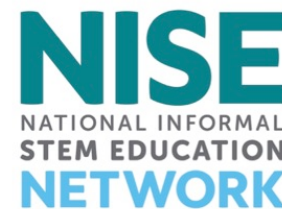


# NISE Network Online Workshop

Museum Community Partnerships – Afterschool Programs:  
Advocating, Collaborating and Bringing Earth and Space Content to  
Out-of-school Time

May 22, 2018



**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



Afterschool Alliance

# The Afterschool Alliance

1

## Policy & Advocacy

- National policy
  - Families & children; STEM
- Advocacy day on Capitol Hill
- Lights On Afterschool



2

## Research

- Translate & synthesize research
- Issue briefs & reports
- Collect data

relating  
research  
to  
practice



3

## Field-Building

- 50 state networks
- Partnerships for policy, research, & practice
- Best practices & models
- Webinars, blogs, toolkits, & other resources

# 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 (21<sup>st</sup> Century)

## Environment

- Low-stakes
- Flexible in time and space
- Community partnerships

## Approach to Learning\*

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

# America After 3PM

## 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,

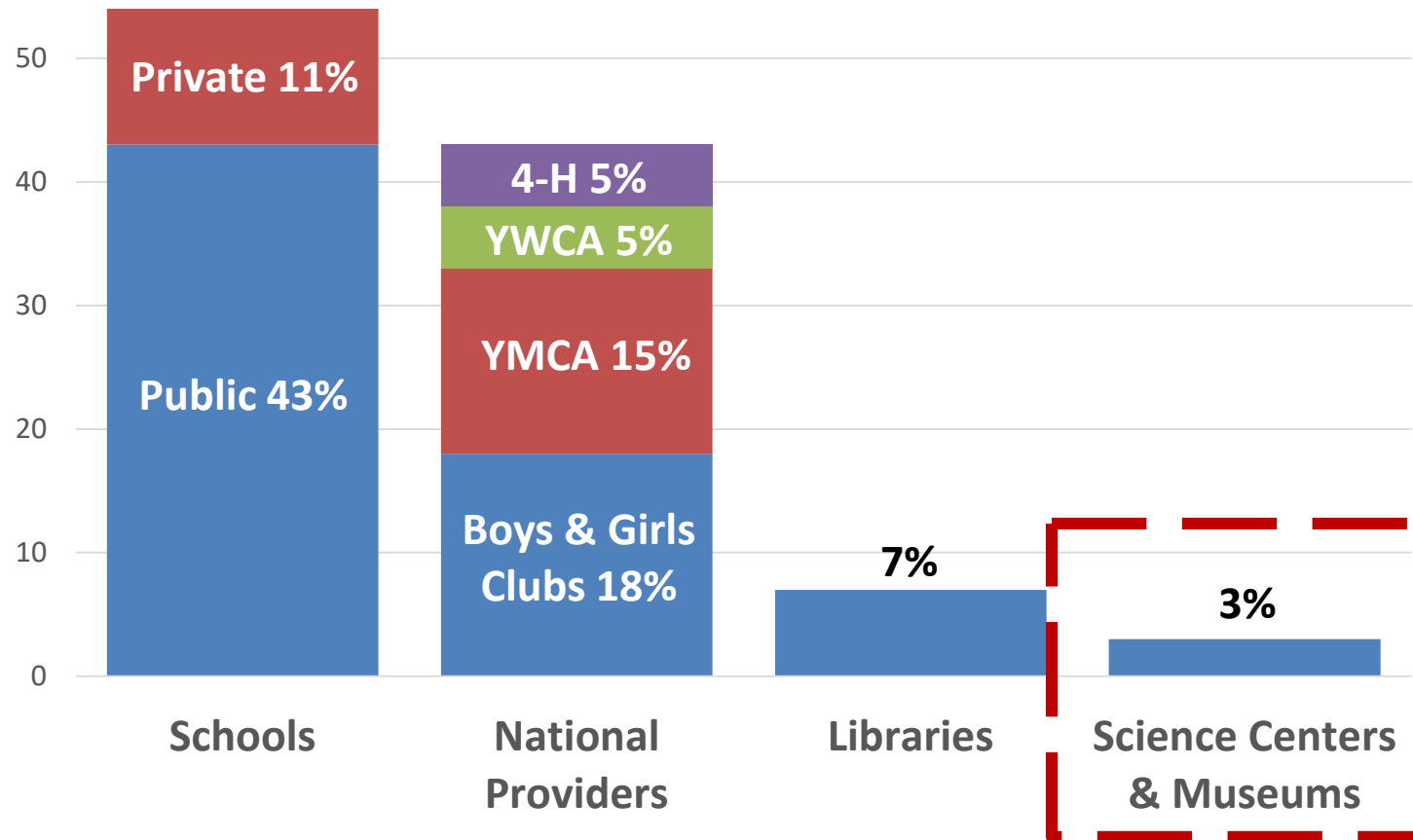


2 are waiting to get in.



# Where are kids going?

Parents say their kids attend afterschool here\*:





# What are kids doing?

## OPPORTUNITIES FOR PHYSICAL ACTIVITY

80%

## HOMEWORK ASSISTANCE

77%

## BEVERAGES, SNACKS AND/OR MEALS

72%

## OPPORTUNITIES FOR READING OR WRITING

72%

## STEM LEARNING OPPORTUNITIES

69%

## ACADEMIC PROGRAMS/CLUBS

65%

## MUSIC OR ART

63%

## WORKFORCE SKILLS DEVELOPMENT, SUCH AS TEAMWORK, LEADERSHIP AND CRITICAL THINKING

46%

## PARENT/FAMILY ACTIVITIES

45%

# 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 Connector

- Database of STEM program providers looking for partners & resources
- Post your programs to the parent portal



# System-Builders for Afterschool

## State & Local



**Statewide Afterschool Networks**  
*Funded by C.S. Mott*



**City / Regional Intermediaries**  
*e.g. Every Hour Counts*

## National Organizations



**National AfterSchool Association**



**Afterschool Alliance**



**National Summer Learning Association**



# 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 MISCI



- 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



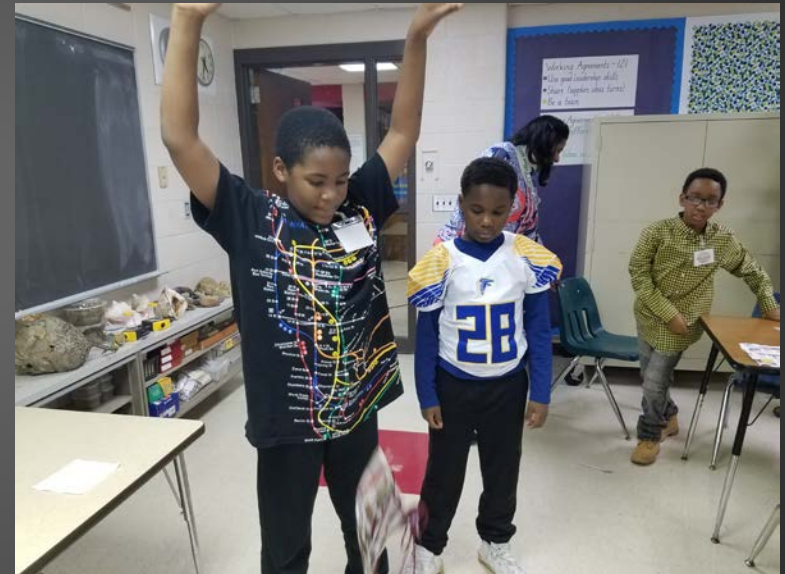
# RED PLANET PIONEERS



- HISTORY
- WHAT: AFTERSCHOOL PROGRAM – MISCI'S FIRST
- WHERE: MCINTYRE ELEMENTARY, SOUTHFIELD, MI
- WHO: 3<sup>RD</sup>, 4<sup>TH</sup> AND 5<sup>TH</sup> 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





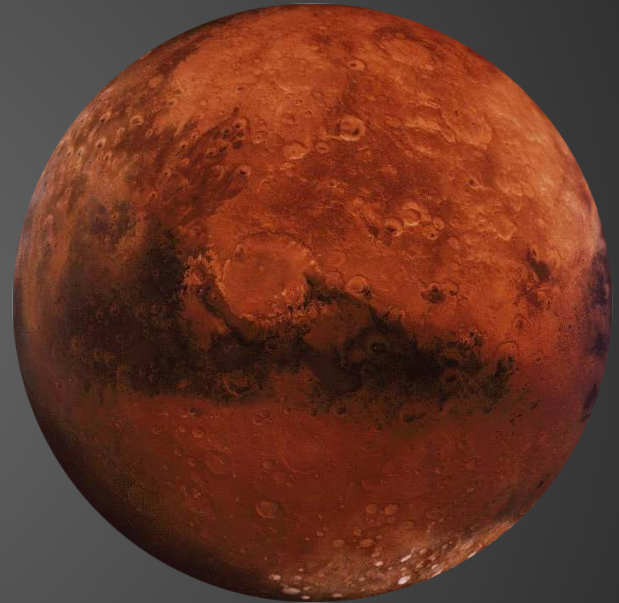
# RED PLANET PIONEERS

- 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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DETROIT, MI 48202

MI-SCI.ORG

@MI\_SCI (TWITTER AND INSTAGRAM)

# 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.



# Toolkit Loaner Program

Collaboration

# East Baton Rouge School System



- The East Baton Rouge School System is composed of 84 schools.
- Enrollment more than 41,000 students Pre-k-12<sup>th</sup>
- 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-5<sup>th</sup>
- 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

# La. State Dept. of Education

- 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<sup>th</sup>





# 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!

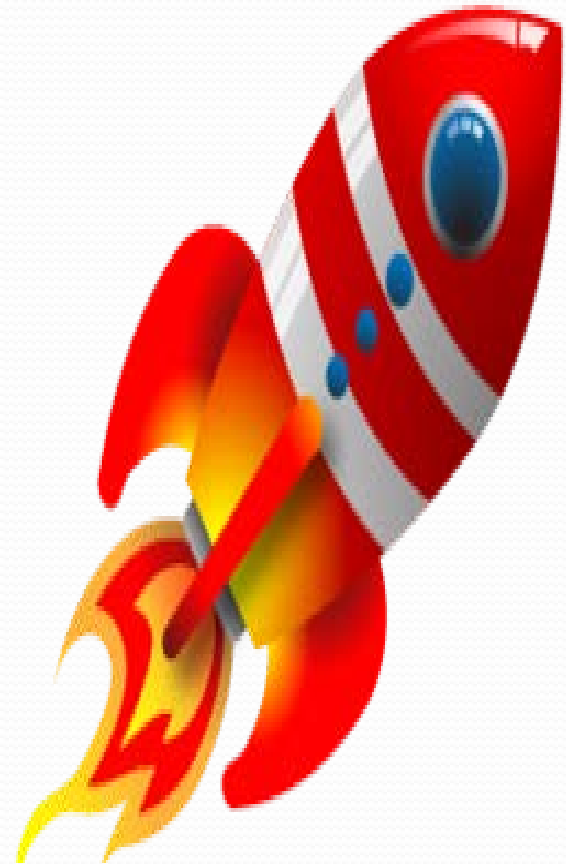
- The Louisiana Art & Science Museum would like to be the light that sparks an interest in Earth and Space Science within the inner city communities of Baton Rouge, Louisiana.





# Toolkit Launch Date

- 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!





# Maria Mitchell Association

Kim Botelho, Director of Education

[kbotelho@mariamitchell.org](mailto:kbotelho@mariamitchell.org), 508-228-9198



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.



# Nantucket Community School

ENGAGING, STRENGTHENING & CONNECTING OUR COMMUNITY

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 17<sup>th</sup> 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  
<https://www.jpl.nasa.gov/edu/pdfs/sodastrawrocket.pdf>





# Helpful Tips for Planning your Afterschool Program



## Activity: Recon Rovers

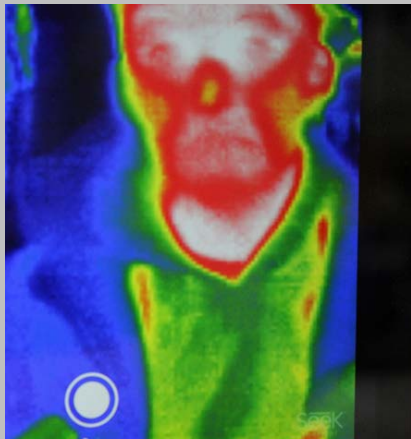
- Consider floor type when planning

# 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

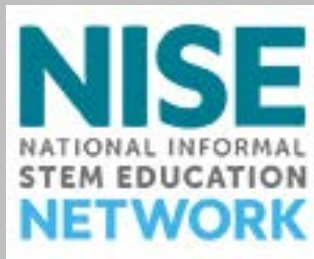


## Activity: Light Filters and Craters

- 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!



EXPLORE SCIENCE  
**Earth & Space**

# 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](https://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](https://nisenet.org/earthspacekit)



# Upcoming Online Workshops



[nisenet.org/events](https://nisenet.org/events)

**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:

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