



**DIOCESE OF OAKLAND**  
**SCIENCE FAIR**  
PRESENTED BY SAINT JOSEPH NOTRE DAME HIGH SCHOOL

**Tentative Schedule**

**February 25, 2012**

- Student project boards must be set-up the night before the science fair on February 24, 2012. The gymnasium will be open from **4 p.m. until 7p.m.** for students, parents, and/or teachers to come and set-up their boards and supplies.
  
- Saturday
  - **8:30a.m.-10a.m.:** First round of judging will occur. No students, parents, or teachers will be present during this first round of judging.
  - **10a.m.-10:30a.m.:** Student Check-in in the main lobby of the gymnasium
  - **10:30a.m.-11:00a.m.:** Welcome and open gym
  - **11:00a.m. -12:30p.m.:** Student interviews in the gymnasium. The gymnasium will be closed to all others during this time.
    - Students will be told when they check-in their interview slot. They will either be interviewed during **slot one: 11a.m.-11:45a.m.** or in **slot two: 11:45a.m.-12:30p.m.**
    - Events will be occurring on campus during this time for those not in the gymnasium.
  - **12:30p.m. – 2p.m.:** Lunch for participants and open gym so people can look at the projects
  - **2p.m.-2:30p.m.:** Gym will close for distribution of ribbons
  - **2:30p.m.:** Award ceremony in the gymnasium
  - **3p.m.:** Event closes and students take their boards and supplies with them.





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**Important things you should know regarding the Diocese of Oakland Science Fair**

1. **All students must compete individually.** There will be no pair or group projects accepted. Those students who show up as pairs or groups will not be judged and will be disqualified from the competition.
2. **All schools and students must be registered on time.**
  - a. Schools must send back their School Participation Form (commitment form) and be registered by **Tuesday, November 29, 2011. (Maximum of 6 students from the 7<sup>th</sup> and 8<sup>th</sup> grades)**
  - b. All students, even those who you are not certain will be competing, must send in their Project Proposal Form if they want to be eligible to move on to the San Francisco Bay Area Science Fair (SFBASF). **Due to SJND by Jan. 6, 2012.**
    - i. This form is needed for any student whose project involves (even if only observing) human subjects, invertebrate or non-human vertebrate animals, recombinant DNA, tissues, pathogenic agents, or controlled substances.
    - ii. These forms must to be mailed to SJND, since we are the site coordinator for the SFBASF.
    - iii. Mail forms to:
      1. Saint Joseph Notre Dame High School  
Attn: Kristina Taylor/Science Fair  
1011 Chestnut Street  
Alameda, CA 94501
    - iv. Fax forms to:
      1. 510-814-7118  
Attn: Kristina Taylor/Science Fair
  - c. Students must be registered with their name, title and category of their project, as well as an abstract of the project (see handout) by **Friday, February 10, 2012.**
    - i. **Categories are:**
      1. Behavioral and Social Sciences
      2. Biological Sciences
      3. Math and Computer Sciences
      4. Physical Sciences
      5. Engineering and Computer Applications
      6. Environmental Sciences
3. **Projects must follow the rules of the Project Construction and Safety handout**
  - a. Students failing to do so will not be judged and their project will be disqualified.
4. **On the day of the science fair, students may not wear items of clothing that would identify the school from which they came.**
  - a. They may bring along a school sweatshirt/polo/jacket to wear during the award ceremony only.
5. **Individual schools are responsible for student chaperones and student permission slips for the event.**
6. **Students/Parents/Teachers must deliver the projects to the Kelly Gymnasium at SJND by 7pm on Friday, February 24, 2012.**





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**Project Construction and Safety Considerations**

1. Tables will be provided for displaying projects. A table space of **122 cm (front)** by **76 cm (side)** is allotted to each entry. Height is limited to **274 cm or less**. This size must not be exceeded. Oversized projects will be disqualified.
2. Strong backing and sides are recommended. The project must stand by itself and cannot be fastened to the table or walls in any fashion.
3. The following items should not be included in exhibits:
  - a. **Liquids:** No liquids of any kind should be in project displays. If water is part of the experiment, then the apparatus must be displayed without water. If there are bottles of sample liquids in the display, they must be empty.
  - b. **Food:** Food samples may not be included in the display due to allergy concerns. Perhaps drawings, plastic food, or photos could be used. This includes bottles of catsup and so on.
  - c. **Bacteria:** No Petri dishes or test tubes with gel and bacterial colonies may *be displayed due to infectious agent concerns. Photos or drawings should be used here too.*
  - d. *Gravel, sand, and dirt must be tightly enclosed and sealed securely.*
  - e. *If plants are in the display, they should be completely covered and sealed (either the entire plant or the pot and soil). This includes vermiculite or any product that could be easily scattered.*
  - f. Mounted birds, mammals, or any stuffed specimens will not be allowed in Science Fair displays because of the risk of insect infestation.
  - g. Live animals are not permitted in project displays.
4. **Working electrical apparatus can be powered only by batteries.**
5. Dangerous chemicals, explosives, drugs, hypodermic syringes or needles, or open flames may not be included in any exhibit.
6. Projects must have the same title that was used when the entry form was submitted.
7. **Neither the student's name nor the name of the student's school should appear anywhere on the project.**





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**Abstract Template**

An abstract is created after the experiment/study is complete. It is a summary of the purpose, procedures, results, and conclusion that gives judges a quick overview of the projects. Prepare to write it as four separate 'paragraphs'. Once this handout is completed, combine all the sentences so that it appears as one paragraph. A complete abstract should be about 150 words in length and should not exceed 250 words.

Write one or two sentences about what you studied and you wanted to find out (example: purpose).

Write three or four sentences about your procedure briefly highlighting what you did (example: procedure/method).

Write three or four sentences about important observations and the general trends of your results (example: observations and results).

Write one or two sentences about your conclusion. This will include the answer to your question, extensions, and applications to your project.





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### Sample Abstracts

#### Example One:

Advertisers are always touting more powerful and longer lasting batteries, but which batteries really do last longer, and is battery life impacted by the speed of the current drain? This projects looks at which AA battery maintains its voltage for the longest period of time in low, medium, and high current drain devices. The batteries were tested in a CD player (low drain device), a flashlight (medium drain device), and a camera flash (high drain device) by measuring the battery voltage (dependent variable) at different time intervals (independent variable) for each of the battery types in each of the devices. My hypothesis was that Energizer would last the longest in all of the devices tested. The experimental results supported my hypothesis by showing that the Energizer performs with increasing superiority, the higher the current drain of the device. The experiment also showed that the heavy-duty non-alkaline batteries do not maintain their voltage as long as either alkaline battery at any level of current drain.

#### Example Two:

The purpose of this project was to determine if Vitamin A tablets have any effect on tomato plants. A total of twelve Rutgers tomato plants each two inches tall were planted in identical individual plastic pots using two cups of potting soil. Each plant received the same amount of water and sunlight during the three week experiment. The twelve plants were divided into four groups of three plants each. One vitamin A tablet was added to each of the three plants in the first group by burying the tablet one inch from the stem and one inch deep. Two vitamin A tablets were added to the second group of three plants in a similar manner. The third group of three plants had three tablets planted in the soil. The fourth group of three plants had no vitamin A tablets added to the soil and served as the control group. The height of each plant was measured and recorded at the start of the experiment and every 7 days thereafter. At the end of the experiment (21 days) the stems were cut across at a height of 3 inches. Experimental groups showed less development and slower growth rates than plants in the control group. The data was analyzed and the conclusion was drawn that giving vitamin A tablets to tomato plants did not improve growth as each of the three experimental groups failed to produce plants that were taller or had thicker stems than those in the control group.






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**Possible Interview Questions**

1. How did you find research for your topic?
  2. Why did you choose your topic?
  3. What is the purpose of your project?
  4. What did you learn during your project?
  5. Tell me about your project.
  6. Did anything unexpected happen, positive or negative?
  7. What variable did you intentionally change?
  8. What response did you observe or measure?
  9. What group did you compare the others against and why?
  10. How many times did you repeat your experiment?
  11. If you had a mentor, in what ways did your mentor assist you?
  12. Which groups in the community would be interested in your experiment?
  13. Did anyone help you with your project?
  14. How would you continue this project in the future?
  15. If you had this project to do again, would you change anything?
  16. How did you control your variables during your experiment?
  17. What aspect of your project was the most difficult and why?
  18. What was your hypothesis? Did you accept or refute it by the end?
  19. Did your data support your hypothesis? Why?
  20. What could our society gain as a result of your hard work and research?
- The interview portion will be worth a total of 15 points toward the students' total score
  - A judging rubric for this portion of the science fair will be set-up and decided on by the science fair board in the coming weeks. We will e-mail you this rubric once it is finalized.





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 Diocese of Oakland Middle School Science Fair Judging Rubric

Grades 7 and 8

Project Title: \_\_\_\_\_

Project #: \_\_\_\_\_

<p><b><u>Question/Title</u></b>          0- no question or title          1- topic unclear in title/question          2- well-defined question; title descriptive</p>	<p><b><u>Conclusion</u></b>          0- none          1- does not relate to the problem/hypothesis or is not supported by the data          2-          3- addresses the problem/hypothesis; not easily supported by the data          4-          5- addresses the problem/hypothesis; easily supported by the data</p>
<p><b><u>Hypothesis</u></b>          0- none shown          1- weak; shows little understanding          2-          3- adequate; show understanding          4-          5- well-defined; shows deep understanding</p>	<p><b><u>Writing, spelling, grammar, organization</u></b>          0-          1- difficult to understand          2-          3- understandable          4-          5- very clear</p>
<p><b><u>Procedure</u></b>          0- none shown or demonstration* only          1- incomplete          2- limited procedure          3- detailed; account for some variables          4- detailed; account for most variables          5-          6- detailed; accounted for all variables</p>	<p><b><u>Presentation/Neatness/Appeal of Display</u></b>          0-          1- unsatisfactory neatness AND display          2- unsatisfactory neatness OR display          3- satisfactory neatness AND display          4- neat/would be more attractive if organization were better          5- very neat/ attractive/ well-organized</p>
<p><b><u>Observations</u></b>          0- none shown          1-          2- single observation or group          3-          4- multiple observations/groups of 2 trials          5-          6- multiple observations/groups/control groups of 3 trials</p>	<p><b><u>Originality</u></b>          4- typical project, typical way          5-          6-          7- typical project, unique approach          8-          9-          10- very creative idea; original project; unique</p>
<p><b><u>Data (pictures, graphs, charts)</u></b>          0- no data          1- limited data is displayed; insufficient for valid conclusion          2-          3- recorded, displayed; hard to understand          4-          5-          6- recorded, displayed; easy to understand</p>	<p><b><u>Total Points:</u> _____ / 50</b>   <b>*Please turn document into Room 30 by 10am</b></p>





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**Interview Question Rubric**

**Diocese of Oakland Science Fair**

**Project #** \_\_\_\_\_

<p>Question 1:  Why did you choose your topic?</p>	<ol style="list-style-type: none"> <li>1- No real reason evident</li> <li>2- Shows some interest in their topic</li> <li>3- Project excites them but it is difficult for them to explain their choice</li> <li>4- Project excites them and they can explain relatively well why they chose this project.</li> <li>5- Project excites them and they can explain in detail why they chose this project.</li> </ol>	<p style="text-align: center;">_____ (out of 5)</p>
<p>Question 2:  Tell me about your project.</p>	<ol style="list-style-type: none"> <li>1- Student is unable to explain the project.</li> <li>2- Student knows little about their project and offers no detail in their explanation.</li> <li>3- Student is able to talk about the project but with limited detail.</li> <li>4- Student is able to talk about the project and provides an adequate amount of detail.</li> <li>5- Student is able to talk about the project in detail and shows a deep understanding of the working of their project on a scientific level.</li> </ol>	<p style="text-align: center;">_____ (out of 5)</p>
<p>Question 3:  What was your hypothesis? Did you accept or refute it by the end?</p>	<ol style="list-style-type: none"> <li>1- No hypothesis evident in discussion with student.</li> <li>2- Very basic hypothesis with the student only being able to discuss limited results that may/or may not relate to the hypothesis.</li> <li>3- Hypothesis evident and student shows a general understanding of how it relates to their results.</li> <li>4- Well stated hypothesis and student demonstrates adequately how it relates to their results.</li> <li>5- Clearly stated hypothesis and student is able to discuss in detail the validity of the hypothesis.</li> </ol>	<p style="text-align: center;">_____ (out of 5)</p>

**Total Points: \_\_\_\_\_ (out of a possible 15)**





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**SCHOOL PARTICIPATION FORM**

School \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ Zip Code \_\_\_\_\_

Science Fair Contact Person \_\_\_\_\_ Title \_\_\_\_\_

Email Address \_\_\_\_\_ Contact Number \_\_\_\_\_

\_\_\_\_\_ Yes, we will be participating in the Diocese of Oakland Science Fair on Saturday, February 25, 2012!

\_\_\_\_\_ No, unfortunately, we will not be able to participate in the Diocese of Oakland Science Fair this year.

Principal's Name \_\_\_\_\_

Principal's Signature \_\_\_\_\_

Date \_\_\_\_\_





## Student Participation Form

\_\_\_\_\_  
**Student's First Name**

\_\_\_\_\_  
**Student's Last Name**

\_\_\_\_\_  
**School**

\_\_\_\_\_  
**Grade**

\_\_\_\_\_  
**Student's Home Mailing Address**

\_\_\_\_\_  
**City**

\_\_\_\_\_  
**Zip Code**

\_\_\_\_\_  
**Student's Email Address**

\_\_\_\_\_  
**Student's Home Number**

\_\_\_\_\_  
**Science Fair Project Title**

Please indicate the correct category for your Science Fair Project:

\_\_\_\_\_  
**Behavioral & Social Sciences**  
*(Please attach abstract)*

\_\_\_\_\_  
**Biological Sciences**  
*(Please attach abstract)*

\_\_\_\_\_  
**Math & Computer Sciences**  
*(Please attach abstract)*

\_\_\_\_\_  
**Physical Sciences**  
*(Please attach abstract)*

\_\_\_\_\_  
**Engineering & Computer Applications**  
*(Please attach abstract)*

\_\_\_\_\_  
**Environmental Sciences**  
*(Please attach abstract)*

\_\_\_\_\_  
**Other:**  
*(Please attach abstract)*

**SJND will provide lunch to all participating students.**

Please submit this participation form, along with **\$20**, to your school's Science Fair contact person by **Friday, February 10, 2012**. If you are unable to make the deadline, please contact Giselle Jiles at 510-995-9458 or [gjiles@sjnd.org](mailto:gjiles@sjnd.org).





**Scientific Review Committee (SRC) Packet**

**Website Link: <http://www.sfbasf.org/srcpacket.pdf>**

**Phone: 510-215-1152**

**Email Address: [sfbasf@gmail.com](mailto:sfbasf@gmail.com)**

