

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 Nutrition: Facts or Fiction?
Is this a continuation of a previous project? Yes No

2. STUDENT'S NAME (Last, First, Middle) Hizon, Janelle Elise

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 11856-1 Cypress Canyon Rd., San Diego CA, 92131

4. Phone (858) - 536 - 3154 email jnl2001@gmail.com

5. School Marshall Middle Grade 8

6. Teacher 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: The Experimenter's Home

10. People, companies, etc. providing equipment, materials, workspace: _____

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 nutrition labeling is accurate, or inaccurate. In order to ascertain this, a hand-made bomb calorimeter will be used. The calorimeter will be constructed from a soda can, cylindrical ventilation duct, wooden dowel, metal coupling, drain netting, champagne corks, butterfly paperclips, and 50 mL of water. A gram scale, graduated cylinder, *barbecue lighter, thermometer, face mask, safety goggles, food samples, and nutrition labels* are also needed to assemble the bomb calorimeter. The formulas for the energy of heat, $Q = mc \Delta T$, the first law of thermodynamics, and the formula for percentage of change were also used.

Once the materials are gathered, the calorimeter may be constructed. The ventilation duct must be drilled with five holes towards the bottom, and the soda can will be drilled with two holes across from each other. The wooden dowel is then inserted through those two holes and the soda can is filled with the water. The soda can contraption is then balanced upon the duct, which will house the champagne cork with a twisted butterfly paperclip inserted into it, along with the burning food item atop the paperclip. The duct may be adjusted or stretched to adapt to the height of the flame. The initial and final water temperatures must be measured, and the food item's weights must be measured to insure consistency. These measurements will then be input to the several formulas to yield results and the supposed Calorie amounts.

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.



Student Signature/Date

6/1/14

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.



Parent Signature/Date

6/1/2014

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*.



Teacher Signature/Date

6-1-14

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