

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 The Effect of Heat and pH on Vegetables  
Is this a continuation of a previous project?  Yes  No

2. STUDENT'S NAME (Last, First, Middle) Huang Eileen

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 11240 Windbrook Way, San Diego, 92131

4. Phone (858)-689-0461 email huang8012@gmail.com

5. School Marshall Middle School Grade 8th

6. Teacher E. 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: Experimental procedures will take place at home.

10. People, companies, etc. providing equipment, materials, workspace: Qiping Zhao, Halozyme Therapeutics

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

For this experiment, a total of 32 vegetables were collected, along with the following: petri dishes, baking soda, acetic acid, a pH meter, vegetable oil, a frying pan, a stove top, a pot, spatula, steamer, strainer, knife, cutting board, measuring spoons, beakers, and a camera. To do this experiment, start off by cutting and rinsing the first vegetable. After that, put the cut up pieces into five different containers, and taking a picture of color reference. Next, take one container and fry it, then pureeing it after fried. Complete this with the other heat procedures. For the pH procedures, cut up the vegetables like before, and put them in the blender with one teaspoon of water. Poor the blended vegetables into the strainer and stop when there is enough liquid in the bowl. Take a picture for color reference, then split the liquid into three petri dishes and add the acetic acid and baking soda. When that is completed, check the pH using either pH strips of a pH meter.

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.

*Eden Huang* 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.

*[Signature]* 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.

*ESPG/K* 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.

*A. B. Khan* 9-1-14  
Additional Advisor Signature/Date