Improving STEM (Science Technology Engineering Mathematics) Education for K-12 Students in San Diego and Beyond

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Outline

• Brief history
  • GA education outreach
  • General Atomics Sciences Education Foundation (GASEF)
• GASSSSS (GA Scientists/Engineers Supporting Science/Engineering for Students)
• TutorMate
• Supporting regional non-profits
• Connecting GA STEM expertise to the K-12 STEM education community
General Atomics Education Outreach -
A Brief History (www.sci-ed-ga.org/about)

• Education outreach initiated by Anne Blue and Pat Winter in 1992
• Non-profit GA Sciences Education Foundation (GASEF) started in 1995
  • Support GA K-12 STEM outreach efforts
  • Fund K-12 STEM programs of regional non-profits
• GASSSSS program started in 2010
• TutorMate program started in 2017

• Extensive Fusion Education Outreach Program
  • http://fusioned.gat.com
Some GASEF Educational materials
The General Atomics Sciences Education Foundation has been actively involved in improving K-12 science and engineering education since 1992 by providing outreach support to GA employees, funding STEM non-profit organizations, and developing educational resources.

The Foundation supports employees to engage in education outreach via the GASSSS program, where they can receive a charge number for up to 8 hours as well as reimbursement for up to $500 in STEM purchases per calendar year. For additional information, see the GASSSS Details and Application Form on the GASSSS website.

**GASSSS**

Employees can contribute their science and engineering skills by participating in the GASSSS (GA Scientists/Engineers Supporting Science/Engineering for Students) program. Employees are reimbursed for purchases.

**TutorMate**

Employees can volunteer as online reading tutors to at-risk 1st graders via the TutorMate program. The tutoring is done from your desk for 30 minutes per week, and includes the reading of science stories.

**Education Resources**

GA scientists have developed education modules, education presentations, hands-on materials, posters, and have published articles.

**Funding Guidelines for Non-Profits**

The Foundation provides a limited number of grants, mostly to regional science related non-profits. Guidelines for requesting support are provided here.

GASEF home page: www.sci-ed-ga.org
GASSSS Program: www.sci-ed-ga.org/gassss

- Open to all GA employees
- GASSSS has 2 components
  - Perform K-12 STEM activity
  - GASEF will provide
    - Up to $500 total yearly reimbursement for STEM purchases
    - Charge number for up to 8 hours yearly
- GA employee activity determined by the employee interacting with the teacher
  - Assist teacher in science activity
  - Perform demonstration
  - Talk about career
- New for 2019: Hours support for college/university career mentoring/presentations
- Application form on GASSSS site
GASSSS Addresses STEM Needs

- Expose students to scientists and engineers
  - Attract students into STEM careers
- Create community of interaction between teachers and scientists/engineers
- Provide real life examples
  - Demonstrate scientific and engineering practices
- Improve content knowledge of teachers
- Provide a mechanism for GA employees to help their communities
- Well received and supported by GA&A scientists and engineers
GASSSS is growing

![Graph showing the growth of GASSSS Participants per Year from 2010 to 2018. The graph indicates a steady increase in both approved applicants and completions.]
GA Scientists/Engineers Supporting Science/Engineering for Students (GASSSS) Program

Welcome!

Welcome to Education Outreach: Where to start if you don’t know where to start.

GA employees can contribute their expertise and enthusiasm for science and engineering by participating in the GASSSS K-12 education outreach program. Starting with GASSSS applications submitted in 2018, the Foundation will reimburse the employee for associated material purchases of up to $500 and provide a charge number for up to 3 hours per calendar year. For additional information, see the GASSSS Details and Application Form below.

For new GASSSS applications please always use the most recent GASSSS application form, which is shown below.

GASSSS

- GASSSS Details & Application Form (Doc)
- Media Consent Form for use of photos
- GASSSS Matchmaker – Matches GA Employees and Educators (PDF)
- GASEF–GASSSS Introduction (PDF)
- GASSSS Poster (PDF)
- Yearly GASSSS Participation and Funding (PDF)

TutorMate: Registration is now open! See documents below for details. Complete your registration by 9/15/19.

- Announcement on internal home pages
- TutorMate flyer
- Process flowchart for TutorMate participation (created by Connie Nickerson)
TutorMate: Help a student learn to read by end of first grade

- GASEF partnership with TutorMate, leading on-line non-profit tutoring program
- TutorMate focus: fight long-term poverty by improving literacy of at-risk students (first grade)
- 2017-2018: completed: 27 participants
- 2018-2019: completed: 27 participants
- 2019-2020: starting

1. Register at [https://www.tutormate.org/register](https://www.tutormate.org/register)
2. Complete online background check
3. Complete training session
4. You are then assigned a student to tutor
5. Set up weekly session
6. Spend 30 minutes weekly reading with your student
TutorMate includes STEM
Funding Regional K-12 STEM Non-Profits

- Since 1999, GASEF has provided over $390,000 to mostly San Diego area STEM non-profits
  - Reuben Fleet Science Center, Big Brothers/Big Sisters, Expanding Your Horizons, San Diego Children’s Discovery Museum, FIRST Robotics of San Diego, San Diego Science Fair, San Diego Natural History Museum, Boys and Girls Clubs, Secondary Science Olympiad …
  - [http://www.sci-ed-ga.org/about](http://www.sci-ed-ga.org/about)
  - Funding Guidelines on Foundation web site
  - Awards are made every 2-5 months
  - Funding generally $1,000 – $10,000
Connecting GA STEM expertise to the K-12 STEM education community

- Non profits contact GA/Woolf and their requests are placed on company home pages
- Specific requests that are informational are placed on GASSSS Matchmaker site
  - GA employees who want to make their interests and expertise known can also post on this site
- Other major outreach opportunities are placed on GASSSS site: link on left side
Summary

GASSSS

Connecting GA to the K-12 STEM Community

TutorMate

Funding K-12 STEM Non-Profits