.

Judging for this award will be by your awards committee. We have provided selection criteria to help in this process.

Also included is a letter to your fair's Mu Alpha Theta Award winner as well as a single certificate to be filled in by your awards committee or fair director and presented to the recipient. In the event of a team winner, extra certificates may be requested. We will mail these after we receive the Award Acceptance Form with the names and addresses for the extra certificates included. Please email the Award Acceptance Form to info@mualphatheta.org no more than 30 days after the date of your fair.

Thanks for all that you do!

Sincerely,

Jennifer Pai
Executive Director



MU ALPHA THETA

c/o University of Oklahoma
3200 Marshall Avenue, Ste 190
Norman, OK 73019
Executive Director: Jennifer Pai

PH: 405-325-0144
Email: info@mualphatheta.org
www.mualphatheta.org

NATIONAL OFFICERS

President:

Kathy Mowers

Owensboro Community and
Technical College
4800 New Hartford Rd.
Owensboro, KY 42303
kathy.mowers@kctcs.edu

Past-President:

Betty Hood

Brentwood High School
5304 Murray Lane
Brentwood, TN 37027-6205
bettyh@wcs.edu

Treasurer:

Dr. John Albert

Department of Mathematics
University of Oklahoma
601 Elm Ave, RM 423
Norman, OK 73019
jalbert@math.ou.edu

Governor Region 1:

Dr. Deanna Wasman

Hickman High School
1104 N Providence Rd
Columbia, MO 65203
dwasman@cpsk12.org

Governor Region 2:

Olvin Carias

KIPP Generations Collegiate
500 Tidwell Rd
Houston, TX 77022
ocarias@kipphouston.org

Governor Region 3:

Rita Ralph

Columbus State C.C.
550 E Spring St
Columbus, OH 43215
rralph@cscc.edu

Governor Region 4:

Kim Woolfenden

14220 N. HWY 301
Thonotosassa, FL 33592
woolfmath@aol.com

MAA Representative:

Dr. Chuck Garner

Rockdale County High School
930 Rowland Rd
Conyers, GA 30012
cgarner@rockdale.k12.ga.us

NCTM Representative:

Laura Entrekin

Hoover High School
1000 Buccaneer Dr
Hoover, AL 35244
LEntrek@hoover.k12.al.us

SIAM Representative:

Dr. Terry Herdman

ICAM 0531
Blacksburg, VA 24061
Terry.Herdman@vt.edu

AMATYC Representative:

Paige Perry

Southern Union State C.C., AL
1701 Lafayette Parkway
Opelika, AL 36801
pperry@suscc.edu

Dear Mu Alpha Theta Award Winner:

Congratulations! On behalf of Mu Alpha Theta, the National High School and Two-Year College Mathematics Honor Society, I commend you on your outstanding achievement as a winner of the Mu Alpha Theta Award. Your project was selected for its challenging, original, thorough, and creative investigation of a problem involving mathematics accessible to a high school student.

Established in 1957, Mu Alpha Theta currently has more than 100,000 members in schools in the US and twenty foreign countries. We strive to promote the enjoyment and scholarship of mathematics through our free mathematics competitions throughout the year, annual national convention, leadership opportunities, and financial support. This past year alone, Mu Alpha Theta awarded well over \$200,000 in scholarships, grants, and awards to our members, teachers, and chapters.

If your high school doesn't already have a Mu Alpha Theta chapter, we invite you to check out all that we offer. Congratulations again and best wishes!

Sincerely,

Jennifer Pai
Executive Director

MU ALPHA THETA AWARD ACCEPTANCE FORM

INSTRUCTIONS: Please complete and email the information requested below to info@mualphatheta.org within 30 days of the fair.

If extra award certificates for members of a winning team are desired, please note this and provide team members' addresses when submitting the form.

The Mu Alpha Theta Award is to be presented to students in 9th – 12th grades only.

Phone: (405) 325-0144

E-mail: info@mualphatheta.org

Winner's Name: _____

Winner's Home Address: _____

Winner's School: _____

School Address: _____

Teacher/Sponsor: _____

Title of Winner's Project: _____

Fair Director's Name: _____

Fair Director's Address: _____

Business Phone: _____

Name of Fair: _____

Location of Fair: _____ Date(s) of Fair: _____

Mu Alpha Theta Award Selection Criteria

The Mu Alpha Theta Award is given to the most challenging, original, thorough, and creative investigation of a problem involving mathematics accessible to a high school student. Components of the investigation may include, but are not limited to, mathematical proof, mathematical modeling, statistical analysis, visualization, simulation, and approximation. The Mu Alpha Theta Award is not limited to projects in the mathematics category. The award can be presented to an individual or a team project. **All winners must be in 9th through 12th grades.**

We recommend judges use the following 100-point scale with points assigned for creative ability, scientific thought, thoroughness, skill, and clarity. Team projects include points for teamwork.

If there are no projects that meet the award description and criteria, judges have a right not to award Mu Alpha Theta Award.

I. Creative Ability (Individual - 30, Team - 25)

- a) Does the project show creative ability and originality in the questions asked, the approach to solving the problem, the analysis of data, or the interpretation of that data?
- b) Creative research should support an investigation and help answer a question in an original way.
- c) A creative contribution promotes an efficient and reliable method for solving a problem.

II. Use of Mathematics (Individual - 15, Team - 13)

- a) Does the project use more than just arithmetic and basic statistics?
- b) Are mathematical conclusions displayed using computer graphics for better visualization?
- c) If mathematical proof is involved, are steps clear, concise, and lead directly from prior statements?
- d) If simulation or approximation methods are used, are they appropriate to the problem? Is there an analysis of possible errors involved in using these methods?

III. Scientific Thought (Individual - 15, Team - 12)

- a) Is the problem stated clearly?
- b) Was the problem sufficiently limited to allow a solution to be found?
- c) Was there a procedural plan for obtaining a solution? What types of mathematics were involved in this solution?
- d) Were the variables clearly recognized and defined?
- e) If controls were necessary, did the student recognize their need and were they correctly used?
- f) Was there adequate data to support the conclusions?
- g) Does the finalist/team recognize the data's limitations?
- h) Does the finalist/team understand the project's ties to related research?
- i) Does the finalist/team make recommendations for further research?
- j) Did the finalist/team cite scientific literature?

IV. Thoroughness (Individual - 15, Team - 12)

- a) Was the purpose carried out to completion within the scope of the original intent?
- b) How completely was the problem covered?
- c) Are the conclusions based on a single experiment or replication?
- d) How complete are the project notes?
- e) Is the finalist/team aware of other approaches or theories?
- f) Was the time spent on the project appropriate?
- g) Is the finalist/team familiar with scientific literature in the studied field?

V. Skill (Individual - 15, Team - 12)

- a) Does the finalist/team have the required laboratory, computation, observational and design skills to obtain supporting data?
- b) Where was the project performed (i.e., home, school laboratory, university laboratory)? Was there assistance from parents, teachers, scientists, or engineers?
- c) Was the project completed under adult supervision or did the finalist/team work mainly alone?
- d) Where did equipment come from? Was it built independently by the finalist or team? Was it obtained on loan? Was it part of a laboratory where the work was done?

VI. Clarity (Individual - 10, Team - 10)

- a) How clearly does the finalist discuss his/her project and explain the purpose, procedure, and conclusions? Is there real understanding of the project?
- b) Does the written material reflect that understanding?
- c) Are important phases of the project presented in an orderly manner?
- d) How clearly is the data presented?
- e) How clearly are the results presented?
- f) How well does the project display explain the project?
- g) Was the presentation done in a forthright manner, without tricks or gadgets?

VII. Teamwork (Team Projects only- 16)

- a) Are the tasks and contributions of each team member clearly outlined?
- b) Was each team member fully involved with the project and familiar with all aspects?
- c) Does the final work reflect the coordinated efforts of all team members?

POTENTIAL MAXIMUM SCORE CHART	Individual Points	Team Points
Creative Ability	30	25
Use of Mathematics	15	13
Scientific Thought / Engineering Goals	15	12
Thoroughness	15	12
Skill	15	12
Clarity	10	10
Teamwork	-	16
Total Possible Score	100 points	100 points

NASA Earth System Science Award 2017



What is Earth System Science?

Earth system science is the study of the complex system and the interconnections that occur on Earth. The Earth system is made up of many different components that interact in complex ways. When one part of that system is altered, the other parts of the system are affected; each component of the system is interconnected. NASA is focusing on trying to understand the different components that make up our Earth system: atmosphere, lithosphere, hydrosphere, cryosphere (snow and ice), and biosphere. The purpose of NASA's Earth science program is to develop a scientific understanding of Earth's system and how it responds to changes that are occurring as a result of natural and human-made causes. NASA is involved in numerous research and educational efforts through which they are working to find answers to questions related to these complex interactions. Through a variety of Earth system satellite missions, NASA is striving to provide researchers and scientists with the data they need to find these answers. Students are encouraged to use data that is being gathered and provided for NASA to assist them in their Earth system science projects.

By providing the NASA Earth System Science Award, our goal is to increase awareness regarding the importance **of scientific research in the area of Earth system science**. The NASA Earth System Science Award should be given to the project that best demonstrates insight into **Earth's interconnected systems**. The project should incorporate studies of the **different components of Earth systems, their interactions and their evolution over time**. It should include cause-effect relationships based on evidence that focuses on the interrelatedness of the various components of Earth systems and demonstrate a clear understanding of how those relationships affect Earth as a system. Listed below are subcategories from which this type of project might be selected.

Subcategories (Based on those used by INTEL):

- **Atmospheric Science (AIR):** Studies of the earth's atmosphere, including air quality and pollution and the processes and effects of the atmosphere on other Earth systems as well as meteorological investigations.
- **Climate Science (CLI):** Studies of Earth's climate, particularly evidential study of climate change as it relates to Earth's systems.
- **Environmental Effects on Ecosystems (ECS):** Studies of the impact of environmental changes (natural or as a result of human interaction) on ecosystems, including empirical pollution studies.
- **Geosciences (GES):** Studies of Earth's land processes, including mineralogy, plate tectonics, volcanism, and sedimentology.

- **Water Science (WAT):** Studies of Earth's water systems, including water resources, movement, distribution, and water quality.
- **Other (OTH):** Studies that cannot be assigned to one of the above subcategories.

NASA Earth System Science Project Award Judging Criteria Checklist

(Items that are underlined must be included in the project to be considered for the award. Other items may be considered to distinguish between multiple projects that qualify for the Earth System Science Award.)

Research Question

- _____ Project exhibits an Earth System perspective focusing on one or more interactions between the different components of the Earth system
- _____ Project identifies contributions to the field of Earth system science
- _____ Project is testable using the scientific research process

Design and Methodology

- _____ Project includes Earth system-related variables, which are defined, appropriate and complete
- _____ Project demonstrates a well-designed plan and method of data collection

Data Collection, Analysis and Interpretation

- _____ Project demonstrates systematic data collection, analysis and evidence based on the relationship(s) between components of the Earth system
- _____ Project contains the possibility of reproducibility of results incorporating Earth system data
- _____ Project displays appropriate application of mathematical and statistical methods
- _____ Project contains sufficient data collected to provide evidence to support interpretation

Creativity

- _____ Project demonstrates significant creativity in the area of Earth System Science

Poster Presentation

- _____ Poster provides a logical organization of material
- _____ Poster possesses clarity of graphics, legends and supporting documentation

Interview Presentation

- _____ Student exhibits an understanding of Earth system science relationships relevant to the project
- _____ Student demonstrates relevant ideas for further research in the area of Earth system science
- _____ Evident that the student conducted the project independently and possesses a clear understanding of the project details (if team project contributions by all team members is evident)
- _____ Student exhibits clear, concise, thoughtful responses to questions

_____ Student demonstrates an understanding of the interpretation and limitations of results and conclusions

NASA EARTH SYSTEM SCIENCE Awardee Acceptance Form

Instructions: As soon after the regional science fair as possible, this form and a copy of the project abstract need to be returned via the electronic or mail options listed at the bottom of this form. **Electronic forms can be submitted to:** <http://mynasadata.larc.nasa.gov/isef>. **Please remember to attach a copy of your ABSTRACT using the form on the Intel ISEF site:** <https://member.societyforscience.org/document.doc?id=688>. Please provide answers to all of the following questions:

Recipient Name: _____

Recipient Mailing Address: _____

Recipient Email Address: _____

Recipient Grade Level: _____ Will this project be entered in the ISEF? _____

If so, which category/subcategory will it be entered? _____

Recipient School: _____

School Address: _____

Supporting Teacher: _____

Supporting Teacher Email Address: _____

Name of Regional Science Fair: _____

Regional Science Fair Director: _____

Regional Science Fair Director Address: _____

Regional Science Fair Director Email Address: _____

Category Entered: _____

Title of Project: _____

Research Question: _____

Source of Earth System Data used in the Project: _____

Earth System(s) associated with Project: _____

Electronic Forms can be submitted to: <http://mynasadata.larc.nasa.gov/isef>

Mailed Entries Please Return to:

NASA Langley Research Center

c/o Jessica Taylor/Tina R Harte

Mail Stop 475

Hampton, VA 23681-2199





UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

Dear Science Fair Director:

The National Oceanic and Atmospheric Administration (NOAA) would like to provide the students at your regional or state fair an opportunity to be recognized for their research emphasizing NOAA-related science. NOAA's "Taking the Pulse of the Planet" Award is available to all domestic regional and state fairs affiliated with the Intel ISEF. The award consists of (1) a Letter of Congratulation, (2) an Award Certificate and, (3) a NOAA medallion. The award will honor one project (from middle or high school) selected from among all the general award categories whose research emphasizes NOAA's mission of **Science, Service, and Stewardship: "To understand and predict changes in climate, weather, oceans, and coasts, To share that knowledge and information with others, and To conserve and manage coastal and marine ecosystems and resources."**

Judging:

Judging for your fair should be organized by your Awards Committee and could be supplemented by a local NOAA employee. Please go to the following URL to find a listing of NOAA presence in your state: <http://www.legislative.noaa.gov/NIYS0107/noainyourstate.html>. This site may help you in locating NOAA judges from specific regions within your state.

Award Process:

- (1) During the judging period at your fair, have your panel of judges select **one project** to receive the NOAA Award according to the award judging guidelines on the next page.
- (2) Once the winning project is selected, insert the winning student's name and school into the blank NOAA Taking the Pulse of the Planet Award Certificate that you received with your packet from Society for Science & the Public and have the Fair Director sign as well.
- (3) Present the NOAA Taking the Pulse of the Planet Award Certificate, the accompanying letter of congratulations, and the accompanying NOAA medallion to the winning student. If the winning project consists of more than one student, please make a copy of the certificate of recognition and congratulations letter to present to the additional team member(s).
- (4) If possible, please email us at science.fairs@noaa.gov with the winning project information.

The award judging guidelines and letter of congratulations are digital for you to print; the award certificate and NOAA medallion for presentation to the NOAA award winner are included in the science fair materials mailed to you by The Society for Science and the Public. Please email us if you have any questions or require anything further.

Sincerely,

June Teisan
Education Outreach and Program Specialist
NOAA's Office of Education
Washington, D.C.





UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

Judging Guidelines: NOAA's Taking the Pulse of the Planet Award

NOAA's mission is Science, Service, and Stewardship: "To understand and predict changes in climate, weather, oceans, and coasts, To share that knowledge and information with others, and To conserve and manage coastal and marine ecosystems and resources." NOAA is a trusted source of accurate and objective scientific information in four particular areas of national and global importance:

- **Ecosystems:** Ensure the sustainable use of resources and balance competing uses of coastal and marine ecosystems, recognizing both their human and natural components.
- **Climate:** Understand changes in climate, including the El Niño phenomenon, to ensure that we can plan and respond properly.
- **Weather & Water:** Provide data and forecasts for weather and water cycle events, including storms, droughts, and floods.
- **Commerce & Transportation:** Provide weather, climate, and ecosystem information to make sure individual and commercial transportation is safe, efficient, and environmentally sound.

Projects focused on topics related to the four areas described above should be judged for this award.

If judging is done as a team, the key attributes and criteria to be used should be discussed, agreed upon beforehand, and utilized by all team members. Judges should focus on the students and what they have learned about their research topic and the scientific process in general. The quality of a student's project should be judged not only on what is exhibited but also upon their ability to discuss the work intelligently and to demonstrate their understanding of the project.

Our suggestion for the weighting of judging criteria for this award is as follows:

- Creative Ability (~ 30%)
- Scientific Approach (~ 30%)
- Thoroughness (~ 15%)
- Skill (~ 15%)
- Clarity (~ 10%)





UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

Dear NOAA Award Winner,

Congratulations! You have been selected to receive the National Oceanic and Atmospheric Administration's *"Taking the Pulse of the Planet"* Award at your Regional/State Intel ISEF Competition.

The National Oceanic and Atmospheric Administration (NOAA) is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. NOAA's activities are vast and involve forecasting the weather, exploring the ocean, managing the nation's marine fisheries, protecting endangered marine mammals, leading cutting edge climatic and atmospheric research, and more.

NOAA's mission is to understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources. Each year, discovery and research at NOAA contribute significantly to a more complete understanding of the complex behavior of Earth's systems. This new knowledge leads to continual improvements in predicting the weather, understanding Earth's climate, projecting future climate variability and change, and applying ecological principles to environmental management. We need the talent of future scientists like you to help us conduct this research and make these new discoveries.

This award recognizes you for your research in these critical areas. We hope you will continue with your interest in science and engineering. In the future, consider applying for NOAA's student opportunities, such as the Hollings Scholarship Program. For more information on NOAA education resources and student opportunities, please visit: <http://www.noaa.gov/education>.

You can visit the NOAA website to learn more about the agency: <http://www.noaa.gov>. Also, you can find a NOAA facility near you: <http://www.legislative.noaa.gov/NIYS0107/noaainyourstate.html>.

Again, congratulations on your success in this science fair and the best of luck in the future.

Sincerely,

A handwritten signature in cursive script that reads "Louisa Koch".

Louisa Koch
Director, NOAA Education





DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
875 NORTH RANDOLPH STREET
SUITE 1425
ARLINGTON VA 22203-1995

IN REPLY REFER TO:

Fall 2017

Dear Science Fair Official:

The Office of Naval Research is committed to supporting science, technology, engineering, and mathematics (STEM) initiatives and programs for our nation's young people. We believe science fairs to be an important component in the education of future scientists of America. On behalf of the U.S. Navy and the U.S Marine Corps, The Office of Naval Research (ONR) is pleased to continue to support regional and state Science and Engineering Fairs for the school year 2017-2018.

We have made adjustments to our website to ease the process of registering for the science fairs and to provide thoughtful guidance to judges and award presenters.

Fair Registration

Please register your fairs for the 2017-2018 school years on the Office of Naval Research web site at:

<http://www.onr.navy.mil/Education-Outreach/K-12-Programs/NSAP/Registration.aspx>

The registration site is available starting 1 Oct 2017.

Important notes:

- Please register as early as possible, so that award packets can be packaged and mailed in a timely manner to your fair's designated point of contact. **Please Note: Registrations less than 3 business days in advance of your fair start date will not be supported.**
- Only registered fairs can be supported. Only current 2018 year award packets will be accepted. Any use of previous year award packets will not be honored.
- Register multiple fairs scheduled for a single site and date as a single fair i.e., if the science fair is separated into four regions, register the fair as "Science Fair, Regions 1-4".
- If they are designated as separate sub-fairs for Life Sciences and Physical Sciences, register as a single fair and indicate the separation in the title – i.e., "Science Fair, Life Sciences and Physical Sciences." The single entry should indicate the total number of senior and junior projects that are expected to be entered for all fairs and will assist in the assignment of judges for each science fair.
- Provide the science fair's website URL.
- Group awards/Team projects are **not allowed** under any circumstances.
- Review the information provided to judges and presenters on the website under the section listing, *Judges and Presenters*. Forward any feedback to Ms. Paula Barden at paula.barden.ctr@navy.mil.

Naval Science Awards Program Award Packages

Grades 9-12:

Award packages for individual project awardees consist of certificates of achievement, letter of congratulations, medallions, and award verification forms. *Note: Team projects are not eligible for Naval Science Award Program (NSAP) awards.* Please ensure student awardees receive their awards immediately. Original award verification forms *must be completed by awardees and mailed within 30 days following the fair* to Technology Management Training Group Inc. (TMT Group, Inc.) and are redeemable for education recognition awards (gift cards). Gift cards amounts are \$50 for regional fairs and \$75 for state fairs and these cards can be used for on-line or in-store purchases. If the completed forms are not received within 30 days, the awardees will not be eligible to receive gift cards.

For science fairs with up to 75 participants, two award packets will be provided. Larger fairs will receive additional award packages; a maximum of 10 award packages will be provided to any one science fair.

Grades 8 and below:

Award packages for individual project awardees consist of certificates of achievement, letter of congratulations, and medallions only.

Naval Science Award Recipients

After the fair completion, ONR requests that you provide information on all students recognized as Naval Science Award recipients. The senior Naval Science Awards Program judge assigned to the science fair is responsible for logging in the Naval Science Award recipients from the completed fair. In the absence of an assigned judge, the fair's Special Awards Chairperson is asked to log in the award recipients on the ONR website on the NSAP page at <https://secure.onr.navy.mil/nsap/recipients.aspx>

Science Fair Judging and Award Presentation

It is our intention to provide qualified volunteers throughout the Navy and Marine Corps to represent our services at fairs by serving as judges and award presenters. We provide the judges and presenters with a description of their roles and criteria to use when selecting student award winners. Additionally, we ask that they work closely with the science fair coordinators to assist as needed while fulfilling their primary task to assess projects deserving Naval Science Awards.

Ideally, we would have an adequate number of judges and presenters to participate at all science fairs; however, when we are unable to provide representation, we ask that you distribute the Naval Science Awards on our behalf.

We look forward to another year of supporting state and regional science fairs and recognizing the hard work and talent of aspiring science students.

Sincerely,



Anthony C. Smith, Sr.
Office of Naval Research
Program Director

Fall 2017

Dear Fair Director:

Congratulations on holding another inspiring science and engineering fair in your community!

Ricoh USA, Inc. would like to provide Ricoh Sustainable Development Award (RSDA) Certificate to your student(s), whose outstanding project(s) address(es) issues of environmental responsibility and sustainable development.

Ricoh firmly believes that the importance of environmental sustainability should be communicated to as large an audience as possible, including students. It is our honor to continue to work with your community toward a vision of a more sustainable future.

Ricoh is proud to help foster innovative ideas that carry the potential for making differences. For over a decade, we have provided a total of more than \$410,000 in scholarships to students through our sponsorship of the Intel International Science and Engineering Fair (Intel ISEF). The 31 recipients of the RSDA at Intel ISEF have pursued their research with passion worldwide. You can learn more at <http://www.ricoh-usa.com/rsda>.

We wish you continued success in your science and engineering education. Please complete the questionnaire at https://www.ricoh-usa.com/en/RSDA_2018 and issue the fillable RSDA Certificate.

Very truly yours,



Kousuke Ito
Director, Environmental Sustainability and Product Compliance
Ricoh USA, Inc.

Fall 2017

Dear Ricoh Sustainable Development Award Recipient:

Congratulations on winning the Ricoh Sustainable Development Award!

Ricoh USA, Inc. would like to provide you with an opportunity to be recognized for your outstanding efforts in addressing issues of environmental responsibility and sustainable development in your science and engineering project.

Ricoh firmly believes that the importance of environmental sustainability should be communicated to as large an audience as possible, including students. It is our honor to recognize your quest for new discoveries and to work with your community, and to inspire you toward a vision of a more sustainable future.

Ricoh is proud to help foster innovative ideas that carry the potential for making differences. For over a decade, we have provided a total of more than \$410,000 in scholarships to students through our sponsorship of the Intel International Science and Engineering Fair (Intel ISEF). The 30 recipients of the Ricoh Sustainable Development Award at Intel ISEF have pursued their research with passion worldwide. You can learn more at ricoh-usa.com/rsda.

We wish you continued success in your endeavors for science. Enclosed please find the award certificate.

Very truly yours,



Kousuke Ito
Director, Environmental Sustainability and Product Compliance
Ricoh USA, Inc.

RICOH Sustainable Development Award

Project: _____ **Judge:** _____

Criteria highlighted in **Blue** to be used to pre-qualify all projects for further consideration and eliminate projects that do not apply. All (12) twelve questions below must score “YES” to pre-qualify.

Once projects are pre-qualified, use the criteria highlighted in **Yellow** for final project evaluation and point tabulation.

PRE-QUALIFYING CRITERIA

FINALISTS' PROJECT MUST HAVE:	TOTAL SYSTEM MUST INCLUDE:
Principles & technical innovations that offer the greatest potential for increasing our ability to grow environmentally friendly & socially responsible businesses.	1. Know-how 2. Procedures 3. Goods & services 4. Equipment 5. Organizational/managerial process
PROJECT MUST REFLECT:	
1. Energy conservation / prevention of global warming 2. Resource conservation / recycling 3. Pollution prevention 4. Conservation of biodiversity	

PLEASE EVALUATE ALL TWELVE QUESTIONS BELOW

UNIQUENESS		
Y	N	Creative ability shown
Y	N	Originality in questions asked
Y	N	Scientific advancement shown
Y	N	Sustainable Development issue within scientific field clear
MEANINGFULNESS		
Y	N	Research addresses a meaningful problem
SOPHISTICATION		
Y	N	With respect to the age of researcher and availability of resources
PRESENTATION CLARITY		
Y	N	Discussion, purpose, procedure, data, results, conclusion
Y	N	Sustainable Development expressed
Y	N	Thought and preparation in exhibit
BUSINESS IMPACT		
Y	N	Social viewpoint clearly demonstrated
Y	N	Environmental viewpoint clearly demonstrated
Y	N	Financial viewpoint clearly demonstrated

_____ **Total Yes**
 _____ **Total No**

All (12) twelve questions must score “YES” to pre-qualify.

DEFINING CRITERIA

10=High

1=Low

RESULTS-ORIENTATION	
10 9 8 7 6 5 4 3 2 1	Efficient & reliable method for solution(s)
10 9 8 7 6 5 4 3 2 1	Research supported investigation
10 9 8 7 6 5 4 3 2 1	Acceptable to potential users
10 9 8 7 6 5 4 3 2 1	Economically feasible
10 9 8 7 6 5 4 3 2 1	Can be successfully utilized in end product(s)
10 9 8 7 6 5 4 3 2 1	Improvement over existing alternatives
THOROUGHNESS	
10 9 8 7 6 5 4 3 2 1	Depth of the problem covered
10 9 8 7 6 5 4 3 2 1	Awareness of other approaches or theories
10 9 8 7 6 5 4 3 2 1	Continuation opportunities recognized
SKILL	
10 9 8 7 6 5 4 3 2 1	Student's ability supports data presented
10 9 8 7 6 5 4 3 2 1	Required laboratory skills - computation, observation, & design
10 9 8 7 6 5 4 3 2 1	Degree of assistance received from a parent, teacher, or professional (Less assistance = Higher score)
SCIENTIFIC THOUGHT OR ENGINEERING GOALS	
10 9 8 7 6 5 4 3 2 1	Solution obtained via a procedural plan
10 9 8 7 6 5 4 3 2 1	Variables clearly recognized; clearly defined
10 9 8 7 6 5 4 3 2 1	Adequate data to support conclusion
10 9 8 7 6 5 4 3 2 1	Objective relevant to potential users' need
ENVIRONMENTAL IMPACT ASSESSMENT	
10 9 8 7 6 5 4 3 2 1	Environmental impact of each process clear
10 9 8 7 6 5 4 3 2 1	Influence that each process has on the environment evident
10 9 8 7 6 5 4 3 2 1	Social benefit of each process evident
SUSTAINABLE MANAGEMENT INDICATORS	
10 9 8 7 6 5 4 3 2 1	A balance among People, Planet and Profit is clearly evident

_____ Total for Defining Criteria

SOCIETY FOR IN VITRO BIOLOGY

The Society for In Vitro Biology (SIVB) provides one (1) award at each Regional/State Intel ISEF Competition. It is intended that this recognition be awarded to the most outstanding 11th grade student exhibiting in the areas of plant or animal in vitro biology or tissue culture.

Judging for 2017-2018 fair awards will be by your Awards Committee. Included is a Certificate to be filled in by your awards committee or fair director and presented to the recipient at the time of awards announcements. Please complete the enclosed AWARD ACCEPTANCE FORM with the award winner and return it as promptly as possible after the fair. A formal letter of congratulations will be sent and publicity of his/her achievement will be included in the society's newsletter on their website at <https://sivb.org>.

In addition, it is possible that the recipient will be contacted by our society and invited to submit an abstract of their work to our annual meeting.

Award Acceptance Form

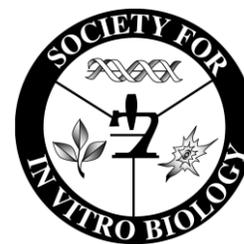
INSTRUCTIONS: Complete and send (1) copy of this "Acceptance Form" and keep one (1) copy for your files. All forms must be typed or have legible print.

DEADLINE: The "Acceptance Form" should be sent to SIVB as soon as possible after the conclusion of the fair so as to allow for timely follow-up contact with award recipient. Letter of congratulations will be mailed in the late summer. Listing of award winners will be published in the fall issue of the SIVB Newsletter.

SEND TO: Marietta Wheaton Ellis, Education Coordinator

SIVB

Society for In Vitro Biology
514 Daniels St., Suite 411
Raleigh, NC 27605
Phone: (910) 755-5431
Fax: (910) 755-5432



Acceptance of Society for In Vitro Biology Award

RECIPIENT'S NAME: _____

RECIPIENT'S ADDRESS: _____

NAME OF FAIR: _____

PLACE OF FAIR: _____

RECIPIENT'S SCHOOL: _____

SCHOOL ADDRESS: _____

Title & Short Description of Recipient's Project (use separate sheet for additional information)



DEPARTMENT OF THE AIR FORCE
AIR FORCE RESEARCH LABORATORY WRIGHT-
PATTERSON AIR FORCE BASE OHIO 45433



14 SEP 17

Dear Science Fair Official:

The Air Force Research Laboratory is proud to support Science, Technology, Engineering, and Mathematics (STEM) initiatives for our nation's youth. The Air Force is committed to providing opportunities to develop the future leaders in STEM through venues such as Science and Engineering Fairs.

As the nation's most technically advanced force, the Air Force recognizes the critical need to foster and increase STEM talent to remain on the cutting edge of technology. The Air Force Research Laboratory will continue its support to the Intel International Science and Engineering Fairs (ISEF) affiliated regional and state science and engineering fairs for the 2017-18 school year.

In order to make the process of registering for Science and Engineering Fairs as seamless as possible for this school year, we have created a new link to our website. Should you have any questions, please email AFRL.WSC@us.af.mil

Fair Registration:

Please register your fairs for 2017/2018 at https://www.surveymonkey.com/r/AFSEFAIR17_18

The Air Force is eagerly anticipating another year of supporting and recognizing student talent at the regional and state Intel ISEF affiliated fairs across the United States.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward W. Ayer".

Edward W. Ayer
Director, Engineering and Technical Management
AFRL/EN

U.S. METRIC ASSOCIATION AWARD

To be completed by Officials of the Regional or State Fair. Please do not give this form to the student winner to complete.

INSTRUCTIONS: After your fair, email the information listed below to the email address shown. If email is not possible or convenient please fill in the information on this page and mail it to the US Postal Service address shown. Please indicate ISEF Fair ID, if possible.

DEADLINE: As soon after your fair as is convenient.

EMAIL: mwhenschell@gmail.com

US POSTAL ADDRESS: Mark Henschel
4691 Black Oak Trail
Rockford, IL 61101

NAME OF FAIR DIRECTOR (or Awards Chair): _____ EMAIL ADDRESS OF

DIRECTOR (or Awards Chair): _____
(Provide US Postal Service address below ONLY IF no email address is available.)

REGIONAL OR STATE FAIR? (Circle one): REGIONAL STATE

NAME OF FAIR (ID NUMBER): _____
(Please omit "1st," "Second," "Annual," "Science & Engineering Fair", etc.)

CITY AND STATE WHERE FAIR WAS HELD:

City _____ State _____
(full address not needed) (US Post Office abbreviation)

NUMBER OF STUDENTS RECEIVING A METRIC AWARD: — —
(This is usually one but may be more in some cases)

SI (Metric) AWARD
sponsored by the
U.S. METRIC ASSOCIATION

JUDGES GUIDE FOR JUDGING

(rev. 2014-08)

ELIGIBILITY: All students competing in the fair are eligible.

THE PROJECT: The project should involve quantitative measures and should use units of the SI metric system for those measures. The subject of the project should not be the SI system itself

THE USE OF SI UNITS: Measures reported in the project, including all calculations, results, graphs, etc. should be expressed completely and correctly in units of the International System (SI) also called the metric system. **It** is preferable that equivalents in other units not be given at all (and if given, should be secondary to the SI expression). Measurements should actually be obtained in metric units, not obtained in old English units and then mathematically converted to metric.

CRITERIA: Any project which involves measures and expresses those measures consistently and correctly in SI metric would be a good choice to win the metric award. A project which uses a variety of metric units for different kinds of measures (such as force in newtons, pressure in kilopascals, energy in joules, power in watts, etc.) would be a better choice than one which only uses centimetres to measure lengths or litres for volumes. A project in which the measures were integrally important to the research would be a better choice than one in which measures were only used to describe the sizes of containers or the amounts of substances tested (or the size of the display board!). Units of older (non-SI) metric systems are NOT acceptable. Examples of such non-acceptable units are: mmHg, cmHg or millibars for pressure; calories, kilocalories or ergs for energy or heat; dynes, grams or kilograms for force or weight. (Grams and kilograms are mass.) The accompanying table, Judges Guide to SI Units, gives the name and correct symbol for many of the units of the SI system, those for measures that are most likely to be encountered. Also shown are a few non-SI units which are officially considered acceptable for use with SI.

COMMON ERRORS: A common error is the incorrect use of unit symbols. Lower case letters are not correct where capitals are prescribed, and vice versa. For kilowatts, kW is right while Kw, kw and KW are all wrong. The symbols are never followed by an "s" to form a plural. **It** is not good usage to use multiple slashes for division. Use m/s², not m/s/s. The product of units is formed by a raised dot or a space between the separate symbols; e.g., the symbol for the newton-second is N·s or N s, but not Ns. Symbols should not be mixed with words. Write the symbol km/h or spell out kilometres per hour; do not use kilometres/hour. The symbols are not considered abbreviations so they should not end with a period. The symbols should be used, not abbreviations. Use min rather than sec. and use cm³, not cc or c.c. and use h not hr. etc.

THANK YOU! The members of the U.S. Metric Association thank you for assisting us by serving as a judge for the metric award.

Science Fair Award Coordinator:
Mark Henschel
4691 Black Oak Trl.
Rockford, IL 61101
email:
mwhenschell@gmail.com

U.S. METRIC ASSOCIATION

Headquarters:
Don Hillger
CIRA 1375
CSU-Ft. Collins
CO 80550
Don.hillger
@colostate.edu

JUDGES GUIDE TO SI UNITS

(revised 2014-07)

MEASURABLE QUANTITY	BASIC UNIT	EXAMPLES OF SOME ACCEPTABLE MULTIPLES AND SUBMULTIPLES	UNITS NOT PART OFSIBUT ACCEPTABLE FOR USE WITH SI
Length, Distance	metre (m)	millimetre (mm) kilometre (km)	astronomical unit (ua)
Mass (not weight)	kilogram (kg)	gram (g) milligram (mg)	tonne (t) (metric ton) atomic mass unit (u) or Dalton (Da)
Time	second (s)	millisecond (ms) microsecond (<i>Jts</i>)	minute (min) hour (h) day(d)
Speed, Velocity	metre per second (rnfs)	kilometre per second (krnfs)	kilometre per hour (krnfh)
Acceleration	metre per second squared (rnfs ²)	centimetre per second squared (crnfs ²)	----
Force (including weight)	newton (N)	kilonewton (kN)	----
Energy (all forms, including heat)	joule (J)	kilojoule (kJ) megajoule (MJ)	electron-volt (eV) kilowatt-hour (kW·h)
Power	watt(W)	kilowatt (kW) megawatt (MW)	----
Pressure, also Stress	pascal (Pa) or newton per square metre (N/m ²)	megapascal (MPa) kilonewton per square metre (kNfm ²)	----
Area	square metre (m ²)	square kilometre (km ²)	hectare (ha)
Volume or Capacity	cubic metre (m ³)	cubic centimetre (cm ³)	litre (l or L) millilitre (ml or mlL)
Angle	radian (rad)	milliradian (mrad)	degree (°), minute ('), second (")
Potential, Emf (voltage)	volt (V)	millivolt (mV) kilovolt (kV)	----
Current	ampere (A)	milliampere (mA)	----
Resistance	ohm (Ω)	kilohm (kΩ) megohm (MΩ)	----
Capacitance	farad (F)	microfarad (<i>JtF</i>) picofarad (pF)	----
Inductance	henry (H)	millihenry (mH)	----
Temperature	kelvin (K), also degree Celsius (°C)	millikelvin (mK) (prefixes not used with °C)	----

Columns 1 and 2 of this list do not contain all the quantities and basic units in SI. It includes most of the quantities and basic units that might be expected in the work of good high school science students. Column 3 contains only a couple examples of acceptable multiples and submultiples formed by adding the SI prefixes to the basic unit. There are many others. Any of the prefixes below is correct. Each is shown followed by the power of ten it represents and its symbol; e.g. tera represents 10^{+12} and its symbol is T, as in one terrawatt (1 TW) equals one trillion watts (10^{+12} W).

----- Multiples -----				----- Submultiples -----							
deka	(10 ⁺¹)	da	tera	(10 ⁺¹²)	T	deci	(10 ⁻¹)	d	pico	(10 ⁻¹²)	p
hecto	(10 ⁺²)	h	peta	(10 ⁺¹⁵)	P	centi	(10 ⁻²)	c	fermto	(10 ⁻¹⁵)	f
kilo	(10 ⁺³)	k	exa	(10 ⁺¹⁸)	E	milli	(10 ⁻³)	m	atto	(10 ⁻¹⁸)	a
mega	(10 ⁺⁶)	M	zetta	(10 ⁺²¹)	Z	micro	(10 ⁻⁶)	<i>Jf</i>	zepto	(10 ⁻²¹)	z
giga	(10 ⁺⁹)	G	yotta	(10 ⁺²⁴)	Y	nano	(10 ⁻⁹)	n	yocto	(10 ⁻²⁴)	y

Top ten simple rules for using the SI metric system:

1) Do not refer to the metric system by the slang term "metrics." The term "metrics" refers to a branch of abstract mathematics. The use of this term to refer to SI is confusing.

To refer to the international metric system of measurement, use the expression "the metric system" or the proper short form "SI," (pronounced Ess-Eye).

2) The metric system does not use abbreviations. Symbols are used to shorten the names for metric units, and these symbols are the same all over the world, regardless of the local language spoken. Rules applicable to these symbols supercede local rules of grammar. The use of the same symbols regardless of language helps facilitate international communication. People who may not understand a foreign language will be able to understand the common international symbols assuming all countries accept the use of the same international SI measuring units.

3) Do not use "K" to stand for kilometer. The correct symbol for kilometer is small k, small m, with no period unless the symbol is at the end of the sentence. Note the proper pronunciation of this word is with the accent on the first syllable. The kilometer is a distance, not a measuring unit or device. The accent on the first syllable makes kilometer sound the same as millimeter or centimeter. Accenting kilometer on the second syllable makes kilometer sound the same as barometer or thermometer. Kilometer should sound like millimeter or centimeter rather than sound like barometer or thermometer. (It rhymes with "gentle squeezer.")

The -re spelling (metre, kilometre, etc.) is the internationally accepted English spelling for metric units. While this spelling may seem unusual for an American, it does make sense to have one spelling for a measurement unit and another spelling for a device or instrument. (The only English speaking country that uses the -er spelling for metric units is the United States.)

4) When referring to a rate of travel, use km/h to stand for kilometers per hour. The proper symbol for kilometer is km, the proper symbol for hour is h, and the slash signifies "per." Both "KPH" and km/hr are incorrect.

The proper symbol for second is small s. "Meters per second" is properly shortened as m/s. Do not use "sec" to stand for second. (The period is used in this instance because the symbol is at the end of the sentence.)

5) Do not place the symbol immediately after the number. There should always be a space between the number and the symbol for the measuring unit. For example, 9mm is incorrect, while 9 mm is correct. Note that a hyphen is not necessary as "9 mm" is a SI symbol, not a compound adjective.

6) Do not use a period (full stop) after the symbol for a unit. SI symbols should not be followed by a period unless they are at the end of a sentence.

7) Do not use "cc" to stand for cubic centimeters. Note that "cu. em." is also incorrect. A 500cc container would be a 500 centi centi container, which is nonsense. The proper symbol for cubic centimeters is small c, small m, with the exponent three immediately following the m. If one is unable to create exponents on their typewriter or computer, "ml" could be used instead as a milliliter is the same size as a cubic centimeter.

If something is larger than 1,000 cubic centimeters, it could be designated as a liter or more. For example, 1,600 cubic centimeters are the same size as 1.6 liters.

8) Do not substitute capital letters when small letters are called for. Capital letters are generally used to honor people or when a small letter has already been used for a symbol. A 100MG package would be a 100 Mega Giga package, 8MM film would be eight Mega Mega film, and a 5K race would be a five Kelvin race.

Also, "Km 0" would be Kelvin meter zero.

9) All metric units of the amount of substance or heaviness are based upon mass, not weight. Mass is the same everywhere, regardless of gravity. Do not use "kilo" to specify the amount of substance. A kilo is a prefix, not a unit. The correct unit would be a kilogram, or kg. (Another reason to use the proper symbol for a distance is that 5k would be a five kilos, which some people might confuse with weight or mass.)

10) Metric prefixes exist to make life easier, not harder. 15,000 kilowatts would be 15 Megawatts. Also, 15,000 metric tons would be 15 kilotons. The symbol for ton (1,000 kilograms) is t. Something weighing 7,000 tons would weigh 7 kt.

When going above 1,000 of anything, use the symbol for the next larger prefix. Instead of 1,000 milligrams, use one gram. Instead of 1,000 grams, use one kilogram. Instead of 1,000 kmlh, use one Mmlh.

Think metric, don't convert. For example, use the rhyme

30 is hot,
20 is nice.
10 wear a coat,
0 is ice.

to keep track of the relationships of SI units to the sizes of things they measure.

ERRORS SEEN FREQUENTLY IN SI USAGE

SI is the symbol for Systeme International which is the modernized version of the metric system that the USA has agreed to use [do not shorten it to S.L]

1. The short forms for SI units are called symbols, NOT abbreviations.
2. SI symbols never end with a period unless they are the last word in a sentence.
3. SI symbols should be preceded by digits and a space must separate the digits from the symbol:

RIGHT: **It** was 300 mm wide. The millimeter width was given.
 WRONG: **It** was 300mm wide. The mm width was given.

4. Symbols are always written in the singular:

RIGHT: 1 mm 500 mm 1 kg 35 kg
 WRONG: 50 mms 35 kgs
 (The lowercase s is the symbol for the "second", therefore 50 mms = 50 millimeter seconds.)

BUT: **It** is correct to pluralize written-out metric units: 25 grams 30 degrees Celsius

5. The meaning of an SI symbol can be changed if one substitutes a capital letter for a lowercase letter, as shown for the word, millimeter, in the following example:

RIGHT: mm (for millimeter, which means 1/1000 meter)
 WRONG: Mm (which means megameter and equals one million meters)
 MM (which means mega mega and is two prefixes, each meaning one million)

CORRECT USAGE: SOME INCORRECT USAGE FREQUENTLY SEEN:

mm		Mm	MM	mm.	Mm.				(for millimeter)
km	%	K	k	KM					(for kilometer- KM means Kelvin Mega)
mL or ml		ML	MI	MI.	ML.				(for milliliter)
g		G	G.	g.	gr.	GR	GRM	grms	GRMS (for gram)
h		hr	hrs	HR	HRS	h.	hrs.	HRS.	HR. (for hour)
cm ³ or mL		cu.cm.	c.c.	cc	(the cc for cubic centimeter belongs to an obsolete version of the metric system. Note: cc = centi centi)				
s		sec	S	SEC	Sec	S.	sec.	s.	(for second)
kPa		KPA	Kpa	(for kilopascal- capital K is the symbol for kelvin)					
10 °C		10 degrees C	10 deg C	(for degrees Celsius- "centigrade" is incorrect)					
The slash means "per": 100 km/h = 100 kilometers per hour. (Do not use 100 kph.)									

Note: A 5K race would be a five Kelvin race, while a 5k race would be a five kilo race, neither of which makes any sense. Kilometer should be pronounced to rhyme with "gentle squeezer."

For more information contact the U.S. Metric Association (USMA) at www.metric.org or explore the www.think-metric.com site.

The metric system was designed on purpose to be a simple, homogeneous system that anyone could use. Do not create extra work by "converting" from inch-pound units. Think metric, measure and work in metric. International communication will be improved, and mathematical calculations will be easier!

Correct SI Metric System Usage

SI is the symbol for the Systeme International d'Unites, the modernized version of the metric system that the USA and other nations have agreed to use. (Do not abbreviate it as S.I.)

This list is provided to point out the correct way to use the metric system and to show many of the incorrect examples of its usage that may be given on package labels and in other printed matter. These correct ways to use SI are set by the international standards that define the SI.

General Guidelines:

- The short forms for SI units (such as mm for millimeter) are called **symbols**, *not* abbreviations.
- SI symbols *never end with a period*. Unless they are the last word in a sentence.
 - RIGHT:** 20 mm, 10 kg
 - WRONG:** 20mm., 10 kg.
- SI symbols should be preceded by digits and *a space must separate the digits from the symbol*.
 - RIGHT:** It was 300 mm wide. The millimeter width was given.
 - WRONG:** It was 300mm wide. The mm width was given.
- Symbols *always are written in the singular form* (even when more than one is meant).
 - RIGHT:** 1 mm, 500 mm, 1 kg, 36 kg
 - WRONG:** 500 mms, 36 kgs
 - BUT:** It is correct to pluralize written-out metric unit names: 25 kilograms, 250 milliliters
- The symbol for a compound unit that is *a quotient of two units is indicated by a solidus* or by a negative exponent.
 - RIGHT:** km/h or km·h⁻¹ (for kilometers per hour)
 - WRONG:** kmph or kph (do *not* use pas a symbol for "per")
 - BUT:** It is correct to say or write "kilometers per hour":
- The meaning of an SI symbol can be changed when substituting a capital letter for a lower case letter.
 - RIGHT:** mm (for millimeter, which means 1/1 000 of a meter)
 - WRONG:** MM or MIJ (M is the prefix for mega, which means one million; a megameter is a million meters)

EXAMPLES OF CORRECT AND INCORRECT USAGE

For	Correct Usage	Incorrect Usage
kilometer	km	Km, km., KM, kms, K, k
meter	m	M, m.
millimeter	mm	Mm, mm., MM
liter	L or l	L., l.
milliliter	ml or mL	ML, ML, mL., ml., mls
kilogram	kg	KG, KG., Kg, Kg., kgr, kgs, kilo
gram	g	G, G., g., gr, GR, GRM, grms
microgram	µg	meg
hour	h	hr, hrs, HR, h., HR., HRS.
second		sec, S, SEC, sec., s., S.
cubic centimeter	cm ³	cc
kilometer per hour	km/h	KPH, kph, kmph, km/hr
kilohertz	kHz	KHz, KHZ, Khz
megahertz	MHz	MHZ, Mhz
hectopascal	hPa	HPa, HPA, Hpa, mb
kilopascal	kPa	KPa, KPA, Kpa
degree Celsius	°C	C, deg C
kelvin	K	°K, deg K

Note: A 5K race would be a five Kelvin race, while a 5k race would be a five kilo race, neither of which would be accurate. Kilometer should be pronounced KILL-oh-meet-ur, not kiii-AHM- it-ur.

The information above was adapted from the U.S. Metric Association Website, <http://www.metric.org>. Students are encouraged to visit this Website for more information.

How to Break Ties

Suppose there are two or more students that all have nice exhibits and you have trouble deciding which one to give an award to. I judged science fairs for 25 years for the Chicago Board of Education and for the Illinois Junior Academy of Science, and I often had to break ties.

I would ask students questions to see how well they understood the Metric System. If the answers students gave indicated they realized how the Metric System worked, and that they were not just converting from obsolete inch-pound units, the student would get the award. Generally I would ask students how tall they were or what their body temperature was or how high the ceiling was. Rarely did I get an answer in SI units, so I doubt you will either. However, I have included a list of sample questions and likely answers so it is easier to tell which students understand the Metric System and which just converted from inch-pound. (I spelled out kilometer using the correct pronunciation since many people incorrectly stress kilometer on the second syllable- a kilometer is a distance, not a device or object .)

- 1) How many centimeters tall are you? (generally between 155 and 180)
- 2) What is your body temperature in degrees Celsius? (37)
- 3) What is the temperature of this room in Celsius? (usually around 20-25)
- 4) How heavy is a milliliter of water? (one gram)
- 5) How heavy is a cubic meter of water? (one ton in SI- officially spelled tonne)
- 6) How heavy is the liquid in a 355 ml can of soda pop? (355 grams)
- 7) How many cubic centimeters are in one liter? (1,000)
- 8) How many hectares are in a square KIL-oh-met-er? (100)
- 9) How many square meters are in a square KIL-oh-met-er? (1,000,000)
- 10) How high is the ceiling in this room (usually 3-4 meters)
- 11) What is the circumference of the planet Earth? (40,000 KIL-oh-met-ers)
- 12) If your mass is 50 kilograms, how many liters is that? (50)
- 13) If someone is 100 kilograms and 2 meters tall, what is their body mass index? (25)
- 14) Can you think of an illustration of parts per million? (one answer: one milligram per liter)
- 15) Can you think of an illustration of parts per billion? (one answer: one milligram per cubic meter)

Here are a few more quick fun facts just in case students are interested:

How tall is the Statue of Liberty? (100 meters)

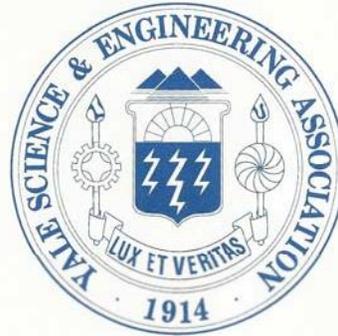
How tall is the Eiffel Tower in Paris, France? (300 meters)

What is the diameter of a DVD or Compact Disk? (12 centimeters)

How many milliliters in a unit of blood (usually around 500, half of a liter)

How many city blocks is a 5 km race? (usually 25 in many cities, about 5 city blocks plus cross streets is close to 1 KIL-oh-met-er)

YALE SCIENCE & ENGINEERING ASSOCIATION INC.



The Yale Science & Engineering Association, Inc. (YSEA) wishes to provide one (1) award at each Regional/State/International Intel ISEF Competition. It is intended that this recognition be awarded to the most outstanding 11th grade project exhibiting in the areas of Computer Science, Engineering, Physics or Chemistry though in extraordinary cases it may be awarded to a 10th or 12th grade project. In any case only a single project may win at any given fair independent of the size of the fair and the number of prize packets received. In the case where online award acceptance forms are submitted from more than one project, you will be contacted for further information on identifying the correct award winner.

Judging for 2018 fair awards will be by your Awards Committee. In future years, we hope to be able to offer judging assistance by Yale University faculty and/or alumni, depending upon availability.

Included herewith is a "Preliminary Certificate" to be filled in by your awards committee or fair director and presented to the recipient at the time of awards announcements. Please make sure that the student completes the AWARD ACCEPTANCE FORM **online at <http://ScienceFairs.YSEA.org>** as promptly as possible after the fair, but no later than 30 May 2018. In cases where a group project has won, all members must separately complete the online award acceptance form. Instructions for the form are included and must be given to the student. A formal award certificate, suitable for framing and a pewter medallion will be forwarded directly to the recipient(s) by the end of September.

In addition, it is possible that the recipient(s) will be contacted by a local Yale Club or Association and invited to an annual or special meeting for further recognition and publicity of his/her achievement.



INSTRUCTIONS FOR SUBMITTING THE 2018 AWARD ACCEPTANCE FORM FOR THE YSEA SCIENCE FAIR AWARD

Dear Candidate/Student:

CONGRATULATIONS on your selection for the YSEA Award. Please follow the instructions below carefully to claim your official Yale Science and Engineering Award.

The Award Acceptance must be submitted ONLINE. There are no exceptions. Please make sure you check your submission prior to finalizing it. If you find that you made an error in your submission, you should make a second corrected submission. In the comments field of the corrected submission state that it as a corrected submission. Each member of a winning team project must submit their information separately.

DEADLINE: You must complete the online submission as soon as possible after the end of your Science Fair, but NO LATER THAN MAY 30, 2018. Late submissions may not be processed.

Your Formal Certificate and Medallion is expected to be mailed to the address you provide by the end of September 2018. You will likely receive no communication from the YSEA until that time.

PROCEDURE:

- 1- Go to the following website: <http://ScienceFairs.YSEA.org>
- 2- Follow the instructions on the site to:
 - a) confirm that you are a 2018 winner of a YSEA Science Fair Award
 - b) enter all the requested information (name, address, email, school name, project title, fair information, name and email of teacher or advisor). This is the address to which the formal certificate and medallion will be mailed so be certain that it is a valid mailing address.
 - c) you are done. Once again congratulations, and look for your award in the mail by the end of September 2018.
- 3- If you have further questions send an email to Rick Koster at ScienceFairs@ysea.org. Make certain that you subject line includes YSEA Science Fair Award.
- 4- Note when entering your address: Please do not use accented letters within your entered name and address. If you wish to have such accents, please list them in the comments field on the website.

To learn about Yale Science and Engineering Association (YSEA) – a group of Yale alumni, visit www.ysea.org

To learn more about Yale, visit www.yale.edu

To apply to Yale, visit www.yale.edu/admit



Science Fair Director, Coordinator, or Teacher,

Thank you for awarding Stockholm Junior Water Prize (SJWP) Regional Certificates at your fair. These certificates recognize high school students who have conducted outstanding water-related research *Please note that students must be between the ages of 15-20 and presently be in grades 9-12.* Projects may have up to three students as a team. A "team" refers to 1, 2 or 3 students.

To present the certificates and give students the opportunity to enter their SJWP state competition, please follow the steps below.

2 Easy Steps

- 1) Award the three enclosed SJWP Regional Certificates to the top three water-related high school projects at your fair. Please consider all categories where a water project could be conducted, such as environmental, chemistry, biology, earth science, etc.
- 2) Upon presentation of the award, please instruct the certificate recipients to enter the SJWP state competition by registering at www.sjwp.org and submitting their research paper.

(Please award one certificate per team. If there are multiple team members, please notify me and I will provide a personalized certificate to them.)

**Thank you for encouraging youth interest
in water-related science!**

Important: When awarding certificate please present it with the certificate holder which contains instructions for entering the State competition. *(Receipt of this certificate does not automatically enter the student in their state competition; entry form must be completed online at www.sjwp.org)*

If you or a student has questions, contact Stevi Hunt-Cottrell at 703-684-2454 or email: shunt-cottrell@wef.org. Additional certificates are available upon request. For information about the competition, including judging criteria, and ideas for projects, visit www.SJWP.org.

Volunteers may be available to evaluate projects and award these certificates. If you are contacted by a Water Environment Federation member who wish present the certificates at your fair, please welcome their participation as judges, or if you would like to request a member to judge, please contact Stevi Hunt-Cottrell at the above information



The U.S. SJWP competition is organized by the Water Environment Federation and its Member Associations with support from Xylem Inc

Background

- The Stockholm Junior Water Prize (SJWP) is the most prestigious international award for a water-related science project at the high school level.
- The Stockholm International Water Institute (SIWI) established the SJWP competition in 1997 to mirror the adult Stockholm Water Prize, the world's most prominent award for outstanding achievements in water-related activities. The international competition is an impressive week-long event that occurs each August or September in Stockholm, Sweden, and the award is presented by a member of the Royal Family.
- WEF and its Member Associations have been organizing the U.S. competition for over a decade, and are nationally sponsored by Xylem Inc.

Eligibility

- The SJWP competition is open to all high school students in 9th – 12th grades who have conducted water-related research science projects, and have reached the age of 15 by August 1st of the competition year. Up to three students may work on a single project.
- It is not necessary for a student to have participated in a science fair in order to enter the competition. The competition is open to any high school student to include home school, private school or students who have worked independent of any school program.
- Projects should be aimed at enhancing the quality of life through improvement of water quality, water resource management, or water and wastewater treatment.
- Projects can explore water issues on a local, regional, national, or global level using a research-oriented approach.
- Students who wish to compete in the state competition must enter their papers online at www.sjwp.org by April 15th.

How it Works

- Regional Water Prize Certificates are awarded at regional and state fairs around the country.
- Students are encouraged enter the state competition by submitting their research papers online at www.sjwp.org. (Students do not need to receive a certificate to participate; they may self-nominate... all students with water-related projects are eligible to enter. Receipt of a regional award does not automatically enter the project into their state competition...this must be done separately by the student.)
- The research papers from each state are compiled and sent to that state's WEF Member Association where a panel of water quality experts judge and select the state's winning project.
- All state winners receive an all-expenses paid trip to the national competition. This two-day event offers educational and entertaining events, and is where the U.S. winner is announced.
- The U.S. winner(s) receives \$10,000, a trophy, and an all-expenses paid trip to Stockholm, Sweden, to participate in the international competition.

Upcoming Competition Locations

- 2016-2018 University of North Carolina-Charlotte

Awards

Regional Certificate Winners and Self-nominees:

- Opportunity to enter their State Stockholm Junior Water Prize Competition
- Free one-year student WEF membership

State Winner:

- An all-expenses paid trip to the national finals
- Frame-ready certificate
- State Medal

National Winner:

- A cash prize of \$10,000 per project
- National trophy and framed certificate
- An all-expenses paid trip to Stockholm, Sweden to compete in the international competition. This award is presented by HRH Crown Princess Victoria of Sweden.

National Runner's Up (2):

- A cash prize of \$1,000 per project
- Framed certificate

International Winner

- A crystal sculpture
- A cash prize of \$15,000 per project
- A cash prize of \$5,000 for the winning student's school.
- Other prizes as determined by the international organizers

The Stockholm Junior Water Prize Strives to

- Encourage enthusiasm in today's youth for water issues.
- Build an international community of young scientists bonded together for the water environment.
- Raise public awareness about the future of our water resources
- Develop and ensure future leadership in the water quality community by attracting the best and the brightest young people to this field.

To learn more about the competition, please visit www.sjwp.org