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

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 12, 2011!

_____ 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

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GUIDELINES and EXPECTATIONS

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 disqualified from the competition.

2. **All schools and students must be registered on time**.
    a. Schools must complete the commitment form and be registered by **Tuesday, November 30, 2010**.
    b. All students, even those that you are not certain will be competing, must send in their Project Proposal Form if they want to eligible to move on to the San Francisco Bay Area Science Fair (SFBASF). **Due to SJND by January 3, 2011**
        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. We are the site coordinator for the SFBASF.
        iii. Mail forms to: Saint Joseph Notre Dame High School, Attn: Kristina Taylor/Science Fair
        iv. Fax forms to (510)523-2181, 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 4, 2011.**
        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**.

4. **On the day of the science fair students must not wear any clothes that would identify the school from which they represent**.
    a. They may bring along a school sweatshirt/polo/jacket to wear during the award ceremony only.

5. **Individual schools are responsible for student chaperons and student permission slips for the event.**

6. **Students/Parents/Teachers must have the project to the SJND gymnasium by 7p.m. on Friday, February 11, 2011.**

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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.

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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Tentative Schedule

February 12, 2011

- Student project boards must be set-up the night before the science fair on February 11, 2011. The gymnasium will be open from **4p.m. until 7p.m.** for students, parents, and/or teachers to come and set-up their boards and supplies.

- Saturday
  - **8a.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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Oakland Diocese Middle School Science Fair Judging Rubric
Grades 7 and 8

Consider for Grand Champ judging (only if a first award)? Yes or No
Project Title: _____
Project #: _____ Total Points: _____ Place: _____

Question/Title 0- no question or title 1-topic unclear in title/question 2-well-defined question; title descriptive	**Conclusion** 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
Hypothesis 0- none shown 1- weak; shows little understanding 2- 3- adequate; show understanding 4- 5- well-defined; shows deep understanding	**Writing, spelling, grammar, organization** 0- 1- difficult to understand 2- 3- understandable 4- 5- very clear
Procedure 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	**Presentation/Neatness/Appeal of Display** 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
Observations 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	**Originality** 4- typical project, typical way 5- 6- 7- typical project, unique approach 8- 9- 10- very creative idea; original project; unique
Data (pictures, graphs, charts) 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	

* Demonstration not judged

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Dear Judges:

The second Annual Diocese of Oakland Science Fair will take place on Saturday, February 12, 2011 on the campus of SJND located in Alameda. The Diocese of Oakland Catholic Middle Schools 7th and 8th graders will be participating in the event.

Due to the great success of last year's science fair we are anticipating greater participation from the Catholic middle schools in this year's science fair. This year we predict the need for a minimum of 50 judges. Each judge will be asked to evaluate a set number of student projects both through analyzing project boards and student interviews. Approximately 150 students will present their projects. Judging is scheduled from 8a.m. until 2p.m. Judges are provided with all necessary materials, and there is a Chairperson for each category to help facilitate the process and answer questions. Free parking is provided, and a continental breakfast, snacks, and lunch will be provided.

As you know, a science fair is an opportunity to recognize talented, hard working students who have an interest in the S.T.E.M. (science, technology, engineering, and math) fields. In the process, the students will develop self-esteem and presentation skills. In addition, we will be acknowledging the accomplishments of many young scientists.

If you are interested in volunteering your time and expertise for this event, please contact me at **gjiles@sjnd.org** or at **510-995-9458**. Also, if you have friends in the S.T.E.M. fields that who like to serve as a judge, please notify us as soon as possible.

We would like to thank you in advance for agreeing to participate in this wonderful opportunity to recognize these talented students. We will be in contact with you soon with details of the day and we look forward to meeting you at the Diocese of Oakland Science Fair presented by Saint Joseph Notre Dame High School.

Thank you,
Giselle Jiles
Science Fair Coordinator
Saint Joseph Notre Dame High School

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Scientific Review Committee (SRC) Packet

Website Link: ://www.sfbasf.org/srcpacket.pdf

Phone: 510-215-1152

Email Address: @gmail.com

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