

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 Are Higher-Priced Sunglasses Any More Effective In Blocking Ultraviolet Rays than Less
Is this a continuation of a previous project? Yes No Expensive Sunglasses

2. STUDENT'S NAME (Last, First, Middle) Van de Grift, Sean, Christian

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 PO Box 421455, San Diego, 92142

4. Phone (619)-990-9301 email seanvdg@gmail.com, vandegriftjon@gmail.com

5. School Thurgood Marshall Middle School Grade 8

6. Teacher Mrs. Elaine 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: 4488 Convoy Street, Suite A, San
Diego, CA, 92111

10. People, companies, etc. providing equipment, materials, workspace: Hector Hernandez - Optical &
Sunglass Warehouse; David Shean - Meridian Optical Laboratory

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

The objective of this experiment is to determine whether a correlation exists between the retail price of sunglasses and their ability to protect the eyes against harmful ultraviolet rays. Using a UV photometer, 80 pairs of sunglasses ranging in retail price from less than a dollar, to nearly five-hundred dollars will be tested for their ability to block ultraviolet rays. Each lens will be tested separately and the results will be recorded along with the retail price of the glasses, the manufacturer, lens material, and any claims included on the product literature. The amount of ultraviolet light passing through the lens expressed as a percentage will be compiled for all specimens and the average of this numerical data will be calculated according to eight price brackets of sunglasses. A graph containing summaries of all the data will be compiled to show whether there was a correlation between price and UV protection.

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

**Continue to next page for required Signatures*

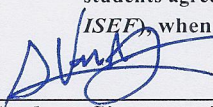
GREATER SAN DIEGO SCIENCE & ENGINEERING FAIR
(GSDSEF) PROJECT PROPOSAL/SIGNATURE FORM (GSDSEF-1, 2015)

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.

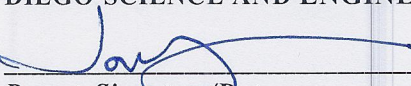
SENIOR DIVISION: GSDSEF forms meet the requirements of California law; therefore, all Senior Division students agree that, should they be selected to compete at the 2015 Intel International Science and Engineering Fair (Intel ISEF), when they sign all required Intel ISEF forms they will predate them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

 9/1/14

Student Signature/Date

Parent/Guardian:

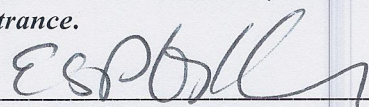
I am aware of all potential safety hazards connected with this project, approve the precautions being taken to ensure my student's safety and will, when appropriate, provide guidance and/or supervision. I understand that failure to comply with *Rules and Regulations* of the GREATER SAN DIEGO SCIENCE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

 9/1/14

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.

 9-1-14

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.

Additional Advisor Signature/Date