Welcome! Today’s presenters are:

Anna Hurst, Astronomical Society of the Pacific
Leah Silverberg, Afterschool Alliance
Charles Gibson, Michigan Science Center
Chandra N. Weathers and Sheree Westerhaus, Louisiana Art and Science Museum
Kim Botelho, Maria Mitchell Association, Nantucket’s Science Center

As we wait to get started with today’s discussion, please:

• **Update your display name.** Include your first and last names, and institution
• **Introduce yourself!** Type your name and institution into the Chat Box
• **Questions?** Feel free to type your questions into the Chat Box at any time throughout the online workshop or use the raise your hand function in the participants list and we’ll unmute your microphone

All workshops are recorded and archived online at

http://www.nisenet.org/event-type/online-workshop
The Afterschool Landscape: Getting to Know Your Potential Partners
# The Afterschool Alliance

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<th>Policy &amp; Advocacy</th>
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How is afterschool unique?

### Youth Development Goals
- Empowering young people
- Socio-emotional learning
- Positive relationships with adults
- Non-academic skills like leadership, confidence, teamwork, service (21st Century)

### Approach to Learning*
- Hands-on, experiential
- Project-based
- Experimentation & failure
- New entry points to topics
- Connected to communities, home cultures, and student knowledge & experiences

### Environment
- Low-stakes
- Flexible in time and space
- Community partnerships
America After 3 PM

DEMAND IS HIGH

More youth than ever before—
10.2 million
—are in afterschool programs.

• Household survey of how kids spend the hours after school

For every child in a program, 2 are waiting to get in.
Where are kids going?

Parents say their kids attend afterschool here*:

- Public: 43%
- Schools
  - Private: 11%
  - Boys & Girls Clubs: 18%
  - YMCA: 15%
  - 4-H: 5%
  - YWCA: 5%
- Libraries: 7%
- National Providers
- Science Centers & Museums: 3%

* Not all categories of afterschool sites reported on are represented in this chart.
# What are kids doing?

<table>
<thead>
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<th>Activity</th>
<th>Percentage</th>
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<tbody>
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<td>Opportunities for physical activity</td>
<td>80%</td>
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<tr>
<td>Homework assistance</td>
<td>77%</td>
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<td>Beverages, snacks and/or meals</td>
<td>72%</td>
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<tr>
<td>Opportunities for reading or writing</td>
<td>72%</td>
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<td>STEM learning opportunities</td>
<td>69%</td>
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<td>Academic programs/clubs</td>
<td>65%</td>
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<tr>
<td>Music or art</td>
<td>63%</td>
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<tr>
<td>Workforce skills development, such as teamwork, leadership and critical thinking</td>
<td>46%</td>
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<tr>
<td>Parent/family activities</td>
<td>45%</td>
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*Image credit: Afterschool Alliance*
Afterschool Providers

National Providers

Community-Based Organizations
Religious-based organizations, local community centers, public housing centers, immigrant or refugee service providers, etc.

Others
City-run afterschool programs through your Parks & Recreation Department or Police Athletic League.

School-Based Sites
Unique to every community!

The Connectory
- Database of STEM program providers looking for partners & resources
- Post your programs to the parent portal
What could you do?

Successful partnerships come in all shapes and sizes:
• Community of Practice
• Professional development
• Themed events
• Advocacy
• Committees/Networks/Boards
• Outreach programming
• Co-teaching
Partnership Tips

Key Steps:
1. Get a sense for your local landscape (youth-serving org in general)
2. Connect with system-builders
3. Find the right partner
4. Learn to speak each other’s language
5. Start small
6. Establish strong lines of communication
7. Build from there
RED PLANET PIONEERS
MICHIGAN SCIENCE CENTER
DETROIT, MI
CHARLES GIBSON
DIRECTOR OF INNOVATION AND OUTREACH
ABOUT MISC1

• The mission of the Michigan Science Center is to inspire curious minds of all ages to discover, explore and appreciate science, technology, engineering and math in a creative, dynamic learning environment.

• 190,000+ Annual Attendance

• 75,000+ Annual Outreach Impact
TRAVELING SCIENCE AND ECHO

- **83 County Initiative**
- **Workshops, Presentations, Science Festivals, virtual visits and webinars**
- **Schools, Libraries, Community Events**
- **STARLAB**
HOW WE USE THE KITS

• **Space / Astronomy Days**
• **Yuri’s Night – World Space Party**
• **Astronomy Events (Astronomy at the Beach - Milford, MI)**
• **Red Planet Pioneers**
RED PLANET PIONEERS

- **History**

- **What:** Afterschool Program – MiSci’s first

- **Where:** McIntyre Elementary, Southfield, MI

- **Who:** 3rd, 4th, and 5th grades – 25 students each supported by parent volunteers

- **When:** October 2017 – May 2018 (once a month)

- **Funded by the Michigan Space Grant Consortium**
RED PLANET PIONEERS

- **DELIVERABLES:**
  - **Once monthly – 1.5 hour program**
  - **Complete curriculum shared at no cost with educators in area**
  - **Professional development – space sciences**
RED PLANET PIONEERS

• **What we used:**
  • Craters, Orbiting Objects, Stomp Rockets, Mars Rover, Ice Orbs, Pocket Solar System, Imagining Life

• **What worked well: All of them! (with some tweaks)**
RED PLANET PIONEERS

• Partner support: 4H, Local Astronomy Clubs, McIntyre’s Teachers and Parent Network

• What’s next?
CHARLES GIBSON
DIRECTOR OF INNOVATION AND OUTREACH
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Louisiana Art & Science Museum

Earth & Space Toolkit Loaner Program
Louisiana Art & Science Museum Toolkit Loaner Program

Museum Mission Statement:

We seek to enhance the understanding and appreciation of art and science for general audiences and students by presenting unique, educational and entertaining experiences that encourage discovery, inspire creativity, and foster the pursuit of knowledge.
East Baton Rouge School System

- The East Baton Rouge School System is composed of 84 schools.
- Enrollment more than 41,000 students Pre-k-12th
- We are one of the largest school districts in the state among the top 100 nationally in student enrollment.
School Breakdown

- 48 Elementary Schools
  Grades Pre-k-5th
- 14 Middle Schools
- 14 High Schools
- 7 Charter Schools
Big Buddy Mentoring Program
Baton Rouge La.

- Youth Age 5-18
- Focus: Resiliency against poverty, crime and academic failure.
- Serving Baton Rouge community for 35 years.
- On an average serves 500 young people per week.
Big Buddy Mentoring Program
Baton Rouge La.

- This program houses after school programs in our public schools within the inner city community.
- Program provides:
  - Enrichment Needs
  - Tutoring Sessions
  - Holiday Camps
  - Summer Enrichment Programs
On July 26, 2018 The Louisiana Art & Science Museum will host The Louisiana State Department of Education STEM Afterschool Program Workshop.
Toolkit Loaner Program

Selection Process
Selection Process

- Schools participating in Space Toolkit Loaner Program were selected according to their zip code.
- We choose schools in the 70802 zip code.
- The Louisiana Art & Science Museum is located at 100 River Road South Baton Rouge, La. 70802
Selection Process

- 9 Elementary Schools
- 1 Charter School
- Target Grades: Pre-K-5\textsuperscript{th}
Toolkit Loaner Program

Storage & Travel
Storage

- Sterilite Storage Containers 1872, 1874, and 1876 Nesting Showoffs.
- These containers provide durable latches to ensure the lid remains securely attached to the base.
- The clear base allows for easy item identification of contents inside the storage container.
Travel

- Best Choice Products-Folding Utility Wagon
- Space-Saving and Lightweight
- It’s made of durable steel and heavy-duty polyester fabric that can haul up to 150 pounds.
- Foldable design makes it easy for transportation and storage.
Travel
Toolkit Loaner Program

Work In Progress
To Do List

- Personal Visit To Selected Schools
- Toolkit Inventory Spread Sheet
- Space Toolkit Invitation to Launch Celebration
- Welcome Letter
- Certificate of Participation
- Program Survey
Inspiring Minds!

- The Louisiana Art & Science Museum would like to be the light that sparks an interest in Earth and Space Science within the inner city communities of Baton Rouge, Louisiana.
The Louisiana Art & Science Museum will launch our Earth Space Toolkit Loaner Program on August 23, 2018!

We are hope to have an exciting adventure during the 2018-2019 School Year!
The Maria Mitchell Association honors Maria Mitchell’s contributions to astronomy, science, and education. We strive to inspire others with her legacy of intellectual curiosity, respect for and love of nature, learning by doing, and the ideal of individualism.

MMA’s mission is to inspire exploration, enjoyment and understanding of Nantucket’s land, water and skies. We aim to increase interest, enthusiasm and engagement in science through hands-on education and research experiences using Nantucket as a laboratory for children and families, aspiring scientists and science enthusiasts of all ages.
The mission of the Nantucket Community School is to engage, strengthen, and connect our community.

Our partner for:
- Annual Nantucket Science Festival
- STEM/STEAM Based Playground
- Spring and Fall Afterschool programs for Nantucket Public School System

2018 Nantucket Science Festival
March 17th at Nantucket High School Gymnasium
All Free-of-Charge
Over 450 people attended
Helpful Tips for Planning your Afterschool Program

Activity: Stomp Rockets

• Make your tubes a little bigger by applying tape

• Allow children to get creative by modifying the nose cone and adding fins

• Buy extra hose to cut so children can continue to use their stomp rocket at home with their own 2 liter bottle

• Add single or multiple store bought launch pads so all children can go at once

• Try straw rockets for an added challenge with older children

Helpful Tips for Planning your Afterschool Program

Activity: Recon Rovers

- Consider floor type when planning
Helpful Tips for Planning your Afterschool Program

Activity: Light Filters

• Expand your afterschool series to include more of the electromagnetic spectrum with older children

• Start with this kit and the visible spectrum. Show children a chart of the entire electromagnetic spectrum and how small the visible light range is

• Since astronomers often use “invisible” light to study space, infrared can be demonstrated in many ways using an infrared or “thermal” camera.

• Objects in space, such as dust or nebulae, that are “cooler” than our eyes are able to see. Show children an image of a nebula viewed this way and how we can also see the infrared radiation we emit too with these cameras
Helpful Tips for Planning your Afterschool Program

Activity: Light Filters and Craters

• To continue study of electromagnetic spectrum, next explore Ultraviolet light

• Scientists also use UV light to study outer space. You can show them images from satellites of extreme UV, only collectable from outer space.

• Connect UV to sunscreen so they understand how this type of light could hurt us and that we are lucky the earth’s atmosphere stops so much of it.

• Bring it down to earth:
  1. Some birds, bees, and certain fish can see UV light
  2. You can use the UV light in the crater kit to look at juvenile bird feathers...some glow!
  3. Some forms of lichen give off UV radiation
  4. Look at butterfly wings, etc
THANK YOU!
Questions?
New Opportunities with the NISE Net

Explore Science: Let’s Do Chemistry Kit
Applications due June 1, 2018
Kit Overview document and how to apply:

nisenet.org/chemistry-apply

Explore Science: Earth & Space 2019 Toolkit
Application opens later this year
Information, including links to the 2017 & 2018 past digital toolkits:

nisenet.org/earthspacekit
Upcoming Online Workshops

Be Prepared: Safety Tips and Reminders for Museums Running Public Events, Including National Chemistry Week and Earth and Space Events
Tuesday, June 12, 2018
2pm-3pm Eastern / 11am-12pm Pacific

Girl Scouts and STEM: New Space Science Badges and Opportunities to Connect with the Earth and Space Toolkits
Tuesday, August 21, 2018
2pm-3pm Eastern / 11am-12pm Pacific
Observing Our Nearest Neighbor, the Moon

Online workshop for informal educators

June 18 - 29, 2018

Live sessions:
1pm Pac / 4pm Eas, June 18, 25, 28

Register by June 10:
https://www.surveymonkey.com/r/MoonWorkshop2018
Thank You

Learn more and access the NISE Network’s online digital resources: nisenet.org

Subscribe to the monthly newsletter: nisenet.org/newsletter

Follow NISE Net on social networking: nisenet.org/social

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