2012 Central PA

Science Fair

for students in *Grades 1 thru 8*

Saturday, April 21, 2012

1:30 PM until 4:00 PM

(Awards Ceremony 3:30 PM - 4:00 PM)

Forest Hills Elementary School

547 Locust Street
Sidman, PA 15955

$100, $75, & $50 Savings Bonds
Trophies & Special Merit Awards

The Central PA Science Fair is free to everyone. Any student in grades 1 thru 8 can enter a project. Registration forms are available from your teacher, school office, the IU8 website (www.iu08.org, then click on the "Curriculum / Student Focused Programs" links) or call Joan Conway at 814-940-0223 ext. 1388. All projects must be brought to the Elementary School Cafeteria on Friday, April 20. On Saturday afternoon, the exhibits will be open to the general public. *Registrations for the Science Fair will be done on-line via the IU8 website and should be active in late February. The registration deadline is Tuesday, April 10, 2012.*

Hosted by: Appalachia IU 8 and Forest Hills School District

To: Administrators and Teachers of Science in Grades 1 - 8

From: Joan Conway, Special Projects Coordinator

Date: January 30, 2012

Re: **2012 Central PA Science Fair**

The 2012 Central PA Science Fair is scheduled to be held on **Saturday, April 21** at **Forest Hills Elementary School**. Students and/or teachers can set up their exhibits on **Friday, April 20** between the hours of **1:45 P.M. until 3:00 P.M.** or **4:00 PM until 6:30 P.M**. DO NOT bring projects during the Elementary Dismissal time (3:10 P.M. – 3:50 P.M.) Projects need to be brought into the cafeteria via the double doors at the top of the loop road located on the back side of the building. The judging will take place on Saturday morning and the exhibits and awards ceremony will take place Saturday afternoon. The Science Fair exhibits will be displayed in the Cafeteria.

At this time we are earnestly seeking contributions from businesses, industries, or professional societies to help cover the cost of this event. If anyone knows a source that might be interested in contributing please contact Joan Conway at 940-0223. **This event may be cancelled in the future due to a lack of participation and funding.**

As in past years, we are seeking volunteers to man the registration / information desk on Friday and Saturday. Included with this entry form is a section for volunteers to complete. I want to encourage parents and/or teachers to take an active role in the Fair. **Please Note: Students from grades 2-8, who are applying for participation in the 2012 ATOMS Scholars Program, are given extra points on the application for placing and exhibit in the Science Fair.**

All projects should involve a scientific investigation and not a demonstration (i.e.: no volcanoes, displays of the solar system, etc...) they must be done by the individual whose name appears on the exhibit and should not be a group effort. All projects must be free standing and fit in a table space no larger than 3 feet wide by 18 inches deep. *All students registering a project will receive written verification and additional information approximately one week prior to the fair.*

Since the Curriculum Department of the IU is trying to "go paperless" this information will be e-mailed to the schools and posted on the IU8 website. I would appreciate it if you would share this information with other administrators and staff members in your school. You are welcome to print out as many copies as are needed. **PLEASE GIVE ALL STUDENTS WHO WANT TO ENTER AN EXHIBIT THE COMPLETE PACKET OF INFORMATION. The website is: www.iu08.org/curriculum/student-programs. Registrations for the Science Fair will be done on-line via the IU8 website and should be active in late February. The registration deadline is Tuesday, April 10, 2012.**

Please contact me if you have concerns or questions. My phone number is: (814) 940-0223 ext. 1388 or my e-mail address is: jconway@iu08.org. I look forward to seeing you and your students' projects at the Science Fair.

2012 Central PA Science Fair

What Is the Science Fair?

The Central PA Science Fair is a free annual competition of science investigative projects done by students in grades **one through eight**. Any student from the central PA region may enter a project in the fair.

Forest Hills Elementary School, Sidman, PA 15955

Saturday, April 21
1:30 PM to 4:00 PM

Prizes and Awards

Savings bonds of $100, $75, and $50 are awarded to the top three projects in each division:

Division I	grades 1 & 2 & 3
Division II	grades 4 & 5 & 6* (*The 6th grade entries will be placed in the division with the smaller
Division III	grades 6* & 7 & 8 number of entries from other grades.)

Trophies are awarded to the top four place winners in each division. All exhibitors receive recognition.

Project Rules

1. Projects must be of an ***investigative*** nature using the "Scientific Process" to answer a question.

2. Projects must be done by individuals. No group or team projects will be accepted.

3. All work must be done by the exhibitors themselves. Teachers and parents may help with planning but must not help in the actual performance of the research, design, or construction of the final exhibit. The use of power tools by young children to construct a display is discouraged.

4. Contents of exhibit must **not** contain live vertebrate animals, preserved vertebrate animals or parts, embryos of vertebrates, aquariums, controlled substances, open flame, dangerous chemicals, live disease causing organisms, poisons, explosives, or any other items that may pose a danger to exhibitors or visitors.

5. Exhibits must be freestanding; there is no wall space available. The display **must fit in a table space that is 3 feet wide and 18 inches deep**. There is no height restriction but be aware that the exhibit should not be top heavy or tip over easily.

6. No electrical outlets may be used. Batteries are acceptable. An exception will be made for exhibits using a computer when the computer is an essential part of the research-presentation and prior arrangements are made.

7. Photographs to show process or equipment are permitted; but the student's face can not show.

8. The Central PA Science Fair takes reasonable precautions in protecting exhibits; however, the fair **IS NOT RESPONSIBLE FOR BROKEN OR MISSING EXHIBITS OR PARTS.**

9. Exhibit title must be on the front of your exhibit in letters at least one inch high. Exhibit number, which will be forwarded to the exhibitor after receipt of the entry blank, must be placed in the upper right corner of the exhibit front. **NO EXHIBITS WILL SHOW THE NAME OF THE EXHIBITOR OR SCHOOL PRIOR TO JUDGING.** Your name, title of your exhibit, school, and exhibit number should be on the bottom center back of your exhibit. *Post-it notes are placed over your name and school during the judging.* **(Note: Avoid writing your name in large letters on the back of your exhibit.)**

10. All entrants must register online via the IU8 website at www.iu08.org/curriculum/student-projects. The registration deadline is Tuesday, April 10, 2012.

11. Exhibits should be brought to the Forest Hills Elementary School Cafeteria between the hours of **1:45 P.M. until 3:00 P.M. or 4:00 PM until 6:30 P.M on Friday, April 20**. DO NOT bring projects during the Elementary Dismissal time (3:10 P.M. – 3:50 P.M.). Further details will be sent when we mail your exhibit number.

12. The rules and regulations stated above must be strictly adhered to or your exhibit will be disqualified or penalized.

Hints for Developing a Successful Project

These are **suggestions** for a good project and are not rules.

Do a science project, not a book report or an experiment from your textbook. Projects that merely relate information copied from a book are not science projects. Originality, a well-researched question, and a neat, thorough, organized exhibit are keys to a successful project.

Choose a problem that you can investigate thoroughly. Make sure it challenges your imagination and ability. **Make sure it answers a question.**

Think of an original hypothesis or guess at the solution to your problem. Your topic should be one that really interests you and you find exciting.

Do experiments that you are able to do and keep very careful, well organized notes on each phase. The notes do not have to be erasure or error free; but, they should show that you have been following the scientific method, observed carefully, and thought about the data you collected.

Think about what happened in your experiments. Try to compile your information or data into a table or graphs or make photographs of the changes.

Make sure your conclusion matches the information you have collected. A conclusion is the final step and the reason you did the project. Make sure you tell why you think the information leads to a particular conclusion.

Make sure your project answers a very specific question. You'll learn more by doing a lot of work on one topic rather than lots of topics.

Write a report! It should contain the problem (question), hypothesis (guess), procedures (experiment), analysis (information saying why), and conclusion (answer). You should also include any special problems or unusual things that occurred, special help you received, or where you found information. The report, also called an abstract, should not be long. If you have about 100 words in it, that is plenty long enough.

Display your information in a way that makes sense and is easy to understand. Your exhibit is the display part of your report. Keep it neat and make sure it will fit in the 3ft x 18inch space that you will be given at the fair.

Do the work yourself. You may get **advice and directions** from teachers, other kids, a scientist, a parent, or anyone who is interested in your project.

Use the judging sheet to evaluate your project. It tells what is important and can help you be sure you have done everything that is needed.

Start Early! It always takes longer than you think to do a ***GOOD*** science fair project.

Judging Projects

How to use this Checklist

Students can use this checklist as a self-evaluative tool prior to entering a project. These guidelines ensure that all students are evaluated according to an established set of criteria and that teachers, parents, and students are aware of the elements that constitute a well-planned display. ***Not every item in each list will apply to every project.*** Check off the applicable ones that you believe have been fulfilled successfully. This should enable you to assess how complete your project is and how it will be viewed by the judges.

The major parts of any science fair project are the ***display and display materials***, and the ***written report.*** Make sure that you do a thorough job on these portions of your project.

Projects are judged by a team of at least three judges. The grand totals are then arranged from highest to lowest. The three highest scores in each division will receive savings bonds and trophies. The fourth highest scoring student in each division receives a trophy and a special prize.

Central Pennsylvania Science Fair Judging Checklist

Creativity - 30 points possible

___Are the materials presented imaginatively?
___Is there a distinctive or unusual approach to problem solving?
___Is the project or display original?
___Is there a variety of equipment or items?
___Is new and interesting information included in the display?
___Are the data or results interpreted appropriately?

Scientific Thought - 30 points possible

___Is the topic or problem stated clearly and completely?
___Is a question being investigated and the experiment designed to answer the question?
___Are the procedures appropriate to the area of investigation?
___Have scientists or other experts and scientific literature been consulted?
___Has scientific literature been cited?
___Has a systematic or logical plan of action been stated?
___Is there enough data to answer the question?
___Is the factual information correct?
___Is there a need for further research or investigation?
___Is a project notebook provided with the display?
___Does the report show an understanding of the variables involved as well as the facts or theories?
___Is the project notebook sufficiently detailed in relation to the scope of the project?
___Have any problems or limitations that occurred been noted?

Thoroughness - 15 points possible

___Is the project complete?
___Does the project represent a sufficient amount of time and effort?
___Is a problem adequately investigated or answered?
___Are the notes complete?
___Does the project include a display, written report, and 3-D items?

Skill - 15 points possible

___Is scientific skill demonstrated in the handling, preparation, mounting, equipment, measurement, etc.?
___Does the project represent the student's own work?
___Does the project represent quality workmanship for the age and grade level of the student?
___Is the exhibit well organized, titled, and labeled?
___Is the hypothesis and conclusion clearly displayed?

Clarity - 10 points possible

___Could a casual observer understand what is being displayed?
___Are titles, written descriptions, and labels neat, legible, and large enough to read?
___Is the presentation logical and sequential?
___Are the data clearly presented?
___Is every piece of material important to the display?
___Is the display colorful, neat and attractive (drawings, graphs, diagrams, etc.?)

Written Report

Title Page - 2 points possible

___Is it present?
___Are the title of the project and the student's name included? *(Names will be covered during judging.)*

Table of Contents - 5 points possible

___Are all the parts listed?
___Are all the sections listed in order?
___Are page numbers listed and correct?

Statement of Purpose - 10 points possible

___Does it pose a question that can be investigated or measured?
___Does it relate to the experiment or project?
___Is it logical, defendable and understandable?
___Is it within the student's age and grade level?

Hypothesis - 8 points possible

___Does it answer the purpose?
___Does it tell what the students is trying to prove with the project?
___Is it scientifically sound?

Research - 15 points possible

___Does the research relate to the topic?
___Is it complete and thorough?
___Does it represent a diversity of sources?
___Is it appropriate with student's age and grade level?

Materials - 10 points possible

___Are all materials listed?
___Are specific amounts given?
___Are there sufficient materials?

Procedures - 10 points possible

___Are procedures listed in chronological order?
___Could the project/experiment be replicated?
___Are the procedures easy to follow and in a logical order?

Observations - 15 points possible

___Are the observations in a logical order and indicate what was done in the project?
___Did the student choose the best form for recording the observations?
___Are the observations clearly labeled?

Conclusion - 15 points possible

___Does it adequately answer the purpose and explain the results?
___Does it tie the entire paper together?
___Is it sufficient in form and length?

Bibliography - 5 points possible

___Is it in alphabetical order and follows a form?
___Is it sufficient in terms of the scope of the project?
___Have primary, scientific sources been consulted?
___Is the range and scope of the bibliography reflected in the report itself?