# Planning Your Broader Impacts with Frost Science

A Guide for Grant Seekers

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# Welcome from Frost Science

Dear faculty and researchers,

At the Phillip and Patricia Frost Museum of Science (Frost Science), we want you to know how much we value your work in research and education. We want to be your educational partner and provide a place where you can execute plans for broader impacts for the Miami and nation-wide communities. People in south Florida benefit from connections to your passion for research, and you benefit from efficient, effective ways to deliver meaningful broader impacts, especially efforts supported by external funding.

Your personal stories of active scientific research taking place in Florida are incredibly valuable to inspire the next generation of scientists and the scientifically attentive public. Museums are seen as trusted institutions around topics of science and at Frost Science, we have extensive experience connecting current scientific research with our guests. We can



work together to engage the public in your research. Federal research grants increasingly value broader impacts and public outreach as a component of competitive research proposals. Together, we can create new, interesting experiences for museum guests. Your team will gain experience in delivering high-quality outreach, and your research proposals will have a leg up when compared to others.

This document communicates the ways we might work together for broader impacts related to your research. It gives an view of how we might work together, including the specific outreach activities, cost and descriptions that can be included in your proposals. We want to make the process of designating Frost Science as a partner for broader impacts as easy as possible. After you have reviewed this document, if you want to think in more detail about how to work together, please reach out to us to discuss opportunities.

Dr. Douglas Roberts President & CEO Phillip and Patricia Frost Museum of Science

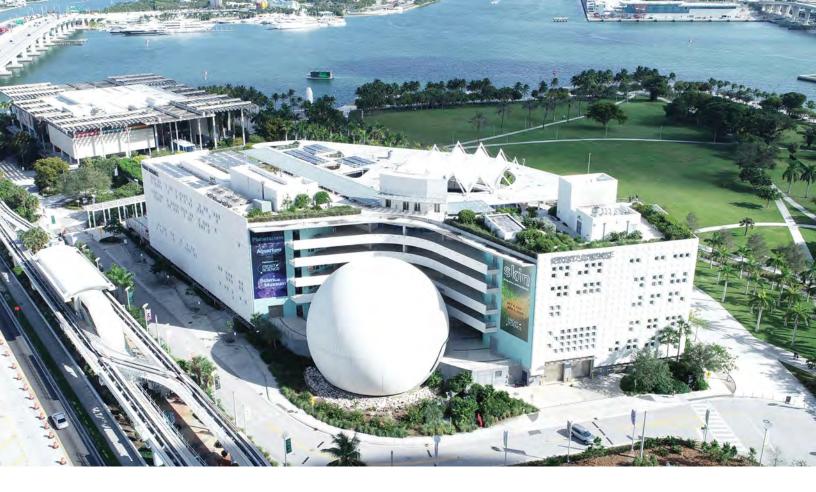
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# Table of Contents

Broader Impacts at Frost Science	5
About the Phillip and Patricia Frost Museum of Science	5
Purpose	5
How it Works	6
Important Frost Science Numbers for Your Proposal	6
A. Programs for a Pre-K - 12 Audience	7
1. Learning Labs	7
2. Outreach Programs Outside the Museum	8
3. Professional Development for Pre-K-12 Teachers	9
4. Host Upward Bound Math and Science Students	10
B. Programs for a General Museum Audience	11
1. Museum Digital Media	11
2. Science Stage Shows	12
3. Sparks of Science Activations	13
4. Planetarium Pre-Show Programming	14
5. TechLab Partner	15
6. Special Event Day Partnerships and Sponsorships	16
C. Programs for University Researchers and Students	17
1. SciComm Workshop	17
2. SciComm Consultation	18
3. University Class Field Trip	19
4. Science Activation Observations	19
5. Frost Science as a Site for Data Collection and Research	20
6. Teaching or Research Assistantship Affiliated with the Museum	21
D. Build Your Own Experience	22



Visit our website to find out the costs associated with the programs listed in this guide.



# Broader Impacts at Frost Science

#### About the Phillip and Patricia Frost Museum of Science

The Phillip and Patricia Frost Museum of Science (Frost Science) is a leading science museum dedicated to sharing the power of science, sparking wonder and investigation, and fueling innovation for the future. Located in Downtown Miami's waterfront Maurice A. Ferré Park, Frost Science guests can learn about the core science behind living systems, the solar system and known universe, the physics of flight, light and lasers, the biology of the human body and mind, and much more. Guests can explore the world of science, technology, engineering, and math (STEM) in an experiential setting with interactive exhibitions and unique shows. Frost Science is dedicated to education, earning national awards for its summer camps and after-school programs.

#### Purpose

Frost Science strives to provide opportunities for community members and visitors to be inspired by natural phenomena and to engage with real-world research. While Frost Science occasionally receives requests to serve as an outlet for university research outreach and/or broader impact activities, we have the capability to offer an even wider range of outreach opportunities to university faculty, staff and students.

We have created this document for you to include science education, outreach and communication programing in your grant proposals to enhance and streamline your public outreach and broader impacts components. Using Frost Science's expertise in STEM education and the museum itself as a hub for science learning, we have curated a list of opportunities for you to make your research accessible to various audiences. From K-12 classroom visits and in-museum programming to science communication workshops for your team and the option to develop planetarium pre-shows showcasing your work, this document outlines a menu of opportunities. Each is accompanied by a "Suggested Text" section that you can easily cut and paste into your grant proposals.

#### **How it Works**

- 1. Write your grant proposal outlining the research you plan to do, as you normally would.
- 2. Determine what kind of science education or communication experience you are interested in including in your proposal. Here, think about the audience you want to reach and how you want to engage them in your research topic.
- 3. Once you've decided on an audience, look through our menu for what most aligns to your needs.
- 4. **Contact us** at scicomm@frostscience.org to let us know what your intentions are. Our team will work with you to ensure that what you intend on accomplishing works for us, and to clarify pricing where applicable.
- 5. Each experience can be scaled to reach various quantities of people. Once you determine the experience you are interested in, think about how many students, teachers, community members or scientists you plan on reaching.
- 6. Use the "Suggested Text" text component to copy and paste information into your proposal. You may also use the information about the Frost Science provided on the previous pages and below in your grant proposal to provide your funders with background information about the Museum.

#### **Important Frost Science Numbers for your Proposal**

- Number of visitors: 725,000/year
- Number of pre-K-12 students engaged in science education programs: 55,000/year
- Number of social media impressions: approx. 20.5 million/year



## 1. Learning Labs

A Learning Lab is an in-depth learning experience on a specific topic taught by Frost Science educators to school groups on field trips to the museum. If you select this option, the Frost Science Education team will work closely with you and other university faculty, staff, and students involved in your research to develop a Learning Lab program based on your scientific research. Your research will be connected to a Frost Science exhibit that students can explore to extend their learning experience. Frost Science Learning Labs are further enhanced through pre- and post-visit curriculum supplements that the Education team provides teachers preparing for their field trips. Schools can purchase Learning Labs for an extra per-student fee.

#### Audience

- Pre-K-12 schools that attend Frost Science on field trips
- The Frost Science Education team will work with you to determine what age group the science content would be best geared towards; options include pre-K, K-2nd, 3rd-5th, 6th-8th, & 9th-12th grades.

#### **Development Cost: Available online**

This covers the cost for the Frost Science education team to create a standards-aligned, age-appropriate Learning Lab that makes university level research accessible to Pre-K-12 students.

#### **Execution Cost: Available online**

In addition to paying the Learning Lab development cost, you can cover the cost of as many students you are interested in reaching. The Frost Science Reservations team will ensure that schools who choose your Learning Lab would not pay until your provided funds are depleted. Additionally, the Frost Science Education team can work with Miami-Dade County Public School administrators to reach schools with specific demographics or family income levels. If there is an existing Learning Lab that aligns with your research already, you can elect to only pay the execution costs for that Learning Lab for the desired number of students.

#### Suggested Text

The Phillip and Patricia Frost Museum of Science Education team will work closely with INSERT PI NAME/ LAB/ORGANIZATION to develop a Learning Lab program for students in grades INSERT DESIRED GRADE LEVEL TO REACH based on INSERT RESEARCH TOPIC. During Learning Labs, field trip groups engage in an in-depth learning experience at the Museum taught by a Frost Science educator. Research would be connected to a Frost Science exhibit that students can explore to extend their learning experience.

The cost of development for this program is a one-time fee of INSERT DEVELOPMENT COST. We plan on funding this Learning Lab for INSERT NUMBER OF STUDENT. At INSERT EXECUTION COST per student, this would total to an additional INSERT COST.

## 2. Outreach Programs Outside the Museum

Outreach programs are 45-minute activities facilitated by Frost Science educators at a location other than the Museum, such as at a school or community site. The Frost Science Education team will work closely with you and other university faculty, staff, and students involved in your research to develop a Learning Lab program based on your scientific research. Your research will then be connected to one of our exhibits that participants can see on their next visit to Frost Science to extend their learning experience.

#### Audience

- Pre-K-12 schools: Options include Pre-K, K-2nd, 3rd-5th, 6th-8th, & 9th-12th
- Community centers
- Libraries
- STEM festivals

#### **Development Cost: Available online**

This covers the cost for the Frost Science Education team to create an age-appropriate outreach event to make your scientific research accessible to a general audience or age groups.

#### **Execution Cost: Available online**

In addition to paying outreach program development costs, you can cover the cost for a desired number of outreach programs. If there is an existing outreach that aligns with your research already, you only pay the execution costs for the desired number of outreach programs.

#### Suggested Text

The Phillip and Patricia Frost Museum of Science Education team will work closely with INSERT PI NAME/ LAB/ORGANIZATION to develop an outreach program based on INSERT RESEARCH TOPIC. Outreach programs are 45-minute activities facilitated by Frost Science educators at a school or community site. The Frost Science education team will work with us to create an outreach aligned to INSERT RESEARCH TOPIC. Research will then be connected to one of the Museum's exhibitions that participants can visit to extend their learning experience. Once the program is developed, it will become part of the Frost Science community engagement menu for future libraries, community centers and schools to purchase.

The cost of development for this program is a one-time fee of INSERT DEVELOPMENT COST. We plan on funding this outreach to be taught to INSERT DESIRED NUMBER OF PARTICIPANTS. At INSERT EXECUTION COST/program, this would total to an additional INSERT COST.

## 3. Professional Development for Pre-K-12 Teachers

Professional development workshops empower teachers to be more confident in teaching current research to students, which in turn gives students the opportunity to learn about real-world science. They also connect public school educators with universities and museums in their communities. The Frost Science Education team will work closely with you and other university faculty, staff, and students involved in your research to create a curriculum for classroom teachers that aligns with your research and supports museum visits. Curriculum can be geared toward any Pre-K-12 audience.

This program includes a full day of science professional development for a specific demographic of Pre-K-12 educators. Frost Science educators will also develop lesson plans that align to current research and provide them to the participating teachers, who will learn about your scientific research and how to conduct the related lesson(s) in their classrooms.

#### Audience

- Pre-K-12 teachers and students
- Options include Pre-K, K-2nd, 3rd-5th, 6th-8th, & 9th-12th

#### **Development + Execution Combined Cost: Available online**

This covers the cost for the Frost Science Education team to create standards-aligned, age-appropriate curriculum that makes university-level research accessible to specific age groups and host the professional development workshop for 30 educators at Frost Science. Lessons produced by Frost Science will be submitted to CPALMS, Florida's state educational standards website, for educators around the state to use expanding your impact. Every 30 additional teachers you wish to add will incur an extra cost.

#### **Suggested Text**

The Phillip and Patricia Frost Museum of Science Education team will work closely with INSERT PI NAME/ LAB/ORGANIZATION to create standard aligned curriculum for classroom teachers that aligns with INSERT RESEARCH TOPIC and supports museum visits. The curriculum will consist of two lesson plans which focus on inquiry-based and interdisciplinary learning in the classroom for INSERT DESIRED GRADE LEVEL TO REACH.

This funding would also support a full day of science professional development for INSERT NUMBER OF TEACHERS AND DESIRED GRADE LEVEL TO REACH educators hosted at Frost Science. Educators will learn about new research and ways conduct the related lesson(s) in their classrooms. Lessons produced by Frost Science will also submitted to CPALMS, Florida's state educational standards website, for educators around the state to use.

The cost of development for this program plus one professional development session is one-time fee of INSERT COST. We plan on funding this curriculum and associated professional development to be taught to INSERT NUMBER OF TEACHERS. At INSERT ADDITIONAL COST/per 30-teacher program, this would total to an additional INSERT COST.



## 4. Host Upward Bound Math and Science Students

The Upward Bound Math and Science program (UBMS) at Frost Science, funded by the U.S. Department of Education, recruits top-notch students from Title I schools in the Miami area and enrolls them in a four-year, after-school, weekend and summer STEM program. UBMS fosters a culture of intellectual curiosity among the approximately 65 teens who participate in the program and exposes them to the world of post-secondary study, inspiring and preparing them to complete high school, be the first generation of their family to enroll in college, and explore pathways toward STEM careers. Through this opportunity, you can host the UBMS students at your institution for a tour or in your lab for a field trip or project day.

#### **Audience**

Approximately 65 high school students from Miami-area Title I schools who are part of UBMS

**Cost:** There is no cost charged to you to implement this program.

#### Suggested Text

The Phillip and Patricia Frost Museum of Science Upward Bound Math and Science program (UBMS), funded by the U.S. Department of Education, recruits top-notch students from Title I schools in the Miami area, and enrolls them in a four-year, after-school, weekend and summer STEM program. In addition to science learning, UBMS exposes these teens to the world of post-secondary study, inspiring and preparing them to complete high school, be the first generation of their family to enroll in college, and engage in pathways toward STEM careers.

We will work with Frost Science to invite approximately 65 UBMS students to INSERT NAME OF LAB/ UNIVERSITY HERE to engage with real scientists and learn about their day to day. We hope to INSERT EXAMPLE ACTIVITY HERE to encourage students to be interested in INSERT SCIENCE DISCIPLINE HERE.

## B. Programs for a General Museum Audience

### 1. Museum Digital Media

Frost Science contains various digital exhibits featuring short science videos. You will work with the Frost Science Education team to develop a 3-5 minute video based on your research, which will be placed in one of these exhibits. Your video will be accompanied by a kiosk containing information about your research and institution. Videos will be professionally produced by a local agency. Please note that this opportunity is offered subject to the content of your research and how it fits with existing Frost Science exhibits.

#### Audience:

Museum guests

#### Development + Execution Cost: Available online

This covers the cost of the video production, including fees paid to a local agency and the Frost Science Education team's time to create the scripts.

#### Suggested Text

In collaboration with the Phillip and Patricia Frost Museum of Science, INSERT PI NAME/LAB/ORGANIZATION will develop a video to be placed in the INSERT EXHIBIT NAME focused on INSERT RESEARCH TOPIC. The Frost Science Education team will work closely with INSERT PI NAME/LAB/ORGANIZATION to develop a unique and educational video based on INSERT RESEARCH TOPIC, allowing museum guests of all ages tounderstand current science in an accessible and engaging manner and in a real-world context.

The cost of development and execution for this program INSERT COST HERE.





## 2. Science Stage Shows

Science Stage Shows are live-performance programs presented throughout the year for Frost Science guests, featuring a range of rotating themes and interactive demonstrations that illustrate the power—and ubiquity—of science in our everyday lives. The Frost Science Education team will work closely with university faculty, staff and students to develop a unique Science Stage Shows program based on current university research, allowing guests of all ages to understand current science in an accessible and engaging manner.

#### Audience

Museum guests

#### **Development + Execution Cost: Available online**

This covers the cost for the Frost Science Education team to create and produce the show, facilitate daily programming, and cover basic consumable material costs for the program for one calendar year (60 shows). If the show requires specialty materials (e.g., liquid nitrogen), you will incur an additional fee.

#### **Suggested Text**

In collaboration with the Phillip and Patricia Frost Museum of Science, INSERT PI NAME/LAB/ORGANIZATION will develop a Science Stage Show focused on INSERT RESEARCH TOPIC. Science Stage Shows are liveperformance programs presented throughout the year for Frost Science guests, featuring a range of rotating themes and interactive demonstrations that illustrate the power – and ubiquity – of science in our everyday lives. The Frost Science Education team will work closely with INSERT PI NAME/LAB/ORGANIZATION to develop a unique Science Stage Show based on INSERT RESEARCH TOPIC, allowing Museum guests of all ages to understand current science in an accessible and engaging manner. The show will be performed in the Museum for guests 60 times throughout INSERT YEAR.

The cost of development and execution for this program is INSERT COST HERE.

## 3. Sparks of Science Activations

The Frost Science Education team hosts daily Sparks of Science, which are 10-minute engaging interactions between Frost Science educators and guests within museum exhibitions. You and other faculty, staff, and students involved in your research will work with our curriculum developers and educators to create a Spark of Science activity aligned to your research and existing museum exhibitions, which will be offered daily for a full calendar year (365 times).

#### **Audience**

Museum guests

#### Development + Execution Cost: Available online

This covers the cost for the Frost Science Education team to create content-appropriate activations that make university-level research accessible to public audiences through hands-on discovery and provides funding for consumable and reusable program materials for one calendar year (365 engagements). Your total cost will depend on the supplies needed to execute your Spark of Science activity.

#### Suggested Text

In collaboration with the Phillip and Patricia Frost Museum of Science, INSERT PI NAME/LAB/ ORGANIZATION will develop a Spark of Science activation focused on INSERT RESEARCH TOPIC. Sparks of Science are 10-minute engaging interactions between Frost Science educators and guests within museum exhibitions. The Frost Science Education team will work closely with INSERT PINAME/LAB/ORGANIZATION to develop a Spark of Science activity based on INSERT RESEARCH TOPIC, allowing guests of all ages to directly interact with science within the Museum. The Spark of Science will be offered daily (365 times) throughout INSERT YEAR.

The cost of development and execution for this program is INSERT COST for 365 activations.



## 4. Planetarium Programming

Frost Science Planetarium shows occur daily at the museum, with 10-15 shows per day, each with an audience of up to 250 guests. In collaboration with the Frost Science Planetarium and Education teams, you will develop a 2-5 minute "science short" video to be shown as part of Planetarium pre-show programming. Your pre-show video will pertain to your research, using visual and audio media to create a unique and engaging experience for Frost Science guests.

#### Audience

Museum guests

#### **Development + Execution Cost: Available online**

The cost of this program will depend on the kind of "science short" you will be developing with the Frost Science team.

#### Suggested Text

In collaboration with the Phillip and Patricia Frost Museum of Science, INSERT PI NAME/LAB/ ORGANIZATION will develop a planetarium pre-show "science short" focused on INSERT RESEARCH TOPIC. Science shorts are 2-5 minute videos pertaining to current research and are aired prior to planetarium shows at Frost Science. Planetarium shows occur daily from 10-15 shows per day, each with an audience of up to 250 guests. The Frost Science Planetarium and Education teams will work closely with INSERT PI NAME/LAB/ORGANIZATION to develop a unique science short based on INSERT RESEARCH TOPIC, using visual and audio media to create a unique and engaging experience for guests. The science short will be aired in the Frost Planetarium for guests throughout INSERT YEAR.

The cost of development and execution for this program is ASK FROST SCIENCE STAFF FOR QUOTE.



## 5. TechLab Partner

TechLabs are quarterly public events that take place at Frost Science. They offer up to 40 participants an opportunity to engage with technology and an expert in the field. Participants not only get hands-on exposure to new technologies, but they also "make and take" an item related to their experience to bring science home. There are two options for researchers interested in partnering with Frost Science on a TechLab.

**Option 1:** A technology-specific component of your research can be used to create (or supplement an existing) TechLab program at Frost Science. By becoming a TechLab partner, you will attend a TechLab program as the content expert, connecting to participants and engaging them in your work.

**Option 2:** In addition to the Option 1 commitment, you can become the supporting sponsor of a TechLab program by covering the cost of the program for participants, including the materials costs for their "make and take" item.

#### **Audience**

- General public
- Adults
- College students
- Grade 6-12 students

#### Cost

Option 1: There is no cost charged to you to implement this program.

#### **Option 2: Available online**

This includes the cost of the program for participants and the materials costs for their "make and take" item. If you select this option, participants will not pay a fee to attend your sponsored TechLab.

#### Suggested Text

#### **Option 1**

INSERT PI NAME/LAB/ORGANIZATION will partner with the Phillip and Patricia Frost Museum of Science for a TechLab program to share INSERT RESEARCH TOPIC with various audiences. TechLabs are public events that take place at the Museum quarterly and focus on technology engagement and a little training, providing the chance for participants to engage with content experts, get hands-on exposure to different technologies, and "make and take" an item related to their experience. By becoming a TechLab partner, INSERT PI NAME/ LAB/ORGANIZATION will attend a TechLab program to engage participants in current technology research.

#### Option 2 (addition to above text)

In addition to being a partner for TechLabs at Frost Science, INSERT PI NAME/LAB/ORGANIZATION will be the supporting sponsor for this program. Guests who register to attend will engage in the programming at no cost to them. The cost of development and execution for this program is INSERT OPTION 2 COST for 40 participants.

## 6. Special Event Day Partnerships and Sponsorships

**Option 1:** Join Frost Science as a partner for one of our event days, including Tech & Engineering Day (March), Earth Day (April), World Oceans Day (June) and Spooky Science (October), to showcase your research to Museum guests. Event days are the most visited days of the year with 3,000+ guests joining in on the fun.

**Option 2:** In addition to the Option 1 commitment, you will be a supporting sponsor for the event and your name will be included in the title of the event on all marketing materials. For example, "Spooky Science Presented by

#### Audience

- Museum guests
- Adults
- College students
- Grade K-12 students

#### Cost

**Option 1:** There is no cost charged to you to implement this program.

#### **Option 2: Available online**

This covers the cost of event materials such as educational programming materials and event planning.

#### Suggested Text

#### **Option 1**

INSERT PI NAME/LAB/ORGANIZATION will partner with the Phillip and Patricia Frost Museum of Science for the Special Event Day INSERT SPECIAL EVENT DAY HERE to share INSERT RESEARCH TOPIC with various audiences. Special Event Days at the museum Celebrate specific STEM disciplines for a full day of engagement and science learning. These days include Tech & Engineering Day (March), Earth Day (April), Spooky Science (October) and World Oceans Day (June) and are the most visited days of the year with 3,000+ guests in attendance.

#### Option 2 (in addition to the above text)

In addition to being a partner for INSERT SPECIAL EVENT DAY HERE at Frost Science, INSERT PI NAME/LAB/ ORGANIZATION will be the supporting sponsor for this program. As the supporting sponsor, INSERT PI NAME/ LAB/ORGANIZATION's name will be included in the title of the event and on all marketing materials. The cost of supporting this program is INSERT OPTION 2 COST.



### 1. SciComm Workshop

#### Option 1

#### **Basic Science Communication Workshop**

Communicating your research interests and outcomes to the public is important but not easy. To assist you and other university faculty, staff and students involved in your research in developing your science communication skills, Frost Science will host a science communication workshop for a university lab or group of researchers. During this workshop, your research group or class (up to 30 people) would join Frost Science's Director of Science Communication at the Museum to learn best practices for communicating complex science concepts to a general audience. By the end of the workshop, you and your group will have a better idea of how to convey research to various audiences and connect to non-scientists in your community.

#### **Execution Cost: Available online**

#### **Option 2**

#### **Customized Science Communication Workshop**

Same as option 1, but customized to your group's field and specific research goals.

#### **Execution Cost: Available online**

#### Audience

- University researchers
- Classes of undergraduate and graduate students
- General audiences

#### Suggested Text

#### Option 1

To enhance science communication skills for INSERT PI NAME/LAB/ORGANIZATION on INSERT RESEARCH TOPIC, we will partner with the Phillip and Patricia Frost Museum of Science to develop and execute a science communication workshop. The Director of Science Communication at the Frost Science Museum will host a workshop for INSERT PI NAME/LAB/ORGANIZATION to learn best practices for communicating complex science concepts to a general audience. By the end of the workshop, we will have a better idea of how to convey this research to various audiences and communicate its importance and how our work relates to the community. The cost of this workshop is INSERT OPTION 1 COST HERE.

#### Option 2 (in addition to above text)

Our science communication workshop will be customized to our work, specifically focusing on communicating INSERT RESEARCH TOPIC, for an additional cost of INSERT ADDITIONAL COST HERE. The total requested cost for our customized science communication workshop is INSERT EXECUTION COST HERE.



## 2. SciComm Consultation

You may wish to brush up your science communication skills outside of a workshop setting and/or have very specific needs in your science communication work. Frost Science's Director of Science Communication will meet with individual or small groups of researchers (up to five people) to discuss the science communication techniques, strategies, and approaches specific to your research and outreach needs.

#### Audience

- University researchers
- Undergraduate, graduate students

#### **Execution Cost: Available online**

This covers the cost for a private or small-group consultation with the Frost Science Director of Science Communication. Consultations can occur in person or by Zoom (or another virtual platform). You may purchase a single hour or set up ongoing appointments as you navigate a long-term research program.

#### **Suggested Text**

INSERT PI NAME/LAB/ORGANIZATION is interested in growing the way we approach communication on INSERT RESEARCH TOPIC to various audiences. The Director of Science Communication at the Phillip and Patricia Frost Museum of Science will meet with INSERT PI NAME/LAB/ORGANIZATION to discuss science communication techniques, strategies, and approaches specific to our research and outreach needs.

At INSERT COST HERE/hour for INSERT HOURS this would total INSERT COST.

## 3. University Class Field Trip

Bring undergraduate or graduate level classes to the Museum for a curated field trip aligned to your syllabus. Using museum exhibitions and experts, the Frost Science team can show your students real-world applications to classroom learning. During this field trip, your class will be engaged in a 2-hour program at the Museum. Examples include a marine conservation tour, in which your class will learn from our husbandry team about animal care, or a STEM education field trip, in which pre-service teachers can learn from Frost Science educators about best practices in science education.

#### Audience

- Undergraduate students
- Graduate students

#### **Execution Cost: Available online**

## 4. Science Activation Observations

Invite your classes, lab or graduate students to visit the museum for a day and observe our Sparks of Science and Power of Science shows. Your team will reflect on science education processes and methods of communication to various audiences and share your conclusions with us. Your feedback as experts and experts-in-training is valuable and will help us improve the science concepts we present.

#### Audience

- Faculty, staff
- Graduate students
- Undergraduate students

**Cost:** There is no cost charged to you to implement this program.



## 5. Frost Science as a Site for Data Collection and Research

You or your students may complete capstone, innovation, or research projects in collaboration with the Museum. This can take many shapes and forms and would depend on the project at hand. Some examples are outlined below.

**Capstone and Innovation Projects:** Students who need to complete a professional internship with an associated project can work with our education, conservation, or husbandry teams, depending on the student's research interests.

**Data Collection from Museum Guests:** Students or researchers who need to collect data from our guests recruit participants for a study, or collect various kinds of data in the Museum, can collaborate with us. Please note that depending on data collection, IRB approval may be needed.

#### Audience

- University researchers
- Undergraduate students
- Graduate students

**Cost:** Frost Science is prepared to offer in-kind contributions within reason and commensurate with the potential project outcomes. If coming to the Museum to collect data, parking will not be included. If your research requires collaboration from one or more Frost Science staff members beyond logistical support (e.g., Frost Science staff assist with development of the research concept or methods, data entry, statistical analysis, etc.), we strongly encourage that you involve those staff members as co-authors on any resulting research publications.

#### Suggested Text

To collect the data for our research project on INSERT TOPIC HERE, our team will be working with the Phillip and Patricia Frost Museum of Science.





# 6. Teaching or Research Assistantship Affiliated with the Museum

This opportunity offers Frost Science as a place of learning and research for graduate students supported by teaching or research assistantship (TA/RA). TAs or RAs will work in conjunction with Museum scientists and education experts to develop an independent research project and collect data on some aspect of the Museum's work. Therefore, the minimum TA commitment is two semesters. With this broader impact component, TAs or RAs will gain valuable science communication and science education experience in a museum setting. They will be supported and mentored by Frost Science staff and affiliated with the Museum.

#### Audience

Graduate students looking for TA or RA opportunities

#### **Cost: Varies**

The cost of this opportunity will vary based on the TA or RA rate at your university. The funds that are requested in your grant proposal will pay the annual stipend of the TA or RA through your university.

#### Suggested Text

A student from INSERT PI NAME/LAB/ORGANIZATION will serve as a Phillip and Patricia Frost Museum of Science TA/RA for INSERT NUMBER OF SEMESTERS. With salary support provided by INSERT PI NAME/ LAB/ORGANIZATION, they will work with Frost Science to plan and execute a research project on INSERT TOPIC HERE. They will be mentored by Frost Science staff and gain valuable experience working in museum education, public outreach and science communication.

## D. Build Your Own Experience

Have another idea in mind? The Frost Science Education team has worked with university faculty and staff on developing a huge variety of outreach activities, not all of which are listed here. Let us know what your needs are, and we can work together on creating a program that fits your desired broader impacts.

Below are examples of broader impacts that we are interested in exploring with university researchers. Please reach out to us if any of these pertain to your specific interests.

- 2D poster exhibit displayed at the Museum
- Live stream of interesting data (e.g., new scanning electron microscopes)
- Hackathon
- Events for workshops or other rentals
- Social media collaboration
- LIVE@Frost Science lecture
- Your own special event day (e.g., Cell Biology Day)



# Location

Frost Science is located on Biscayne Boulevard in Maurice A. Ferré Park next to the Pérez Art Museum.

#### By Metromover

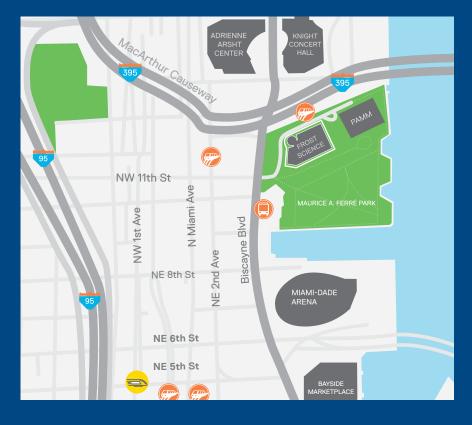
Frost Science is directly adjacent to the Miami-Dade Metromover, Museum Park station. Take the Omni Loop train to Museum Park station, and arrive steps from the museum entrance.

#### By Brightline

Hop on at Brightline's Fort Lauderdale or West Palm Beach stations and enjoy the ride into Miami. When booking your train fare at least two hours prior to departure, you can also add Brightline+ to reserve a shared or private ride from MiamiCentral Station to Frost Science.

#### By Metrobus

Museum Park is serviced by several bus routes. Visit Miami-Dade Transit to view bus schedules, connections and transit directions.





For additional assistance, please email us at scicomm@frostscience.org.



Visit our website to find out the costs associated with the programs listed in this guide.

## PHILLIP & PATRICIA FROST MUSEUM OF SCIENCE

1101 Biscayne Blvd, Miami, FL 33132 I 305-434-9600 I frostscience.org I @frostscience

The Phillip and Patricia Frost Museum of Science is supported by the Miami-Dade County Department of Cultural Affairs and the Cultural Affairs Council, the Miami-Dade County Mayor and Board of County Commissioners of Miami-Dade County. This project is supported by the Building Better Communities Bond Program and the City of Miami. Sponsored in part by the State of Florida, Department of State, Division of Arts and Culture, the Florida Council on Arts and Culture, and the National Endowment for the Arts. The museum is accredited by the American Alliance of Museums, is an affiliate of the Smithsonian Institution and a member of the Association of Science and Technology Centers.



Smithsonian