Best program ever!
<table>
<thead>
<tr>
<th>Presenters</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALI JACKSON</td>
<td>Sciencenter</td>
</tr>
<tr>
<td>BRAD HERRING</td>
<td>Museum of Life + Science</td>
</tr>
<tr>
<td>JEANNIE COLTON</td>
<td>Arizona State University</td>
</tr>
<tr>
<td>KEITH OSTFELD</td>
<td>Children’s Museum of Houston</td>
</tr>
<tr>
<td>RAE OSTMAN</td>
<td>Arizona State University + Science Museum of Minnesota</td>
</tr>
<tr>
<td>STEPHANIE LONG</td>
<td>Science Museum of Minnesota</td>
</tr>
</tbody>
</table>
Session overview

NISE Net in a nanoshell

Crash course in program development

Rapid prototyping session

Resources for development, delivery, training, and evaluation
NISE NETWORK
NISE Net is the National Informal STEM Education Network.
NISE Net supports **informal learning about STEM** in communities across the United States.
Over 600 organizations regularly participate in Network activities.
NISE Net engages **all audiences** in learning about STEM in ways that are fun and easy to understand.
NISE Net improves the practices and skills of educators and scientists.
Together, Network partners reach millions of people each year!
We have projects in many areas of STEM.

- Nanotechnology
- Synthetic biology
- Sustainability
- Earth and space science
- Chemistry
- Making
CRASH COURSE
Program elements

- Content
- Setting
- Audience
- Format
Horton Senses Something Small

Setting: Children’s museums and other informal learning environments
Big idea: There are things that are too small to see
Audience: Early learners
Format: Story time followed by hands-on activities
Attack of the Nanoscientist

Setting: Science museums and other informal learning environments

Big idea: Nanoscience may lead to new applications in medicine, computing, materials, defense, environment, and consumer products.

Audience: All ages

Format: Comedic theater
Life cycle

Planning

Development + formative eval

Implementation + summative eval

Ongoing improvements
Development process

Create prototype
- Research online
- Find successful examples
- Try things out

Get input
- Educators
- Experts
- Participants

Test systematically
- Traditional eval
- Reflective practice
- Team-based inquiry

Make improvements
- Strengthen learning
- Polish materials
LEARNING OBJECTIVES
• Be explicit about your audience and objectives
• Be ruthless about designing for them
• Be realistic about what’s possible in an informal learning environment

BEST PRACTICES
• Use universal design principles
• Use an iterative process
• Get feedback from peers, participants, and experts

PRACTICAL CONSIDERATIONS
• Think ahead to implementation, so it’s easy to set up, deliver, clean up, and store materials
• Document the program so others can learn and use it
RAPID PROTOTYPING
CHALLENGE: You’ll draw your program topic from a hat. Your program must address the challenge on your card!

MATERIALS: You’ll be given some silly props that you must incorporate! You’re also free to use the materials on the supply table.

PROGRAM AUDIENCE & FORMAT: These are up to you, but be sure your group has a specific audience in mind.

PRESENTATION: You have just a few minutes total to introduce your topic and deliver your program. In your intro, tell us:
• Your challenge
• Your program’s name
• Your program’s “big idea”
• Your target audience and program format

HAVE FUN!
WRAP UP + RESOURCES
Three things we learned
READY-TO-USE RESOURCES
Professional development guides
Program templates
Evaluation tools
Training slides and videos
Improv exercises
...and more!

MANY TOPICS
Programs, activities, games
Presentation skills
Partnerships and collaborations
Universal design
Team-based inquiry
...and more!

Data Reflection Cheat Sheet
Use the four steps outlined below to focus on the purpose of your team-based inquiry (TBI) study, immerse yourselves in the data, and make sense of the information you collected.

1. Describe and clarify:
The facilitator restates the team of the inquiry and data discussion goals. The group asks questions as needed.

2. Observe and discuss:
The group spends time reviewing the data. Afterwards, each team member mentions one unique piece of data that is particularly interesting or important.

3. Immerse and notice:
Each team member suggests a unique theme or pattern he or she notices in the data related to the goal of the data reflection.

4. Categorize and explain:
After rehashing potential themes, the team sorts the data by theme, counting the number of data points in each category and discussing possible explanations.
Professional resources – nisenet.org

Guides
Bilingual Design Guide for Educational Experiences in Museums
Collaboration Guide for Museums Working with Community Youth-Serving Organizations
Gaming and the NISE Network: A Gameful Approach to STEM Learning
NanoDays: A NISE Network Guide to Creating Activity Kits, Building Communities, and Inspiring Learning
Nanotechnology and Society: A Practical Guide to Engaging Museum Visitors in Conversation
Program Development: A Guide to Creating Effective Learning Experiences for Public Audiences
Team-Based Inquiry: A Practical Guide for Using Evaluation to Improve Informal Education Experiences
Translation Process Guide for Educational Experiences in Museums
Universal Design Guidelines for Public Programs in Science Museums

Videos
America’s Next Top Presenter
Speed-ucate Video, or How to Have an Effective Science and Society Conversation
Team-Based Inquiry Training Videos
(Plus lots of training videos for specific activities!)

Tools
Improv Exercises
Museum & Community Partnerships: Collaboration Guide and additional resources
NanoDays Training Materials
Nano and Society Training Materials
NISE Network Program and Activity Templates
NISE Network Program Evaluation Tools

Workshop Recordings and Packages
Bilingual Audiences Workshop Resources
Improving NanoDays Trainings with Team-Based Inquiry: Partner Examples
Team-Based Inquiry Stories: NISE Network Partners Share What Works (and What Doesn’t!)
Universal Design of Educational Programs Workshop Resources
Videos 101: Tips, Tricks, and Strategies for Small-Scale to Large-Scale Video Production
Thank you

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