

PHILLIP & PATRICIA FROST MUSEUM OF SCIENCE

# COVID-19 Business Recovery and Reopening Plan





# Science Happens Here

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We are excited to welcome the community back to the Phillip and Patricia Frost Museum of Science (Frost Science) where we are committed to protecting the health and safety of our employees, guests and community. I began my professional career in public health, with degrees in microbiology and environmental/occupational health, researching applied disinfection techniques and working to understand the mechanisms of the spread of HIV. All of this before I began working and managing public cultural facilities. We all often look back and wonder how past education and experience will help to inform our decisions and I feel fortunate to have had that experience and training at this time, helping to prepare Frost Science for a safe reopening and sustainable future. This document outlines many of the processes and procedures Frost Science is undertaking in order to reopen its Downtown Miami campus to the public.

As a leading science institution and trusted community space, we remain committed to following the recommendations of public health authorities, including the Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), Occupational Safety and Health Administration (OSHA), Florida Department of Health, Miami-Dade County and City of Miami. We are grateful to these entities for their exceptional efforts and guidance.

**Frank Steslow,**  
*President & CEO, Frost Science*

## BACKGROUND

Frost Science temporarily closed its doors to the public on Monday, March 16, along with our campus neighbor, Pérez Art Museum Miami (PAMM), in accordance with directives from public health authorities and federal, state and local agencies. During the closure period, the museum continued to (i) provide our animals and live exhibits with dedicated, professional care through the tireless efforts of essential staff working both on- and off-site, (ii) engage the Miami community and beyond with robust, free virtual programming through *Frost Science@Home*, and (iii) secure funds necessary for maintaining the campus during this period.

## REOPENING

As Miami-Dade County emerges from safer-at-home mandates and we reopen Frost Science, we want to share what we're doing to help protect every person who passes through our museum doors. Using Miami-Dade County's "The New Normal Guide", our plan prioritizes the following:

- ✔ **Safety and health of staff and guests**
- ✔ **Exceptional visitor experience**
- ✔ **Operational flexibility and nimbleness given rapidly changing conditions, policies and guidelines**

We're adapting our visitor experience and the way we engage with the public to keep our guests and staff safe and healthy. We're following all guidelines for safely operating with new procedures in place to maintain a distance of 6 feet from others while within the museum spaces. We created one way pedestrian paths from the parking garage through the museum, limited our occupancy to 25%, implemented cashless transactions, are requiring that all visitors wear facial coverings pursuant to Miami-Dade County Emergency Order 20-20, modified exhibits, installed a contactless thermal temperature scanning system for all staff, contractors and guests, and have a total of 50 touchless hand washing sinks and 37 touchless hand sanitizing dispensers throughout our campus for visitor use. As you'll see, we've made many additional changes as well.

In creating this plan, Frost Science followed required measures as set forth in Miami-Dade County Mayor Gimenez's The New Normal Guide and incorporated guidance set forth by federal, state and local agencies. Please continue reading for more detailed information about additional precautions we are taking.

**Thank you for your continued support of Frost Science.**



# EMPLOYEE HEALTH AND SAFETY PROTECTIONS

The following are changes we have implemented for the safety of our staff:

1. Installed hand sanitizing touchless dispensers at our staff entrance and common office areas
2. Posted health questionnaire sign at entrance kiosk requiring employees to self-report any symptoms or contact with COVID-19
3. Installed a contactless temperature thermal imaging system to use for scanning all staff at museum entrance elevated temperatures
  - Temperatures must be below CDC recommendation of 100.4 F (38.0 C) or staff will be sent home sick
4. Requiring employees to self-identify symptoms and report exposure to any illness
5. Providing staggered breaks to reduce employee to employee contact
6. Requiring and supplying facial coverings for all staff
7. Increased and enhanced staffing for cleaning and disinfection of office common areas/touch points (door handles, light switches, etc.)
8. Reconfigured our workspaces for social distancing requirement of at least 6 ft
9. Allowing for flexible schedules for childcare and sick time
10. Implemented alternating staff schedules to decrease workspace crowding and enable social distancing
  - Remote work is continuing for several non-guest experience staff members
11. Reconfigured staff common areas to enable social distancing
12. Avoiding meetings of more than five participants and encouraging virtual meetings
  - Social distancing of at least 6 ft and facial coverings required for all in-person meetings
13. Trained all staff on new standard operating procedures prior to opening



# GUEST HEALTH AND SAFETY PROTECTIONS

The following are changes we have implemented for the safety of our guests:

1. Established contactless ticketing system (online) for guest ticket reservations
2. Implemented timed ticketing entry with 25% visitor capacity limitation
3. Spaced out customer lines at main entrance and Member and Guest Relations Desk with visual floor markers every 6 ft
4. Installed plexiglass dividers between staff and guests at Member and Guest Relations Desk and main entrance kiosk
5. Added additional staff for continuous disinfection of door handles, exhibits, stair bannisters and other high frequency touchpoints using traditional cleaning techniques and electrostatic fogging technology throughout the day
6. Installed temperature thermal imaging system to use for scanning all guests at museum entrance elevated temperatures with new queuing area to provide for distancing
  - Temperatures must be below CDC recommendation of 100.4 F (38.0 C) or guest(s) will be denied admittance
7. Collecting email addresses (one per household/unit) for future health-related communication if necessary via our ticketing system
8. Requiring face coverings/masks for all guests **two and over** consistent with Miami Dade County Emergency Order 20-20
  - Face coverings do not need to be worn by persons who have trouble breathing due to a chronic pre-existing condition or persons who are not able to remove face coverings without assistance or on their own
9. Installed signage that requires elevators to be reserved for those in need (wheelchairs, strollers), along with a required maximum of four guests per elevator. Additional requirement of four guests from the same household/family unit
10. Increased hand cleaning stations to a total of over 80 separate touchless sinks or sanitizing dispensers located throughout the facility
  - Installed three new foot pedal activated handwashing sinks with touchless soap outside of restrooms in the following locations:
    - Special Exhibition Gallery Vestibule (Level 1)
    - West Building Terrace outside of MeLab (Level 2)
    - West Building Terrace outside of MeLab (Level 3)
  - Placed 37 new hand sanitizer stations throughout the museum
11. Limiting restrooms to one household/family unit at a time with signage
  - Added housekeeping staff for continuous cleaning and disinfection of restrooms throughout the day
  - All restrooms contain contactless/handsfree soap, faucets and flush valves and there are 18 separate public restrooms available throughout to maintain social distancing

# BUSINESS PROCESS ADAPTATIONS

The following are additional Business Adaptions we have implemented:

1. Added safety and compliance language to digital tickets
2. Posted all safety measures at [frostsscience.org/covid19safety](https://frostsscience.org/covid19safety) prior to opening
3. Created one-way guest circulation path throughout the museum and to/from parking garage including:
  - Floor markings indicating circulation path
  - Separate up and down staircases
  - Extensive signage throughout
  - New printed visitor guides
4. Requiring that no groups larger than 10 persons can congregate within the museum at any time
5. Requiring that social distancing is maintained at all times with the exception of family members residing together
6. **Third-party partners are following all required employee safety protocols including mask/face covering and temperature check upon entering facility, team member training and retail and restaurant requisites as outlined in Miami-Dade County's The New Normal Guide**

- Event Network - Science Store

**Safety measures taken by Event Network include but are not limited to:**

- One-way entrance and exit for retail space
- Floor markers to allow for social distancing when purchasing at check-out counter
- Plexiglass sneeze guards at check-out counter
- Removal of all hands-on toys and demonstrations
- Limited capacity inside store to 25% occupancy
- Increased sanitation of all items throughout the day
- Constellation Culinary Group (Coffee@Science and Food@Science cafe)

**Safety measures taken by Constellation Culinary include but are not limited to:**

- Phased opening approach will include but not limited to:
  - Phase 1 - Coffee@Science open with grab-and-go only
    - One-way entrance and exit for cafe
    - Social distancing will be maintained when purchasing at check-out counter through signage and staff monitoring
    - Plexiglass sneeze guards at check-out counter
    - Limited interior occupancy
    - Outdoor seating encouraged
    - All tables a minimum of 6' apart
    - Per table party limit of 4 persons must be maintained for both indoors or outdoors seating (tables with members of the same household may seat up to 10)
    - Contactless payment and mobile pre-ordering via app
    - Single use and individually wrapped menus and serve ware
  - Phase 2 - Food@Science café opens regular menu with food brought to table or takeout. All above changes remain in place.

## BUSINESS PROCESS ADAPTATIONS (CONTINUED)

7. Modified in-person summer camp and created virtual camp offering
  - Virtual camp for ages 4 - 14 is conducted through dedicated Zoom rooms and explores different scientific topics weekly
  - In-person summer camp started June 8 and follows Miami-Dade County and City of Miami guidelines
8. Suspended in-person groups/field trips visits until permitted by Emergency Orders
  - Developed virtual field trip offerings
9. Suspended special events/large gatherings until permitted by Emergency Orders
  - Offering *Frost Science@Home* virtual programming to the community for free, including a series of digital webinars available via museum's Facebook channel (Virtual LIVE@Frost Science)
10. Implemented new virtual programming to provide community access without in-person visits such as virtual birthday parties and outreach
  - Offering new virtual programming including virtual birthday parties and virtual outreach
11. Modified facilitated museum experiences with the following changes:
  - No groups larger than 10 persons shall congregate
  - Social distancing maintained at all times with the exception of family members residing together
  - Unscheduled, pop-up science experiences limited to groups of fewer than 10 with social distancing between family groups or will be conducted with one household/family unit at a time
    - Demonstrations only, no participation by guests
    - Minimum of 6' distance maintained at all times between staff and guests marked with physical barriers or floor markings
12. Suspended venue rentals until permitted by Executive Orders
  - Developing detailed plan with in-house catering company for events and catering when venue rentals resume at a later date
13. Adapted membership policies
  - Offered pre-opening day for members
  - Currently offering an essential worker free membership promotion for each membership purchased
  - Will offer special hours/days/weeks for members once open
  - Extended membership terms for all active members for the duration of museum closure
  - Created new digital membership card accessible via online membership account

# PUBLIC HEALTH INTERVENTIONS AND INDUSTRY-WIDE SAFEGUARDS

The following are Miami Dade Industry Wide Requirements we have implemented:

1. Implementing deep cleaning with disinfection during all operating hours with comprehensive cleaning and disinfection overnight and prior to opening each day. Added staff dedicated to disinfection
2. Installed required CDC signage in all high traffic areas and in multiple languages, including but not limited to:
  - “Stop the Spread of Germs”
  - “Symptoms of Coronavirus”
  - “Use of Face Coverings to Help Slow the Spread of COVID-19”
3. Installed dedicated trash containers for face masks and other personal protective equipment (PPE) near exits and entrances and other common areas
4. Adjusted the building automation system to the **maximum design allowance for amount of outdoor airflow to the building** while keeping temperature, %RH and building pressurization under control for museum collection items. This increases our room air changes per hour. We also utilize MERV-13 air filtration in all of our air handling units
5. Posted contact email address and/or telephone number for employees/customers to contact if they have questions or concerns
6. Implemented protocols and training for handling non-compliant guests
  - Miami-Dade County has implemented a “no warning” policy: any guest deemed failure to comply with all stated policies will be politely escorted to the nearest exit and asked to leave the museum

**ADVISORY**

*By entering the museum, you consent to and authorize Frost Science to conduct a contactless temperature screening from a distance via thermal imaging cameras.*

If you do not consent to this health screening, you must refrain from entering the museum.

Based on guidance from health officials, those with temperatures above 100.4°F (38°C) will not be allowed entry nor will those in their party.

In the interest of public health and safety, please do not enter if you have recently experienced or have any symptoms associated with COVID-19 in the last 14 days.

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**Symptoms of Coronavirus (COVID-19)**

Know the symptoms of COVID-19, which can include the following:

Symptoms can range from mild to severe illness, and appear 2-14 days after you are exposed to the virus that causes COVID-19.

**\*Seek medical care immediately if someone has emergency warning signs of COVID-19.**

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

This list is not all possible symptoms. Please call your medical provider for any other symptoms that are severe or concerning to you.

[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

**STOP** *Feeling Sick?*  
Stay home when you are sick!

If you feel unwell or have the following symptoms please leave the building and contact your health care provider.

**DO NOT ENTER** if you have:

**FEVER**    **COUGH**    **SHORTNESS OF BREATH**

[cdc.gov/COVID19](https://www.cdc.gov/COVID19)

**Face Covering Do's and Don'ts:**

**DO:**

- ✓ Make sure you can breathe through it
- ✓ Wear it whenever going out in public
- ✓ Make sure it covers your nose and mouth
- ✓ Wash after using

**DON'T:**

- ✗ Use if under two years old
- ✗ Use surgical masks or other PPE intended for healthcare workers

[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

**Stop the Spread of Germs**

Help prevent the spread of respiratory diseases like COVID-19

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## EXHIBITS AND FROST PLANETARIUM OPERATIONS

**Interactive exhibits** are crucial components of a modern museum learning experience and are quite varied in the types and degrees of interactivity used to support the design and learning objectives. It's important to distinguish between these degrees when considering safe disinfection and operation. For example, at Frost Science, interactivity can be achieved through the use of cameras to pick up body movement, glass/impermeable touch screens, small buttons/knobs/handles, pressure sensitive foot pads, single-use consumable supplies (paper airplanes) or through more complicated multicomponent touch such as puzzles, water tables or sand boxes. Given the varied nature of interactive exhibits, we took an exhibit-by-exhibit approach to ensure a safe and enjoyable experience for guests.

### Exhibit Operating Plan:

**Exhibition operations have been modified and adapted as follows:**

1. Implemented sanitizing procedures for interactive exhibit touch points following the requirements for similar building-related touch points (door handles, elevator buttons, safety rails, etc.)  
**This includes:**
  - **continuous sanitizing by museum floor staff throughout the day**
  - **self-disinfection by guests with available disinfectant stations/wipes strategically located in each gallery and signage to promote use**
  - **robust pre-opening sanitizing of gallery spaces by professional housekeeping staff using a variety of cleaning/sanitizing equipment, including atomizing spray disinfectant equipment and physical wiping of all surfaces with approved disinfectants**
2. Distributed 37 touchless hand sanitizing stations have been distributed through the building as well as 46 hand-washing sinks within restrooms and 4 touchless sinks outside of restrooms in the public circulation path for a total of 87 separate opportunities for public hand sanitizing throughout the museum
3. Added signage to remind guests to use hand sanitizer before and after touching any surfaces
4. Making nitrile gloves available for guests upon request
5. Monitoring of all exhibit usage by floor staff
6. Maintaining social distancing throughout the galleries through a combination of signage, graphics and floor staff and, where possible, one-way guest traffic has been established to assist with physical distancing
7. Prohibiting groups of 10 or more from congregating
8. Closed or removed from public spaces all higher-risk and difficult to clean exhibits including but not limited to:
  - Water play tables
  - Interactives with face proximity required (microscopes, rooftop viewing scopes, periscope-type interactives)
  - Sand box-filled interactives such as fossil dig
  - Those that contain multiple small parts and pieces that are not single use consumable, or not feasible to regularly sanitize such as building blocks or puzzles

## EXHIBITS AND FROST PLANETARIUM OPERATIONS (CONTINUED)

The **Frost Planetarium** at Frost Science, an integral component of the visitor experience, is safely operated within recommended CDC guidelines. Frost Planetarium shows average 20 - 25 minutes during which time guests remain seated and have no need to get up and move around. The Frost Planetarium features a very high ceiling/air volume to surface area ratio and a high turnover HVAC system designed for laser show fog removal. These engineering features contribute to limiting the concentration of virus particles in the air. Our staff controls the entrance and egress process, social distancing in seating and the necessary times between shows for cleaning and disinfecting. the Frost Planetarium is operating at less than 50% capacity and masks are worn at all times. There is also no talking or eating in the Frost Planetarium to aerosolize virus particles. Seats, armrests and handrails are made of easily disinfected synthetic materials (no cloth) and thorough disinfection between shows can be accomplished.

### Frost Planetarium Operating Plan

**Reopening the Frost Planetarium will include the following adaptations and precautions:**

1. Installed hand sanitizing stations at the entrance and exit of the planetarium
2. Created entry line queue marked off with mandatory social distancing using floor graphics and signage
3. Permitting one family group to enter at a time, directed to seats by staff
4. Closed off alternating rows of seats with physical barriers and requiring at least three empty seats between household/group units to allow for a minimum of 6 ft. of social distancing
5. Reduced seating capacity reduced from a maximum of 250 to 100 (new maximum with required social distancing)
6. Limited show duration to 30 min or less including load-in and -out
7. Maintaining adequate time between shows to allow for disinfection of seats and armrests and the use of electrostatic disinfectant fogger
8. Implemented staff-controlled entrance and egress processes so guests/family units do not directly pass one another with separate dedicated entrance and exit
9. Asking family units with small children to sit at ends of rows to facilitate safe exit should they need to leave early; otherwise all guests remain seated for the duration of the show
10. Consistent with the rest of the museum, face coverings will be required for all guests two and older, and floor markers will be used to allow for social distancing while in queue
  - Face coverings do not need to be worn by persons who have trouble breathing due to a chronic pre-existing condition or persons who are not able to remove face coverings without assistance or on their own
11. Prohibited food and drink consumption

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**We are very fortunate that Frost Science is both an outdoor and indoor experience with most of our primary circulation paths outdoors as well as a number of our exhibition spaces. With these outdoor experiences, large air volume interior spaces and modified exhibit experiences that can be safely viewed or experienced within all requirements and guidelines, we are grateful to be welcoming back our community and supporters at a time when interest in science is more important than ever.**

**Thank you.**



FROST  
SCIENCE

*Thank You*