

**GREATER SAN DIEGO SCIENCE & ENGINEERING FAIR (GSDSEF)
PROJECT PROPOSAL/SIGNATURE* FORM (GSDSEF-1, 2015)**

This form must be completed and signed prior to starting project work. It must be placed in the student's notebook with an ABSTRACT OF THE PROJECT for the GSDSEF Screening Fair. (Use the "Tab" key to move from line to line)

1. Project Title How The Modern Day Wind Turbine Can Improve

Is this a continuation of a previous project? Yes No

2. STUDENT'S NAME (Last, First, Middle) Sitapati, Kedar, Daniel

2a. Partner's Name (for Senior Division 2 person projects only) _____

EACH SENIOR DIVISION PARTNER MUST SUBMIT A SEPARATE PROJECT PROPOSAL FORM.

3. Address, City, Zip 10370, San Diego, 92131

4. Phone 858-472-2896 email Kedarbuilder@yahoo.com

5. School Marshall Middle School Grade 8

6. Teacher Mrs. Gillum

7. This project involves (check all that apply):

- Live Vertebrate Animals (GSDSEF-2, 2015)
- Humans as subjects, helpers, or interviewees (GSDSEF-3, 2015)
- Hazardous Substances (anything that could cause injury) (GSDSEF-4, 2015)
 - Chemicals
 - Infectious Agents
 - Bacteria, Fungi and/or Molds
 - Mutagenic Agents
 - Carcinogenic Agents
 - Teratogenic Agents
- Human or Other Vertebrate Tissue (GSDSEF-5, 2015)

8. WHERE REQUIRED (see #7 above), the following supplemental forms must be completed and included with the project proposal form (CHECK ALL THAT APPLY):

- Certification of Humane Treatment of Live Vertebrate Animals (GSDSEF-2, 2015)
- Certification of Compliance of Research Involving Humans (GSDSEF-3, 2015)
- Certification of Hazards Control (GSDSEF-4, 2015)
- Certification of Vertebrate Tissue Source & Safety (GSDSEF-5, 2015)

9. Location where experimental procedures will take place: 10370, San Diego, 92131

10. People, companies, etc. providing equipment, materials, workspace: Thames and Kosmos provided a wind turbine, Cosyswan provided a anemometer.

11. Describe, in 200 – 250 words, the planned project/experiment and the procedures to be used:

This Experiment's purpose is to find the most efficient design of a wind turbine to produce power. Thames and Kosmos Wind Power 2.0 will be acquired and built. An Angle meter, multimeter anemometer and fan will be acquired. The first set of blade, will be set up with a 10 degree angle, then connected with the multi meter. The fan will be set up 65 cm away from the turbine and will remain this far. The gear ratio will be set to 1:3, the fan will be turned on high, and recordings will be made. The fan will be turned to medium then low with recordings made. The gear ratio will be turned down to 1:1, the fan will be set on high-low with recordings made. The gear ratio will be set to 3:1. The fan will be turned from high-low and recordings will be made. Every step taken after a 10 degree blade angle was set is the pattern. Repeat the pattern from a blade angle of 15 degrees to a blade angle of 30 degrees with intervals of 5. The six bladed blue set will be taken off. The three bladed blue set will be set with a 20 degree angle. The pattern will be repeated. The three bladed blue set will be taken off. The three bladed white set will be connected to the turbine. The pattern will be repeated with blade angles from -20 to 10 degrees with intervals of ten.

Just before the screening fair, attach a 200-250 word ABSTRACT of your project to this form.

*Continue to next page for required Signatures

GREATER SAN DIEGO SCIENCE & ENGINEERING FAIR
(GSDSEF) PROJECT PROPOSAL/SIGNATURE FORM (GSDSEF-1, 2015)
REQUIRED SIGNATURES:

Student:

I have read the *Rules and Regulations* of the GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR and certify that my project complies with them. I understand that failure to meet the terms of these rules and regulations will result in the disqualification of my project.

SENIOR DIVISION: GSDSEF forms meet the requirements of California law; therefore, all Senior Division students agree that, should they be selected to compete at the 2015 Intel International Science and Engineering Fair (Intel ISEF), when they sign all required Intel ISEF forms they will predate them to agree with the date on this form.

Kedari 6/5/2014
Student Signature/Date

Parent/Guardian:

I am aware of all potential safety hazards connected with this project, approve the precautions being taken to ensure my student's safety and will, when appropriate, provide guidance and/or supervision. I understand that failure to comply with *Rules and Regulations* of the GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR will result in the disqualification of the project.

[Signature] 6/5/2014
Parent Signature/Date

Teacher:

I approved this project prior to the student beginning work on it and verified that it complies with the *Rules And Regulations* of the GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR. Any concerns about the project's design, appropriateness, safety, or legality were submitted to the GSDSEF Scientific Review Committee (SRC) for approval prior to allowing the student to proceed. I understand that failure to comply with the Fair's *Rules And Regulations* will result in the disqualification of the project. I will provide all needed supervision (other than that specified on other included forms) and will ensure that this proposal and all required supplemental forms are included in the student's notebook at the screening fair. I will have the student, if invited to apply for entrance to the GSDSEF, submit all SRC requested certification forms with their 2015 Application for Entrance.

ESDGK 6-5-14
Teacher Signature/Date

Additional Advisor (if required)

When certification forms (GSDSEF 2, 3, 4 or 5, 2015) are signed by someone in addition to the science teacher, a signature here ensures that the procedures described on these forms will be followed.

Breannon D. [Signature] 6/7/14
Additional Advisor Signature/Date