

Local Section Innovative Project Grant (IPG) Application Form

Sponsoring Local Section:	Georgia
Submission Date:	01/29/2017
Title of Project:	Time Consuming, but so Worth It!
Brief Description:	Atlanta Science Festival attendees will embark upon an interactive journey in hopes of determining who stole the NIST-F2 cesium atomic clock. After receiving a briefing, attendees will begin an interactive journey through the crime scene and forensics laboratory. Along the way, they will be educated on various forms of evidence, collection methods, and the role of chemistry in solving crimes.
Name:	Sarah Paquette
Address:	[REDACTED]
Tel:	[REDACTED]
Email:	[REDACTED]
Does the Section currently have an active IPG funded by LSAC?	No
If yes, indicate submission date:	
Name of Current Section Chair:	Ronald E. Hunter
Letter of Support from Local Section attached? (If the Section Chair is the Project Coordinator, a member of the Executive Committee must submit the support letter.)	Yes
Upload Local Section's letter of support here (acceptable formats: .pdf, .doc, .docx).	ASF_Letter_of_Support.pdf (61k)
Letter(s) of support from your co-sponsors attached?	No
Upload co-sponsor's letter(s) of support here (acceptable formats: .pdf, .doc, .docx).	
Which groups are co-sponsors?	None
Specify partnership(s):	NA
What are the project's goals/objectives?	<p>The primary goals of the project are to:</p> <p>Provide middle school students with the opportunity to collaborate with and be inspired by local chemists,</p> <p>Provide middle school students the opportunity to research, develop, and implement a powerful learning experience to broad audience at a major venue (The Atlanta Science Festival),</p> <p>Educate local families and people of all ages about forensic chemistry, and</p> <p>Extend the project into an educational outreach program that can be implemented in science classes and hosted by teachers we are pairing up with for Project SEED.</p>

<p>How is this project consistent with your local section's strategic plan?</p>	<p>The Georgia Local Section of the ACS has selected the theme "A Year of Giving: Catalyzing Chemistry via Community" for its 2017 programming. A Year of Giving refers to the outreach and education of technical and non-technical audiences to increase awareness of the importance of chemists and chemistry. These goals will be accomplished by coupling basic chemistry concepts with technical chemistry ideas. The proposed project exemplifies major facets of the strategic plan, including outreach, education, and the application of chemistry in society. The middle school students who both design and take a lead role in implementing the forensics-based chemistry project at The Atlanta Science Festival have the opportunity to teach a broad audience of +30,000 persons that it is possible to shape the world of justice by using chemistry to solve a crime.</p>
<p>Justify how the project is innovative for your local section or a unique one-time opportunity.</p>	<p>The proposed project is innovative to both our local section and our community. Our local section participates in a great number of outreach activities. However, we rarely partner with other professional groups or organizations. This project allows us to integrate with many forensic teams as well as eighth grade students. The Atlanta Science Festival represents a community effort to provide fun and exciting demonstrations to children. To date, there has not been a forensics-based, interactive activity at this festival. More importantly, this project allows us to unite many groups together. The Georgia Bureau of Investigations and Metropolitan Atlanta Rapid Transit Authority forensics teams have agreed to participate in this program in addition to our local ACS section and will directly interact with not only an eighth grade student elective group but also each other. Besides its own novelty, the project is innovatively linking all of us together to stimulate young minds towards STEM.</p>
<p>How will this project stimulate local section members to become and remain involved?</p>	<p>The first people to volunteer from our local ACS section happen to be employed at The Coca-Cola Company (TCCC). Globally, TCCC supports STEM education. Locally, we are thrilled that the local section membership includes scientists at TCCC. When we demonstrate to TCCC local section members the importance of our collaboration at the ASF, the potential to not only stimulate other members but also to partner in the future with TCCC is immense. Furthermore, this project provides an excellent opportunity to showcase our outreach activities to inactive local section members through our monthly newsletter. We hope that this advertisement and association with major organizations will inspire participation in future outreach activities by these members. These activities not only allow us to give back to the community, but also provide members with important professional networking opportunities.</p>

<p>What is the project's plan of action? Please include probable date(s).</p>	<p>9/16: Identified target audiences - the local middle school community and the general public via the Atlanta Science Festival (ASF)</p> <p>10/16: Identified and developed strategic partnerships to enhance the informational component of the project and ensure that it is practically sound in its design</p> <p>11/16: Continued research and project development</p> <p>12/16: Submitted project proposal to ASF committee</p> <p>1/17: Identify resources (time, staff, expertise, money) needed to support the project's middle school trial and broader ASF audience, apply for IPG</p> <p>2/17: Run trial at a local middle school to assess the likelihood of project success, revisit and refine project to achieve desired outcomes</p> <p>3/17: Present project at ASF, identify underserved audiences and potential schools in the local community</p> <p>4/17: Revisit and refine project, identify promotional outreach strategies</p>
<p>Identify target audience(s) and estimate the number of people to be reached. Estimate the number of members involved in organizing the project.</p>	<p>To reduce the chance of duplicating the efforts of existing programs, students assessed the need for a forensics-based after school program in our local middle school community. No overlap was evident. Although an initial trial will be conducted with 43 middle school students, targeting this level allows for potential to reach hundreds of students over the course of an academic year.</p> <p>Students also determined that no forensics programs have been offered to the general public via the Atlanta Science Festival (ASF) since its conception. Presenting at the event potentially exposes +30,000 people to the project.</p> <p>These two programs offer abundant opportunities to unify local ACS members. In addition to the 7-10 members currently volunteering to assist students with the initial roll-out of the programs, upcoming promotional newsletters will inform members of such opportunities as well as the need to further develop and host the outreach program that will stem from the experiences.</p>

<p>How will IPG funding seed continuing events following the completion of this project?</p>	<p>After experimenting with veering slightly from our gold standard of technical talks for monthly meetings, we received much positive input, especially regarding the blending of familiar and technical chemistry concepts. This year we anticipate even more fun topics and exploration of additional creative ways of communicating chemistry and science and motivating people to want to learn more. This event could lead to a series of events throughout the year focused on just this objective with an emphasis of student learning. Additionally, the forensics-based activity we propose will ultimately be integrated into an educational outreach program that can be implemented in science classes and hosted by teachers we are pairing up with for Project SEED.</p>
<p>If the spaces below are insufficient, you may also upload an itemized budget spreadsheet with explanations (acceptable formats: .xls, .xlsx).</p>	<p>ASF_Projected_Budget.pdf (62k)</p>
<p>Item:</p>	<p>See attached document</p>
<p>Expense:</p>	<p>2920.00</p>
<p>Justification:</p>	
<p>Item:</p>	
<p>Expense:</p>	<p>0.00</p>
<p>Justification:</p>	
<p>Item:</p>	
<p>Expense:</p>	<p>0.00</p>
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<p>Expense:</p>	<p>0.00</p>
<p>Justification:</p>	
<p>Item:</p>	
<p>Expense:</p>	<p>0.00</p>
<p>Justification:</p>	
<p>Additional funds requested from other sources:</p>	<p>0.00</p>
<p>Justification:</p>	
<p>Project Total:</p>	<p>2920.00</p>
<p>Total Requested from LSAC:</p>	<p>2920.00</p>

<p>How do you plan to evaluate the success of your event?</p>	<p>Success of the event will be measured by the number of people who complete the activity. The activity spans several stations at the festival, so we anticipate that some participants will not complete it. If the activity is interesting and successful, we expect to have at least 70% of those who start the activity complete it. We will also evaluate this event based on media attention and the acquisition of new professional contacts who are interested in working with the local ACS section.</p>
<p>What tools will you use to measure success of event (i.e., surveys)?</p>	<p>To measure success of this event, we will number the handouts given to participants when they begin the activity. These numbers will be collected and recorded at the completion of the project. This system will allow us to quantify the number of people beginning the activity and the number of people who complete it. Additionally, we will use website searches to identify any media outlets that mention our booth.</p>
<p>How will you use the data captured for future planning?</p>	<p>If the percentage of participants who complete the activity is below 70%, reflection on improvements for the activity will be performed prior to creating the outreach program.</p> <p>Recording the number of participants who begin the project will provide insight into the number of supplies needed for future Festival activities.</p> <p>Capturing specific media comments about the activity and identifying the strengths and notable parts of the activity will enable us to highlight them in the future.</p>

Forensics

Anticipated project supplies for initial program trial at middle school level and Atlanta Science Festival

Item	Expense	Justification
Soil Test Kit <i>(partially recyclable for outreach program)</i>	150.00	pH, phosphate, nitrate, potassium, and soil density demos
Soil Test Kit Refills	700.00	for student trial and festival attendees to experience testing pH, phosphate, nitrate, potassium, and soil density
Footprint Casting Kit <i>(recyclable for outreach program)</i>	400.00	demonstrate making exact reproductions of footprints and tire prints in snow, mud, sand and dirt
Casting Plaster Refill	80.00	fast-setting calcium sulfate for additional story-line prints
Latent Print Kit <i>(partially recyclable for outreach program)</i>	250.00	demonstrate how magnetic fluorescent powders, brushes, magnetic wands, and hinge lifters are used to lift prints
Hinge lifters, Backing Cards	250.00	for student trial and festival attendees to experience lifting their own prints
Evidence Packaging, Labeling, and Sealing <i>(recyclable for outreach program)</i>	100.00	demonstrate proper collection, handling, labeling, transportation, and storage of evidence - critical elements to maintaining the integrity of crime scene investigations
Phenolphthalein, fingerprint poster, crime scene tape, evidence marking tents, hand lenses, clip boards, dry erase markers, evidence tags, scales, lanyards with badges, nitrile gloves, additional evidence jars	350.00	suspect reveal via invisible message/chemical reaction, data collection, analyzation of evidence, visual enhancements shipping and handling of supplies
CSI Shirts and Lab Coats <i>(recyclable for outreach program)</i>	400.00	visually unify presenters, provide a professional appearance
Crime Scene Banner <i>(recyclable for outreach program)</i>	120.00	visual scene enhancement of one, 10x20 booth
Forensics Laboratory Banner <i>(recyclable for outreach program)</i>	120.00	visual scene enhancement of one, 10x20 booth
PROJECT TOTAL	2920.00	

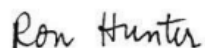
Dear Technical Division – Innovative Project Grant (IPG) Program:

On behalf of the Georgia Local Section of the American Chemical Society, I support without hesitation the Innovative Project Grant entitled “Time Consuming, but so Worth It!”. The purpose of this project is to engage youth in leadership activities focused on chemistry while operating a motivating chemistry-based outreach activity at the Atlanta Science Festival Exploration Exposition (ASF). The exposition component of the festival consists of greater than 100 interactive exhibits, hands-on experiments, demos, and performances sponsored by Atlanta-based companies and educational institutions with the goal of increasing student awareness and interest in STEM careers. The interactive activity we propose in this IPG application is not only innovative for our Section but is also novel to the ASF galvanizing the exposition coordinators around this unique opportunity. For this activity, eighth grade students from The Woods Acres School will be designing a collaborative forensic investigation activity, which will be conducted across two booths and stations at the ASF. Scientific “clues” will lead visitors to these booths and through these stations to solve a “crime.” Thus, our Section undoubtedly knows this will be a highlight of the ASF, and we are proud to support such a stellar project.

The impact of this IPG is expected to be particularly noteworthy. Since this is Atlanta's biggest interactive science event and it is FREE and open to adults, families, and children of all ages and interests, the ASF attracts approximately 30,000 persons each year. We aim to perform the forensics activity with 15-20 students. This IPG grant will be used to fund the required materials to guide participants through the crime story and acquire the scientific “data” to solve the “crime.” An anonymous donor (a major Atlanta company that desires to remain unknown) has already agreed to contribute \$2083 for two 10x20' booths at the fair. Booths and stations will be facilitated by students and local ACS member volunteers, including Sarah Paquette, our Education Committee Chair, who is running this project, and myself. In addition, our local section has budgeted \$2000 towards support of this project.

We value your consideration of this activity and eagerly anticipate collaborating on this project with your additional support.

Sincerely,



Dr. Ronald E. Hunter, Jr.
2017 Chair
Georgia Section – American Chemical Society