

2012 Science Fair & Invention Convention

February 28, 2012

January 17, 2012

Dear Students and Parents,

The Bonnie Brae PTO is pleased to announce that our school's annual Science Fair and Invention Convention will be held on Tuesday, February 28.

The Science Fair will be open to scientific experiments, investigations, and inventions. Guidelines for each of these are provided in the attached packet. Additional copies of this packet are available in the school office and on the school's website. To help students identify a project, a list of science fair and related websites can be found in this packet.

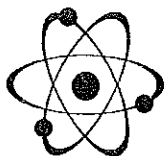
A **Registration Form** must be completed **for each project**. Students working in a group should complete one form but ensure that the full names of all participants are included on the form. **Completed forms should be returned to the school by Thursday, February 2.**

On the evening of the Science Fair, all participants are asked to stand at their display to answer questions related to their projects.

We look forward to participation by every student. We also want to say 'thank you' to parents for encouraging your children to participate and for fostering their scientific curiosity and talents.

If you have any questions please attach a note to your participation form or call Laura Blahusch at (703) 764-9712 or e-mail at paul.and.laura@cox.net.

Laura Blahusch
Chairperson
2012 Bonnie Brae Science Fair



LET THE SCIENTIST IN YOU RULE!

What is the BBES Science Fair and Invention Convention?

The Science Fair and Invention Convention offers an opportunity for all Bonnie Brae students to explore the creative world of scientific and technological problem solving and design, and to share their discoveries with others. It consists of two major project divisions: Inventions or Scientific Investigations. Students may choose to participate in either division (or both if they like). **A registration form is needed for each project.**



Who Can Help With the Project?

Parents and other adults can be important partners in their children's learning. However, parents should limit their assistance to support and guidance and are not to do the project for the child. Students should be encouraged to choose topics that interest them and that are appropriate for their grade levels.

May I Work With a Group?

Students may participate either as individuals or in a group of up to four (4) friends or siblings. Multi-grade groups are permitted. Each scientist/inventor will receive a participation ribbon whether the project was completed individually or as a group.

What Type of Projects Can Be Submitted?

Projects can range from classic chemistry experiments such as a "volcano" erupting with baking soda and vinegar "lava" to biology explorations of plant growth, earth and space models, electricity and electronics, physics, engineering or math problems in everyday life. The best projects begin with a student asking "why" or "how" in an everyday situation, such as:



- Why does a soap bubble pop?
- Why does a compass needle point north?
- Why does it sleet rather than snow?
- How does a battery work?
- How is electricity carried from one place to another?

Project ideas may also be found in books in the nonfiction section of the library at call number 507 or on websites that describe experiments. (**Note:** Project ideas found in books and websites often describe scientific investigations and activities instead of scientific experiments. Scientific experiments involve a hypothesis and use of multiple trials to test different scenarios.)

What is NOT Allowed in My Project?

These restrictions are set by the County...

Restrictions for FCPS Elementary Science Fair Projects

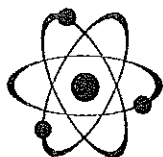
Students are prohibited from using the following organisms in their projects:



- Molds
- Bacteria
- Humans (including human surveys)
- Vertebrates

If I Still Have Questions?

If you have any questions, please contact Laura Blahusch at 703-764-9712 or paul.and.laura@cox.net.



DESIGNING YOUR PROJECT

Use the Scientific Method to explore an idea or build an invention.

What is the Scientific Method? It is a way of solving a problem or answering a question.

1. **Question:** Identify a problem and decide what you want to find out.
2. **Research:** Information gathered about your question that helps to form the hypothesis.
3. **Hypothesis:** An intelligent guess about what you think will happen. Usually, this is an "if...then" statement that is either supported or not supported by the results of an experiment.
4. **Materials:** Gather materials needed to do the experiment or study. Keep a list.
5. **Procedure:** Things done to conduct the experiment or solve the problem. What are you going to do first, next, last. Design your experiment to use a control group or constant to compare with the group you change. This is called using a dependent variable and an independent variable.
6. **Observations:** What you see happening during the experiment. You should record your observations through notes, measurements, photographs, or drawing pictures. Your record of things you can count and measure is your data.
7. **Results:** What happened when you did your experiment? Make a chart, poster, or graph to display your data clearly and easily.
8. **Conclusion:** Do the results of your experiment support the hypothesis? Why or why not? What did you learn from your experiment and how is it related to your everyday life?

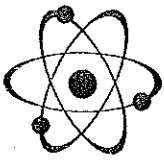
Tip: Keep a journal as you work, to record all your thoughts and findings in one place. You may share your journal as part of your project if you wish.

Displaying Your Project

The display board should be durable and made out of cardboard, tag board or some other self-supporting material. **The display should be NO MORE THAN 36 INCHES WIDE** Display boards are available at craft and office supply stores.

In addition, a table display may include the equipment, log book or journal, samples, or other items from the project activity placed on the table in front of the display board. Participants are urged to do as much of the project on their own as possible! Using the computer to prepare written materials is good, but neatly handwritten displays are also welcome.

The basic elements of the display for experiments, investigations, and inventions are listed on the next page.



REGISTRATION FORM

Complete and submit to your teacher by Thursday, February 2

Student Name (*print as you would like to appear on name card – PLEASE PRINT CLEARLY*):

Email: _____

Phone number (in case we have questions): _____

Grade: _____ Teacher: _____

Project Title: _____

Project Description: _____

I plan to do (circle one): Experiment Investigation Invention

If doing this as a group, please list the names of **other** members in group (no more than three):

	<u>Name</u>	<u>Grade</u>	<u>Teacher</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

Special Display Requirements: Most projects are table top displays, using a conventional science fair tri-fold board, and space in front of it to display items. If you have a special requirement, please indicate the space needed (width x depth) or other requirement

Please note that county regulations do not permit vertebrate animals, volatile substances, open flames and electrical wiring not conforming to school codes. Also, it is not possible to provide protection for laptop computers or other valuable items. Such items should not be included in science fair displays.

I, _____ accept the responsibility to complete my project,
(Print Student's name)

bring it to the gym on Tuesday morning, and share my findings with visitors.

(Student Signature)

Parent Signature: _____

If you have any questions, please contact Laura Blahusch, 703-764-9712, paul.and.laura@cox.net.