PJAS Guidelines

As a student of Notre Dame of Bethlehem School you will be creating a proposal for PJAS and performing a scientific experiment according to the guidelines for the Pennsylvania Junior Academy of Science. The project must be in the following PJAS categories: Physics, Astronomy, Biology, Biochemistry, Botany, Ecology, Microbiology, Zoology, Chemistry, or Earth Science. Information beyond these basics will be discussed in class. Mrs. Iobst has hundreds of possible project topics to share.

All students are strongly encouraged to present their work at the PJAS Regional Meeting at Easton High School on February 28th. Any student with a first place win at Easton is eligible to attend the PJAS State Meeting at Penn State University, May 17th – May 19th.

Here are some deadlines to help you organize your work.

Second Quarter:

Monday, November 3, 2014 **MUST BE WORD PROCESSED**

Project Title, Category, Independent Variable, Dependent Variable, Controlled Variable, Materials needed. **If you plan to present at Easton PJAS registration form due including $10.00 due to Notre Dame School.** Quiz Grade

Monday, December 1, 2014

Project proposal due, including research (see attached handout) Test Grade

Third Quarter**:**

Friday, January 9, 2015

Full Project Report (see attached handout) Test Grade

**February 28, 2015- PJAS Regional Meeting- 10 minute MAXIMUM oral presentation- Easton Area High School – time TBA**

**Test grade of 100 for presenting at regionals**

Fourth Quarter:

**May 17- May 19, 2015 – PJAS State Meeting Penn State**

**Research Proposal**

**1. Introduction (10 points)**

**-this should include a general statement of the object of your study and experimentation including:**

**a. what you are studying**

**b. why you chose to study it**

**c. why this is a worthwhile question to study**

**2. Summarize your research (60 points)**

**-this should include:**

**a. describing the science behind your project**

**b. other experiments done on the topic-science journals are a challenging but**

**impressive way to do this**

**c. any reading you have done on your project**

**d. any websites you researched related to your project**

**3. Materials and Methods (10 points)**

**-your procedure in clear steps**

**-any materials you will need**

**-what data you anticipate needing (show possible charts and graphs)**

**-describe any statistical analysis you plan to use**

**4. State your hypothesis clearly in “if, then” form. (10 points)**

**5. Include a bibliography of all your research sources. (10 points)**

**Due Monday, December 1, 2014**

**Science Project Report Grading Rubric**

**Please print out the following:**

**a. Title page (5 points)**

**b. Introduction (5 points)**

**c. Research Summary (15 points)**

**d. Materials List (5 points)**

**e. Procedure (5 points)**

**f. Hypothesis (5 points)**

**g. Results- a table listing all the data and observations. The date(s)**

**that the experiment(s) was/were performed should be included. If at**

**all possible graph your data. (25 points)**

**h. Conclusion – what did you learn from your experiment? Do not forget**

**to include sources of error. (25 points)**

**i. Possible extensions of your project for the future (5 points)**

**j. Bibliography (5 points)**

**Due Friday January 9, 2014**

**From this written paper you will prepare Power Point to be saved on a flash drive. More info to follow.**

**Your presentation may be a MAXIMUM of 10 minutes. You must use METRIC MEASURES. If you speak longer than 10 minutes or do not use metric you will not be awarded a first place at either the regional or state meeting.**