






Welcome to TESI

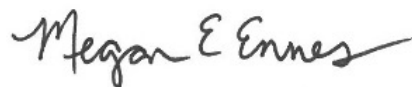
Thank you for your interest in working with the University of Florida Thompson Earth Systems Institute (TESI) to develop your education and public outreach activities. Our team is excited to assist in the designing of engaging programs that will help translate your research to public audiences.

The TESI team is made up of education researchers, communications specialists, former K-12 science teachers, and evaluators. We have experience developing a wide range of broader impact activities including K-12 outreach, public engagement campaigns, and science communication training.

During our institute's inaugural five years (2019-2023), our team:

-  Supported the broader impact activities on 15 grant-funded projects and worked with nearly 1,000 scientists to share their research
-  Reached more than 12,000 lifelong learners through public programs
-  Coordinated more than 4,000 scientist visits to schools
-  Garnered more than 1.1 million impressions on educational social media content
-  Trained almost 400 students and scientists in effective science communication and leadership skills

Read on for more information on the types of education and public outreach activities our institute can support. We look forward to adding your project to the list of successful TESI collaborations.



Dr. Megan Ennes
Director, Thompson Earth Systems Institute
Florida Museum of Natural History
University of Florida

About TESI

The University of Florida Thompson Earth Systems Institute is advancing communication and education about Earth systems science in a way that inspires Floridians to be effective stewards of our planet. We meet this mission through several core programs, such as Scientist in Every Florida School, environmental leadership and communication professional development, and innovative digital outreach and public programming. Housed at the Florida Museum of Natural History, our vision is to lead the way to a healthier planet by cultivating a responsible and curious society that values, trusts, and has access to science.

To learn more about our team and the work we do, visit: go.ufl.edu/TESI

The Purpose of This Document

Our team of seasoned educators, communicators, and evaluators is ready to collaborate with you to develop impactful activities that complement your research efforts and advance public understanding of your subject. We have expertise working with researchers on their National Science Foundation Broader Impacts activities; collaborating with community organizations on public programs; and partnering on grants from foundations, nonprofits, and agencies.

TESI's founding director, Bruce MacFadden, previously served as a program officer at the National Science Foundation and authored a book titled "Broader Impacts of Science on Society." Additionally, some of our esteemed faculty members teach graduate-level and faculty courses centered around this subject. Crafting effective education and public outreach activities is an integral part of our mission, and we are dedicated to making it a seamless experience for you.

This document serves as a guide for you to include science education, outreach, and communication programming in your grant proposal. Based on our team's expertise and existing programs, we have curated a list of different activities you can consider based on the audience you are trying to reach. Please keep in mind that the budget ranges presented are just estimates and depend on a variety of factors, including staff time needed, supplies, venue rental, etc. We are willing to develop programs that fit in a wide range of budgets.

Navigating the Collaborative Process

- **Craft your grant proposal.** Begin by outlining your research project as you would typically. The scientific essence of your proposal remains unchanged.
- **Define your target audience.** Identify the audience you intend to engage through your Broader Impacts or education and outreach component.
- **Select a collaborative activity.** Review our range of offerings and choose an activity that resonates with both your research objectives and your target audience's preferences.
- **Initiate collaboration.** Visit go.ufl.edu/tesibroaderimpacts to learn how to contact us and let us know about your project. We will ensure that your chosen activity aligns with our mission and address any pricing considerations if applicable.

Logistics

- For National Science Foundation grants specifically, we recommend dedicating around **5%-10% of direct costs** to Broader Impacts activities. An estimated budget range for each activity is included in this guide but may vary based on audience size and scale.
- Please contact us **no less than two months** before the grant deadline. In most cases, because of budget development, we typically do not have the capacity to partner with you if less than six weeks remain before the deadline.
- **A letter of collaboration** from our institute is required for our participation in any funded project.

Collaborating with TESI on your education and public outreach activities can significantly enhance the societal relevance and impact of your project. By following this guide, you'll be well-equipped to seamlessly integrate impactful education, outreach, and communication efforts into your grant proposal. We look forward to partnering with you on this exciting journey toward fostering a more informed and engaged society.



Activities by Audience

Our team of trained science communicators and environmental educators can work with you to share your science in creative ways that reach your target audience.

K-12 Teachers & Students

Through our Scientist in Every Florida School Program (SEFS), we build long-term, collaborative relationships between teachers and scientists, better integrate current scientific research and big data into classroom lessons that adhere to Florida Sunshine State Standards, and aim to connect a scientist with every school in the state.

By partnering with SEFS for your broader impact activities, you will gain access to a network of K-12 schools, teachers, and district leaders who have come to trust the work we do.

Our team is comprised of former K-12 educators who understand the unique and specific needs of classrooms and are well-versed in state learning standards. When you partner with SEFS, we will not only help match you with K-12 audiences, but we will also help you craft your science content in a way that is understandable, engaging, and fits into existing curricula.

1. Professional development workshops and research experiences for teachers: (limited capacity)

SEFS professional development workshops and research experiences for teachers include hands-on workshops (ranging from a day to a week long) with ongoing teacher cohort support throughout the year. As a collaborator, you bring your science content expertise, and our team will help promote the program and recruit teachers, assist with developing an interactive and engaging agenda, coordinate all logistics, and provide program evaluation. During each of these programs, you will work with teachers to develop standards-aligned lesson plans based on your research.

See some examples of workshops we've hosted on our K-12 Professional Development page: go.ufl.edu/sefsk12pd



Audience: Florida public K-12 teachers, with a preference for those who teach at schools that receive Title I funds.



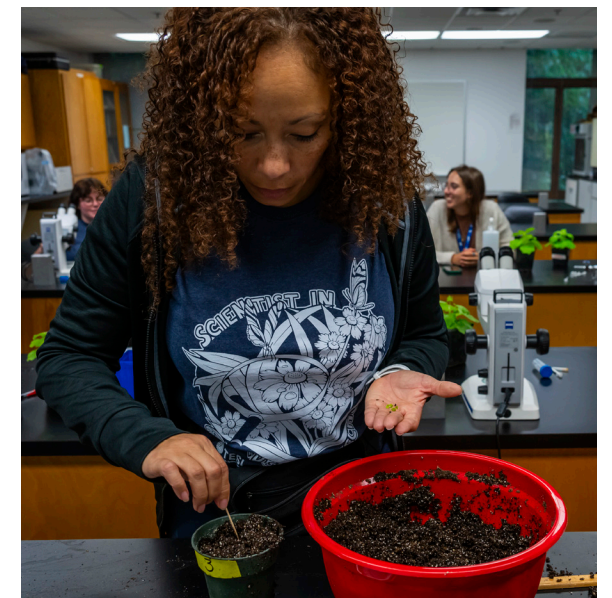
Development and execution cost: \$15,000-\$50,000. This range is based on factors such as length of time, number of teachers, supplies, and other components.

How do we calculate budget?

When negotiating a budget for your proposed activity, we look at a range of factors including:

- Staff time to develop and execute programs
- Supplies and materials
- Venue rental, catering, etc.
- Number of attendees in an audience
- Length of time for a program


Our programs can be customized to fit a variety of budgets, and we look forward to meeting with you to design a plan.






2. Outreach with accessible hands-on projects for K-12 classrooms:

Bring your science directly to the classroom with help from our education professionals. Our team will assist you with designing engaging lesson plans and activities to teach students about your research. As former science teachers, our SEFS team members have a professional background in curriculum design and pedagogy. Once you're ready to debut your lesson, we will tap into our established network of teachers and classrooms to ensure you have an excited and engaged audience.

 **Audience:** Florida K-12 students

 **Development and execution cost:** \$5,000-\$15,000

3. Livestream or virtual lab tours: Our education livestreams and virtual lab tours reach broad student groups statewide. We have a proven track record of designing interactive virtual programs in a variety of formats. We are happy to help refine ideas, as well as promote and implement your envisioned program. All previous livestreams can be found on our YouTube channel, making your outreach efforts even more robust with continued views well past the air date.

 **Audience:** Florida K-12 students

 **Development and execution cost:** \$1,000-\$5,000


4. Field trips with classrooms: Although on-site field trips to various locations around the state have hurdles when it comes to school-aged children, this type of outreach can be truly rewarding for both the students and the scientists. Our team can help coordinate field experiences that showcase your work to students and their families.


 **Audience:** Florida K-12 students, teachers, and families

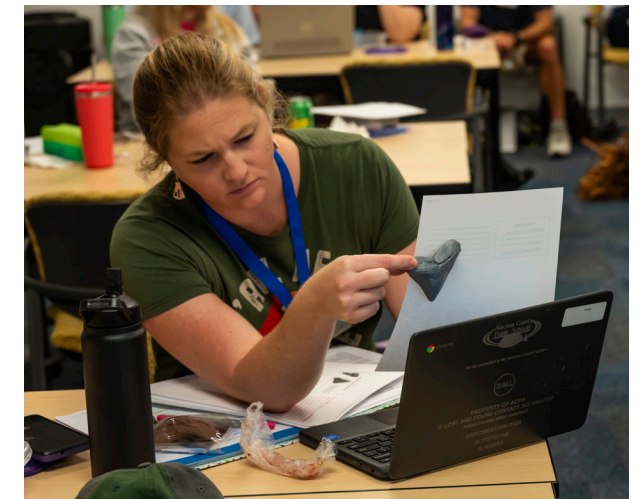
 **Development and execution cost:** \$5,000-\$25,000

5. Outreach opportunities for undergraduate/graduate students:

Consider giving your undergraduate and graduate students experience in science education and outreach through fellowships and assistantships with SEFS.

 **Audience:** Undergraduate and graduate students looking to gain experience in science education and outreach

 **Development and execution cost:** \$3,000-\$30,000 per student (note that graduate students may come with an additional cost for tuition).






Lifelong Learners


Lifelong learners include adults and families learning outside a formal classroom setting. TESI engages lifelong learners through public events and digital outreach.

- 1. Public events:** We have experience organizing well-attended and interactive public events in informal settings, like breweries and libraries, as well as virtually. See some of the events we've hosted on our Public Programming page: go.ufl.edu/tesipublicprograms. Our team can provide coordination and planning support, evaluation support, science communication/presentation training, and promotion for your event.

 **Audience:** Lifelong learners in Florida. We can further narrow this audience depending on the event you are thinking about.

 **Development and execution cost:** \$1,000-\$7,500

- 2. Digital outreach:** Using a variety of methods (social media, newsletters, interactive webpages, etc.), we can work with you to design and implement an awareness campaign or produce a story on a focused topic. We work with you to define clear goals and objectives, decide on campaign deliverables and key messages, and develop evaluation methods. For example, we have worked with scientists to develop interactive ArcGIS StoryMaps on manatee declines and climate change research in Florida. We have also teamed up with entomologists to spread awareness about global insect decline through our Insect Effect campaign.

 **Audience:** Lifelong learners in Florida. We can further narrow this audience depending on the topic you are thinking about.


 **Development and execution cost:** \$1,000-\$4,500

Researchers

If your education and outreach activity focuses on improving science communication in your field, we're here to help. Through our education and outreach grants program, science communication training seminars, and K-12 teacher professional development workshops, we help scientists hone their communication skills and disseminate their research to broader audiences. Learn more about our efforts on our Science Communication Professional Development page: go.ufl.edu/tesisicomm

- 1. Science communication training workshops:**

We can help you develop science communication training workshops in the areas of environmental education, working with the media, developing a digital communications plan, Broader Impacts, working with K-12 students and teachers, advocating for your science, using storytelling to deliver science, the 5E learning cycle, and much more. These workshops can be for a small cohort like your lab or a larger group.

 **Audience:** University researchers, graduate students, undergraduate students

 **Development and execution cost:** \$2,500-\$7,000



UF Undergraduate Students

Our environmental leaders programs aim to connect UF students to environmental research, education and outreach, and civic engagement opportunities.

1. UF TESI Environmental Leaders Fellowship:

This academic yearlong fellowship brings together students from diverse majors and backgrounds and provides them with the opportunity to gain experience in environmental research, education and outreach, and civic engagement. Sponsor a fellow in the next cohort and help provide them with the knowledge, skills, confidence, and network to advocate for the planet as they take on leadership roles in their respective careers. In this type of collaboration, you financially sponsor an undergraduate to take part in your research or another project while providing guidance and mentorship along the way. In turn, TESI manages the recruitment and placement of students; hosts a fellowship orientation; provides monthly meetings for student socialization, networking, and experiences; coordinates the spring break field experience; hosts an end-of-year symposium; and provides evaluation services and results.



Audience: UF undergraduates interested in the environment



Development and execution cost: \$3,000-\$7,500 per student

2. UF TESI Environmental Leaders Network:

Through this network, we seek to empower students interested in the environment through opportunities, seminars, workshops, networking, and more. The EL Network hosts a database of environmentally focused jobs, internships, volunteer opportunities, workshops, seminars, and more. Consider hosting a seminar, workshop, or field activity for network members. Examples might include a scientific illustration workshop or a panel about graduate school or career pathways.



Audience: UF undergraduates interested in the environment



Development and execution cost: \$1,000-\$5,000

Evaluation Services (on any education or outreach project)

Program evaluation can help determine if your project was successful and how it might be improved. Including a plan to evaluate your education and outreach activities can strengthen your proposal, as it helps funders measure the outcomes of their investment. Our team can work with you to develop and implement an evaluation plan to go with our activity offerings or for any education and outreach project you devise and complete independently.

Each evaluation plan is unique, so our team will meet with you to better understand your project goals and anticipated outcomes in order to collaboratively develop an evaluation protocol. Beyond crafting this protocol, our services include developing and implementing data collection tools like surveys and interviews, navigating approval from the University of Florida Institutional Review Board, data analysis, and presentation of results. We will compile the evaluation findings into a comprehensive document that can be included in reports to funders or as supporting evidence for future proposals.



Audience: All



Development and execution cost: \$4,000-\$12,000