What word/or words best describes the role you have at your institution/organization.

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• Poll Link
The most powerful person in the world is the storyteller. The storyteller sets the vision, values and agenda of an entire generation that is to come.

~Steve Jobs
Bonnie F. Harris  
Director, Strategic Partnerships  
Program Director, Georgia Intern-Fellowships for Teachers (GIFT)

Heidi M. Turcotte, MSci.  
Program Director,  
Campus & Community Coordination
Center for Education Integrating Science, Mathematics & Computing (CEISMC)

Mission

To enhance PreK-12 and postsecondary STEM education by drawing upon expertise and scholarly contributions of the Georgia Tech community.
Session Objectives

• To provide overview of programs and activities that engaged the public in advancing the impact of research in society.

• To share strategies and lessons learned for curating resources and building capacity for success.
Engagement Experiences

• Collaboration between the Georgia Tech community and local school district in a campus-wide teacher professional learning day;

• University undergraduates as school districts’ STEM Innovators-In-Residence;

• High school students research internships under tutelage of Georgia Tech faculty; and

• STEM and STEAM summer internships for K-12 teachers, provided by businesses, universities, and informal science education institutions.
K-12 STEM EDUCATION
CAMPUS & COMMUNITY
ENGAGEMENT

The Georgia Tech Center for Integrating Science, Mathematics, and Computing (CEISMC) creates opportunities for the Georgia Tech staff and faculty to engage with programs that build upon their innovation and creativity to serve PreK-12 students and teachers, and the community.

For more details and to sign up for our newsletter, visit k12.gatech.edu.
Purpose is to empower CTAE teachers to connect to national and international research

122 teachers participated (High school and Middle School)

Opportunities to experience cutting-edge resources and research to increased understanding of current, real-world applications.

Place-based experience
Project Change Logistics

• The morning session consisted of teachers traveling to 2 of 8 different labs across campus. These labs included:
  * Healthcare Robotics Lab
  * IEN CleanRoom
  * Aero Maker Space
  * Forensic Lab GT
  * Food Processing Technology Division [GTRI]
  * Interdisciplinary Design Commons (IDC)
  * LMC colab/Video Production Lab
  * High Propulsion Lab [GTRI]

• The afternoon session consisted of teachers attending 1 of 5 different hands on activities. These activities and departments included:
  • Computer based models for decision making/ ISYE
  • Conceptual design and prototyping/ GTRI
  • DIY Spectrometry/ GTRI
  • Intro to Nanotechnology/ IEN
  • Papermetronics/ Paper Museum
Project Change Conclusions

I increased my content knowledge vs.

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The tours provided information that I can use in building CTAE lessons

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Overall, Project Change was a successful professional learning experience for me

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Innovators in Residence

The program started in the fall of 2017 with a cohort of 4 innovators at one school.

The following year in 2018, there were 5 innovators at 2 schools.

This year the 3rd innovator cohort is comprised of 13 innovators working at 10 schools in 3 school districts.

Each cohort of innovators is selected with the charge of supporting the development and implementation of quality STEAM curriculum in their assigned school.

Partnership with elementary, middle, and high schools in the metro Atlanta area through 3 different unique projects that support the program.

Innovators partner with teachers to design and implement student-centered projects in the classroom, as well as support engaging steam-focused afterschool programs.
Innovators-in-Residence

• Work 20 hours per week
• Partner with teachers to design and implement student-centered projects in the classroom and afterschool
• Must have a passion for tinkering, design, making, art or robotics, as well as STEAM education
• Create a portfolio of the work completed during the residency
The R.E.A.L. program provides high school student research internships during the summer. Teamed with teachers, students from populations under-represented in STEM spend 5 weeks conducting research in Georgia Tech (GT) laboratories under the tutelage of researchers and graduate students.

Program highlights:
• Founded in 2004. Over 400 students Internships to date;
• Each summer, students present research findings to the public;
• Value added weekly Brown Bag information sessions;
• Students enter research findings into local, state and international science fair competitions
• Over 80% of students pursue STEM careers in postsecondary education
RESEARCH, EXPERIMENT, ANALYZE, AND LEARN (R.E.A.L.)
Sample High School Internships

• **Urban Honey Bee Project**
  Students generated a survey of plant-pollinator interactions on Georgia Tech’s Campus. They took photos of bees and analyze the species of bees, species of flower, flower color, location and time of day.

• **Candler Field Museum**
  Students at the Candler Field Museum, a replica of the old 1920’s Atlanta Hartsfield-Jackson Airport, learned skills involved in aircraft maintenance along with skills needed to restore antique and vintage airplanes.
Georgia Intern-Fellowships for Teachers (GIFT) provides K-12 teachers summer STEM internships in university research labs, industry, and informal science education institutions.

Program Highlights
Founded in 1991, 2000+ placements to date
Paid 4 to 7 weeks summer internships
Teachers conduct experiments, interpret research data, communicate findings and apply STEM concepts to solve industry challenges
First-hand experience with STEM research and workplace careers converted into innovative classroom curricula and knowledge about career awareness.
Teachers earn state teacher recertification credits
“The species that will best survive are those that have the greatest geographical area” – Dr. Nick Pyenson
Call To Action

Using Miro add your ideas
https://miro.com/app/board/o9J_ktLGoxg=/

• Identify activities that you have implemented or tried to implement.
• Challenges you have encountered when facilitating programs to the general public.
• New Ideas
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