National Aeronautics and Space Administration

NASA STEM

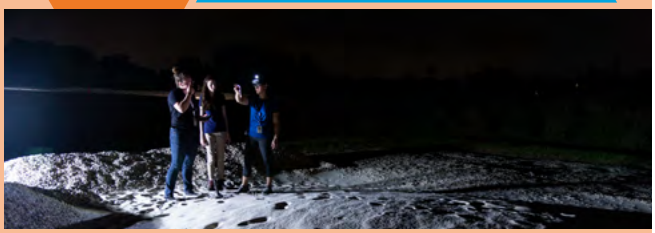
BETTER TOGETHER 2022

2022

CONVENE

CONNECT

COLLABORATE



August 31, 2022 - September 1, 2022

8:00 AM - 5:30 PM ET

NASA Langley Research Center

Hampton Roads Convention Center

CONVENE – CONNECT – COLLABORATE

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Special Welcome

Michael A. Kincaid
Associate Administrator
NASA Office of STEM Engagement

Dear Colleagues:

We are pleased to welcome you to the Office of STEM Engagement (OSTEM) Better Together 2022 Meeting with the theme of Convene Connect Collaborate. This is the third time we are bringing together our community of more than 400 grantees, stakeholders, and team members from academia, industry, and government, whose collective work advances NASA's strategic vision, mission, and goals for STEM engagement. The meeting provides opportunities for networking, collaboration, and information exchange among key stakeholders across the agency, the OSTEM portfolio of funded projects, and our Mission Directorate partners.

The Better Together 2022 Meeting is dedicated to fostering a useful and engaging forum on a wide range of topics relevant to the broader STEM engagement community. Here is what we are aiming to accomplish:

- Strengthen grantee and stakeholder relationships with OSTEM and NASA Missions.
- Integrate across projects, network, and exchange ideas.
- Establish new connections across the OSTEM enterprise with grantees and stakeholders.

Thank you for your interest, participation, and outstanding contributions to furthering NASA STEM engagement in your communities and institutions. We look forward to connecting with you throughout the meeting.

Sincerely,

Michael A. Kincaid,
Associate Administrator

Contents

Special Welcome	1
STEM Engagement Overview	3
Office of STEM Engagement Projects	4
Office of STEM Engagement Cross-Cutting Functions	5
General Information	6
Hampton Roads Convention Center Map	7
Program Agenda	8
Breakout Session Descriptions	11
World Café Session Descriptions	13
Acronyms	18
#NASASTEM Polo Orders	20
Notes	21

STEM Engagement Overview

NASA's achievements have propelled technological breakthroughs, pushed the frontiers of scientific research, and expanded our understanding of the universe. These accomplishments, and those to come, share a common genesis: education in science, technology, engineering, and mathematics (STEM).

In NASA STEM Engagement, we are committed to engaging students in our mission, with the aim to immersing them in NASA's work and inspiring the next generation to explore.

We seek to:

- Create unique opportunities for a diverse set of students to contribute to NASA's work in exploration and discovery.
- Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA's people, content, and facilities.
- Attract diverse groups of students to STEM through learning opportunities that spark interest and provide connections to NASA's mission and work.

To achieve these goals, NASA STEM Engagement strives to increase K-12 involvement in NASA projects, enhance higher education, support underrepresented communities, strengthen online education, and boost NASA's contribution to informal education. NASA STEM engagement encompasses all endeavors Agency-wide to attract, engage, and educate students and to support educators, educational institutions, and professional and student organizations.

The intended outcome is a generation prepared to code, calculate, design, and discover its way to a new era of American innovation.

For more information, visit: https://www.nasa.gov/stem.

NASA STEM ENGAGEMENT LEADERSHIP

Associate Administrator
Mr. Michael A. Kincaid

Deputy Associate Administrator
Strategy & Integration,
Ms. Kris Brown

Deputy Associate Administrator
STEM Engagement Program,
Mr. Torry Johnson (Acting)

Executive Officer
Ms. Lisa Stewart

Resources Management Officer
Ms. Mary Jo Dotson

Manager, Enterprise Acquisition
Mr. Dean Kern

Manager, Program Evaluation and Performance Assessment
Mr. Richard Gilmore

Manager, Educational Tools and Platforms
Ms. Tammy R. Brandon

Manager, Informal Education & Engagement
Dr. Beverly Girten

Manager, Internships
Ms. Lynnette Madison

Manager, Strategic Partnerships
Mr. Robert LaSalvia

Manager, Portfolio Integration
Ms. Diane D. DeTroye

Manager, Space Grant College and Fellowship Program
Mr. Tomas Gonzalez-Torres

Manager, Established Program to Stimulate Competitive Research
Mr. Jeppie Compton

Manager, Minority University Research and Education Project
Ms. Kelly Martin-Rivers (Acting)

Manager, Next Gen STEM Project
Dr. Carrie Olsen

NASA MISSION DIRECTORATE LEADS:

Aeronautics Research
Ms. Karen Rugg

Exploration Systems Development
Dr. Alotta Taylor

Science
Dr. Lin Chambers

Space Operations
Dr. Alotta Taylor

Space Technology
Ms. Stephanie Yeldell

Office of STEM Engagement Projects

Established Program to Stimulate Competitive Research (EPSCoR)
https://www.nasa.gov/stem/epscor/about/index.html

EPSCoR establishes partnerships with government, higher education and industry that are designed to effect lasting improvements in a state or region's research infrastructure, research and development (R&D) capacity and its national R&D competitiveness. The EPSCoR program is directed at those jurisdictions that have not participated equably in competitive aerospace and aerospace-related research activities. Twenty-five states, the Commonwealth of Puerto Rico, the U.S. Virgin Islands and Guam currently participate.

Please contact the EPSCoR team at agency-epscor@mail.nasa.gov.

Minority University Research and Education Project (MUREP)
https://www.nasa.gov/stem/murep/about/index.html

MUREP investments enhance the research, academic and technology capabilities of minority-serving institutions through multi-year cooperative agreements. Awards assist faculty and students in research and provide authentic STEM engagement related to NASA missions. Additionally, awards provide NASA-specific knowledge and skills to learners who have historically been underrepresented and underserved in STEM. MUREP investments assist NASA in meeting the goal of a diverse workforce through student participation in internships and fellowships at NASA centers and the Jet Propulsion Laboratory (JPL).

Please contact the MUREP team at hq-murep@mail.nasa.gov.

National Space Grant College and Fellowship Program (Space Grant)
https://www.nasa.gov/stem/spacegrant/home/index.html

Space Grant is a national network of colleges and universities that work to expand opportunities for Americans to understand and participate in NASA's aeronautics and space projects. The 52 consortia support and enhance science and engineering education, research, and public outreach efforts. Space Grant investments fund fellowships and scholarships for students pursuing careers in STEM as well as curriculum enhancement and faculty development. Member colleges and universities also administer pre-college and public service education projects in their states.

Please contact the Space Grant team at hq-space-grant@mail.nasa.gov.

Next Gen STEM
https://www.nasa.gov/stem/Next Genstem/index.html

Next Gen STEM's mission is to spark and sustain interest in STEM in students in grades K-12, by connecting students and their formal and informal educators to NASA's endeavors in exploration and discovery. Next Gen STEM creates, delivers and curates NASA STEM products and experiences that make connections to NASA and fuel STEM learning and identity. Next Gen STEM provides funding for informal institutions, such as museums and science centers in direct alignment with NASA's mission and operates NASA's Museum and Informal Education Alliance (MIE Alliance), a robust community of practice within its overall online community of practice for educators, NASA CONNECTS.

Please contact the Next Gen STEM team at hq-stemcop@mail.nasa.gov.

Office of STEM Engagement Cross-Cutting Functions

Internships, Fellowships, and International Initiatives
OSTEM paid internships allow high school and college-level students to contribute to agency projects. Additionally, the internship program continues its collaboration with the Office of Human Capital's (OCHCO) Talent Acquisition Office, specifically its Pathways Internship and Recruitment groups. The Pathways program offers current students and recent graduates paid internships that are direct pipelines to full-time employment at NASA upon graduation. NASA Fellowships allow graduate-level students to pursue research projects in response to the agency's current research priorities. University students from participating countries may intern through the agency's International Internships activity.

For more information, visit: https://intern.nasa.gov/.

Performance and Evaluation (P&E)
OSTEM implements a comprehensive performance assessment and evaluation strategy used to inform evidence-based budgetary, programmatic, and operational decisions. It provides a systematic approach for building and using new knowledge about project and operational performance for evidence-based decision-making and continual improvement.

For more information, visit: https://www.nasa.gov/stem/performance.html.

Strategic Partnerships
Through collaboration with external partners, NASA expands its reach, engaging students of all grade levels through opportunities that align with the agency's missions and STEM Engagement programs – and sparking a love of space and STEM topics. These partnership efforts reach students as young as pre-kindergarten through university undergraduates, including students from groups and communities underrepresented in STEM.

For more information, visit: https://www.nasa.gov/stem/partnerships/index.html.

Educational Tools and Platforms
STEM Educational Tools and Platforms is an investment in innovative tools to support OSTEM's mission-driven programmatic model, to take care of stakeholders in new ways, and to rapidly modernize processes. The focus is on access and scalability through a suite of tools and platforms that enable student engagement and data collection. NASA STEM Gateway is the agency's premier Office of STEM Engagement database for students and stakeholders in an enterprise cloud environment.

General Information

CHECK-IN & HELP DESK
The meeting Check-in & Help Desk at Hampton Roads Convention Center is available at the base of the main staircase for pick-up of meeting materials and participant inquiries. The desk will be open at the following times:

Wednesday, August 31 7:30 a.m. – 5:00 p.m.
Thursday, September 1 8:00 a.m. – 5:00 p.m.

LANGLEY RESEARCH CENTER TOUR REQUIREMENTS
For those pre-registered for tours, you are required to bring your photo ID and wear closed-toe shoes. Tour attendees should meet 15 minutes prior to tour at front entrance of the convention center. Signs will direct you to specific buses.

MEALS
Coffee, tea, and water will be available before noon, courtesy of the American Institute of Aeronautics and Astronautics – AIAA.

Breakfast, lunch, and snacks will be available for purchase at concession stands from 7:30 a.m. – 3:30 p.m. *CASH ONLY* ATM is available in the convention center.

WIFI
Complimentary wireless internet is provided at the Hampton Roads Convention Center.

Network Name: Better Together
Password: connect2022!

Please limit the number of devices connected to the WiFi to help avoid bandwidth overloading.

CELL PHONES AND OTHER ELECTRONIC DEVICES
Please be courteous to presenters and fellow attendees by silencing your phone or other electronic devices during sessions. Attendees are reminded not to leave personal items, including laptops, tablets, etc., unattended at any time. Neither the Convention Center nor NASA is responsible for lost or stolen items.

CONTACT INFORMATION
SPECIAL ASSISTANCE: If you need special assistance, please visit the meeting Check-in & Help Desk. Every effort will be made to accommodate your need.

EMERGENCY NUMBERS: In case of emergency, dial 911 immediately. For meeting-related issues, please see the Check-in & Help Desk or call 757-864-9709.

OTHER INQUIRIES: Send an email to hq-stem-engagement@mail.nasa.gov, or call 757-864-9709.

MEDIA
Live audio recording and photography will be in progress during sessions. Registration and attendance at this meeting acknowledges consent to be recorded and photographed.

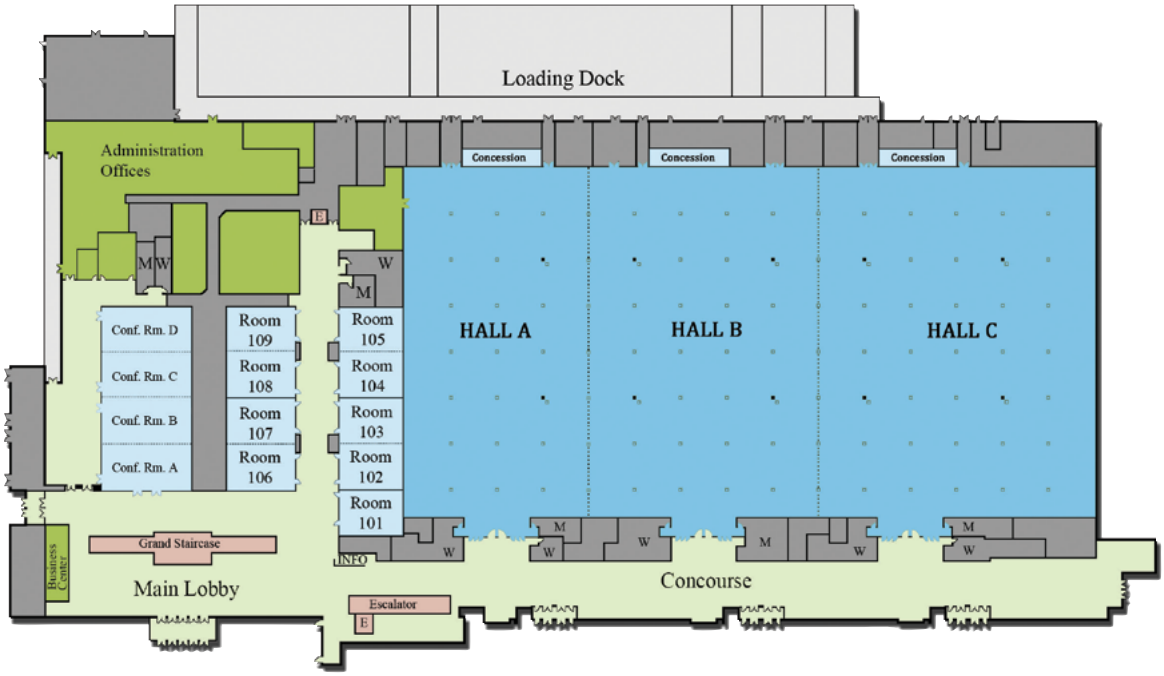
COVID CONDITIONS
We will monitor the current CDC guidelines and recommendations regarding COVID-19 leading up to and during the Better Together meeting. Masks are welcome but not required. Masks (N-95) and hand sanitizer are available on site. Seating at session tables is at a reduced capacity and breakout rooms have attendance capacity limits. Additional adjustments, as necessary, will be made in response to current conditions.

VA COVID-19 Map: Virginia COVID-19 Map: Tracking the Trends (mayoclinic.org)

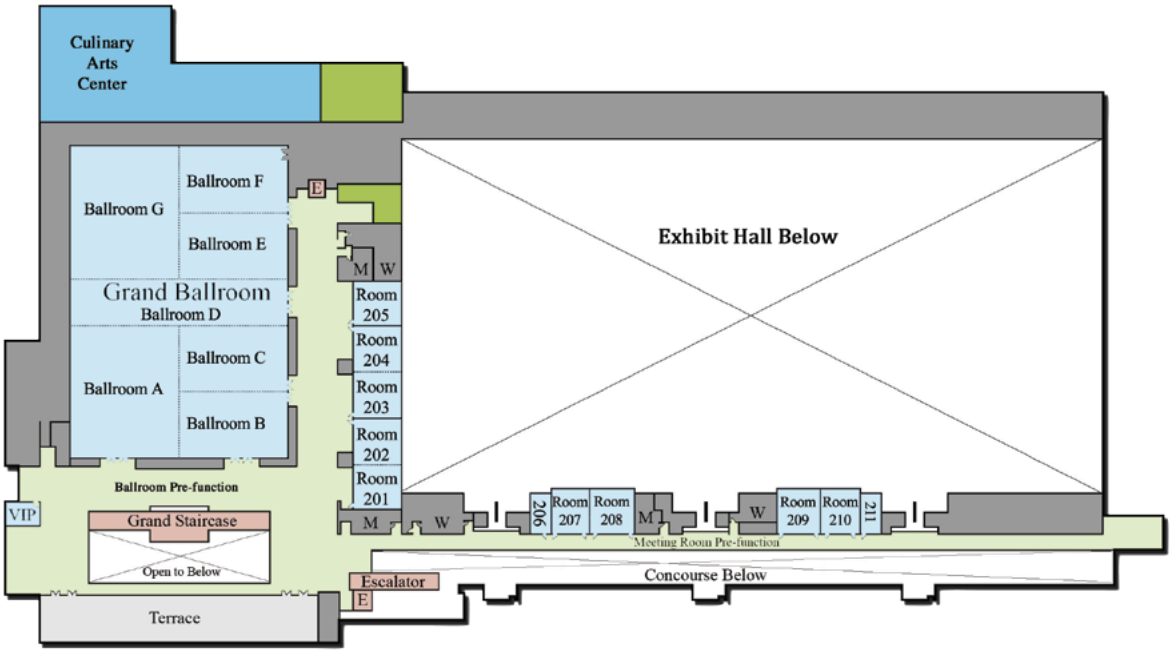
LOCAL INFORMATION RESTAURANTS
In order to make the most of your stay in Hampton, a list of recommended restaurants and shops can be accessed http://books.vistagraphicsinc.com/books/rgro/#p=1.

Hampton Roads Convention Center Map

FIRST FLOOR



SECOND FLOOR



2022 Agenda

Wednesday, August 31, 2022

Location: Hampton Roads Convention Center

8:00 – 8:30 a.m.
Game Time! – Day 1
Check-in to receive your badge and Better Together materials. Have some fun with the Connection Collection Challenge!
Convention Center Lobby

8:30 – 9:00 a.m.
Welcome to Better Together: Convene, Collect, and Collaborate! – Join us as LaRC's Center Director, Dr. Clayton Turner kicks-off Better Together 2022
Ballroom ABCD

9:00 – 9:30 a.m.
Fireside Chat with Associate Administrator for OSTEM, Mike Kincaid and NASA Deputy Administrator, Pam Melroy
Ballroom ABCD

9:30 – 10:15 a.m.
Mission Directorate Overview – Key Content Area and Ideas
In this session, the Mission Directorates will briefly discuss the key themes that will be present throughout the event. Participants will have the opportunity to dive into those themes in more detail as the meeting progresses.
Ballroom ABCD

10:15 – 10:45 a.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

10:45 – 11:45 a.m.
Breakout Sessions – For Breakout Session Descriptions visit page 11.
Learning is Connection – Solar System: Room 104
Learning is Connection – Aeronautics: Room 105
World Cafe – Activities & Services: Room 106/107
World Cafe – Missions: Room 108/109
Storytelling in STEM: Room 201/202

11:45 a.m. – 12:30 p.m.
Lunch and Let's Play!
Connect and collaborate while grabbing lunch. Continue the Connection Collection Challenge and visit the Collaboration Room and the Refresh and Recharge Room!
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

12:30 – 2:15 p.m.
Connection and Collaboration Through the Lens of Diversity, Equity, Inclusion, and Accessibility
This is not your typical plenary session featuring a dynamic, expert presenter coupled with Q&A. This is a completely different kind of experience! Convene in the main ballroom for an interactive discussion focused on the importance of Diversity, Equity, Inclusion, and Accessibility (DEIA) as we seek to broaden student participation in our STEM activities. The entire room will converse about this important topic in a structured, engaging, facilitated manner. The outcomes of group discussions will be shared later in the day! Don't miss the closing plenary session -- you'll want to learn the collective results of our DEIA discussions and end the day with ideas on new and creative ways to broaden student participation!
Ballroom ABCD

2:15 – 2:45 p.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

2:45 – 3:45 p.m.
Breakout Sessions – For Breakout Session Descriptions visit page 11.
Learning is Connection – Solar System: Room 104
Learning is Connection – Aeronautics: Room 105
World Cafe – Activities & Services: Room 106/107
World Cafe – Missions: Room 108/109
Storytelling in STEM: Room 201/202

3:45 – 4:15 p.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

4:15 – 5:15 p.m.
Reconvene: Culmination of DEIA ideas and solutions
During this session, we will learn the collective results of our DEIA discussions and come away with ideas on new and creative ways to broaden student participation.
Ballroom ABCD

Thursday, September 1, 2022
Location: Hampton Roads Convention Center

8:15 – 9:00 a.m.
Game Time! – Day 2
If you haven't checked in, now is the time! Use this time to connect and collaborate with others!
Convention Center Lobby

9:00 – 10:00 a.m.
Breakout Sessions: Transcend Exploration
For Breakout Session Descriptions visit page 11.
ESDMD/SOMD: Ballroom ABCD
ARMD: Room 104/105
STMD: Room 106/107
SMD: Room 108/109

9:00 – 10:30 a.m.
Gateway/Evaluation Help Desk
Collaboration Room 102

10:00 – 10:30 a.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

10:30 – 11:30 a.m.
Breakout Sessions
For Breakout Session Descriptions visit page 11.
Space Grant & EPSCoR Project Status Update: Ballroom ABCD
MUREP Ideation Forming Unique Networks (FUN) Workshop #1: Room 106/107
Next Gen STEM Project Status Update: Room 108/109

11:30 a.m. – 12:00 p.m.
Grab 'n Go Lunch

12:00 – 1:00 p.m.
Breakout Sessions: Transcend Exploration
For Breakout Session Descriptions visit page 11.
ESDMD/SOMD: Ballroom ABCD
ARMD: Room 104/105
STMD: Room 106/107
SMD: Room 108/109

1:00 – 1:30 p.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

1:30 – 2:30 p.m.
Breakout Sessions
For Breakout Session Descriptions, visit pages 11-12
SG Impact Evaluation Pilots: Multi-State Findings on NIFS and STEM Identity: Ballroom ABCD
OSTEM Internships – Planning a Proposal?: Room 104/105
Meeting Audiences Where They Are! NASA's Digital Communications: Room 106/107
NGS Collaborative Discussion Deep Dive: Room 108
MUREP Ideation FUN Workshop #2: Development of Technological Capability Statements and Research Team Formation: Room 109

2022 Agenda

2:30 – 3:00 p.m.
Connect & Collaborate
Use this time between sessions to connect and collaborate with others. The Collaboration Room and Refresh and Recharge Room will be open.
Ballroom Lobby; Collaboration Room 102; Refresh and Recharge Room 103

3:00 – 4:00 p.m.
Breakout Sessions – For Breakout Session Descriptions visit page 11.
OSTEM Internships – Brainstorming Broadening Student Participation:
Room 104/105
Meeting Audiences Where They Are! NASA's Digital Communications:
Room 106/107
NGS Collaborative Discussion Deep Dive:
Room 108
MUREP Ideation FUN Workshop #3: Strategies for Broadening Participation with NASA: Researchers, University Instructors, Students and Communities:
Room 109

For OSTEM Researchers in EPSCoR Jurisdictions ONLY
Thursday, September 1, 2022

8:15 – 9:00 a.m.
COLLABORATION & CONNECTION TIME
OSTEM Greeting and Research Check-in
Check-in to receive your badge and Better Together materials.
Lobby of Room 203

9:00 – 10:00 a.m.
LARGE GROUP STREAMING SESSION
The Big Picture: An Overview of Langley's Research Initiatives and Outcomes
Join us for our Researchers track as Langley leaders provide an overview of FY22's research initiatives and outcomes.
Live Streaming Room 203

10:00 – 11:30 a.m.
BREAKOUT SESSIONS
Open Research Discussions
Meet your colleagues and dive into the topics addressed during the research overview.
Room 201/202
10:00 – 10:15 Welcome and Instructions on Session Logistics
10:15 – 10:45 Session 1
11:00 – 11:30 Session 2

11:30 – 12:00 p.m.
COLLABORATION & CONNECTION TIME
Grab n' Go Lunch

12:00 – 5:30 p.m.
BREAKOUT SESSIONS
Open Research Discussions
Meet your colleagues and dive into the topics addressed during the research overview.
Room 201/202
12:00 – 12:30 Eat Lunch
12:30 – 1:00 Session 3
1:15 – 3:30 Poster Session
3:30 – 5:00 Networking, One-on-One Sessions

* Tours offered for Researchers from 1:30 – 4:00 p.m. Must be pre-registered for tours.

Breakout Session Descriptions

Wednesday

Get Hands On – Learning is Connection - In these sessions, you will explore hands-on activities for students K-12 from one of NASA's six communication themes. Rooms 104/105

World Café - In these sessions, you will have the opportunity to rotate between table hosts for "speed dating style" conversations about a variety of topics. There are two World Café Rooms, each with a broad array of topics to spark discussion. Please refer to pages 13-17 for table topics and descriptions for both the ACTIVITIES AND SERVICES as well as MISSIONS World Café rooms. Each table has a host(s) ready to connect and engage with you! You'll be able to visit up to 3 tables as you move about within or between the rooms over the course of this hour-long session. Rooms 106/107 and 108/109

Storytelling in STEM - Join OSTEM's communication team to learn about the elements of a good story and photograph, how to be effective on social media, and how to bring students together to be part of NASA's mission. Rooms 201/202

Thursday

Transcend Exploration - Join us as mission subject matter experts from each Mission Directorate delve into their respective programmatic vision and goals. Each mission subject matter expert will host their own 60-minute discussion. ESDMD/SOMB: Ballroom ABCD; ARMD: Rooms 104/105; SMD: Room 108/109

Space Grant & EPSCoR Director and Coordinator Meeting - This session will be an update on both EPSCoR and Space Grant. Ballroom ABCD

MUREP Ideation Forming Unique Networks (FUN) Workshop #1: NASA Principal Investigators' Shared Experiences – Best Practices and Challenges (for MUREP grantees ONLY)
This workshop will allow participants to network in a fun environment and will encourage collaboration while focusing on discussions regarding PI shared positive and challenging experiences regarding working as NASA PIs. - NASA Principal Investigators' Shared Experiences - Best Practices & Challenges. Rooms 106/107

Next Gen STEM Status Update - Join Next Gen STEM leaders as they provide a status update on the program's initiatives, goals, and outcomes. Rooms 108/109

MUREP Ideation FUN Workshop #2 - Development of Technological Capability Statements and Research Team Formation
This workshop will allow participants to connect with other NASA PIs from MSIs while encouraging collaboration through sharing Capability Statements and resources, reviewing NASA's Technology Taxonomy, and supporting resources. Room 109

MUREP Ideation FUN Workshop #3 - Strategies for Broadening Participation with NASA: Researchers, University Instructors, Students and Communities
This workshop will provide a forum for reviewing and sharing research-based best practices that have been shown to contribute to reaching goals of broadening participation in STEM research and education settings. Participants will network, discuss, and collaborate. Room 109

SG Impact Evaluation Pilots: Multi-State Findings on NIFS and STEM Identity - In this session, you will learn about two Space Grant pilot programs and the impacts on underrepresented minorities and STEM identity. Ballroom ABCD

Breakout Session Descriptions

OSTEM Internships – Planning a Proposal? - Learn more about OSTEM internships and how to include them in your proposal. Rooms 104/105

Meeting Audiences Where They Are! NASA's Digital Communications - During this session you will learn tried and true best practices for engaging with online audiences. Rooms 106/107

Next Gen STEM Collaborative Discussion Deep Dive - Share how NASA scientists and engineers could support your K-12 programs and learn about CONNECTS, a collaborative tool for Educators to stay engaged with STEM opportunities! Room 108

Available All Day on Both Days

Connect and Collaborate Room - A dedicated space where attendees can peruse a variety of materials and share ideas with each other. Room 102

Refresh and Recharge Room - A quiet space to refresh, charge your phone, or answer emails. Room 103

World Café Session Descriptions

In these sessions, you will have the opportunity to rotate between table hosts for "speed dating style" conversations about a variety of topics. There are two World Café Rooms, each with a broad array of topics to spark discussion. Listed below are the table topics and descriptions for the ACTIVITIES AND SERVICES and the MISSIONS World Café rooms. Each table has a host(s) ready to connect and engage with you! You'll be able to visit up to 3 tables as you move about within or between the rooms over the course of this hour-long session.

Wednesday Morning: 10:45–11:45 a.m.

ACTIVITIES AND SERVICES WORLD CAFE

Rooms 106/107

Artemis Camp Guides
The Artemis Camp Guides is a set of hands-on activities is intended for use in K-12 informal education settings and tells the story of NASA's Artemis Program that will land the first woman and first person of color on the Moon.

Established Program to Stimulate Competitive Research (EPSCoR)
Ask Me Anything About EPSCoR!

Educator Professional Development Collaborative (EPDC)
EPDC is a national educator professional development system composed of and designed to serve STEM educators at all levels including K-12 educators, pre-service teachers, higher education faculty and informal educators.

Learning Agenda 101/Performance & Evaluation Practice Guides
Understand the NASA STEM Engagement Learning Agenda and how NASA plans to conduct learning activities (i.e., performance assessment and evaluation activities) that generate evidence to answer key learning questions and support the achievement of performance goals.

Minority University Research and Education Project (MUREP) Connection Corner
Learn about agency funding through Engagement Opportunities in NASA STEM (EONS) and ways to connect with diverse academic collaborators at Minority Serving Institutions nationwide!

NASA CONNECTS
Come and learn about how NASA CONNECTS can be utilized to find NASA STEM resources and collaborate with other educators.

NASA Human Exploration Rover Challenge (HERC)
NASA Human Exploration Rover Challenge (HERC) challenges U.S. and International high school and college students to design and build a human-powered rover to traverse challenging terrain while completing scientific tasks along the way. As an Artemis Student Challenge, HERC draws inspiration from both the Apollo and Artemis missions, emphasizing designing, constructing, and testing technologies.

NASA MITTIC Activity
Are you fascinated by NASA technology? Can you turn a creative idea into a real-world application? Do you want to be an entrepreneur? The Minority University Research and Education Project (MUREP) Innovation and Tech Transfer Idea Competition (NASA MITTIC) is your #SpaceToPitch! MITTIC is a spinoff challenge to develop new ideas for commercialization open to multi-disciplinary student teams attending Minority Serving Institutions (MSIs).

National Space Grant College and Fellowship Program (Space Grant)
Ask Me Anything About Space Grant!

Next Gen STEM & CONNECTS
Lean about OSTEM's K-12 Project, Next Gen STEM, serving students and support educators through an online community of practice, CONNECTS.

Opportunities in Informal Education: TEAM II/MIE Alliance
Discuss opportunities for support and involvement with NASA informal education programs. Open now - funding opportunity to be a NASA Community Anchor! Join the NASA Museum and Informal Education Alliance.

World Café Session Descriptions

Re-imagining NASA Internships
Broadening student participation within intern cohorts; How to include internships in proposals

SBIR/STTR Opportunities
Learn how you can participate in and benefit from the Small Business Innovation Research/ Small Business Technology Transfer (SBIR/STTR) program. There are several opportunities for research institutions and students.

STEMonstrations
Stop by the STEMonstration table to learn how astronauts on board the International Space Station are teaching students STEM content in a weightless environment.

Student App Development Challenge
Artemis Student Challenge in which students form teams to develop an app that creates a visualization of the Lunar South Pole based on NASA data.

TEAM II/Community Anchors
Learn about K-12 solicitation opportunities for informal education institutions, TEAM II and Community Anchors.

MISSIONS WORLD CAFE

Rooms 108/109

Activate Science Learning
Come find out about Science Mission Directorate projects and resources that can help reach learners of all ages in YOUR community.

Aeronautics K-12 STEM Engagement Opportunities
Explore opportunities to engage students, organizations, and educators at the K-12 level with activities, programs, and more, all with an aeronautics focus. NASA programs and projects along with core academic content make our resources exciting and relevant.

Aeronautics Research Mission Directorate University Innovation Project
Discuss ARMD UI Opportunities such and University Leadership Initiative, University Student Research Challenge, and the Blue Skies Competition.

Aeronautics STEM Engagement Opportunities and Collaborations
Discuss NASA's Aeronautics missions with applications towards OSTEM and ARMD STEM Engagement Opportunities.

Great Lunar Expedition for Everyone
Collaborate on a student mission to the moon!

K-12 Quantum Education is here. Are you Ready?
Come and learn about quantum education in your classroom.

Kibo Robot Programming Challenge
The Kibo Robot Programming Challenge (Kibo-RPC) is an International Student Challenge led by JAXA in which students solve various problems by moving free-flying robots (Astrobee) with students' programs on the International Space Station (ISS).

Microgravity Neutral Buoyancy Experiment Design Teams (Micro-g NExT)
Micro-g Neutral Buoyancy Experiment Design Teams (Micro-g NExT), one NASA's Artemis Student Challenges, offers undergraduate students the opportunity design, build, and test mission enabling hardware that addresses an authentic, current space exploration challenge. The overall experience includes hands-on engineering design, test operations, and public outreach. Test operations are conducted in the simulated microgravity environment of the NASA Johnson Space Center Neutral Buoyancy Laboratory (NBL).

NASA Earth and Space Missions: Diverse STEM Engagement in Planetary & Earth Science
Engage with diverse subject matter experts from the NASA Dragonfly mission to Titan and the NASA-Indian Space Research Organization Synthetic Aperture Radar (NISAR) mission to Earth about the future of space exploration and Earth science.

NASA Spacesuit User Interface Technologies for Students (SUITS)
NASA Spacesuit User Interface Technologies for Students (SUITS) design challenge requires undergraduate and graduate student teams

World Café Session Descriptions

to design and create spacesuit information displays within augmented reality environments.

NASA Student Launch
NASA Student Launch, one of NASA's Artemis Student Challenges, is a 9-month long, engineering design challenge in which middle school, high school, college, and university students across the U.S. design, build and fly a high-powered rocket with a scientific or engineering payload.

NASA's BIG Idea Challenge
The 2023 BIG Idea Challenge is an engineering design competition sponsored by NASA's Space Technology Mission Directorate and the National Space Grant College Project, and managed by the National Institute of Aerospace. Teams of students from Space Grant-affiliated colleges/universities are invited to submit proposals for technologies that will enable the production of lunar infrastructure from ISRU-derived metals found on the Moon. Key products desired are storage vessels for liquids and gases, pipes, power cables, and supporting structures.

NASA's TechRise Student Challenge
The NASA TechRise Student Challenge invites teams of sixth to 12th-grade students to design, build, and launch science and technology experiments on high-altitude balloon flights during the upcoming 2022/2023 school year.

TRISH & "Space Health: Surviving the Final Frontier"
Supported by the NASA Human Research Program (HRP), TRISH is a virtual institute based at the Baylor College of Medicine with consortium partners Caltech and MIT. The Translational Research Institute for Space Health (TRISH) brings together in one central location research proposals from academic and pharmaceutical research institutions, as well as biotech and startup companies. We are building a thoughtful portfolio of scientific discovery and technologies with the potential to address pressing health and safety challenges in space travel – from LEO missions in the coming months to Mars missions in the next decade – with applications on Earth as well.

Wednesday Afternoon: 2:45 – 3:45 p.m.

ACTIVITIES AND SERVICES WORLD CAFE
Rooms 106/107

Artemis Camp Guides
The Artemis Camp Guides is a set of hands-on activities is intended for use in K-12 informal education settings and tells the story of NASA's Artemis Program that will land the first woman and first person of color on the Moon.

Educator Professional Development Collaborative (EPDC)
EPDC is a national educator professional development system composed of and designed to serve STEM educators at all levels including K-12 educators, pre-service teachers, higher education faculty and informal educators.

Learning Agenda 101
This session will describe the NASA STEM Engagement Learning Agenda and how NASA plans to conduct learning activities (i.e., performance assessment and evaluation activities) that generate evidence to answer key learning questions and support the achievement of performance goals.

Minority University Research and Education Project (MUREP) Connection Corner
Learn about agency funding through Engagement Opportunities in NASA STEM (EONS) and ways to connect with diverse academic collaborators at Minority Serving Institutions nationwide!

NASA Human Exploration Rover Challenge (HERC)
NASA Human Exploration Rover Challenge (HERC) challenges U.S. and International high school and college students to design and build a human-powered rover to traverse challenging terrain while completing scientific tasks along the way. As an Artemis Student Challenge, HERC draws inspiration from both the Apollo and Artemis missions, emphasizing designing, constructing, and testing technologies.

World Café Session Descriptions

NASA MITTIC Activity
Are you fascinated by NASA technology? Can you turn a creative idea into a real-world application? Do you want to be an entrepreneur? The Minority University Research and Education Project (MUREP) Innovation and Tech Transfer Idea Competition (NASA MITTIC) is your #SpaceToPitch! MITTIC is a spinoff challenge to develop new ideas for commercialization open to multi-disciplinary student teams attending Minority Serving Institutions (MSIs).

National Space Grant College and Fellowship Program (Space Grant)
Ask Me Anything About Space Grant!

Next Gen STEM & CONNECTS
Next Gen STEM & CONNECTS: Lean about OSTEM's K-12 Project, Next Gen STEM, serving students and support educators through an online community of practice, CONNECTS.

Opportunities in Informal Education: TEAM II/MIE Alliance
Discuss opportunities for support and involvement with NASA informal education programs. Open now - funding opportunity to be a NASA Community Anchor! Join the NASA Museum and Informal Education Alliance.

Re-imagining NASA Internships
Broadening student participation within intern cohorts; How to include internships in proposals.

SBIR/STTR Opportunities
Learn how you can participate in and benefit from the Small Business Innovation Research/ Small Business Technology Transfer (SBIR/STTR) program. There are several opportunities for research institutions and students.

STEMonstrations
Stop by the STEMonstration table to learn how astronauts on board the International Space Station are teaching students STEM content in a weightless environment.

Student App Development Challenge
Artemis Student Challenge in which students form teams to develop an app that creates a visualization of the Lunar South Pole based on NASA data.

TEAM II/Community Anchors
Learn about K-12 solicitation opportunities for informal education institutions, TEAM II and Community Anchors.

MISSIONS WORLD CAFE

Rooms 108/109

Activate Science Learning
Come find out about Science Mission Directorate learners of all ages in YOUR community.

Aeronautics Research Mission Directorate University Innovation Project
Discuss ARMD UI Opportunities such and University Leadership Initiative, University Student Research Challenge, and the Blue Skies Competition.

Aeronautics STEM Engagement Opportunities and Collaborations
Discuss NASA's Aeronautics missions with applications towards OSTEM and ARMD STEM Engagement Opportunities.

Great Lunar Expedition for Everyone
Collaborate on a student mission to the moon!

K-12 Quantum Education is here. Are you Ready?
Come and learn about quantum education in your classroom.

Kibo Robot Programming Challenge
The Kibo Robot Programming Challenge (Kibo-RPC) is an International Student Challenge led by JAXA in which students solve various problems by moving free-flying robots (Astrobee) with students' programs on the International Space Station (ISS).

Microgravity Neutral Buoyancy Experiment Design Teams (Micro-g NExT)
Micro-g Neutral Buoyancy Experiment Design Teams (Micro-g NExT), one NASA's Artemis Student Challenges, offers undergraduate students the opportunity design, build, and test mission enabling hardware that addresses an authentic, current space exploration challenge. The overall experience includes hands-on engineering design, test operations, and public

World Café Session Descriptions

outreach. Test operations are conducted in the simulated microgravity environment of the NASA Johnson Space Center Neutral Buoyancy Laboratory (NBL).

NASA Earth Missions: NISAR Student Engagement
Strategies, resources, and communication methods for student engagement through educational outreach, internships, and science workshops at JPL with subject matter experts from the NASA-Indian Space Research Organization Synthetic Aperture Radar (NISAR) mission to Earth.

NASA Spacesuit User Interface Technologies for Students (SUITS)
NASA Spacesuit User Interface Technologies for Students (SUITS) design challenge requires undergraduate and graduate student teams to design and create spacesuit information displays within augmented reality environments.

NASA Student Launch
NASA Student Launch, one of NASA's Artemis Student Challenges, is a 9-month long, engineering design challenge in which middle school, high school, college, and university students across the U.S. design, build and fly a high-powered rocket with a scientific or engineering payload.

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Acronyms

AA	Associate Administrator
AANAPISI	Asian American and Native American Pacific Islander-Serving Institutions
AFRC	Armstrong Flight Research Center
ANNH	Alaska Native and Native Hawaiian Institutions
ARC	Ames Research Center
ARMD	Aeronautics Research Mission Directorate
CONNECTS	Connecting our NASA Network of Educators for Collaborating Together in STEM
CoSTEM	Council for STEM Education Strategy
EPDC	Educator Professional Development Collaborative
EPSCoR	Established Program to Stimulate Competitive Research
ESDMD	Exploration Systems Development Mission Directorate
FY	Fiscal Year
GRC	Glenn Research Center
GSFC	Goddard Space Flight Center
HBCU	Historically Black Colleges and Universities
HERC	Human Exploration Rover Challenge
HQ	Headquarters
HSI	Hispanic Serving Institution
IEIs	Informal Education Institutions
IT	Information Technology
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
K-12	Kindergarten through 12th grade
KSC	Kennedy Space Center
LaRC	Langley Research Center
MAIANSE	MUREP for American Indian and Alaska Native STEM Engagement
MIE	Museum and Informal Education Alliance
MD	Mission Directorates
Micro-g NExT	Micro-g Neutral Buoyancy Experimental Design Teams
MINDS	MUREP Innovative New Designs for Space
MIRO	MUREP Institutional Research Opportunity
MITTIC	MUREP Innovation Tech Transfer Idea Competition
MSFC	Marshall Space Flight Center
MSI	Minority Serving Institution
M-STAR	MUREP Space Technology Artemis Research
MUREP	Minority University Research and Education Project
MUREP High Volume	MUREP Aerospace High-Volume Manufacturing and Supply Chain Management Cooperative
NCAS	NASA Community College Aerospace Scholars
NGS	Next Gen STEM
OCIO	Office of Chief Information Officer
OCOMM	Office of Communications
ODEO	Office of Diversity and Equal Opportunity
OSTEM	Office of STEM Engagement
P&E	Performance and Evaluation
PBI	Predominately Black Institution

Acronyms

R3	Rapid Response Research
RID	Research Infrastructure Development
SER	Southeast Regional Office
SOMD	Space Operations Mission Directorate
SMD	Science Mission Directorate
SME	Subject Matter Expert
SPARX	Sparking Participation and Real-world eXperiences in STEM
SSC	Stennis Space Center
STEM	Science, Technology, Engineering and Mathematics
STMD	Science Technology Mission Directorate
SUITS	Spacesuit User Interface Technology for Students
TCU	Tribal Colleges and Universities
TEAM II	Teams Engaging Affiliated Museums and Informal Institutions
TM	Technical Monitor

#NASASTEM Polo Orders

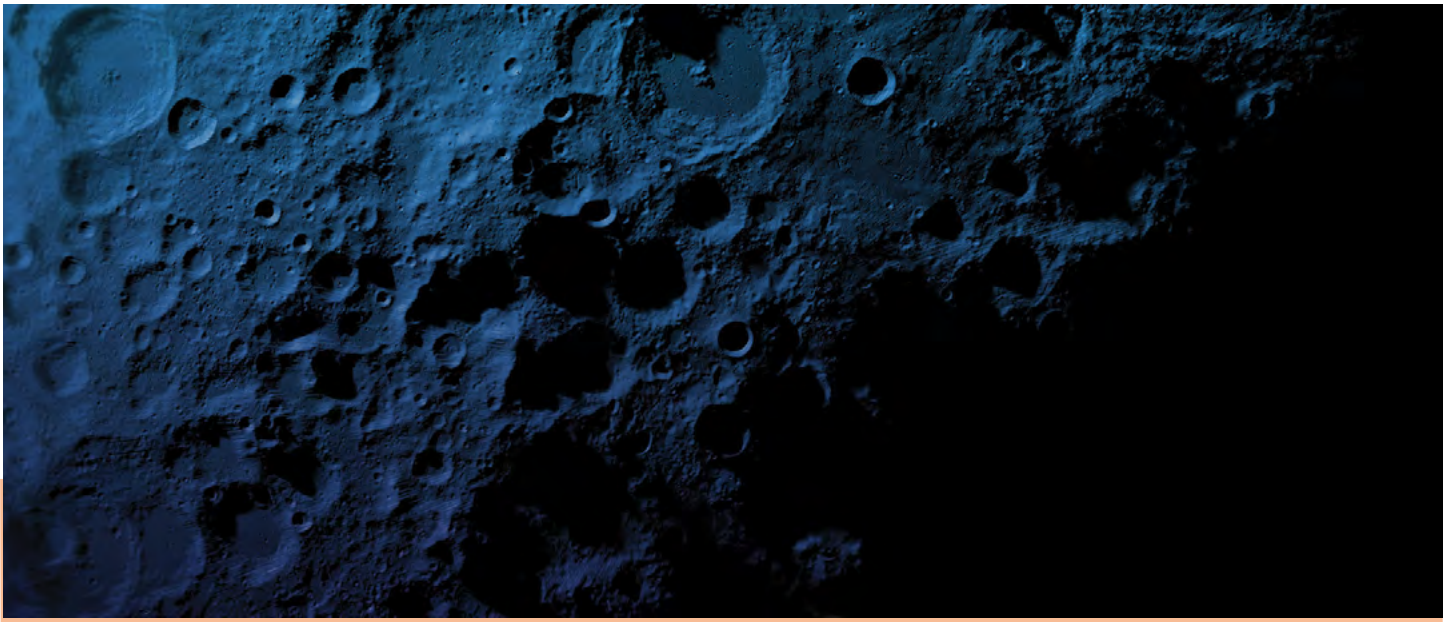
Get your #NASASTEM polo from the Johnson Space Center Exchange shop by going to: https://www.shopnasa.com/collections/nasastem-polos. Choose from men's or women's cut and a variety of colors including: black, steel grey, fuchsia, Carolina blue, royal blue, or teal.

Meeting Notes

Meeting Notes

Thank You

Thank you for participating in the
OSTEM BETTER TOGETHER 2022
Convene, Connect, Collaborate Meeting.



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