FORT ATKINSON REGIONAL SCIENCE FAIR 2015

25TH ANNIVERSARY

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More info available at ***fasciencefair.org***

Fort Atkinson Science Fair, Inc., would like to acknowledge the work of Nasco's R&D Graphics Department in the production of our 2015 booklet.

Fort Atkinson Regional Science Fair

The Fort Atkinson Science Fair, Inc., is a nonprofit organization with the main purpose of encouraging students of all abilities in the fields of science.

Science importantly shapes our lives and communities. Local industry and individuals have contributed to scientific knowledge and understanding. For 25 years, the Fort Atkinson Regional Science Fair has been dedicated to such individuals. Each year, the fair will host a speaker to highlight a specific scientific topic. Our hope is to inspire the young people of our area by showing them what science can do for them and their communities. The 2015 speaker is Dr. Chris Veldkamp of the UW-Whitewater Chemistry Department.

Prior Honorees and Speakers:

1991	Art Waterman	1999	William D. Knox	2007	Dr. Fred Rose
1992	Albert Haller	2000	Paul Raasoch	2008	Richard Wanie
1993	Richard Wanie	2001	Leland Allenstein, D.V.M.	2009	Dr. Bob Benjamin
1994	Anne Griffiths, M.D.	2002	Helmut Ajango	2010	Mary Linton
1995	William David James	2003	Dr. Kenneth Griffiths	2011	Dr. Rex Hangar
1996	Frank Haban	2004	Gary Reuterskiold	2012	Dr. Thomas Nordland
1997	Capt. Wilbur Sundt	2005	Frank & Shirley Stekel	2013	Dr. John Ejnik
1998	Dr. James & Sophia Majerus	2006	Dr. Russel Nord	2014	Dr. George Clokey

• *25th Annual* •

2015 Fort Atkinson Regional Science Fair

Featured Speaker

Dr. Chris Veldkamp

UW-Whitewater Chemistry Department

Dr. Christopher Veldkamp joined UW-Whitewater in 2009. Now, as an Associate Professor, he has taught general, organic, and biological chemistry courses. His research interests include structural biology and cancer metastasis.

Prior to teaching, Dr. Veldkamp was an American Cancer Society postdoctoral fellow at the Medical College of Wisconsin. There he engineered a now patented protein molecule that can reduce cancer metastasis in mouse models of human cancer.

Since joining UW-Whitewater's chemistry department, Dr. Veldkamp's continued research efforts resulted in an Academic Research Enhancement Award for $334,000 from the National Cancer Institute of the National Institutes of Health. This award has provided research jobs for students and has led to students coauthoring peer-reviewed, scientific publications.

HELPFUL HINTS AND HELPFUL PEOPLE

KINDERGARTEN – GRADE 1

- Your project can be a display or demonstration of a science related topic or of an actual experiment based on a question, like the other grades are required to do.
- In your display, you must explain or identify how your project is related to science.
- Use scientific terms to explain, identify, and describe the various parts of your project.
- Be sure to review and follow the specific requirements for your grade level as outlined under the sections "Judging Criteria," "Additional Information," and "Rules and Safety Information" as stated in this booklet.

GRADES 2 – 12

- Review the Scientific Method as described on page 7 of this booklet. Follow all five steps in your science fair project.
- Your project MUST ASK A QUESTION. This question should not be answerable by just researching information in a book or online. Clearly state the question on your display.
- A good question will lead you to create an experiment in which you will measure something. Examples of things you might measure include changes in weight or volume, lengths of time or distance, numbers of occurrences, or differences between things.
- Have a control sample and more than one test sample.
- You must record and display your results. Show how you followed all five steps of the Scientific Method.
- Be sure to review and follow the specific requirements for your grade level as outlined under the sections "Judging Criteria," "Additional Information," and "Rules and Safety Information."
- Please remember – displaying models or posters of things such as volcanoes, the solar system, prehistoric animals, etc., will not meet the requirements of an experiment since you cannot set up an acceptable experiment to answer a question.

SCIENCE FAIR PARTICIPANT HELP SESSION

Science Fair Participant Help Session date will be Tuesday, December 2, from 6:30 to 8:00 pm at the Dwight Foster Public Library in Fort Atkinson. These experts can help you formulate your hypothesis, plan your research strategy, or just answer any questions you may have about putting together your Science Fair project. The Dwight Foster Public Library is located at 209 Merchants Avenue in Fort Atkinson.

Good luck and enjoy your scientific exploration!

Fort Atkinson Science Fair, Inc.

Board of Directors

Board of Directors

President	Amy Lutzke	920-222-6832
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Fort School Representatives

2014-2015 Science Fair School Representatives

FORT ATKINSON

Barrie School	Holly Andrews	920-563-7817
Purdy School	Rick Brietzke	920-563-8836
Rockwell Scool	Kris Curran	920-650-1327
Luther School	Dave Geiger	920-568-4465
St. Joseph Catholic School	Ray Robinson	920-568-0933
St. Paul's Lutheran	Gary Schommen	920-568-0126
Fort Atkinson Middle School	Ginny Timm	920-563-7833
Fort Atkinson High School	Chick Westby	920-563-7811

Area Community Representatives

AREA COMMUNITIES

Whitewater Schools	Crystal Gordon	262-473-1897
Lake Mills Schools	Alex Mulligan	920-648-3043
Cambridge Schools	Mary Beth Stevens	608-423-4735
Jefferson Schools	Nick Skretta	920- 675-1316
Johnson Creek Schools	Melanie Heckel	920-699-3481
Palmyra/ Eagle Schools	Chelli Taylor	262-215-9364
Milton Schools	Jon Hundt	920- 222-4493

Fort Atkinson Regional Science Fair

February 20-24, 2015
at
Hoard Historical Museum
401 Whitewater Ave.
Fort Atkinson, WI

FRIDAY	
Student Set-Up	3:00 - 6:00 PM
SATURDAY	
Judging	8:30 - 11:30 AM
Public Viewing	1:00 - 3:30 PM
Awards Presentation	3:30 - 4:30 PM
TUESDAY	
School Viewings	8:30 AM - 2:30 PM
Project Pickup	3:00 - 5:00 PM

Information contained in this booklet can also be found on our website at…

www.fasciencefair.org

Awards

All students exhibiting projects in the Fort Atkinson Science Fair will receive a participation certificate and a ribbon designating their level of accomplishment. These awards will be attached to the exhibits after the judging has taken place. Thus, the names of the students will be on the exhibits for the public viewing on Saturday.

A commemorative medal on a colored ribbon will be awarded to the 1st, 2nd, and 3rd place winners in each division regardless of individual or group participation. The top six winners in each division will receive a science fair T-shirt. For group projects, a T-shirt will be awarded to all members of the team if it places in the top six of the division. There will also be a drawing at the awards presentation for a microscope donated by Nasco.

In addition, monetary awards will be presented to the top 3 winners of the grades 9-12 division. First place will receive $200, second place $100, and third place $75. Fourth through sixth places will receive $10 Nasco gift cards. The intent of the monetary award has been as an incentive and reward for high school entries. The regular 9-12 division has requirements above and beyond those of all others. These standards are outlined in our booklet under "Judging Criteria" for grades 9-12 and "Additional Information" for Division 9-12 in the booklet. They include a typewritten abstract and formal report, proper completion of ISEF forms, display size requirements, and participation of an adult sponsor. The Science Fair Board also acknowledges that projects designed to compete at this level often require more expensive equipment and supplies, as well as substantially more time and effort on the student's part. The first and second place winners may also incur traveling expenses in order to attend the Badger State Science & Engineering Fair.

Fort Atkinson Regional Science Fair

JUDGING CRITERIA

To view the actual sheets used by the judges in each category to score the projects, please go to our website at *www.fasciencefair.org*

Kindergarten - Grade 3

Both groups (Kindergarten-1 and 2-3) will have the following judging criteria, but will be judged according to their appropriate level and within their own division.

Kindergarten and grade 1 will be allowed to create a scientific display or demonstration instead of the same criteria as grades 2 and 3 if they wish.

The intent of grades 2 and 3 is to get the student to ask and answer a question about some facet of science. They do not have to do a research project. They should, however, have a specific question and answer that question.

They will be judged on:

- appropriateness of topic
- data collection and interpretation
- clarity of presentation

Grade 4 - Grade 5

This age group should be establishing an understanding of the scientific method. The student should show both experimentation and book research in their project. A log book (containing dates, times, places of experimentation, lists of materials, procedures, thoughts, etc.) will be required. A formal report is not necessary, though the following information should appear somewhere in the project: a clear statement of the problem, experimental methods, presentation of data (graphs, pictures, etc.), results, summary, acknowledgments (including any parental help), and bibliography. They will be judged on:

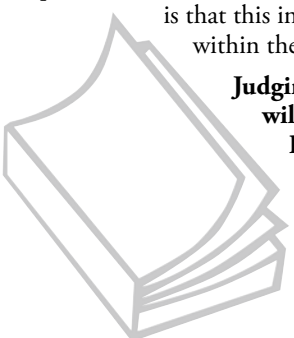
- appropriateness of topic and question
- appropriate use of log book
- overall thoroughness of data collection and interpretation
- clarity and organization of presentation

Grade 6-Grade 12

Both groups (6-8 and 9-12) will have the following judging criteria, but each group will be judged independently and relative only to their age group division.

At this level of age and experience, students should be exploring more creative attempts at problem solving that utilize the scientific method. The project should show evidence of laboratory and analysis skills, be supported by a well documented log book (required) as well as a review of scientific literature that relates to the question being asked. Note: An adequate review will include the search results of several Internet search engines, but also library text/journal research.

A formal report is required for the 9-12 Division, which should include the following: A clear statement of the question/problem, experimental design and methods, presentation and analysis of data, statement of results and conclusion, acknowledgements (including all help received), and a bibliography. While the 6-8 Division is not required to have a formal report, it is encouraged, and the expectation is that this information will be presented somewhere within the project display.



Judging criteria for both groups will be as follows:

Research topic/question. The project will be judged on the originality and depth of the question being asked, as well as the suitability of the question to controlled, scientific experimentation.

Experimental design. The basic science relating to the experiment should be well understood and explained, and used to design an experiment that can be expected to produce relevant results. The potential variables should be identified and controlled in order to limit the variations of the results obtained, and a hypothesis shall be created based upon this understanding.

Data collection and interpretation. Good laboratory practices should be followed in collecting data, including evidence of accuracy and thoroughness. The data should be analyzed properly, utilizing appropriate tools and methods, and the analysis shall include the recognition of unexpected results. Do the conclusions derived reflect this analysis as well as an understanding of the underlying scientific principles?

Clarity, organization, and presentation. The display and report (if relevant) shall clearly and accurately present the questions and underlying scientific principles involved, as well as the experimental procedures. Are the analysis and the resulting conclusions clearly presented, and do they flow logically from the question and experiment? References, sources of ideas, and other assistance shall be adequately identified.

Special Education Science: Kindergarten-Grade 5

This division is designed for Special Education students. Participants allowed in this category shall be either cognitively delayed or are learning disabled students receiving science instruction in special education. *All entry forms submitted in this category must be signed by a special education instructor.* The form may be signed next to or below the parent or guardian's signature. This additional signature is necessary to assure only those students who are eligible for this division are entered in it.

Students will ask and answer a specific question relating to science. Their project should reflect research and experimentation. Use of a log book is encouraged, but not required. They will be judged on:

- appropriateness of topic
- data collection and interpretation
- clarity and organization

Special Education Science: Grade 6-Grade 12

This division is designed for Special Education students. Participants allowed in this category shall be either cognitively delayed or are learning disabled students receiving science instruction in special education. *All entry forms submitted in this category must be signed by a special education instructor.* The form may be signed next to or below the parent or guardian's signature. This additional signature is necessary to assure only those students who are eligible for this division are entered in it.

Students will ask and answer a specific question relating to science. Their project should reflect research and experimentation. They should keep a log book. They will be judged on:

- appropriateness of topic and question
- thoroughness of data collection and interpretation
- clarity and organization of presentation
- appropriate use of log book

ADDITIONAL INFORMATION

SCIENTIFIC METHOD

Science is a process that is done by people who are trying to understand more about the world in which we all live. Science includes thinking about, observing, describing, explaining, and experimenting with the world around us. The scientific method is a way that scientists do their work, and is the method that you should follow as you do your project.

☑ **Identify a Question.** Look at things that happen around your home, at school, or outside and ask a question as to why you think that these things happen. Ask a question about your observation. It may start "What would happen if…" or "How would this change affect…." See what you can find out about your question at the library or on the Internet.

☑ **Hypothesis.** This is your guess about what result you expect to see when you do your experiment. It should take a form similar to "If I do this, then I expect this will happen." or "If this changes, I expect to find this result." Give a reason for your guess.

☑ **Create an Experiment.** Now, think of a way that you could turn your question into an experiment. You want to do a controlled experiment where you *only change one variable.* A variable is the element of the experiment that changes to test the hypothesis. Examples of variables are: temperature, depth, pH, moisture, amount of light, length of time. Also, your procedure should be like a recipe - another person should be able to perform your experiment following your procedure.

☑ **Data collection and analysis.** Do your experiment. Be sure to repeat the steps for better data and keep everything else that is not the changing variable the same.

☑ **Conclusions.** Do the results of your experiment show that your hypothesis is true or not? **Remember,** when unexpected things happen and your hypothesis does not appear to be correct, you have still learned something very important and it is still a valid experiment. Real world scientists often find this in their experiments as well. Also, explain what you might have done differently to make your experiment better.

THE LOG BOOK

The log book should be an informal recording made each day. It should show the scientist's work. The log book should start with the observations and questions that are the beginning of planning the experiment. It should also include any reference material you use to help you, the materials and methods you are using to answer the question, and measurements and other data as they are collected.

Since the log book is a daily diary of the project, it is not expected to be neat (but it should be legible), and it should not be recopied. As when entering anything in a diary, a date and time should be entered each time you write in your log book. Every time you work on your project, it should be recorded in the log book.

At the end of the project, the log book should contain all the information you used to prepare the display and write the formal report (if one is required).

THE PRESENTATION

The poster presentation should include the research question, an explanation of the experiment, and the results. Data are best displayed in a visual way using charts, graphs, or diagrams. The presentation should be brief and clear enough for viewers and judges to understand the project. For examples of how to display your project, see our website: www.fasciencefair.org.

HIGH SCHOOL ENTRANT INFORMATION

In order to be eligible to advance to the Badger State Science & Engineering Fair, Division 9-12 entries must conform to ISEF (Intel® International Science and Engineering Fair®) rules. However, eligibility to advance is OPTIONAL and not necessary to compete at the Fort Atkinson Regional Science Fair. Those entrants who wish to be eligible to advance must complete ALL of the following steps. Those who wish to only compete regionally may skip those steps marked "[ISEF]". An adult sponsor and research paper are required of all Division 9-12 entrants.

Fort Atkinson Regional Science Fair→Badger State Science & Engineering Fair→Intel® International Science and Engineering Fair® (ISEF)

1. Choose an adult sponsor and discuss what kind of experiment you would like to do. An adult sponsor may be a teacher, parent, university professor, or scientist. This individual must have a solid background in science and should have close contact with the student during the course of the project. They are ultimately responsible not only for the health and safety of the student conducting the research, but also for the humans or animals used as subjects. ISEF requirements for the adult sponsor will be found in the ISEF Rules & Guidelines booklet. If you cannot find an adult sponsor, contact the FASF Science Advisor for assistance.

2. [ISEF] Obtain copies of ISEF booklets (Rules & Guidelines and the Student Handbook) from the ISEF website (www.sciserv.org/isef/). Read everything carefully. Fill out any necessary forms, get all required signatures, and keep the forms safe in a folder or binder. These forms will need to be part of your display and copies will be reviewed by a committee if your project is chosen to compete at the state level. Always keep the original forms in your possession and send only copies when required.

3. [ISEF] Write a research plan. This will be added to your forms. It should include the following:

- Problem or Question Being Addressed
- Hypothesis
- Description in Detail of Method or Procedures (see ISEF form 1A for details)
- Bibliography (at least three major references from your library research)

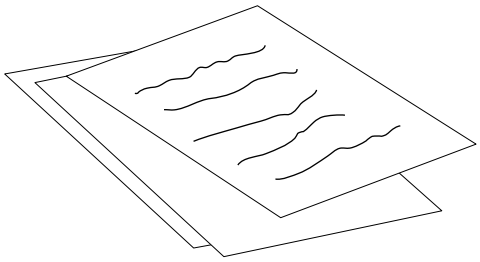
4. Experiments involving human subjects, nonhuman vertebrate animals, pathologic agents, controlled substances, recombinant DNA, and human or animal tissue must be pre-approved before experimentation begins. Contact the FASF Science Advisor at 568-5532 if this is the case. Students who wish to be ISEF eligible and are performing studies involving any of the above mentioned items might also need to work with a qualified scientist. See the ISEF rules and guidelines for details.

5. Perform the experiment, carefully documenting every step in your log book or project data book. You may want to take photos to include in the display.

6. [ISEF] Write an abstract. An abstract is a one page, 250-word (maximum) summary of the project, which should include the purpose of the experiment, procedures used, data, and conclusion. A sample can be found in the ISEF Student Handbook.

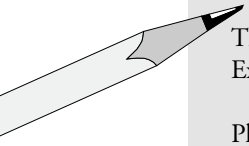
7. Write a research paper. This is the formal report that is based on the notes in your log book and can be as long as necessary. It should include the following:

- Title Page
- Table of Contents
- Introduction
- Experiment
- Discussion
- Conclusion
- Acknowledgements
- References



8. Create the display. It should have a good title, be well organized, eye-catching, and sturdy. Size requirements of display cannot exceed 30" D x 48" W x 72" H.

9. [ISEF] To be eligible to advance to the Badger State Science & Engineering Fair, we must know of your intentions to compete by January 15th. Please notify the FASF president by then (see page 4 for contact information).



Please note the following:

There are some items allowed in displays at the Fort Atkinson Regional Science Fair that are not allowed by ISEF. Examples include plant material and soil samples. Try to avoid having these things in your display.

Photos are a good substitute.

Team projects in this division are limited to three members.

ISEF fairs, including the Badger State Science & Engineering Fair, require the entrants to be present during judging in order to discuss their work with the judges.

RULES AND SAFETY REGULATIONS

Responsibility

1. Fort Atkinson Science Fair, Inc., is not responsible for loss or damage of displays. Displays are entered at exhibitor's own risk.

Those Eligible

2. Any student fitting the description of one of the seven divisions who is a resident of the communities of Johnson Creek, Lake Mills, Palmyra, Jefferson, Milton, Cambridge, Eagle, Sullivan, Fort Atkinson, or Whitewater, or is attending a school in these districts, is eligible.

   The Fort Atkinson Science Fair, Inc., board reserves the right to limit entrants based upon space available.

3. The Special Education Science Kindergarten-Grade 5, the Special Education Science Grades 6-8, and the Special Education Science Grades 9-12 divisions are designed for Special Education students. Participants allowed in this category shall be either cognitively delayed or learning disabled students receiving science instruction in special education. All entry forms submitted in this category must be signed by a special education instructor. The form may be signed next to or below the parent or guardian's signature. This additional signature is necessary to assure only those students who are eligible for this division are entered in it.

Team Projects

4. Team projects are permitted in all divisions of the science fair and are eligible for prizes and awards. Awards are distributed by project with no consideration given to the number of people involved in the project. In other words, a winning team project will only receive one medal and one rosette ribbon. However, each member of the team will receive a t-shirt per the awards criteria.
5. The division in which the team will compete is assigned based on the highest grade level achieved among the team members.
6. If there is a significant number of team entries in a division, they may be split off into a separate division for the competition. This determination is made at the sole discretion of the FASF Board of Directors.
7. Guidelines for entering a team project can be found on page 23.

Entry Forms

8. Entry forms must be mailed by January 31 to the address listed on the entry form or turned in at the Dwight Foster Public Library. This is only an acknowledgment that you will participate. The actual projects do not need to be completed until the date of the fair.

No Names

9. The exhibitor's name, picture, or school must not appear anywhere on or in the exhibit (including the log book). Numbers will be assigned to identify exhibits.
10. Acknowledgements of help from family members or teachers should list them by title (Mother, Father, 4th Grade Teacher, etc.) so as to ensure anonymity. Only the first names of people used in a survey or similar project can appear on the display or in the log book. Pictures of participants or assistants in the projects must have their faces covered.

Project Requirements

11. Only projects meeting all criteria are eligible for prizes and awards.
12. All of the work performed on each project entered in the fair must *substantially be the entrant's own work*. This includes the research for the project, the work carried out during the experiment, and the creation of the display. Those projects deemed by the judges to be questionable in this area will be subject to closer scrutiny by having the entrant called in to explain their work.
13. Assistance provided to the entrant by others shall be merely supportive in nature and must be acknowledged. Details must be given as to who provided assistance and what specifically they did to help. (Example: "Thank you to my mom for helping me pick out and buy supplies and to my brother for checking my spelling.") This can be described on the display or in the log book. Remember — no proper names! *Failure to provide this information can result in disqualification.*

Log Books/Project Verification Form

14. A log book is required for each exhibit at the 4th grade level and older and Special Education Science 6th grade and older. For further details about the log book, see page 7. You may use spiral notebooks or three-ring binders.
15. An adult must complete and sign the Project Verification Form to verify that the project entered in the fair is the product of original work done by the entrant or team. This form is found at the bottom of the entry form and should be removed when the entry form is submitted. *The project verification form must be submitted with the project at the fair. Do not send it in with the entry form.*

Special Requirements Grades 9-12

16. A formal report is required in addition to the log book for grades 9-12. It must be typewritten. The report should include a clear statement of the problem, experimental methods, presentation of data, results, summary, bibliography, and acknowledgments.
17. All students in grade 9-12 division must have an adult sponsor. An adult sponsor can be a teacher, parent, university professor, or a scientist. This individual must have a solid background in science and will have close contact with the student during the course of the project from start to finish. The Science Fair board members should be contacted if a student needs help finding a sponsor. More information on an adult sponsor can be found on page 7.

Display Requirements

18. Exhibit size is limited to 30" (76 cm) D x 48" (122 cm) W x 108" (274 cm) H, including 30" (76 cm) table height. Any exceptions must be approved by the entry chair.

RULES AND SAFETY REGULATIONS

19. Any project involving animals, human subjects, tissue/blood research, pathogenic agents/controlled substances, or recombinant DNA must be certified prior to the start of research. Contact the Science Fair Advisor, Kevin Hart, at (920) 568-5532 for instructions.

The Use of Live Animals

20. Projects using any live animals, including invertebrates, *must be approved prior to the submission of the entry form or start of research.* Contact the Science Fair Advisor, Kevin Hart, at (920) 568-5532 for instructions.

21. Humane treatment of animal subjects is expected and required.

22. **No live animals may be exhibited.** This exclusion includes invertebrates such as worms, insects, or mollusks. The method and results of a project involving use of live animals may display drawings, charts, photos, or graphs.

Safety Rules for Displays

23. No preserved animals or parts, including embryos, may be exhibited. The exhibition of human parts is prohibited except: teeth, hair, nails, histological sections and liquid tissue slides properly acquired.

24. **Displays must not include any food items; any mold, fungi, or microbial cultures; open flames; syringes; chemicals; highly combustible materials; or Class III or IV lasers. Photographs and sketches are preferred alternatives to the actual object. When in doubt, call the Science Fair Advisor, Kevin Hart, at (920) 568-5532.**

25. Exhibits must be durable. Moveable parts must be firmly attached. Push buttons and levers must be securely mounted and may not be attached to tables or walls.

26. Participants requiring electrical power (110 volts AC) must so indicate on the entry form. All electrical apparatus must be UL approved. If electrical power is required, the participant must provide a grounded heavy-duty extension cord at least 6 feet long.

Judging

27. Judging of the Science Fair projects is closed to exhibitors and the public.

28. Judges reserve the right to call the student for a personal interview.

Set-Up

29. All projects are to be set up on Friday between 3:00 p.m. and 6:00 p.m. Projects brought any other time will not be accepted.

30. Public viewing is NOT permitted at the time of set-up. Do not touch any other display before the judging and please leave the building as soon as your display is set up.

Pickup

31. All projects are to be picked up on Tuesday between 3:00 p.m. and 5:00 p.m. Projects not removed by the designated time will be disposed of properly. If you cannot pick your project up at this time, please make other arrangements with the Entry Chair ahead of time.

PAST SCIENCE FAIR WINNERS

2014 Winners

People's Choice Awards	
People's Choice	Bailey Behm
Most Creative	Brady Byrnes
Most Practical	Team of Tessa Byrnes, Rachel Edwards, Rhianna Chapman, Joselyn Calleja
K-1 Division	
1st Place	Calvin Ficenec
2nd Place	Trace Hadler
3rd Place	Eli Scheuerell
4th Place	Brady Byrnes
5th Place	Aaron Messler
6th Place	Braden Arndt
2-3 Division	
1st Place	Jonas Boshart
2nd Place	Tessa Byrnes
3rd Place	Ryan Messler
4th Place	Tawney Hadler
2-3 Teams Division	
1st Place	Jack Opperman, Emerson Brandenburg, Hunter Rogers, Jesemia Flores
2nd Place	Bailey King, Aiden Janecek, Ellianah Walton, Lupe Pena-Nigh
3rd Place	Mitchell Broadhead, Cammie Wellington, Anthony Luxem, Evan Marinez
4th Place	Hayley DeMott, Liliana Reyes-Ehrke, Michael Siarkiewicz, Corbin Lynn
5th Place	Makayla Wagie, Mariah Luebke, Christian Wagie, Rodrigo Zuniga
6th Place	Louden Goutcher, Amelia Sault-Sauby, Brooke Christiansen, Braden Griffiths

4-5 Division	
1st Place	Bailey Behm
2nd Place	Elee Sharp, Tyla Staude, Sawyer Voss, Vale Cazanove Pena
3rd Place	Dominick Edwards
4th Place	Caidon Pemper
5th Place	Valorie Schamens
6th Place	Martha & Mary Ellen Moran
4-5 Special Ed Division	
1st Place	Josh Woychik
6-8 Division	
1st Place	Ernest Box
2nd Place	Grace Mans
3rd Place	Ben Dresdow
4th Place	Emmalee Buchta
5th Place	Ben Koenig
6th Place	Audrey Shockman
9-12 Division	
1st Place	Thomas Shockman
2nd Place	Hannah Rueth
3rd Place	Jamie Christensen

PAST SCIENCE FAIR ESSAY WINNER

2014 Winner

6-8 Division	
1st Place	Emma Hanisko

ROSE LAKE FRIENDS

OF DOROTHY CARNES COUNTY PARK
JEFFERSON COUNTY, WI
FORT ATKINSON SCIENCE FAIR

SPECIAL AWARD

Rose Lake Friends is a group of interested individuals involved in preserving, protecting, and promoting the natural history of Jefferson County's Dorothy Carnes Park and its principal natural feature, Rose Lake, located just west of the city of Fort Atkinson.

A Rose Lake Friends goal is to support continuing development of public awareness and appreciation for the natural world around us, in particular the natural gem being preserved that is Dorothy Carnes Park. We feel a significant movement toward that goal is to partner and contribute to the success of the Fort Atkinson Science Fair.

To that goal, we are contributing a **special award of precision Eagle Optics binoculars** to a Fort Atkinson Science Fair participant whose presentation involves in some way, shape, or form, some aspect of scientific investigation of the environment and ecosystem that specifically involves activity at Dorothy Carnes County Park and/or Rose Lake. Participants will need to notify the Fort Atkinson Science Fair judging committee of their eligibility for the special award and of their interest in having a Rose Lake Friends representative evaluate their exhibit. A Rose Lake Friends representative will decide the recipient of the award which will be presented at the awards ceremony. The award also includes a free one-year family membership in Rose Lake Friends.

Fort Atkinson Regional Science Fair

COLLEGE SCHOLARSHIP

Scholarship Chairperson: Amy Lutzke 920-222-6832

Information contained in this booklet can also be found on our website at…

www.fasciencefair.org

Purpose: To provide recognition and financial encouragement to a past participant in the Fort Atkinson Regional Science Fair who is planning to pursue a post high school course of study at an accredited academic institution in a recognized field of science.

Eligibility: Those eligible for this scholarship must have been an entrant in the Fort Atkinson Regional Science Fair for at least one year. Applicants must be graduating high school seniors.

Application: All applicants will complete the attached Fort Atkinson Regional Science Fair Scholarship Application with necessary attachments and submit it to the address shown on the form. Envelopes must be received by April 1st. Application may be made for any academic year of a program study.

Selection Process: A committee composed of three members — two Fort Atkinson Science Fair, Inc., Board of Director members and an additional member chosen from the current fair panel of judges — will make the scholarship selection.

Selection Criteria: The judges review and evaluate each applicant based on the following criteria.
- Academic achievement reflecting the challenge of the chosen program of study
- Extra-curricular and community activities
- Science-related activities, including personal projects, additional course work and/or independent study, participation in clubs or organizations, and other demonstrations of a commitment to their chosen field of study.
- Development of a career plan and chosen field of study.

Selection Process: A committee composed of three members — two Fort Atkinson Science Fair, Inc., Board of Director members and an additional member chosen from the current fair panel of judges — will make the scholarship selection.

Award: A $500 award will be made at the end of the academic year. The number of awards each year will be dependent upon community financial support for the Fort Atkinson Regional Science Fair and also the availability of qualified applicants. The awards will be payable to the recipient and academic institution jointly, and be divided equally between the academic terms of the following school year.

PAST WINNERS:
2004 – Heidi Miller
2005 – Jason Smoniewski
2006 – Sarah Schmid
2007 – Joelle Baird
2008 – Nathaniel Wilson
2009 – Connor Mulcahy
2010 – Pat Mulligan
2011 – Shalane Hundt and Jeremy Primmer
2012 – Bill Mulligan
2014 – Thomas Shockman

Fort Atkinson Regional Science Fair

SCHOLARSHIP APPLICATION FORM

Due Date: April 1

Name: _____
(last) (first) (middle)

Address:_____
(street) (city) (state) (zip)

Phone: _____ Graduating High School: _____

Father or Guardian's Name: _____
(last) (first)

Mother or Guardian's Name: _____
(last) (first)

Past participation in Fort Atkinson Regional Science Fair – Year(s) and Project Title(s):

_____

_____

Awards and recognition: _____

College, University, or Technical School you are planning to attend: _____

When you plan to begin:_____

Planned science career or degree: _____

On an attached sheet, please include a narrative on the following:

- Describe your activities and interests, including extracurricular school activities, community and volunteer activities, jobs, and individual projects.

- What inspired you to pursue your chosen field of study? Consider your outside and extracurricular activities, individual projects and interests, jobs, supporting teachers or mentors, camps, and other forms of encouragement.

- References: Please request two letters of recommendation from individuals who are familiar with your work, your chosen field of post high school study, your accomplishments, or academic achievements.

Application — Attach the above, plus a copy of your high school transcript and send to:

Fort Atkinson Regional Science Fair Scholarship Committee
P.O. Box 371
Fort Atkinson, WI 53538

Applicant's Signature: _____ Date: _____

This scholarship does not discriminate on the basis of sex, race, religion, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional or learning disability or handicap.

Fort Atkinson Regional Science Fair

ESSAY CONTEST

Please note changes to this year's contest.

Information contained in this booklet can also be found on our website at *www.fasciencefair.org*

The Fort Atkinson Science Fair invites all area students to participate in this year's science essay contest, which will be held in conjunction with the science fair. The essay contest offers students the opportunity to propose a hypothesis and then review research done by others to evaluate the accuracy of the hypothesis. The goal of this contest is to promote awareness of the importance of analytical thinking and effective communication in scientific areas.

ELIGIBILITY

Any student eligible to enter the Fort Atkinson Regional Science Fair is eligible for the essay contest. Students may enter both competitions if desired. Class projects: Teachers who submit essays on behalf of their students may submit no more than 2 essays per class.

ASSISTANCE

Optional pre-submission. E-mail your essay to our essay chair at ***courtiea@uww.edu*** before January 15. She will review your essay to make sure it meets our criteria. She will **NOT** go through and do grammar, spelling, and punctuation edits, but will provide feedback on the main six points:

- You have asked a question
- You have proposed a hypothesis
- You have the correct amount of references and have cited them correctly
- Your essay is free of opinion and bias
- You have adequately provided research
- You have accepted or rejected your hypothesis and said why

DIVISIONS

There will be two divisions: Grades 6-8 and 9-12. Each division will be judged separately. There is no Special Education division for the essay contest.

AWARDS

All participants will receive a certificate of participation and a ribbon designating their level of accomplishment. One rosette ribbon will be awarded for each essay judged to be 1st, 2nd, and 3rd place in each division. The top six winners in each division will receive a science fair t-shirt. Awards will be presented at the science fair awards ceremony (see schedule on page 5 for date and time). All essays will be on display at the fair and can be picked up during project pickup time.

Submit your essay by February 1st.
Essays can be dropped off or mailed to:
Amy Lutzke
Dwight Foster Public Library
209 Merchants Ave.
Fort Atkinson, WI 53538

ESSAY VERIFICATION FORM

This form MUST be submitted WITH the essay. (Photocopies of this form are allowed.)

I, _____

(Parent/Guardian/Teacher Signature)

verify that the essay submitted to the Fort Atkinson Science Fair is the product of original work done by

_____

(Entrant's Name)

and any assistance rendered was not of a significant nature.

Essay Title: _____

Grade Division: _____ Proofread by: _____

Word Count: _____

Entry Number: _____ (To be filled in by FASF Essay Committee)

Fort Atkinson Regional Science Fair

ESSAY CONTEST SUBMISSION CRITERIA

To view the actual sheet used to evaluate each essay, please see next page.

All essays must be typed using 12 point Times New Roman font, double spaced. It is recommended that you have a parent or teacher proofread your essay before submission.

Each essay must include the following information on the **back** of the essay:
Name
Address with City and Zip Code
Home Telephone Number
Grade Level
School

Each essay must include the Essay Verification Form signed by a parent or teacher including an accurate word count.

Division 6-8:
- Meet the above criteria.
- Write a minimum of 500, but no more than 750, words on any science-related topic.
- Cite sources within the body of the essay using the APA citation style.
- Include a list of references consulted using the APA style.
- Use a minimum of 1 (one) primary source.
- Write your essay on one of the following topics:
  1. Invasive species at Yellowstone National Park.
  2. The Yellowstone supervolcano.
  3. Human effects on Yellowstone National Park.

Division 9-12:
- Meet the above criteria.
- Write a minimum of 750, but no more than 1,200, words on any science-related topic.
- Cite sources within the body of the essay using the APA citation style.
- Include a list of references consulted using the APA style.
- Use a minimum of 3 (three) primary sources.

Essay Outline

1. Introduction.
   a. Propose your question. (e.g., When will the Yellowstone supervolcano erupt?)
   b. State your hypotheses. (e.g., I think the Yellowstone supervolcano will erupt in my lifetime.)
2. Conduct your research. Some good sources for primary and secondary source science research articles are the following databases contained in the free BadgerLink resource (www.badgerlink.net):
   a. KidsSearch Middle School
   b. Student Research Center High School
   c. Science Reference Center
   d. Also click on Database List to access Academic Search Premier
3. Provide a discussion and analysis of your research.
   a. Include data and graphics.
   b. Explain what you found through your reading clearly and completely. Make sure your discussion matches your topic.
4. Write your conclusion.
   a. Did your research support your hypothesis? Was your hypothesis incorrect? What did you learn from this exercise? It's OK if you found out your hypothesis was wrong.

Fort Atkinson Regional Science Fair

SCIENCE FAIR ESSAY CONTEST JUDGING SHEET

Entry Number _____

Clearly evident – most points awarded
Somewhat evident – middle points awarded
Not evident – least points awarded

CRITERIA	POINT RANGE	POINTS AWARDED
Purpose – question and hypothesis are clearly stated	0, 10, 20	
Scientific Argument – conclusions are adequately supported without unsubstantiated opinion	0, 10, 20	
Organization – the writing flows logically with clear structure	0, 5, 10	
Content – subject is discussed clearly, fully, and matches topic	0, 5, 10	
Data & Graphics – includes data and graphics that are supportive of the argument	0, 7, 15	
References – attributes sources with proper citation per rules for grade category	0, 5, 10	
Standard Usage – uses proper grammar, spelling, and punctuation	0, 3, 5	
Neatness & Structure – paper is presented appropriately and according to contest rules (including word minimums, font, font size, and spacing)	0, 3, 5	
Effectiveness – the essay could be understood by the student's peers	0, 3, 5	

Total (100 maximum) _____

Judges comments:

FORT ATKINSON SCIENCE FAIR T-SHIRT DESIGN CONTEST

Chairperson: Amy Lutzke (920) 222-6832

Every year the Fort Atkinson Science Fair, Inc., holds a T-shirt design contest. Any student living or going to school in the communities of Johnson Creek, Lake Mills, Jefferson, Milton, Cambridge, Fort Atkinson, Palmyra, or Whitewater is eligible to enter. One design will be chosen for next year's Science Fair T-shirts. Students may submit more than one design, but each has to be on a separate piece of paper. The student whose design is chosen will receive a free T-shirt and a $20 Nasco gift card.

Remember! Simple designs generally look better and are easier to print. Use bold lines – thin lines do not transfer well onto T-shirts.

Design entries should:

- be on a sheet of 8" x 10" paper and be vertically oriented.
- include "Fort Atkinson Science Fair" and "2015" in the design.
- include your initials (not full name) in the design.
- include your name, address, phone number, and age on the BACK of your entry.
- must be black ink on white paper.

The winning entry is chosen based on originality and suitability (in other words, how well it would look on an actual T-shirt). Fort Atkinson Science Fair, Inc., reserves the right to slightly alter the chosen design if necessary.

Entries should be turned in at the Nasco Outlet Store (NOT the Nasco Arts & Crafts Store) no later than November 1st. The winner will be announced on our website by the end of November. Designs will not be returned, but can be picked up later. Please call 920-222-6832 to schedule a pickup time.

Past Science Fair T-Shirt Design Winners

2014

Emma Mans

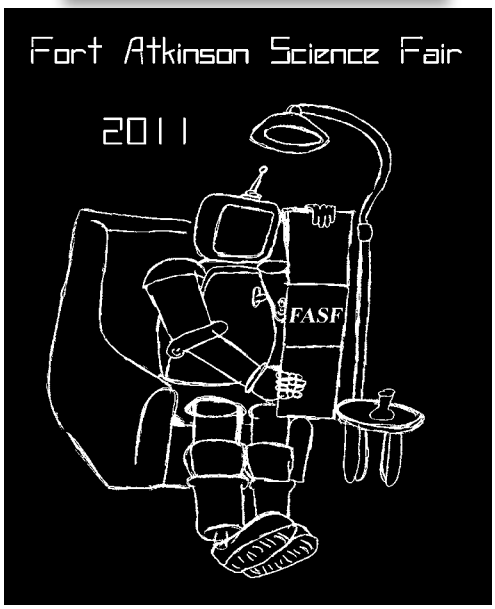
2013

Jessica Sharp

2012

Nick Hoffman

2011



Shawnn Teske

Fort Atkinson Science Fair, Inc.

asks you to support the sponsors of our

2014 Regional Science Fair

Sponsored By:

Handy Art
UW-Whitewater College of Letters and Sciences

Additional Support From:

Nasco
Creature Comforts
W. D. Hoard & Sons
Drs. Gobel, Bender, Kind & Stafford

George Clokey
Outsource Solutions LLC
Steve Sahyun
Tuttle's Pharmacy, Inc.
W&A Distribution Services, Inc.
Wisconsin Energy Foundation

We also appreciate the efforts of the following businesses and organizations without whom there could be no fair:

Hoard Historical Museum
Daily Jefferson County Union
Students of UW-Whitewater
Fort Atkinson FFA
Dwight Foster Public Library
Netwurx / IDC
Fort Atkinson Kiwanis Club
Fort Atkinson Parks & Recreation Dept.

…and to all of our participants, judges, and volunteers…

Thank you!

Fort Atkinson Regional Science Fair

SCIENCE FAIR BUDGET FOR 2014-2015

REVENUE

Contributions Needed	$3,700.00

EXPENSES

Advertising	$300.00
Awards & Prizes	$800.00
Bus Transportation	$350.00
Misc./Other	$300.00
Paper (Photocopies)	$150.00
Postal Expenses	$150.00
Scholarship	$500.00
State Registration Fee	$10.00
T-shirt Production	$1,000.00
Venue Rental	$80.00
Website	$60.00

We need your help!

Please consider a donation to Fort Atkinson Science Fair, Inc.

Make checks payable to: Fort Atkinson Science Fair, Inc.
Send to: Fort Atkinson Science Fair, Inc.
P.O. Box 371
Fort Atkinson, WI 53538

❑ $100 ❑ $50 ❑ $30 ❑ Other $_____

Name: _____

Address: _____

_____

_____

Fort Atkinson Science Fair, Inc., is a 501(c)(3) tax-deductible nonprofit organization.

FORT ATKINSON SCIENCE FAIR ENTRY FORM

(Please print clearly or type in all lines except where noted.)
This form may be photocopied.

Entries due no later than February 1.

PLEASE NOTE CHANGE – Mail or turn in to ONLY:
Amy Lutzke, Dwight Foster Public Library
209 Merchants Ave., Fort Atkinson, WI 53538

Name of Entrant or Team:_____

Project Title:_____

The question your project will try to answer:_____

School: _____ School Phone: _____ Grade: _____

Home Address:_____ City: _____

Zip Code: _____ Home Phone: _____

Grade Division (Check one)

_____ K-1 _____ 2-3 _____ 4-5 _____ 6-8 _____ 9-12

_____ Special Education Science K-5 (See rule #3) _____Special Education Science 6-8 (See rule #3)

_____ Special Education Science 9-12 (See rule #3)

Check all lines that apply to your display:

_____ Display will be standing on table (See rules for size limitations).

_____ Display will require 110 volts AC.

_____ Display will be free standing on the floor.

_____ Display will be a flat poster.

Please list your display's approximate depth, width, and height in feet _____D x _____W x _____H

I/We agree to follow the Rules and Safety Regulations of the FASF (Fort Atkinson Science Fair).

_____

(Participant's Signature)

I/We have read and discussed the FASF Rules and Safety Regulations with the entrant. This child has permission to participate in this science fair.

_____

(Parent/Guardian Signature/s)

PROJECT VERIFICATION FORM

This form MUST be submitted WITH the project at the fair.

I, _____

(Parent/Guardian Signature/s)

verify that the project (including log book if required) submitted to the Fort Atkinson Science Fair is the product of

original work done by _____

(Entrant's or Team Name)

and any assistance rendered was not of significant nature and has been duly noted on the project or in the log book according to rule # 7.

Project Title: _____

Grade Division: _____

Entry Number: _____ (To be filled in by FASF Set-Up Committee)

FORT ATKINSON SCIENCE FAIR TEAM PROJECTS

Please review all team project rules found on page 9.

Directions for entering a team project:

1. There is a maximum number of four team members allowed for all divisions except 9-12. Division 9-12 is limited to three members per team. Special Education 9-12 division teams may have four members.

2. Choose ONE person to be the primary contact person. This person can be a team member or the adult supervisor. The contact person will receive all necessary information and materials from the Entry Chairperson. In the event that the team is awarded a prize, only the contact person will be notified. It is their obligation to notify the other members of the team about the awards ceremony and prizes. The Science Fair Board will not take responsibility for contacting the other team participants.

3. Choose a name for your team. Team name is subject to approval by the Entry Chairperson. Fill in the team name on the top line of the science fair entry form.

4. Fill out the rest of the entry form on Page 21. You may leave spaces for home address, city, zip code, and home phone blank. Also complete the information required below. You must submit both forms together.

5. The adult supervisor of the project should sign where the parent or guardian signature is required. This person may be a teacher instead of a parent or guardian. The adult who signs has the responsibility of filling out the project verification form as well as making sure that all the team members have parental permission to participate. After the signature, please indicate the relationship to the team (i.e., "4th grade teacher," or "Jim's father").

6. All team participants must understand and agree to follow all rules and regulations of the science fair and must indicate this by signing on the participant's signature line of the entry form.

TEAM INFORMATION:

Please Print or Type

Name of Contact Person: _____

Address: _____

City: _____ Zip Code: _____

Phone number where you can be reached during the fair: _____

List the names of ALL team members (including Contact Person if he or she is a team member):

1. _____ Grade: _____

2. _____ Grade: _____

3. _____ Grade: _____

4. _____ Grade: _____

WWW.FASCIENCEFAIR.ORG

25TH ANNIVERSARY

NP 177-14