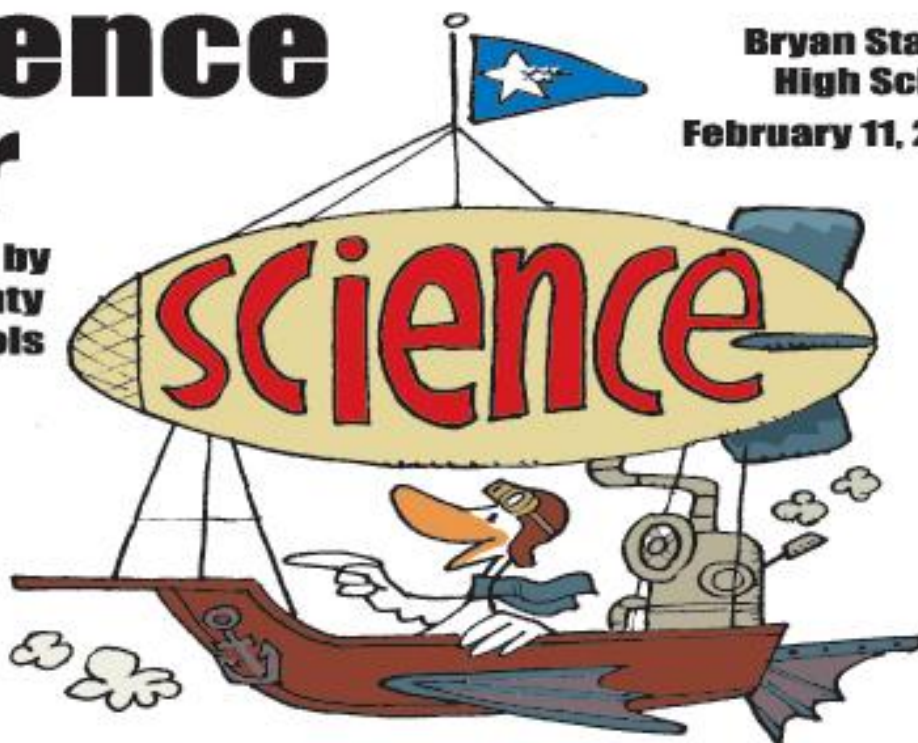


Kentucky American Water Science Fair

coordinated by
Fayette County
Public Schools

Bryan Station
High School
February 11, 2012



it's ENERGY FOR LIFE



Who is eligible to enter?

All 4th through 12th grade students currently enrolled in the Fayette County Public Schools or a private school within Fayette County are eligible to enter a project. The number of projects from each school will be limited. The school science fair coordinator must recommend each project.

What kinds of projects are allowed?

Projects must be scientific investigations, not demonstrations. Collections or displays that do not involve an experimental question are not eligible. Each project will be entered into one of the following categories:

- Animal Sciences
- Behavioral & Social Sciences
- Biochemistry **
- Cellular & Molecular Biology***
- Chemistry
- Computer Science **
- Earth & Planetary Science
- Engineering
- Energy & Transportation **
- Environmental Sciences
- Medicine and Health**
- Microbiology
- Physics & Astronomy
- Plant Sciences

**High School only Categories

*** Middle and High School Only

What are the entry rules?

1. The **student's teacher** must enter the Student Project Data through the **Science Fair website** by **5:00 PM on Friday, January 27, 2012 when the registration site will be closed – there will be no late entries!**
2. Private school and home school students must send completed entry forms to David Helm, Science Specialist, FCPS, 701 E. Main St., Lexington, KY 40502 no later than **4:00 PM on Friday, January 27, 2012.**
3. In grades 4-12, projects may be the work of a single student or of a team of 2 or 3 students. A student/team may enter only one project in the science fair.
4. All exhibits must be placed in and removed from the exhibit area at the times specified. **Students MUST be present for the judging.**

Neither Kentucky American Water nor the Fayette County Public Schools assume any responsibility and/or liability for loss or damage to any exhibit or part thereof; not for personal injuries to exhibitors, or other persons arising out of or related to work on, exhibiting, or viewing projects.

Who should I talk to if I have questions?

If you need more information about the Science Fair, or doing a project, talk to your science teacher or the science fair coordinator at your school. You may also contact:

David Helm, Science Specialist 859-699-1437
Lori Bowen, Science Specialist 859-699-1436
Fayette County Public Schools
701 East Main St.
Lexington, KY 40502

What are the rules for the projects?

1. The student must do all work on the project's experimental procedure, data collection, and data analysis. The judges will disqualify projects that indicate the direct assistance of individuals other than the student. Teachers, parents, or other persons may advise and provide technical assistance, but may not be involved in the actual work of the project.
2. Exhibits must fit within a space of 45 cm (1.5 ft) front to back and 75 cm (2.5 ft) side to side, and be less than 180 cm (6 ft) tall.
3. Only table space will be provided at the fair. Exhibits must be free standing with their own support.
4. If electricity is used in the exhibit, all switches, cords, and other devices must be of an approved variety. Students must supply their own extension cord, at least six (6) feet long. Electrical outlets will be available only if requested on the project entry form.
5. The student's school affiliation must not be visible until after the judging is complete.
6. Record books outlining the purpose of the project, procedures used, source of data and information, etc., **must** be available for examination by the judges. Daily/periodic logs are highly recommended as a part of the Record book.
7. Projects using vertebrates in **ANY** manner must submit Research Plan 1A and Approval Form 1B to be reviewed by the District Scientific Review Committee before any research is started by the student. Projects in all grades are prohibited from using vertebrate animals in experiments that would result in injury, discomfort or death of the organism. Use of vertebrate animals in grades 4-12 must strictly adhere to the I.S.E.F. guidelines on animal experimentation. If in the opinion of the judges a project violates this rule, it will be disqualified. (Research plans may be downloaded from the FCPS website. (<http://www.societyforscience.org/page.aspx?pid=312>)
8. According to I.S.E.F. rules, the following items **may not** be included in the project exhibit under any circumstances (**display drawings or photographs are allowed instead**):
 - Live animals (vertebrate or invertebrate), including humans.
 - Plants.
 - Preserved vertebrate animals or parts.
 - Live pathogens, microbial cultures or fungi, i.e. bread mold, etc.
 - Open flames.
 - Chemicals (even water).
 - Any other materials hazardous to the public.Any projects in these categories must be reviewed by the teacher before beginning research. It is recommended that students submit research plan 1A and 1B to the teacher before the start of the project. Vertebrates are subject to rule 7 listed above. Please pay particular attention to any project with human subjects, even surveys.
9. Go to the following website to view guidelines for projects involving any of the above topics.
<http://www.sciserv.org/isef/students/wizard/index.asp>
10. Projects not meeting these guidelines will not be eligible to win at the District Science Fair and therefore

What awards will be given?

Projects at each grade level will be judged separately. Awards will be given according to the judges' evaluation of each project, based on the criteria listed below. The decision of the judges is final. Medals, ribbons, or certificates will be awarded to all projects in each grade level/subject area category. The outstanding project in each of the grade levels and subject areas will receive special recognition. Students in grades 9-12 will be judged according to the subject area category with the outstanding project receiving special recognition. Kentucky-American Water Company will also sponsor special awards for "Outstanding Projects Involving Water Science" in each grade level 4-8 and one award for grades 9-12.

What are the judging criteria?

Entries will be judged in four general areas. The following criteria will each be evaluated to determine the project's overall performance.

1. Project Topic

- The topic lends itself to experimentation, rather than demonstration
- The topic is unique or innovative, shows creativity
- The question is sufficiently limited to allow investigation

2. Experiment Design

- The project shows originality in its design and procedure (based on the student's age and experience).
- The project reflects appropriate investigative techniques.
- Variables to be investigated are clearly identified.
- Attention is given to controlling other possible variables.
- The project shows imaginative use of available materials.
- Data collected includes both written observations and numeric measurements (where appropriate).
- Repeated trials or multiple subjects are included in the procedure.

3. Exhibit Display

- The exhibit contains the following information

Project title	Experimental Question
Student Hypothesis	Identification of Variables
Description of Procedures	Data Collected
Summary of Results	Student's conclusion
- Sufficient data were collected to allow conclusions to be made.
- Exhibit is visually appealing; shows evidence of being the student's own work; information in the exhibit is recorded neatly and accurately
- Tables, graphs, etc., are used to show results (where appropriate).
- Exhibit is helpful in communicating the ideas/results of project.

4. Student Discussion

- The student's discussion indicates sound understanding of what was done in the experiment, as well as the ability to manipulate the equipment used (if any).
- The student summarizes the results and discusses conclusions regarding the experiment.
- Conclusions reached are justified, based on the experimental data.
- The student identifies new questions for investigation, based on this experiment.



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- The student discusses possible application of his/her work.

