

The Gelfand Science and Engineering Fair Program Case Western Reserve University

APPLICATION PACKAGE

Program Overview

Thank you for your interest in the Gelfand Science and Engineering Fair program at Case Western Reserve University. The goal of this program is to increase student participation in and raise the quality of school science fairs. All public, private, charter, and parochial schools in Cuyahoga, Lorain, Medina, Summit, Lake, Geauga, and Ashtabula counties are eligible to apply with priority given to schools in those districts designated as “high-needs” by the Ohio Department of Education.

Funded by the Gelfand Engineering and Technology Education Fund, teachers may request up to \$1,000 to support a science fair in their school. Applicants proposing science fairs with 20-50 students may request up to \$500, those proposing fairs with 51-75 students may request up to \$750, and those proposing science fairs with more than 75 participants may request up to \$1000.

Expectations

- Gelfand awardees are expected to hold their school science fair by January 31, 2014 for schools funded in the first round (October 18, 2013 application deadline) and by May 9, 2014 for schools funded in the second round (March 7, 2014 application deadline).
- Participation in three mentoring workshops is mandatory. These workshops will be held at CWRU and provide opportunities to share ideas, problems, and solutions as the science fair season progresses.
- Gelfand awardees must fully participate in program assessment. This will include each student completing a short Experimental Design Aptitude Test and attitude survey, both pre and post.
- Gelfand awardees must complete a brief report on the outcomes of your school fair including an itemized list of expenditures. This information is used to document the impact of the program. Reports must be submitted by May 30, 2014.

Distribution of funds

Funds are held by Case Western Reserve University. Teachers may elect to purchase approved materials and submit receipts to CWRU for reimbursement. To minimize out of pocket expenses, it is recommended teachers order supplies through CWRU and have them delivered directly to their school.

Program Components

Gelfand Fellows

A limited number of Gelfand Science and Engineering Fellows are available to mentor your students as they plan, prepare, implement, and present their projects. Gelfand Fellows are CWRU undergraduate and graduate students trained to work with K-12 students in project development, experimental design, data analysis, and data presentation.

Only high needs schools in Cuyahoga County are eligible to apply for Gelfand Fellows. Check the box in item 11 on the application if you would like to have Gelfand Fellows work with your students.

Equipment Loan

The Gelfand Equipment Loan Program is intended to provide tools students can use to complete science fair projects. A variety of basic laboratory equipment (balances, thermometers, water baths, glassware, etc.), probeware, and other materials are available. Inquire for details.

3rd Annual Gelfand Expo

On May 22, 2014, CWRU will host the 3rd Annual Gelfand Expo. The Expo will be an opportunity for select students in grades 4-6 to present their projects, discuss the project development process, and provide input on the Gelfand Program.

Completed and signed applications should be submitted by October 18, 2013 (Round One) for schools intending to hold their fair by January 31, 2014 (to be eligible for the Northeast Ohio Science and Engineering Fair on March 10-13, 2014) and by March 7, 2014 (Round Two) for schools intending to hold their fair by May 9, 2014. Grant proposals will be reviewed in the order they are received and decisions communicated within ten business days of receipt. Late proposals may be considered depending on availability of funds. It is anticipated 15-20 awards will be made in 2013-2014.

Completed applications may be returned by

1. MAIL : James Bader
Leonard Gelfand STEM Center
Case Western Reserve University
10900 Euclid Avenue,
Cleveland, Ohio 44106-7158
2. FAX : (216) 368-5465
3. EMAIL : gelfandsciencefair@case.edu

If you have any question about the application or the program, please contact:
James Bader at (216) 368-5289 or by email at gelfandsciencefair@case.edu.

Complete and return pages 4-8 to apply.

Schedule of mentoring sessions and topics:

Date	Topic
R1: Oct 30, 2013 R2: Mar 19, 2014	Assessment, logistics, and project ideas
R1: Nov 13, 2013 R2: April 2, 2013	Projects, questions, hypotheses and experimentation
R1: Dec 4, 2013 R2: Apr 16, 2014	Fair day details including judging, recruiting judges, awards etc.
May 22, 2014	3 rd Annual Gelfand Expo

R1 – Round One Gelfand awardees; R2 – Round Two Gelfand awardees

Topics in detail:

Introduction to the Gelfand Science and Engineering Program: The first mentoring session will provide an overview of the Gelfand Program including an introduction to the Gelfand Science and Engineering Fellows. We will present a timeline for the pre-program assessment and discuss where to get project ideas for large numbers of students. In addition, this session will address the mechanics of distributing funds and placing orders.

Projects, questions, hypothesis and experimentation: This session will address project ideas in more detail and will be facilitated by the Gelfand Fellows. Fellows will describe some of the strategies they are using with your students and areas of particular emphasis. What makes a good project? What is a good question to be answered and how is that expressed as a hypothesis? The importance of repeated measures and statistical analysis of data will be discussed along with ideas about the most effective ways to present data.

Fair day details: This session will be used to discuss arrangements of how to organize the fair. Topics include registering projects and organizing categories, judging forms and recruitment, reserving space and time at school and what types of awards and prizes can be planned. In addition we will discuss any questions and problems of specific ongoing student projects.

Gelfand Expo: This session will be a celebration for all Gelfand awardees. We will reflect on the science fair experience, discuss post-program assessment and reporting requirements, and recognize outstanding performances and accomplishments.

**The Gelfand Science and Engineering Fair Program
Case Western Reserve University**

Science and Engineering Fair Grant Application

Round one applications due October 18, 2013

Round two applications due March 7, 2014

I. Applicant Information

1. Applicant Information

Name _____

Email Address _____

Grade Level _____

Telephone _____

(please list a number where you can be reached during the day)

2. Co-Applicant Information (if more than one teacher is involved in this application)

Name _____

Email Address _____

Grade Level _____

3. School Principal Information

Name _____

Email Address _____

4. School Information

School Name / District _____

Address _____

Telephone _____ School Fax _____

II. Your Past Experience

5. Has anyone run a science fair at your school in the past? ☐ Yes ☐ No

What year was the most recent fair? _____

How many students were involved? _____

6. Have students at your school participated in a district, regional, or state fair in the past?

☐ Yes ☐ No

7. If you answered *no* to question 6, skip questions 7 and 8. If you answered *yes* to question 6, please complete the following:

- a. Which fair did your students attend and when? Check all that apply.

☐ District fair Most recent year _____

☐ NEOSEF Most recent year _____

☐ Buckeye Most recent year _____

☐ Other Most recent year _____

- b. How many students participated? Check all that apply.

☐ District fair Number of students _____

☐ NEOSEF Number of students _____

☐ Buckeye Number of students _____

☐ Other Number of students _____

8. Do you feel that your experience at the district /regional/state fair was successful? Why? Why not? What could have been done differently that would have made the experience better?

III. Plans for This Year

9. Describe how you will develop and implement your school science fair this year:
 - a. What grade levels will participate in your school science fair?
 - b. Will student participation be voluntary or a class requirement?
 - c. When is the deadline for students to select their project idea?
 - d. What are the start and end dates for experimentation?
 - e. How much time (if any) will be provided for students to work on their projects during class?
 - f. Where at the school will your science fair be held?
 - g. What is the date of your science fair?
 - h. What criteria will you use to judge the projects?
 - i. Who will judge the projects and select the winners?
 - j. How many winners (1st, 2nd, etc.) will you select?

10. Estimate your expenses for the science fair program at your school. Please remember the primary purpose of this funding is to purchase materials and equipment necessary for students to conduct high quality projects. The Gelfand program will provide up to 100 display boards for your school. If you need more than 100 boards, you can include the additional boards in your budget or make arrangements for the remainder, but additional boards or other materials necessary for putting boards together may be no more than 15% of the total budget. Awards and recognitions (ribbons, certificates, etc.) may be no more than 10% of the total budget and refreshments for judges may be no more than 5% of your total budget. Items which should not be purchased with grant funds include meals for students or anything which is not an essential part of conducting and presenting a high quality investigation.

Note: Grant Awards will be limited to a maximum of \$1,000. Applicants proposing science fairs with 20-50 students may request up to \$500. Those proposing fairs with 51-75 students may request up to \$750, and those proposing science fairs with more than 75 participants may request up to \$1000.

Category	Estimated Cost

Total amount of funding requested : \$ _____

Total number of students who will participate _____

11. I teach at a school in a high needs district in Cuyahoga County as defined by the Ohio Department of Education (Cleveland Heights/University Heights, Cleveland Municipal, East Cleveland, Maple Heights, Warrensville, Bedford, Brooklyn, Garfield or Euclid), and would like Gelfand Fellows to mentor my students as they plan, prepare, execute, and present their science fair projects.

☐ Yes ☐ No

My signature certifies that I have reviewed this mini-grant application to the Gelfand Program and am in full support of the applicant(s) efforts to develop and implement a Science Fair as described above. I further acknowledge that if this mini-grant application is funded, expended funds will be used for eligible expenses as described in the application guidelines. If the Fair is not fully implemented, my school will be required to refund awarded moneys to the Gelfand Program.

Applicant _____ Date _____

Co-Applicant _____ Date _____

Principal _____ Date _____

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