

Welcome NISE Network Partners!

While we wait for everyone to join, please type a response to the following question in the text box to get the conversation going.

Has your museum offered programs or activities specifically designed to reach girls?



Tips and Tricks for Engaging Girls in Museum Programing

Presenters:

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Durango Discovery Museum

Today's Conversation



Tips and Tricks for Engaging Girls in Museum Programming

Join NISE Net partners for a conversation on how to better engage girls in museum programming! Presenters will share lessons learned, resources from PBS programming SciGirls and NSF funded Girls RISE (Raising Interest in Science and Engineering) Museum Network, and some specific tips and tricks to better engage girls in upcoming NanoDays 2015 activities.

Reaching Diverse Audiences



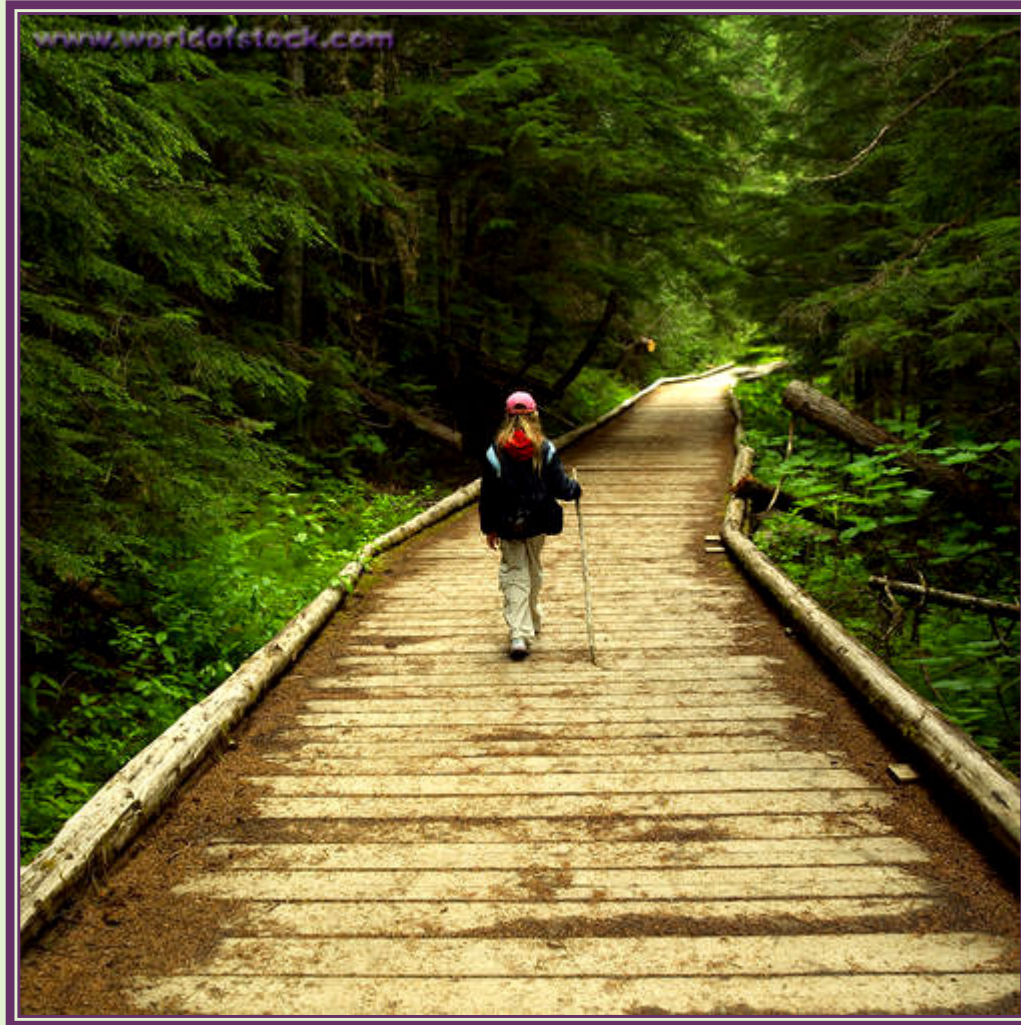
Inclusive Audiences

Raising our capacity to effectively engage underserved and underrepresented audiences

Why use an Inclusive Audiences approach?

- Museums are uniquely situated to educate the public, inspire youth, and provide access to learning experiences.
- Inclusive approaches help reach all audiences more effectively.
- It allows us to go beyond education and inspiration to empowerment and social justice.

Our Work is a Journey...





A national partnership to help informal science educators engage and motivate minority girls in grades 6-12 to explore science and engineering careers.

The screenshot shows the homepage of the girlsRISEnet website. At the top, there is a navigation bar with links for "Home", "Contact", "Sitemap", and "Login". A search bar is located on the right side of the navigation bar. Below the navigation bar, there are five main menu items: "ABOUT", "WORKSHOPS", "ENGINEERING", "RESOURCES", and "SHOWCASE". The "WORKSHOPS" menu item is highlighted in green. The main content area is divided into two columns. The left column has a "Workshops" section with a list of links: "Select a Region", "Calendar", and "Mini grants". Below this is a "Showcase" section featuring a news item titled "Science Program Inspiring Creative Exhibits (SPICE)" with a brief description and a "Read More" link. At the bottom of the left column is a "Resources Tag Cloud" with various tags like "minorities", "diversity", "statistics", etc. The right column has a "WORKSHOPS" section with a "Select a Region" heading and a paragraph explaining the network's mission. Below the text is a map of the United States with different regions highlighted in various colors. At the bottom of the right column is a legend for the regions, showing the number of items for each region: North East (0), Mid Atlantic (0), E North Central (0), W North Central (0), N South Atlantic (3), S South Atlantic (0), W South Central (0), E South Central (2), Mountain (1), S Pacific (0), and N Pacific (0).

Question for Attendees

Is anyone already a Girls RISEnet partner?

Has anyone used Girls RISEnet resources?

The screenshot shows the homepage of the Girls RISEnet portal. At the top right, there are navigation links for Home, Contact, Sitemap, Logout, and My Account, along with a search bar. Below the navigation is a main menu with categories: ABOUT, WORKSHOPS, ENGINEERING, RESOURCES, and SHOWCASE. The main content area is divided into several sections:

- Welcome!**: A blue header section with a list of bullet points: "Find a Girls RISEnet workshop in your region.", "Explore resources and research on engaging girls in STEM learning.", "Connect with engineering societies and mentors.", "Stay current on Girls RISEnet activities." Below the list is a link to "join the Girls RISEnet network!" and a "Learn More" button.
- Regional Workshops**: A green header section featuring a map of the United States with gears overlaid. A specific workshop is highlighted: "08/21/14 Programmable Push" with a "View More Workshops" button.
- Engineering Corner**: An orange header section with a sub-header "Professional Engineering Societies" and a paragraph explaining their role. Below it is a sub-header "Engineering and Science Activities" with a "Visit Engineering Corner" button.
- Resources Tag Cloud**: An orange header section with a list of tags including "Informal Learning-Education, STEM, Identity, Research-Report, Workforce, Policy, Formal Education, Gender, Learning Research, Instructional Strategy, Instructional Strategies, Mentors, Program Model, Role Models-Mentors, Cultural Competence, Media, Technology, Equality-Equity-Disparities, Website, Evaluation..." and a "View More Resources" button.
- Showcase**: A purple header section with a sub-header "June, 2014 Newsletter" and a paragraph about "World Oceans Day!" with a "Read More" link. Below it is a "View Showcase" button.
- Featured Resources**: A blue header section with two resource entries: "Google Puts \$50 Million Toward Getting Girls Into Coding" with a "View Resource" link, and "The Condition of Education 2014" with a "View Resource" link. Below it is a "View More Research" button.

At the bottom of the page, there is a footer with navigation links: Home, About, Workshops, Engineering, Resources, Showcase, Contact, Site Map, My Account. It also includes copyright information: "Copyright © Museum of Science, Inc. 2014" and "Site Design by Wood Street, Inc."

Regional Meetings

NISE Net/Girls RISEnet Regional Meeting

- OMSI in Portland, OR

Girls RISEnet Regional Meetings

- OMSI in Portland, OR
- Museum of The North, Fairbanks, AK
- Tahoe Environmental Research Center,
Lake Tahoe, NV



A Guide for Engaging Girls in NanoDays 2015

NISE Net is creating a quick and easy tool for Nanodays 2015 kits for helping facilitators to engage with girls.

NanoDays

The Biggest Event for the Smallest Science!

Tips for Engaging Visitors

Greet visitors

Say "hello," make eye contact, and smile. Simply looking like you're available and friendly will bring visitors to your station.

Let visitors do the activity

As much as possible, let visitors do the hands-on parts of the activity, and let them discover what happens. (If your activity has a surprise, don't give it away!)

Share what you know

Use clear, simple language. Focus on one main idea—don't feel that you need to tell visitors everything at once! Keep the information basic for starters, and be willing to expand on an idea for interested learners.

Use examples from everyday life

Familiar examples can help explain abstract concepts. Be aware of visitors' abilities, keeping in mind that children do not have the same skills or vocabulary as adults.

Ask questions

Help visitors observe and think about the activity. Try to use questions that have more than one answer, such as:

- What do you see happening?
- Why do you think that happened?
- What surprised you about what you saw?
- Does this remind you of anything you've seen before?

Be a good listener

Be interested in what visitors tell you, and let their curiosity and responses drive your conversation forward.

Offer positive and encouraging responses

If visitors haven't quite grasped a concept, you might say, "That's a good guess," or "Very close, does anyone else have something to add?" Don't say, "No" or "Wrong" in response to visitors' observations or explanations.

Share accurate information

If you aren't sure about something, it's OK to say, "I don't know. That's a great question!" Suggest that visitors go to whatisnano.org to learn more about nanoscale science, engineering, and technology.

Remain positive throughout the interaction

Remember that nonverbal communication is important, too. Try to maintain an inviting face and body language.

Thank visitors

As your interaction ends, suggest that visitors explore other NanoDays activities.

HAVE FUN! © A positive experience will lead to learning.



Tips for Engaging Girls

Tip 1: Feature female role models

Tip 2: Make it social

Tip 3: Engage the senses

Tip 4: Tell a story



Tips for Engaging Girls

Tip 5: Highlight altruism

Tip 6: Make it Personal

Tip 7: Use inclusive language

Tip 8: Encourage creativity

Tip 9: Make sure there are many “right” answers



Questions from the Audience

Please either type a question in the chat box or “raise your hand” to ask a question.





SciGirls

Ways to Engage Girls in Museum Programming

Jessie Herbert
Public Education Specialist
spectrUM Discovery Area



UNIVERSITY OF MONTANA
spectrUM



To change how millions of girls (ages 8-13) think about STEM



- ★ On TV
 - national PBS Kids series
- ★ Online
 - safe, social networking website
- ★ On the Ground
 - activities and professional development



Girls everywhere can join the SciGirls revolution online at:
pbskids.org/scigirls



Scigirlsconnect.org is a great website for educators!

The screenshot shows a web browser window with the URL scigirlsconnect.org. The browser's address bar and tabs are visible. The website's main banner features the SciGirls logo, a cartoon girl character, and the word "CONNECT". Below the banner is a navigation menu with links: About SciGirls, My Page, Activities, Video, en español, Groups, Learn, Program Resources, Forum, and Photos. The main content area is divided into three columns. The left column has a "Members" section with a grid of profile pictures and a "Sign Up for Our Newsletter!" section. The middle column has a "Welcome New Certified SciGirls Trainers!" section with a photo of a group of women. The right column has a user profile for "Jessie Herbert" with links for Sign Out, Inbox, Alerts, Friends - Invite, and Settings. Below the profile are sections for "SciGirls on Facebook" with a "Like" button and "SciGirls on Twitter" with a "Follow" button and a tweet from SciGirls dated 22 Jul.





**Can you share with the group
a strategy that you have used
that worked well with
engaging girls?**



- 1. Girls benefit from collaboration, especially when they can participate and communicate fairly.** (Parker & Rennie, 2002; Fancsali, 2002)





- 1. Girls benefit from collaboration, especially when they can participate and communicate fairly.** (Parker & Rennie, 2002; Fancsali, 2002)
- 2. Girls are motivated by projects they find personally relevant and meaningful.** (Eisenhart & Finkel, 1998; Thompson & Windschitl, 2005; Liston, Peterson, & Ragan, 2008)



3. Girls enjoy hands-on, open-ended projects and investigations. (Chatman, Nielsen, Strauss, & Tanner, 2008; Burkam, Lee, & Smerdon, 1997; Fanscali, 2002)



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- 4. Girls are motivated when they can approach projects in their own way, applying their creativity, unique talents and preferred learning styles.** (Eisenhart & Finkel, 1998; Calabrese Barton, Tan, & Rivet, 2008)



5. **Girls' confidence and performance improves in response to specific, positive feedback on things they can control – such as effort, strategies and behaviors.** (Halpern, et al., 2007; Zeldin & Pajares, 2000; Blackwell, Trzesniewski, & Sorich Dweck, 2007; Mueller & Dweck, 1998)



- 5. Girls' confidence and performance improves in response to specific, positive feedback on things they can control – such as effort, strategies and behaviors.** (Halpern, et al., 2007; Zeldin & Pajares, 2000; Blackwell, Trzesniewski, & Sorich Dweck, 2007; Mueller & Dweck, 1998)



- 6. Girls gain confidence and trust in their own reasoning when encouraged to think critically.** (Chatman, et al., 2008; Eisenhart & Finkel, 1998)



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- 6. Girls gain confidence and trust in their own reasoning when encouraged to think critically.** (Chatman, et al., 2008; Eisenhart & Finkel, 1998)
- 7. Girls benefit from relationships with role models and mentors.** (Liston, et al., 2008; Evans, Whigham, & Wang, 1995)



My Own Strategies

Play Music in the Background!

It's fun to dance to, gets girls having fun

Share your own stories

Talk about real life problems

Girls like problem solving, and nano is a great way to talk about how scientists are figuring out solutions to real problems

Games and Icebreakers

SciGirls BrainSTEM Game

Nano Board Game

Nano and Society activities



National Girls Collaborative Project



National Girls Collaborative Project

CREATE AN ACCOUNT > LOG IN > Search

ABOUT GET INVOLVED PROGRAM DIRECTORY EVENTS RESOURCES BLOG **DONATE**



Advancing the Agenda in Gender Equity

Encouraging girls to pursue careers in Science, Technology, Engineering, and Mathematics.



FIND

A Collaborative in your Area.



SUBMIT

Your Program to our Directory.



CONNECT

With Resources and Partners.



www.ngcproject.org



pbskidsgo.org/scigirls

pbs.org/teachers/scigirls

pbs.org/parents/scigirls

scigirlsconnect.org



facebook.com/scigirlstv



twitter.com/SciGirls

ngcproject.org

spectrUM.umt.edu

jessie.herbert@umontana.edu

(406)728-STEM



Powerhouse Science Center

(formerly Durango Discovery Museum)



- Initially, we thought PSC was serving equal numbers of girls and boys, but upon closer examination of our stats:
 - Only 39% of program participants were girls
 - Only 4 of our 19 interns were girls
- So....we applied for a Girls RISEnet mini-grant and a Women's Foundation of CO grant



Girl-Centric Marketing techniques



STEM-Power:
Growing the Future with You!

Right now, women are changing the world through Science, Technology, Engineering, and Math (STEM) – and it's your creativity and curiosity that's going to make the future of scientific innovation happen!

This *FREE* evening of hands-on experiments and friendly collaboration with local female engineers, scientists, mathematicians, and IT specialists is sure to challenge and inspire young, girl scientists, ages K-5th grade.

Wednesday, May 21 / 6-8pm
at Durango Discovery Museum

For more information or to register, contact Sarah at (970) 403-1863 or sarah@durangodiscovery.org.

This material is neither sponsored nor endorsed by Durango School District #18.



- Wording
- Visuals
- Color choices
- Creativity
- Collaboration
- Service-based
- Role Models
- Girls-only

Girl-Centric Marketing techniques

**BUILDING ROBOTS. BUILDING TEAMWORK.
BUILDING THE SCIENTISTS AND ENGINEERS
OF THE FUTURE.**



FIRST LEGO League Robotics is a global program for students ages 9-14 to build, test, and program an autonomous robot to conquer theme-based challenges. Four Corners FLL is now one of five official qualifying competitions for the New Mexico State FLL Tournament!



FOUR CORNERS FIRST LEGO LEAGUE

A new season gears up September 8, 2014.

HELP BUILD THE FUTURE. Team and individual registration is Sept. 2 and 4, from 5-6pm. Attending only one registration meeting is necessary. Contact Sarah at Sarah@PowSci.org for more information.



**CREATING ROBOTS. USING TEAMWORK TO
SOLVE WORLD ISSUES. BECOMING THE
SCIENTISTS AND LEADERS OF THE FUTURE.**



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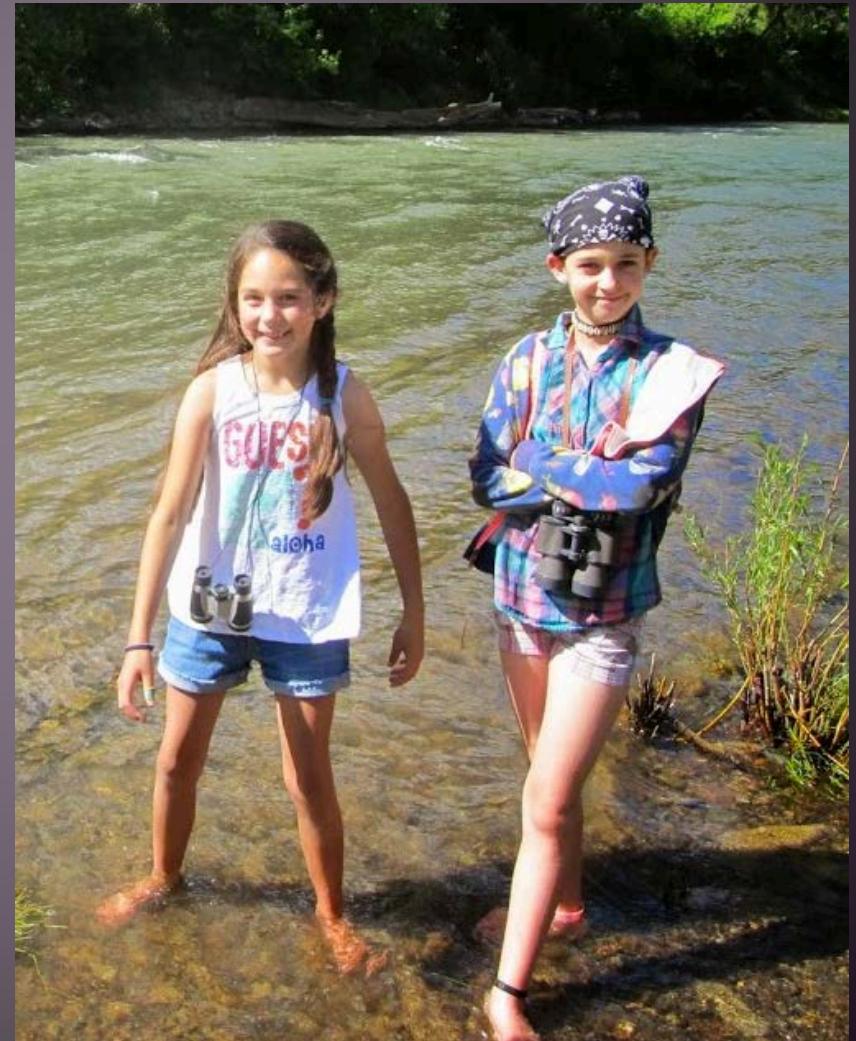
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Girl-Centric Programming: Girls Geek Boutique and Citizen Science Summer Camps



Girl-Centric Programming: All-Girls LEGO League Team



Girl-Centric Programming: Girls STEM-Power Event



Girl-Centric Programming: Sleepovers at the Museum



Mixed Audiences

What is the
secret?

Variety!

Variety!

Be careful of
Assumptions.

Some girls like
loud and messy!



Planning

Variety!

- Style points
- Social
- Creative
- Open-ended



Planning

Variety!

Stories



Examples



Analogies



Our Favorite Resources

"YOUNG GIRLS NEED TO SEE ROLE MODELS IN WHATEVER CAREERS THEY MAY CHOOSE, JUST SO THEY CAN PICTURE THEMSELVES DOING THOSE JOBS SOMEDAY. YOU CAN'T BE WHAT YOU CAN'T SEE."

— SALLY RIDE



A Mighty Girl
Liked · 11 mins ago

Advanced Girl: Ride on why role models matter: "Young girls need to see role models in whatever careers they may choose, just so they can picture themselves doing those jobs someday. You can't be what you can't see."

Physicist Sally Ride became the first American woman in space as a crew member on the Space Shuttle Challenger in 1983. In the years after she left NASA, Ride devoted much of her life to... See More

Like · Comment · Share

241 people like this

43 shares

Write a comment...

Sponsored by  Create Ad

 NYC Tour Bus Settlements
tourbussettlement.com
Get a Refund from a Settlement Reached with Gray Line or CitySightS Bus Tours of NYC

amightygirl.com



SciGirls Projects Friends Games Video Rewards English

How to affect whether an egg hatches without the scientist??

JOIN!

WATCH!

PLAY!

pbskids.org/scigirls/



girlsrisenet

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ABOUT WORKSHOPS ENGINEERING RESOURCES SHOWCASE

Welcome!
Welcome to the Girls RISEnet portal. Here's what you can find on the site:
• Find a Girls RISEnet workshop in your region.
• Explore resources and research on engaging girls in their learning.
• Connect with engineering societies and mentors.
• Stay current on Girls RISEnet activities.
We welcome you to the Girls RISEnet network!

Regional Workshops
View More Workshops

Engineering Corner
Professional Engineering Societies
An engineering society is a professional organization for engineers. Some focus on providing support to women and minorities, some are employer organizations that recruit highly talented individuals, others are discipline-specific. [Read More](#)
Engineering and Science Activities
Use these activities to better understand and appreciate science and engineering on [Read More](#)
Visit Engineering Corner

Resources Tag Cloud
Informal Learning-Education, STEM Identity, Research-Report, Workforce Policy, Formal Education, Gender, Learning Research, Instructional Strategy, Mentors, Program Model, Role Models-Mentors, Cultural Competence, Media Technology, Equality-Equity-Disparities, Website, Evaluation... [View More Resources](#)

Showcase
June, 2014 Newsletter
June 20th is [Girls' Super Day](#). There are many ways you can participate and make it... [Read More](#)
View Showcase

Featured Resources
Google Pays \$50 Million Toward Getting Girls Into Coding
[Learn More](#)
The Condition of Education 2014
National Center For Education Statistics (NCES) [View Results](#)
View More Resources

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girlsrisenet.org



NISE network
NANOSCALE INFORMAL SCIENCE EDUCATION

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Social Networking
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Mini-grants
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About Audiences

The NISE network creates educational products for a wide range of public audiences in informal learning settings. The NISE network also creates a variety of professional development materials for scientists and educators to raise their capacity to engage the public in nanoscale science, engineering, and technology.

Inclusive Audiences Approach

The NISE Network seeks to increase professional and institutional capacity to effectively engage underserved and underrepresented audiences, including girls, bilingual audiences, and persons with disabilities, in informal learning experiences related to nanoscale science and technology.

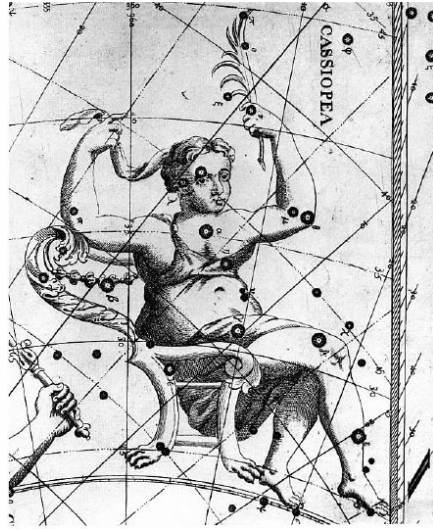
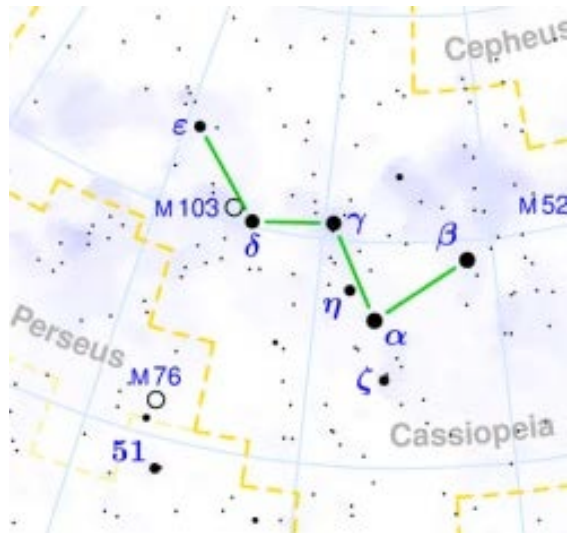
The NISE Net strives to reach a diverse audience with regard to geography, disability, gender, racial/ethnicity, language and income. Some examples of this work include:

- Geography:** building partnerships with existing regional networks and other informal learning organizations that serve rural areas
- Disabilities:** using Universal Design principles when designing programs and exhibits, making video materials more accessible through the use of video captions, and using audio labels and audio descriptions for exhibits.
- Gender:** partnering with informal learning organizations that serve girls
- Race/Ethnicity:** partnering with diversity-serving organizations
- Language:** translating many public education materials into Spanish
- Income:** encouraging partners to collaborate closely with community partners

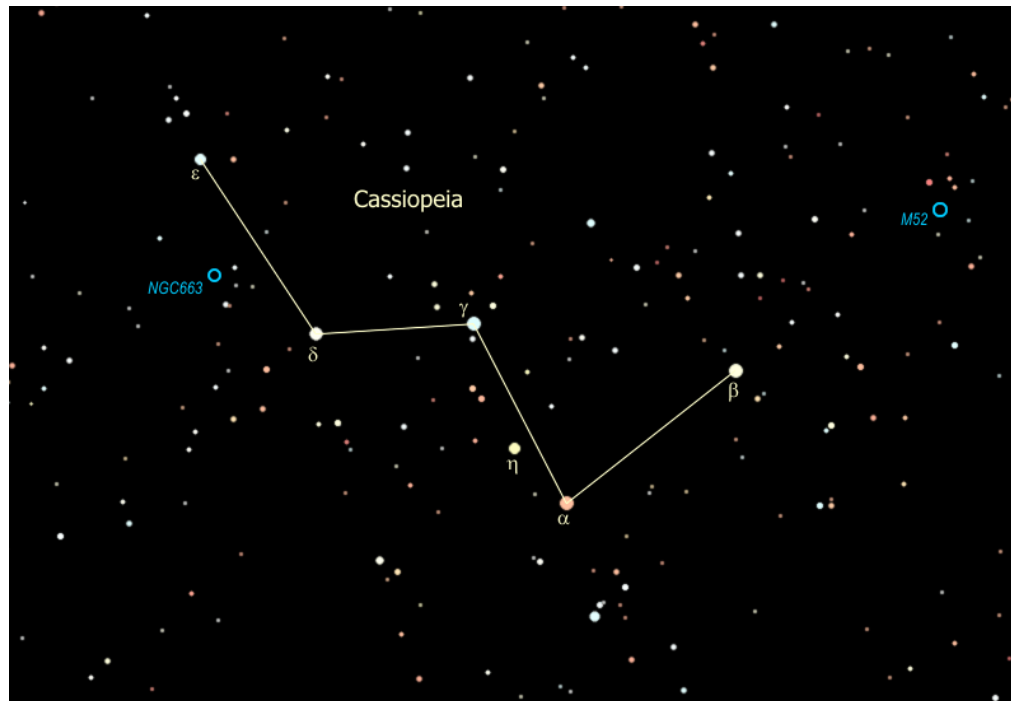
Available on the website:

- Spanish Language Translations: A listing of all the NISE Network Spanish language resources, including nanoDays activities, selected longer length programs, media, and graphics.
- Translation Process Guide: A guide describing the NISE Network's translation process, including a Spanish Style Guide and

Nisenet.org



Which picture would you choose?



Implementation

Variety!



Listening

“What does it remind you of?”

“What does it look like?”

“What do you think?”

“How do you know?”



Watching Interactions

Is everyone engaged?

What interests them?

Be ready with extra supplies!

Speaking

Use inclusive language.

Use affective language.

What does success look like?



Mindful teaching
benefits everyone!



Questions from the Audience



Please either type a question in the chat box or “raise your hand” to ask a question through audio for any of the presenters.

THANK YOU!

To all our partners - we could not do this work without you!





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Any opinions, findings, and conclusions or recommendations expressed in this presentation are those of the author(s) and do not necessarily reflect the views of the Foundation.

