St. Francis Annual Science Fair – VIII

Individual Participants – Students of grades 5, 6, 7, and 8
Group Projects – Classrooms K-1; 2-3; and 4

- March 16, 2012 (Friday) – Written Report due
- March 19 (Monday) – Display Board, Journal, & Research due

This year we will have four **or five Science Coaches** to assist students as advisors. The experimental process will be modeled in class and guidelines given for the project. The **Science Coaches** will meet with each student to offer ideas and direct research. Please note the following project dates:

Jan. 11 – written **Science Proposal -** attach some **on-line** r**esearch**

Feb. 6 – Week for **Journal Check: meet with Science Coach**

March 16 **– Written Report due**

March 19 – **Complete Science Project due:** Board, Journal, Research Folder

Some Experiment tips: an experiment **tests only one variable** at a time. All other variables need to be controlled. An experiment can have several phases in order to test other variables.

- Independent Variable – the variable you are controlling and altering
- Dependent Variable – a variable which changes depending on what you do with the independent variable.
- Constants – the elements of the experiment which do not change throughout the experimental process.

A "control" is an element of an experiment which is left in its natural state and the other parts of the experiment are shown in comparison with the control. It makes the changes obvious; gives contrast. Not all experiments lend themselves to a "control."

Experiments with living organisms such as people, animals, mold, bacteria, insects, etc. need special permission. (It's best to avoid them.) Please review the Valley Catholic Middle School Guidelines:

http://www.valleycatholic.org/middle-school/documents/vcms_science_fair_rules.pdf

First and second place exhibits will be sponsored to attend Valley Catholic Science Fair. Entry forms due March 23 with Abstract. VCMS Science Fair - April 2012.

Science Fair 2012 Project Requirements

I. Journal

As you do your **inquiry experiment (**vs. a demonstration) be sure to include the date each time you record data.

II. Science Board (Display)

Boards need to have attractive headings and brief information. (Boards can be checked out from SMP. We have many to loan.) Include all of the <u>headings</u> of the written report on your board (in that order. See #3 below.) "Materials Needed" is usually not a category.

III. Written Report

Include:

1. Cover page with name of experiment and your name/date.
2. About 1 ½ to 2 pages, font 14, double spaced. Not more than 4 pages.
3. The following **<u>headings</u>**: (Make headings stand out.)
    a. **Question**
    b. **Hypothesis**
    c. **Procedure**
    d. **Data** (Include lists, tables, graphs, sketches, photos)
    List Independent and Dependent Variables and Constants. (Controls?)
    e. **Analysis of Data** (No opinions or reasons here, only facts)
    f. **Conclusion** (Briefly answer the **Question.** Was your hypothesis correct? **Give opinions or reasons for these results.** Tell how this experiment applies to your life and how it benefits humanity. What would you do next?)

Other important elements of the written report are an opening paragraph and a page to cite your **Sources.** Label it "Sources" or "Bibliography." Use the Turabian Format. It can be found on-line or Sister Mary Peter can provide you with a copy of the format.

IV. Internet Research

Include a folder which contains two or three articles that present information which directly relates to the **<u>concepts being explored</u>** in your experiment.

The **Science Coaches** and Sister Mary Peter are available to assist with ideas and suggestions.

An experiment which **answers one or more** of the following questions may be helpful:

a. Does this have meaning in my life?
b. Does research in this area contribute to my health or the health of others?
c. Does this experiment help with conservation of natural resources?
d. What might be the next step after this experiment?

SCIENCE FAIR
HINTS AND TIPS

Here is a list of resources, provided by Valley Catholic, which may come in handy when preparing to create an award winning science fair project.

BOOKS:
The Complete Handbook of Science Fair Projects by Julianne Blair Bochinski
This book contains excellent examples of award winning science fair projects.

The Compete Science Fair Handbook by Anthony D. Fredericks and Isaac Asimov
This book has great project ideas and good teaching aides such as sample timetables, sample letters to parents, keys to successful projects, how to go about creating a project, etc.

There are many science fair books filled with project ideas. We will be looking through some of these books in our library to inspire the students toward a project of their own design. Students will find the science fair project rewarding and fun if they pick a topic in an area of their interest.

INTERNET SITES:
http://www.nwse.org
This is the official Northwest Science Expo site from which much of the format and information for the Valley Catholic Science Fair comes. You will find links to many resources from this site.

http://www.intel.com/education/isef/middleschool.htm
This site provides the download for the Intel ISEF Middle School Curriculum. The curriculum is tailor made to help teachers and parents guide their student through the science fair project process.

http://school.discovery.com/sciencefaircentral/
This is an excellent site for all kinds of hints and tips including tips for students and parents.

http://www.super-science-fair-projects.com/sample-science-fair-projects.html
This site is designed to assist middle through high school students with sample science fair projects, as well as a "how-to-do," step-by-step approach. It includes excellent tips for teachers.

http://www.scifair.org/
Another great source for project ideas

http://dummies.com/WileyCDA/DummiesArticle/id-1665.html
Great advice on impressing judges

Also check **Science Buddies**

May this be a rewarding science fair year for you.
God bless you,
SMP