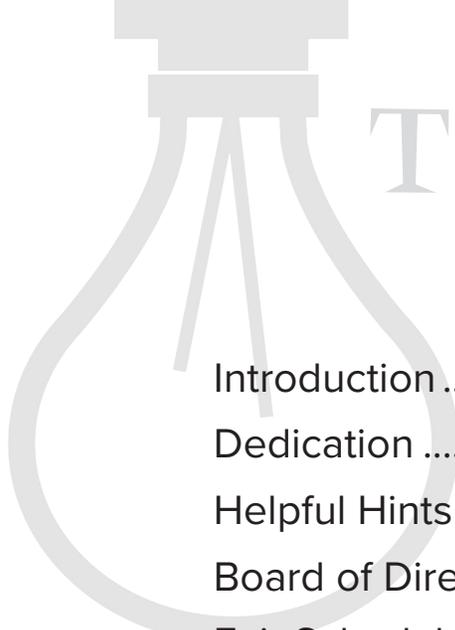


FORT ATKINSON REGIONAL

# SCIENCE FAIR 2019



FEBRUARY 9, 2019

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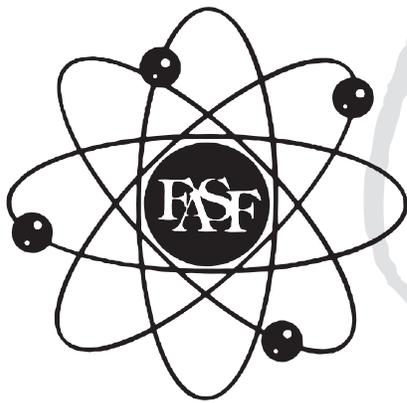
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More info available at [fasciencefair.org](http://fasciencefair.org)

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Fort Atkinson Science Fair, Inc. would like to acknowledge the work of Nasco's Creative Services Department in the production of our 2019 booklet.



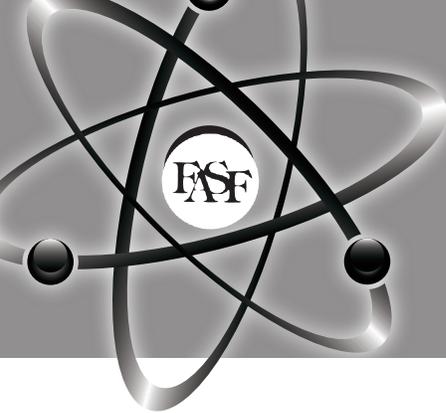
# Fort Atkinson Regional Science Fair

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.

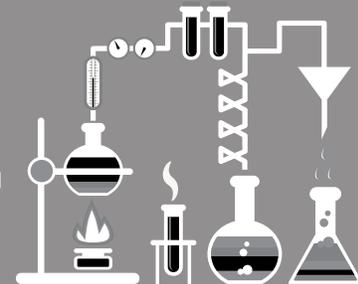
Science importantly shapes our lives and communities. Local industry and individuals have contributed to scientific knowledge and understanding. For 28 years, the Fort Atkinson Regional Science Fair has been dedicated to such individuals. Each year, the fair will host a speaker to highlight a specific 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 2019 speaker is Dr. Jen Stafford.

## **Prior Honorees and Speakers:**

1991	Art Waterman	2001	Leland Allenstein, D.V.M.	2010	Mary Linton
1992	Albert Haller	2002	Helmut Ajango	2011	Dr. Rex Hangar
1993	Richard Wanie	2003	Dr. Kenneth Griffiths	2012	Dr. Thomas Nordland
1994	Anne Griffiths, M.D.	2004	Gary Reuterskiold	2013	Dr. John Ejnik
1995	William David James	2005	Frank & Shirley Stekel	2014	Dr. George Clokey
1996	Frank Haban	2006	Dr. Russel Nord	2015	Dr. Chris Veldkamp
1997	Capt. Wilbur Sundt	2007	Dr. Fred Rose	2016	Dr. Dawn Belt Davis
1998	Dr. James & Sophia Majerus	2008	Richard Wanie	2017	Dr. Steven Sahyun
1999	William D. Knox	2009	Dr. Bob Benjamin	2018	Ben Knowles
2000	Paul Raasoch				



# 2018 Fort Atkinson Regional Science Fair



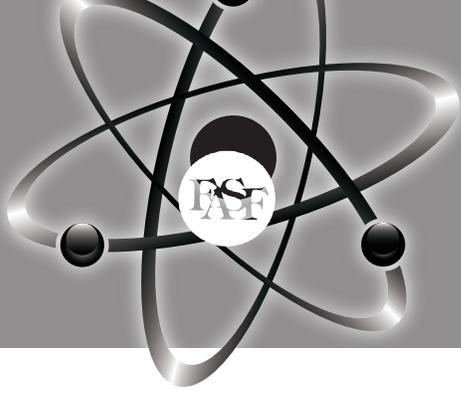
## *Featured Speaker* **Dr. Jen Stafford, DDS, FAGD, FICCMO**



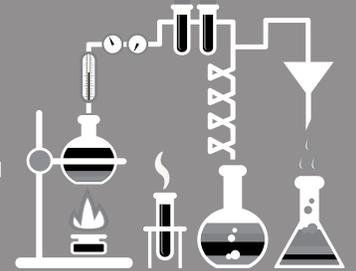
Dr. Jennifer Stafford is a general dentist practicing in Fort Atkinson, WI. She received her undergraduate education from the University of Minnesota, graduating with a degree in Genetics, Cell Biology, and Development with a minor in Chemistry in May 2004. While working towards her degree, Dr. Stafford participated in a research project on cell growth in a *Drisopholla Melanogaster* (fruit fly) genetics laboratory, and presented this research at several undergraduate research conferences. Dr. Stafford continued her education at the University of Minnesota School of Dentistry where she worked on several research projects through a research scholarship granted by the Dental School. She received her Doctor of Dental Surgery (DDS) degree in May 2008.

Dr. Stafford began practicing dentistry at Bender, Kind, and Stafford Dental in Fort Atkinson in July 2008 following graduation. In 2009, Dr. Stafford began focusing much of her continuing education towards specialized training in treating jaw joint, facial pain, and obstructive sleep disorders. She opened the BKS Dental Center for TMJ and Facial Pain in November 2015. Dr. Stafford earned a Fellowship degree in the Academy of General Dentistry (AGD) in July 2016, and a Fellowship Degree in the International College of Craniomandibular Orthopedics (ICCMO) in September 2016. Dr. Stafford holds the following professional memberships: American Dental Association, Wisconsin Dental Association, Jefferson County Dental Society (past president), Academy of General Dentistry (Fellowship), International Association of Orthodontics, International Association of Comprehensive Aesthetics, International College of Cranio-Mandibular Orthopedics (Fellowship), Academy of Laser Dentistry.

Dr. Jennifer Stafford started a science club for 1st-4th grades at St. Joseph Catholic School, and still currently volunteers in the program. She is a member of the Fort Atkinson Science Fair Committee, and volunteers as a track and cross country coach for St. Joseph Catholic School. Dr. Jennifer Stafford and her husband Erik reside in Jefferson with their two children, Jameson and Sophia. In her free time, Dr. Stafford enjoys running, boating, swimming, gardening, and camping with her family.



# Fort Atkinson Regional Science Fair



## HELPFUL HINTS AND HELPFUL PEOPLE

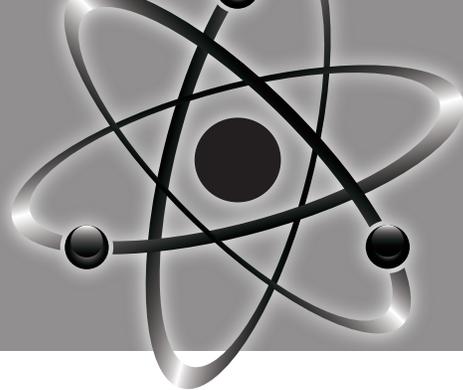
### KINDERGARTEN – GRADE 1

- 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.

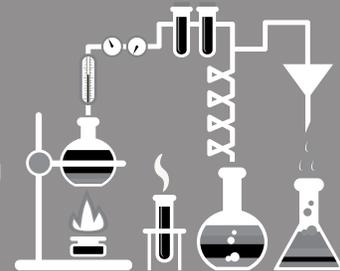
### GRADES 2 – 12

- 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.

***Good luck and enjoy your scientific exploration!***



# Fort Atkinson Regional Science Fair

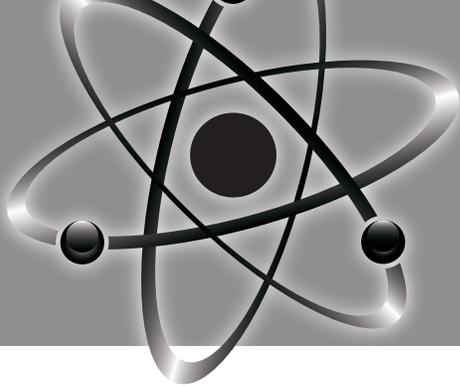


## Board of Directors

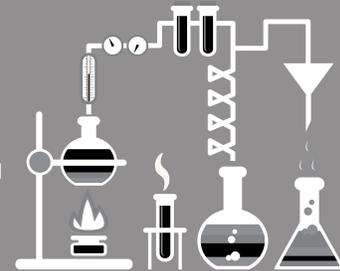
President	Amy Lutzke	920-222-6832
Vice President	Dr. Steven Anderson	262-472-5121
Treasurer	Paul Hable	920-222-0796
School Rep. Chair	Dr. Jon Hundt	920-563-7698
Judging Chair	Dr. George Clokey	262-472-5140
Fundraising Chair	Dr. Steve Sahyun	262-472-5113
Entry Chair	Jordan Nelson	920-568-5533
Awards Chair	John Miller	920-563-2446
Science Advisor	Kevin Hart	920-650-7666
Publicity Chair	Cynthia Ficenec	920-568-8850
Member-At-Large	Dr. Jen Stafford	
Member-At-Large	Tina Hill	

Like us on Facebook to get updates and information about FASF:

<https://www.facebook.com/FortAtkinsonRegionalScienceFair/>



# Fort Atkinson Regional Science Fair



**February 8-12, 2019**  
at  
**Hoard Historical Museum**  
**401 Whitewater Ave.**  
**Fort Atkinson, WI**



	<b>FRIDAY</b>	
Student Set-Up		3:00 – 6:00 PM
	<b>SATURDAY</b>	
Judging		8:30 – 11:30 AM
Public Viewing		1:00 – 3:30 PM
Awards Presentation		3:30 – 4:30 PM
	<b>TUESDAY</b>	
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](http://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. Students in grades K-8 will also receive the following cash awards: first place will receive \$30, second place \$20, and third place \$10 in each division. Team projects will need to split the cash between each member of the team.

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 monetary award is 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. Turn to inside of the back cover for information on UW-Madison’s sponsored Science and Engineering Fairs.

**“SCHOOL AWARDS”** The school with the most students who enter AND participate will receive a \$500 award to spend on science-related materials or programs. A prize worth up to \$100 will be awarded to the classroom of each first place winner. The classroom teacher can choose to get any classroom, library, or computer lab materials that can be used for science or agriculture education.

# 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](http://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.

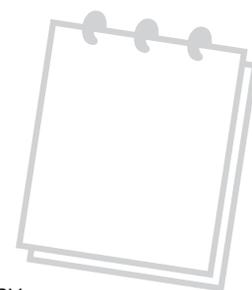
 **CONCLUSIONS.** Do the results of your experiment show that your hypothesis is true or not? **Remember**, when unexpected things happen and your hypothesis does not appear to be correct, you have still learned something very important and it is still a valid experiment. Real world scientists often find 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 is 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](http://www.fasciencefair.org).

## HIGH SCHOOL ENTRANT INFORMATION

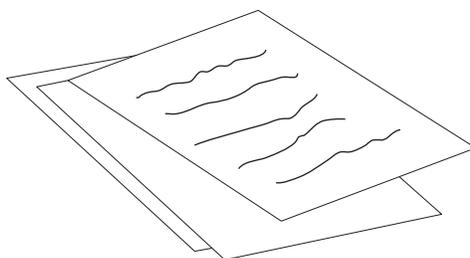
In order to be eligible to advance to the Badger State Science & Engineering Fair, Division 9-12 entries must conform to ISEF (Intel® International Science and Engineering Fair®) rules. However, eligibility to advance is OPTIONAL and not necessary to compete at the Fort Atkinson Regional Science Fair. 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/](http://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 (920) 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 22.

## **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) 650-7666 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) 650-7666 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) 650-7666.**

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.

**SAFETY  
FIRST**

# PAST SCIENCE FAIR WINNERS

## 2018 WINNERS

### T-Shirt Design

Carter Hill, Fort Atkinson

### Friends of Rose Lake Award

Nolan Legge

### People's Choice Awards

People's Choice Ben Lund  
 Most Creative Maxin Calvert-Minor  
 Most Practical Phoebe Berndsen

### K-1 Division

1st Place Cole Schaning, St. Joseph School  
 2nd Place Judah Beck, St. Joseph School  
 3rd Place Dagny Ruecker, St. Joseph School  
 4th Place Julius Draeger, Rockwell Elementary

### 2-3 Division

1st Place Isabel Raub, St. Joseph School  
 2nd Place Huck Barnes, Lake Mills Elementary  
 3rd Place Violet Kapfer, Lincoln Elementary in Whitewater  
 4th Place Craig Hanger, Luther Elementary  
 5th Place Jameson Stafford, St. Joseph School  
 6th Place Skyler Ottosen, Purdy Elementary

### 4-5 Division

1st Place Maxin Calvert-Minor, Luther Elementary  
 2nd Place Ella Last, St. Joseph School  
 3rd Place Analisa Boshart, Barrie Elementary  
 4th Place Eli Szabo, Luther Elementary  
 5th Place Ivy Stevens, CES  
 6th Place Ainsley Copp, Purdy Elementary

### 6-8 Division

1st Place Francis Kuefler, St. Joseph School  
 2nd Place Jonas Boshart, Fort Atkinson Middle School  
 3rd Place Alex Theriault, St. Joseph School  
 4th Place Calla Willcomm of St. Joseph School  
 5th Place Jack Jonas, St. Joseph School  
 6th Place Martha Moran, St. Joseph School

### 9-12 Division

1st Place Emma Hanisko, Cambridge High School

## ROSE LAKE FRIENDS

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

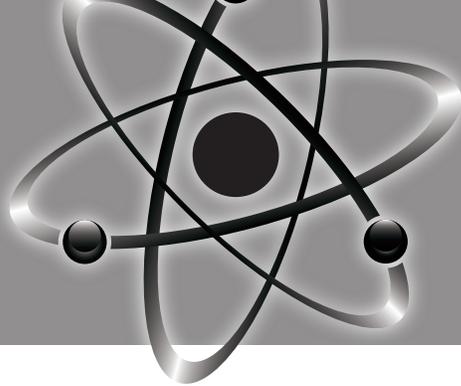
### SPECIAL AWARD

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.

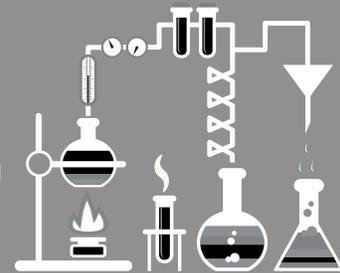
A Rose Lake Friends goal is to support continuing development of public awareness and appreciation for the natural world around us, in particular the natural gem being preserved that is Dorothy Carnes Park. We feel a significant movement toward that goal is to partner and contribute to the success of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

**Award:** A \$1,000 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

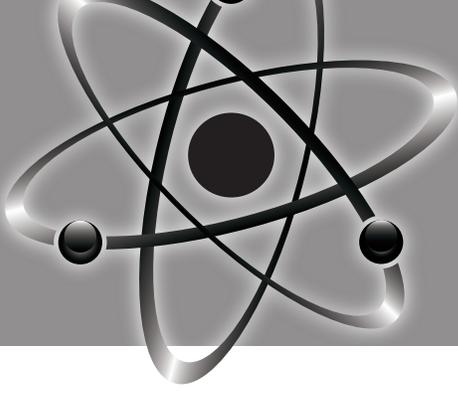
2014 – Thomas Shockman

2016 – Leif Sahyun

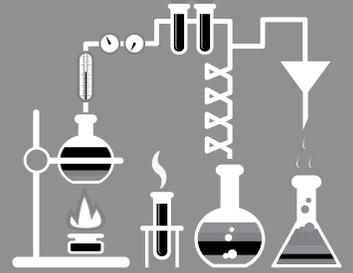
2017 – Walter Moran

2018 – Emma Hanisko and Holland Foelker





# Fort Atkinson Regional Science Fair



## SCHOLARSHIP APPLICATION FORM

Due Date: April 15

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:

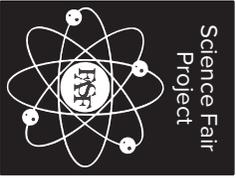
Fort Atkinson Regional Science Fair Scholarship Committee  
P.O. Box 371  
Fort Atkinson, WI 53538

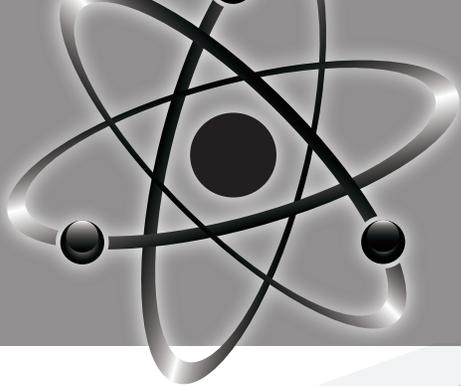
Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*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.*

# GRADES 4-12 & SPECIAL EDUCATION SCIENCE GRADES 6-12 SCIENCE FAIR POSTER TEMPLATE

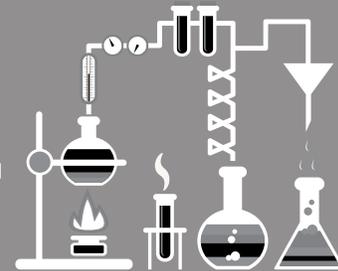
For additional templates, see [our website at fasciencefair.org](http://our website at fasciencefair.org)

<p><b>QUESTION</b></p> <ul style="list-style-type: none"> <li>• State your question here in 1-2 sentences.</li> </ul>	<p><b>HYPOTHESIS</b></p> <ul style="list-style-type: none"> <li>• Predict the outcome to the question in 1-2 sentences. Remember to do this <i>before</i> your experiment takes place.</li> </ul>	<p><b>BACKGROUND</b></p> <ul style="list-style-type: none"> <li>• Find out about the topic.</li> </ul>	<p><b>VARIABLES</b></p> <ul style="list-style-type: none"> <li>• Identify those that are: Independent Dependent Controlled</li> </ul>	<p><b>MATERIALS</b></p> <ul style="list-style-type: none"> <li>• Equipment</li> <li>• Supplies</li> <li>• Anything you used must be listed here.</li> </ul>
<p><b>PROJECT TITLE</b></p>		<p><b>METHODS/PROCEDURE</b></p> <ul style="list-style-type: none"> <li>• Discuss the design of your experiment.</li> <li>• Steps taken.</li> <li>• Explain what you did in such a way that someone else could recreate the display or demonstration.</li> </ul>	<p><b>RESULTS</b></p> <ul style="list-style-type: none"> <li>• Observations, data, tests, surveys, tables, graphs, pictures, photos, etc.</li> </ul>	<p><b>RESULTS</b></p> <ul style="list-style-type: none"> <li>• Observations, data, tests, surveys, tables, graphs, pictures, photos, etc.</li> </ul>
		<p><b>LOG BOOK:</b></p> <p>A log book needs to be included on the table in front of your poster.</p>	<p><b>FORMAL REPORT</b></p> <p>Encouraged, but not required, for grades 4-8. Required for grades 9-12. Not required for special ed. science students. Place on table in front of poster.</p>	
<p><b>Independent variables</b> are changed by the scientist (e.g., a water faucet valve) during an experiment.  <b>Dependent variables</b> change in response to the independent variable (e.g., water flow).  <b>Controlled variables</b> are kept constant during an experiment (e.g., water pressure).</p>				
<p><b>DISCUSSION</b></p> <ul style="list-style-type: none"> <li>• Briefly tell what the results show and what you found out.</li> </ul>		<p><b>CONCLUSIONS</b></p> <ul style="list-style-type: none"> <li>• Interpret your results.</li> <li>• What do they say or mean?</li> <li>• State whether or not your hypothesis was correct and why.</li> <li>• Make recommendations for improving your project and what could be done for further study.</li> </ul>	<p><b>BIBLIOGRAPHY</b></p> <ul style="list-style-type: none"> <li>• List all references used.</li> </ul>	<p><b>ACKNOWLEDGEMENTS</b> (if necessary)</p>



# Fort Atkinson Regional Science Fair

P.O. Box 371 Fort Atkinson, WI 53538



## 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 "2019" 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.

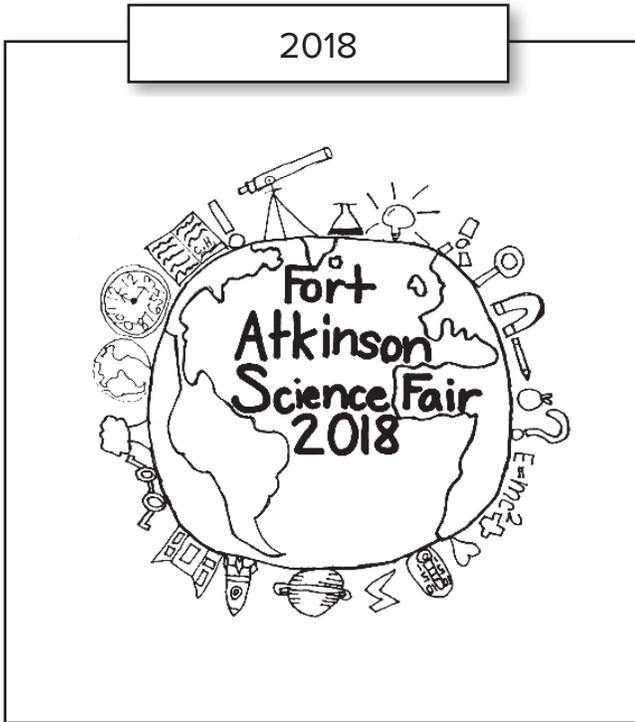
The winning entry is chosen based on originality and suitability (in other words, how well it would look on an actual T-shirt). Fort Atkinson Science Fair, Inc. reserves the right to slightly alter the chosen design if necessary.

**Entries should be turned in at the Nasco Retail Store no later than November 15th.**

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

2018



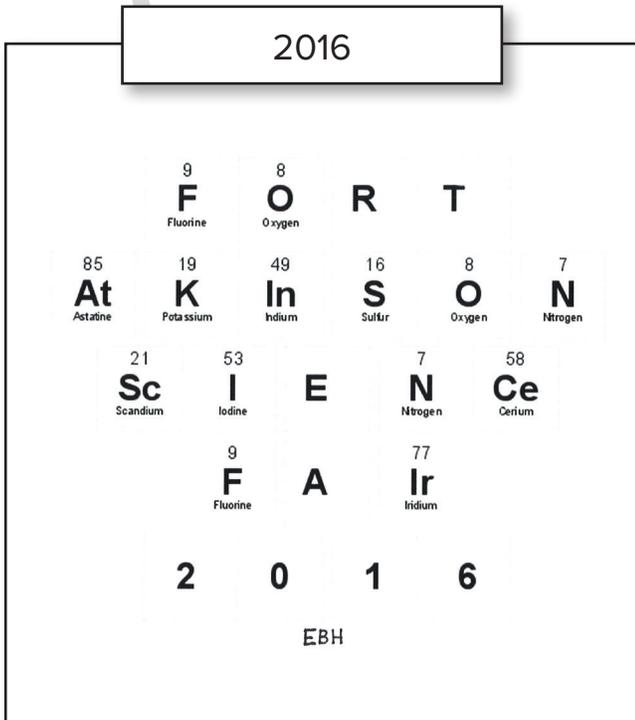
Carter Hill

2017



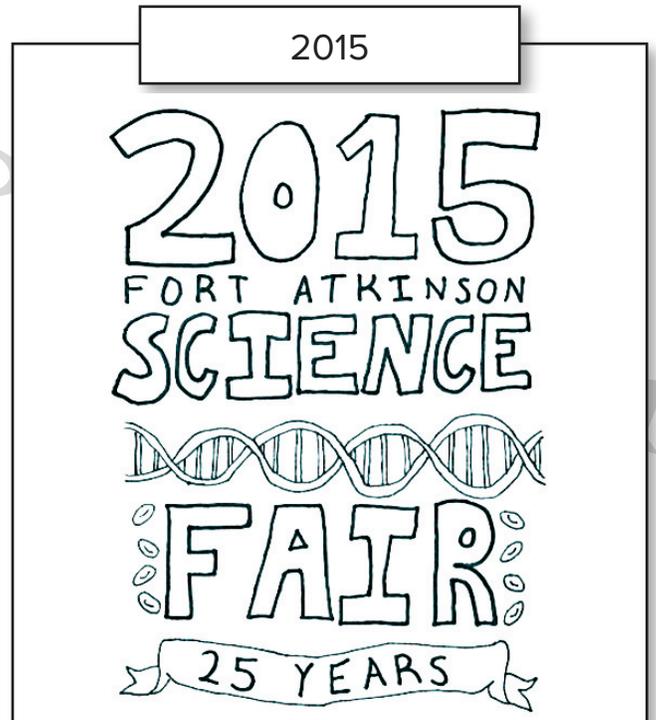
Melissa Gleiter

2016



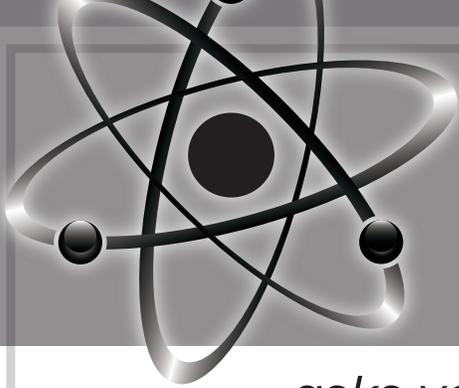
Emma Hanisko

2015

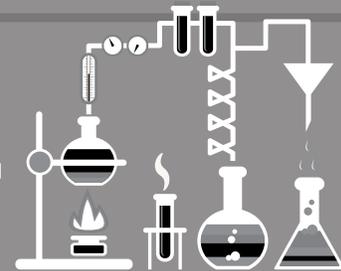


Emma Hanisko

Past Winners



# Fort Atkinson Regional Science Fair



*asks you to support the sponsors of our*  
**2018 REGIONAL SCIENCE FAIR**

Sponsored By:

**Handy Art®**

In honor of Robert LaHann and Paul Raasoch FASH science educators who guided, enlightened, and inspired scores of Fort Atkinson students.

**and Bender, Kind and Stafford Dental**

Additional Support From:

Animal Clinic of Fort Atkinson

Badger Basement Systems

Ball Corporation

Bos Design Builders

Creature Comforts

Design Alliance Architects

Double Three Transport

Epic Resins

Fort Community Credit Union

Friends of Rose Lake

JM Carpets

Kiwanis Club of Fort Atkinson

Nasco

Outsource Solutions LLC

Tuttle's Pharmacy

UW-Whitewater College of  
Letters & Sciences

W&A Dist. Services

Wayne Hayes Real Estate

George Clokey

Paul Hable

John Miller

Paul Neary

Phil & Linda Niemeyer

*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

Senior Judging Volunteers

Dwight Foster Public Library

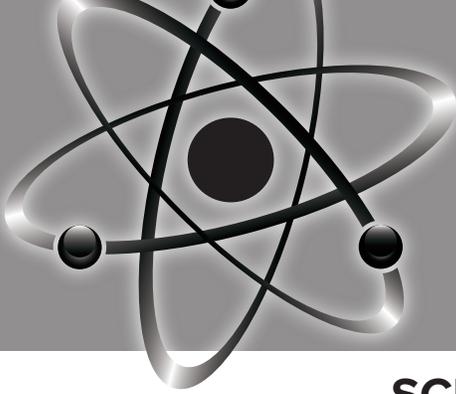
Netwurx / IDC

Fort Atkinson Kiwanis Club

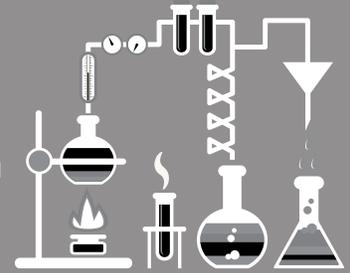
Fort Atkinson Parks & Recreation Dept.

*And to all of our participants, judges, and volunteers –*

***Thank you!***



# Fort Atkinson Regional Science Fair



## SCIENCE FAIR BUDGET FOR 2019

### REVENUE

Contributions Needed                      \$4,895.00

### EXPENSES

Advertising	\$300.00
Awards & Prizes	\$1,000.00
Bus Transportation	\$350.00
Miscellaneous	\$300.00
Photocopies	\$150.00
Postage	\$150.00
Scholarship	\$1,000.00
School Awards	\$800.00
State Registration Fee	\$10.00
T-shirt Production	\$650.00
Venue Rental	\$125.00
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 20. 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: \_\_\_\_\_



## Science Fair Survey for Participants

How did you hear about the Fort Atkinson Regional Science Fair?

Did you pick up a booklet from the Dwight Foster Library or Nasco Retail Store?    Yes    No

Did you use the Fort Atkinson Regional Science Fair website for information?    Yes    No  
If so, was the information easy to find? (Circle one option below)

Very easy                  Somewhat easy                  Easy                  Somewhat difficult                  Difficult

Did you participate in the Science Fair help sessions held in early December?    Yes    No  
If not, can you tell us why?

Do you feel it is important to offer help sessions to participants? (Circle one option below)

Very important                  Somewhat important                  Important                  Not important

Is there a better month/time of year to offer the help sessions?

Was the project drop-off time convenient? (Circle one option below)

Very convenient    Somewhat convenient    Convenient    Somewhat inconvenient    Inconvenient

Do you have suggestions for project drop-off?

Were you able to pick up your project during the project pick-up time?    Yes    No

Do you have suggestions for project pick-up?

Do you feel the Fort Atkinson Regional Science Fair awards good prizes?

Great prizes      Good prizes      Acceptable prizes      Not good prizes

Do you have any suggestions about the prizes?

Do you have any suggestions on how we can attract more participants to the science fair?

Do you know how to contact the Fort Atkinson Science Fair if you have any questions?

Other comments:

Thank you for completing this survey. We appreciate your feedback.

## Special Notice for HIGH SCHOOL students:

High school students have additional opportunities to exhibit their research and compete for recognitions, prizes, and valuable scholarships. Both the Fort Atkinson Regional Science Fair (FASF) and the Capital Science & Engineering Fair (CSEF) held in Madison are regional fairs. Their eligible geographic areas overlap; residents of Jefferson County are eligible to enter both of these regional fairs.

Projects can be selected from either regional fair to advance to the State level—the Badger State Science and Engineering Fair—and from there, to the prestigious Intel® International Science and Engineering Fair® (ISEF). In addition, the Madison fair (CSEF) is an official ISEF affiliate: this means that winning projects at CSEF can be advanced directly to ISEF without having to first proceed to the State level and win there.

**The Fort Atkinson Science Fair (February 10, 2018) is scheduled for one week before the Capital Science and Engineering Fair (February 17, 2018). This will make it possible for students to exhibit at BOTH fairs.** The Board of the Fort Atkinson Regional Science Fair encourages high school students to participate in both FASF and CSEF, as each fair provides different opportunities for awards and scholarships.

In addition, CSEF Director Dr. Sundaram Gunasekaran advises that participants have the opportunity to meet their peers from other schools in the region and learn about their research, and that CSEF also organizes tours of various research facilities and science and fun projects at the University of Wisconsin-Madison.

Note that CSEF has its own deadlines. An *Online Interest Form* is due November 15 and a *Registration Form* is due December 15. CSEF requires that students have an adult sponsor and encourages students to complete checklists and approval forms early in the process of conducting their research.

For more information about the Capital Science & Engineering Fair, please see <http://allen.neep.wisc.edu/sciencefair/index.htm> and contact CSEF organizers directly.



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

ESC18000024MSP