

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 Arsenic and Water Quality in Bangladesh and America

Is this a continuation of a previous project? Yes No

2. STUDENT'S NAME (Last, First, Middle) Reza, Samiha

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 11399 Eastview Point, San Diego, CA, 92131

4. Phone 858-401-9671 email samihar@hotmail.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: Dhaka, Bangladesh; San Diego,
America

10. People, companies, etc. providing equipment, materials, workspace: Dr. Fakir Yunus, Ershad Bin
Ahmed, Elaine Gillum

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


The planned project is to collect data from various water sources within Bangladesh and America then compare data. It's purpose is to raise awareness of the intimidating and vast arsenic contamination issue in Bangladesh. The chosen parameters that each sample will be tested for are arsenic, pH, oxidation reduction potential (ORP), total dissolved solids (TDS), and turbidity. Using the Lovibond Arsenic Kit, multiple ORP and TDS meters, pH meter and paper, and a turbidity tube, water will be tested from approximately 45 to 50 different water sources between the two countries. Water samples will be collected in clean, sterile plastic water bottles, with one sample from each source. For Bangladesh, ORP, TDS, and pH meters will be used to record data. For America, due to limitation of materials, ORP and TDS meters will be used to record data. pH paper will be used to record that parameter. Samples from both countries will be tested with the same turbidity tube and arsenic kit. The procedures will be finished in approximately two days for each country. Experimentation will include simply taking measurements, recording, and retesting or rechecking if the data seems extremely far off compared to previous numbers which would mean malfunction of technology.

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.

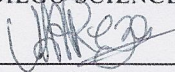
SENIOR DIVISION: GSDSEF forms meet the requirements of California law; therefore, all Senior Division students agree that, should they be selected to compete at the 2015 *Intel International Science and Engineering Fair (Intel ISEF)*, when they sign all required *Intel ISEF* forms they will predate them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

 6.01.14

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.

 6/1/2014

Parent Signature/Date

Teacher:

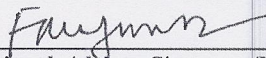
I approved this project prior to the student beginning work on it and verified that it complies with the *Rules And Regulations* of the GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR. Any concerns about the project's design, appropriateness, safety, or legality were submitted to the GSDSEF Scientific 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*.

 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.

 6.01.14

Additional Advisor Signature/Date