

Welcome NISE Network Partners !



NISE Network Regional Meeting

Fall 2013



Regional Meeting Welcome



Introductions

Logistics

- restrooms
- handouts
- getting a copy of slides
- reimbursement forms
- luggage
- airport rides
- dinner tonight

Swap Table


Regional Meeting Goals



1. Nurture and deepen **relationships** with existing partners in the NISE Network.
2. Provide valuable **networking opportunities** among workshop attendees, focusing on museum educators and outreach coordinators.
3. Create **opportunities for sharing** experiences with using NISE Net products.
4. Discuss ways to **sustain the benefits** of the NISE Network **after Year 10**.
5. Present an **update of NISE Net's resources**, including new programs, tools and guides, mini-exhibition, and mini-grants.

Regional Meeting Agenda – Day 1

12:00 Lunch

- 
- 1:00 Welcome and introductions
 - 1:15 Improv Activity 1: *I Say Hi*
 - 1:45 NISE Network update
 - 2:30 Break
 - 2:45 Mini-Grants: New Ideas for Doing Nano
 - 4:30 Improv Activity 2: *Yes, And*
 - 5:00 Break / *Science Playground* tour / Museum free time
 - 5:30 Dinner - Pizza & Salad in OMSI Auditorium**
 - 6:00 Sherlock Holmes Opening Exhibition Event at OMSI
* Hors d'oeuvres & drinks served in *Theory*

Regional Meeting Agenda – Day 2

8:00 Breakfast

9:00 Nano & Society - Improv & Conversation

10:00 Break

10:15 NanoDays Share-out

11:00 Inclusive Audiences Bilingual and Universal Design

12:00 Lunch

1:00 *Nano* mini-exhibition share-out

1:30 Scientist & Research Center Partnerships

2:15 Beyond Year 10 Discussion Part 1

3:00 Break/List completion

3:15 Beyond Year 10 Discussion Part 2

4:45 Meeting wrap-up

6:30 Group Dinner

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Improv Exercise – *I Say Hi!*



More info: nisenet.org/catalog/tools_guides/improv_exercises

Why implement improv exercises ?



Incorporating improv exercises into staff and volunteer training helps create a supportive and upbeat environment for educators to practice and strengthen essential skills.

- **Warm up skills** required for interacting with visitors
- **Encourage conversations:** with visitors (rather than reciting scripts)
- **Be better listeners:** think on your feet and respond in the moment
- **Be responsive:** better tailor content to visitors responses and integrate visitor feedback
- **Be positioned as equals** with visitors not “the expert”
- **Foster teamwork & creativity:** create a fun, supportive, positive work environment to practice skills



More info: nisenet.org/catalog/tools_guides/improv_exercises

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Where can you

find nano?



NISE Network Overview

- Introduction
- Network Community
- Educational Products
- Professional Tools and Guides
- Upcoming Opportunities



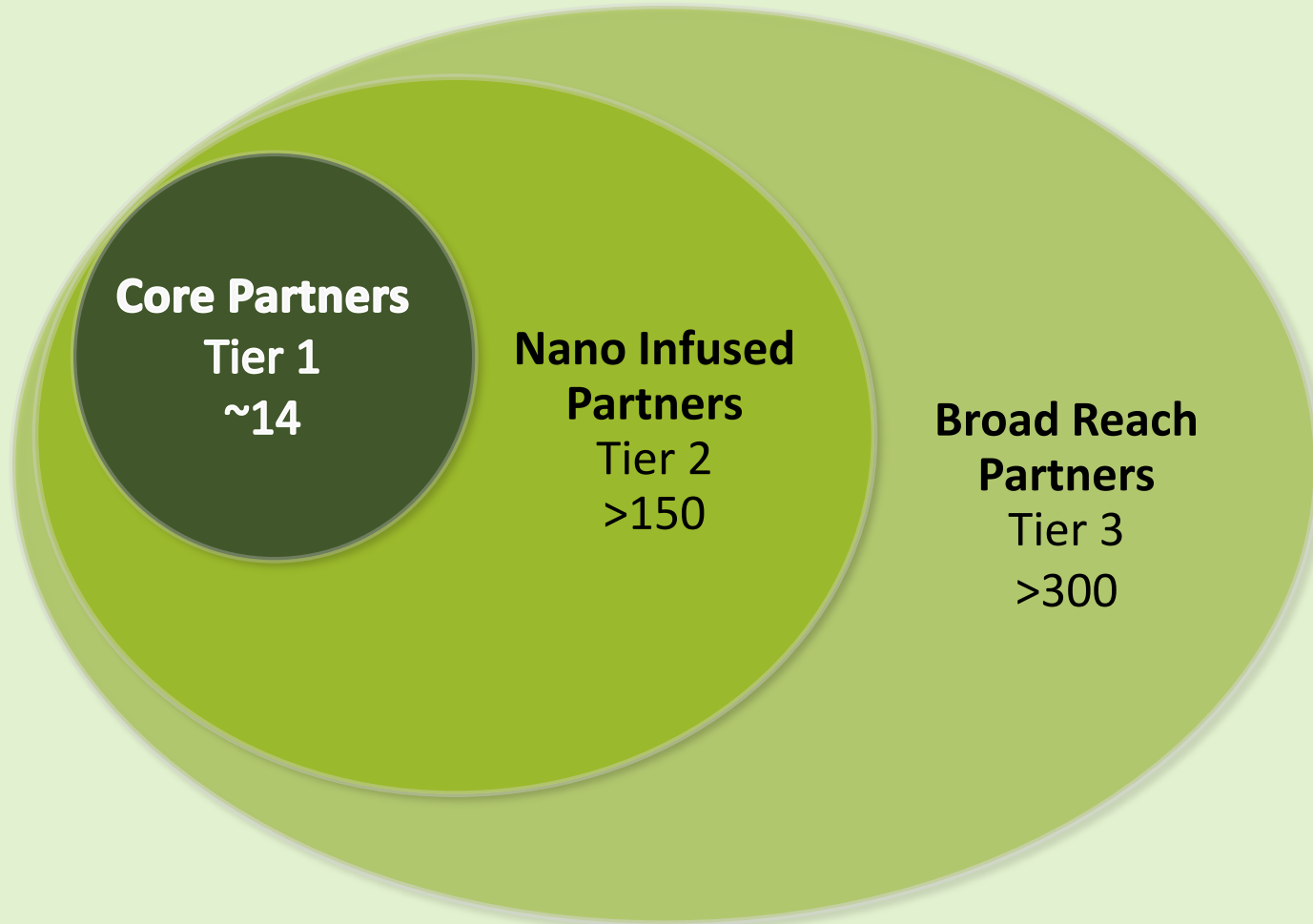
NISE Network

Nanoscale Informal Science Education Network

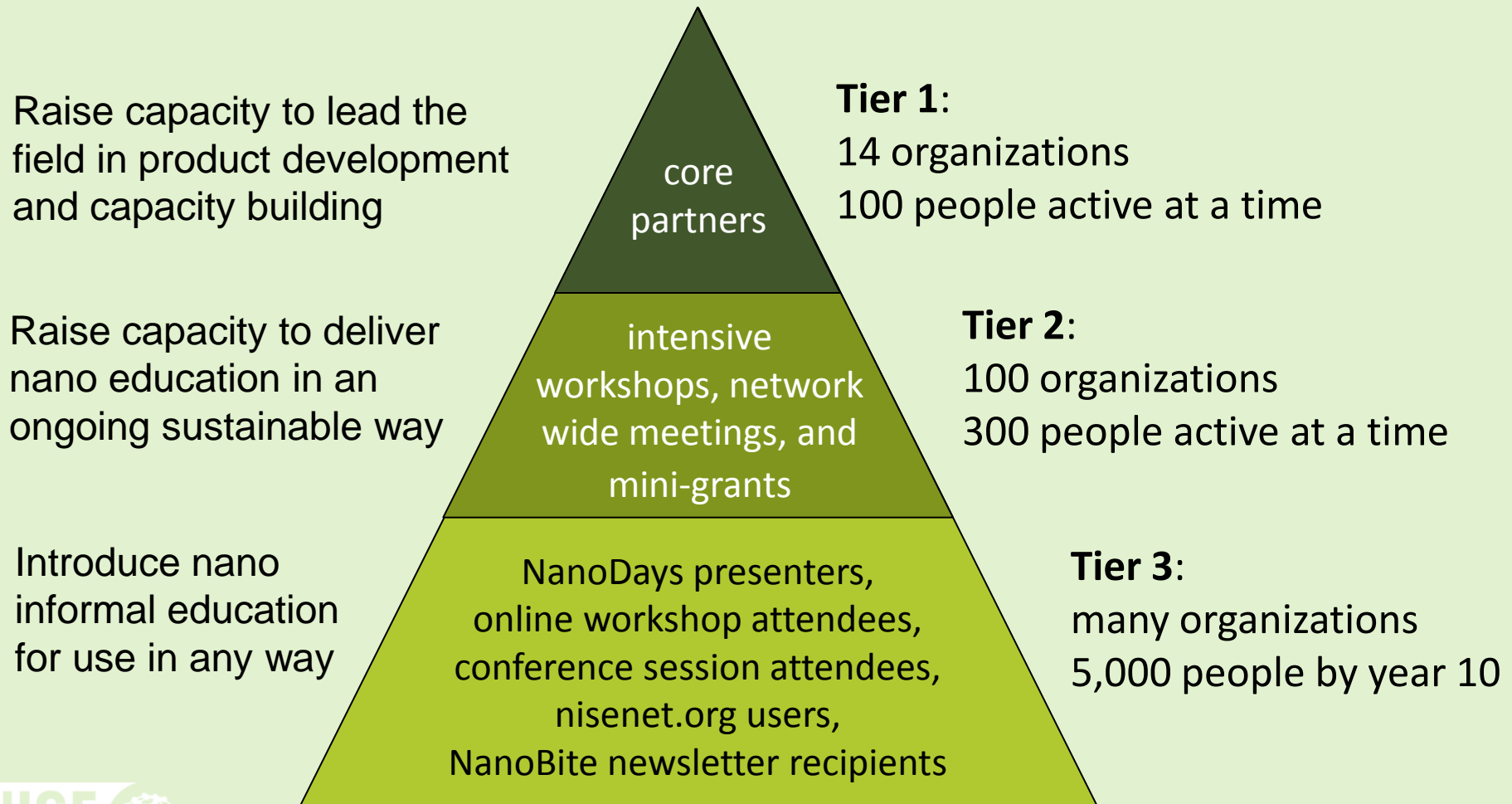
The NISE Network is a national community of researchers and informal science educators dedicated to fostering public awareness, engagement, and understanding of nanoscale science, engineering, and technology.



Network Community Strategy



Professional Impacts Strategy



Raise capacity to lead the field in product development and capacity building

Raise capacity to deliver nano education in an ongoing sustainable way

Introduce nano informal education for use in any way

core partners

intensive workshops, network wide meetings, and mini-grants

NanoDays presenters, online workshop attendees, conference session attendees, nisenet.org users, NanoBite newsletter recipients

Tier 1:

14 organizations
100 people active at a time

Tier 2:

100 organizations
300 people active at a time

Tier 3:

many organizations
5,000 people by year 10

Year 8 NISE Network Teams

Network Community

Community

Leader: Catherine McCarthy
NOG: Catherine McCarthy

Website

Leader: Catherine McCarthy
NOG: Catherine McCarthy

RISE

Leader: Larry Bell
NOG: Vrylena Olney

Network Leadership

NEG
NOG

Project
Coordination

Administration
NEG: Larry Bell
NOG: Vrylena Olney

Public Engagement

NanoDays

Leader: Ali Jackson
NOG: Brad Herring

Programs

Leader: Brad Herring
NOG: Brad Herring

Exhibits

Leader: Catherine McCarthy
NOG: Catherine McCarthy

Capacity Building

Online Brown-Bags

Leader: Vrylena Olney
NOG: Vrylena Olney

Team-Based Inquiry Professional Development

Leader: Scott Pattison
NOG: Brad Herring

Inclusive Audiences

Leader: Veronica Garcia-Luis
NOG: Vrylena Olney

Universal Design Workshop
Leader: Anna Lindgren-Streicher
NOG: Vrylena Olney

Bilingual Workshop
Leader: Kari Jensen
NOG: Brad Herring

Knowledge for the Field

Evaluation

Leadership and Logic Model
Leader: Liz Kunz Kollmann
NOG: Vrylena Olney

Public Impacts
Leader: Gina Svarovsky
NOG: Catherine McCarthy

Professional Impacts
Leader: Juli Goss
NOG: Vrylena Olney

Survey and Data Mining
Leader: Liz Rosino
NOG: Catherine McCarthy

Research

Leader: Steve Guberman
NOG: Vrylena Olney

Scientist Partnership Study
Leader: Vera Michalchik

Organizational Change Study
Leader: Steve Guberman

Evidence-Based Decision Making
Co-Leaders: Gina Svarovsky
& Liz Kunz Kollmann

What is Nano?



1. Nano is small and different

Nanometer-sized things are very small, and often behave differently than larger things do.

2. Nano is studying and making tiny things

Scientists and engineers have formed the interdisciplinary field of nanotechnology by investigating properties and manipulating matter at the nanoscale.

3. Nano is new technologies

Nanoscience, nanotechnology, and nanoengineering lead to new knowledge and innovations that weren't possible before.

4. Nano is part of our society and our future

Nanotechnologies—and their costs, utility, risks, and benefits—are closely interconnected with society and with our values.

Year 6-10 Focus



Years 1-5: (2005-2010)

- Building the network

Years 6-10: (2010-2015)

- Engaging the public through the network

NISE Network: Goals



Network community: increase capacity in the field

- Support partners in engaging the public in nanoscale science, engineering, and technology
- Form partnerships among Informal Science Education institutions and research centers

Educational products: engage the public

- Develop and distribute educational products
- Raise public awareness and understanding of nano

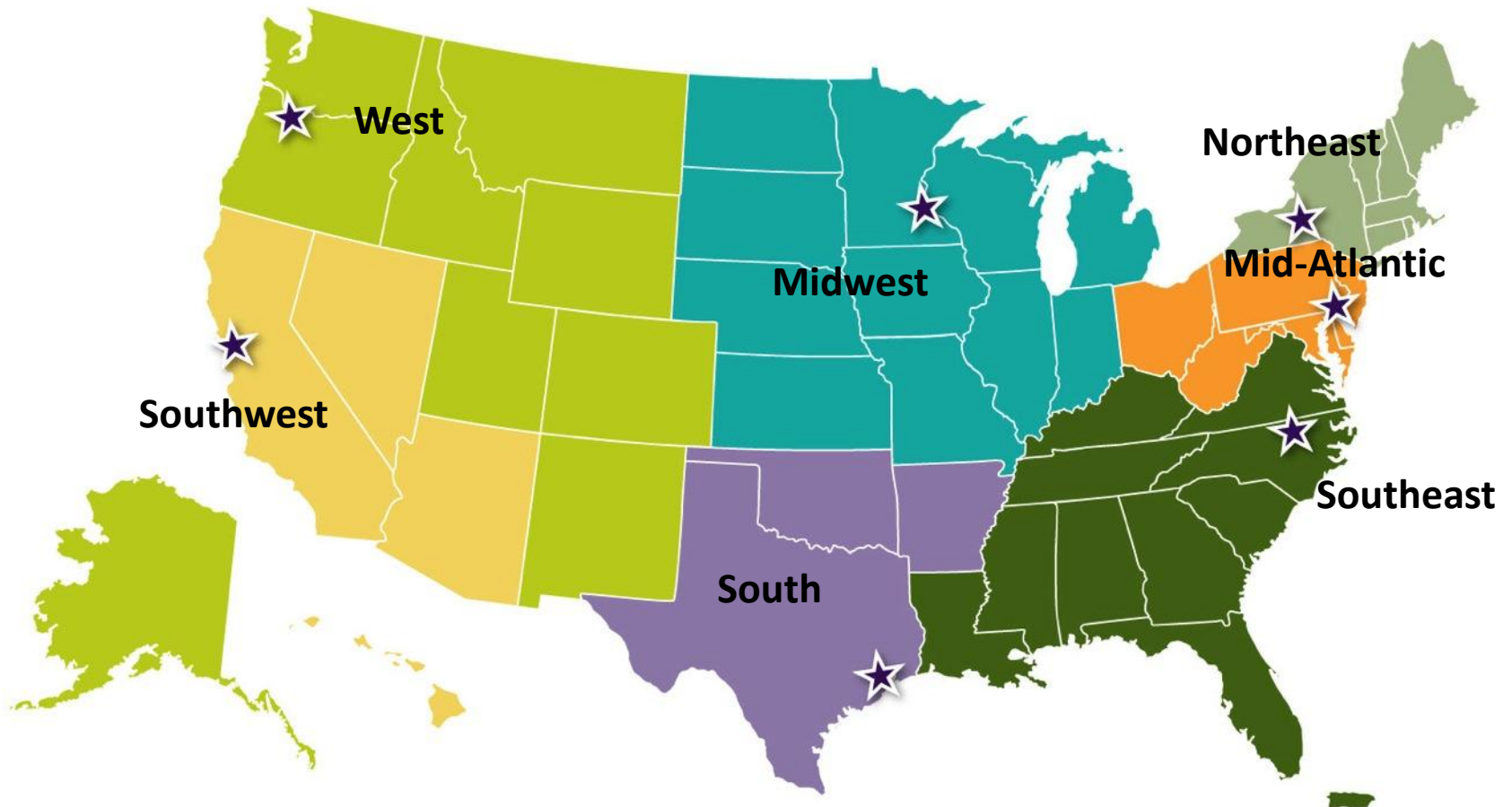
Knowledge: inform the field and future projects

- Generate and document learning through evaluation and research
- Communicate broadly in ISE and research fields

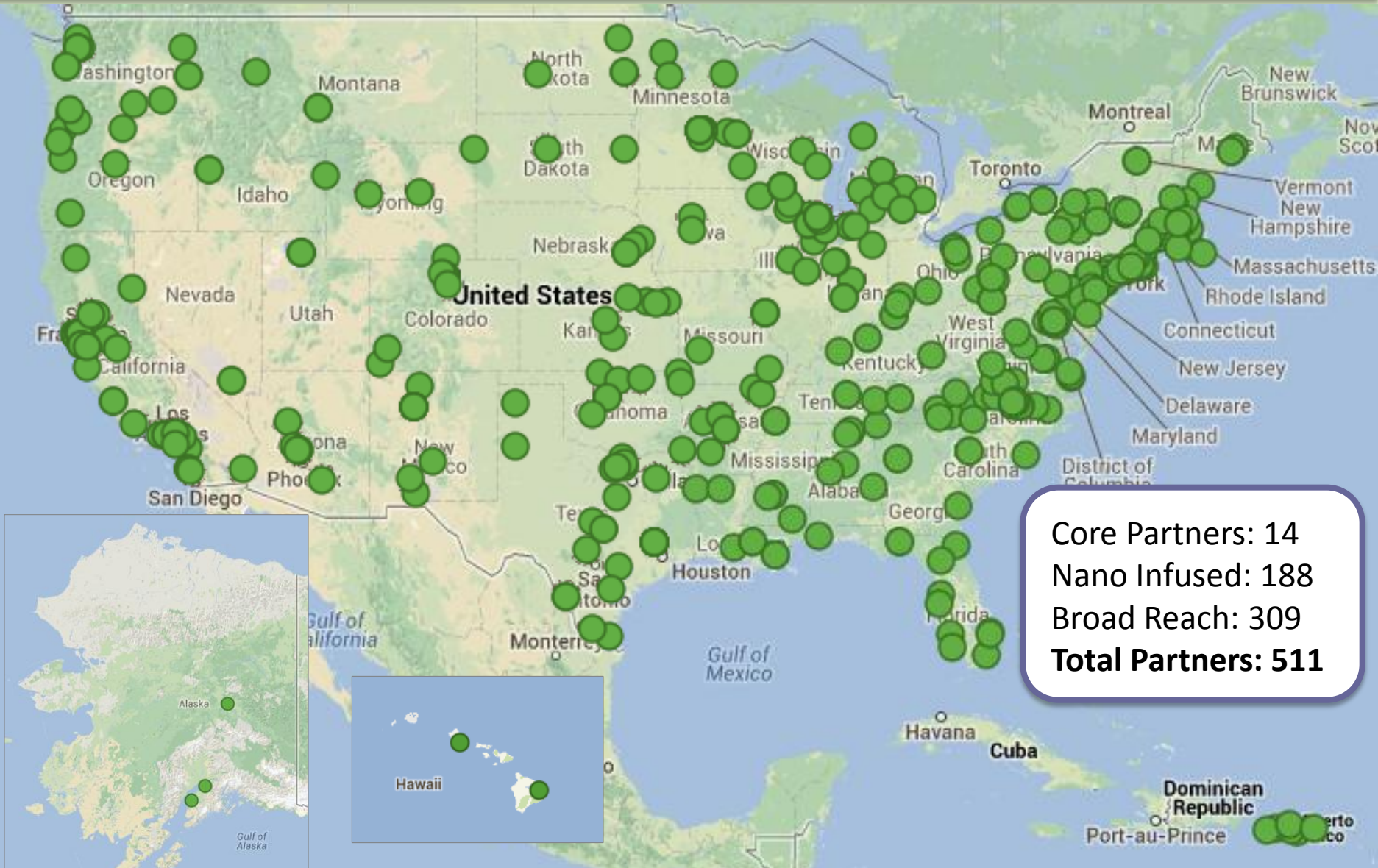


Network Community

NISE Net Regional Hub Structure



Partner Reach





Educational Products

- Product Development Process
- Website
- DIY Nano App
- *Nano* mini-exhibition
- New in catalog

Product Development Process



Iterative, collaborative development process:

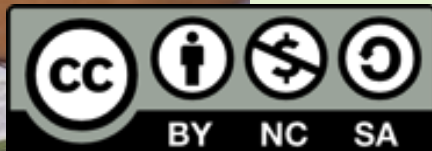
- ✓ Scientist review
- ✓ Peer review
- ✓ Visitor evaluation

Audiences and Content

- Content Map as a guide
- Inclusive audience approach

Designed for sharing

- Easily edited and adapted
- Creative Commons license



More info: [/nisenet.org/programs](https://nisenet.org/programs)

Content Map

1.

Nano is
small and different

2.

Nano is studying
and making
tiny things

3.

Nano is
new technologies

4.

Nano is part of
our society
and our future

Inclusive Audiences Approach



Spanish Bilingual materials:

- NanoDays materials and exhibits are available in both English and Spanish

Tools and Guides:

- Universal Design guidelines for programs and exhibits
- Bilingual graphic design
- Translation process guide

More info: [/nisenet.org/inclusive_audiences](https://nisenet.org/inclusive_audiences)

Website for educators - nisenet.org


 Site People Catalog

HOME COMMUNITY CATALOG ABOUT WHAT IS NANO

Support | Log in | Sign up

Nanoscale Informal Science Education Network

The NISE Net is a national community of researchers and informal science educators dedicated to fostering public awareness, engagement, and understanding of nanoscale science, engineering, and technology.

Become a partner of the NISE Network. Learn how to get involved or sign up now.

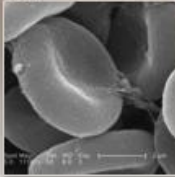
NanoDays

MARCH 30 - APRIL 7, 2013

Be sure to fill out your NanoDays 2012 online report by May 1st and be entered in our drawing!



Image Collection



Human Red Blood Cells (SEM)

Red blood cells carry a protein called hemoglobin which has a molecular structure adapted to transport oxygen to body tissues. This scanning electron micrograph shows the cells' characteristic donut-like shapes.

NISE Net News

Blog Newsletter

NanoDays 2012 report - winners chosen

By Catharine McCarthy on May 22, 2012 | 0 comments

Two winners!

We have two randomly drawn winners who submitted their online NanoDays reports by the May 1st deadline. Both will be receiving additional educational materials to use with their visitors.

[Read more »](#)

DIY Nano App now available

By Catharine McCarthy on May 11, 2012 | 0 comments

Over 20,000 people have downloaded the new DIY Nano App!

[Read more »](#)

MRS Call for Papers- Deadline Approaching!

By KQ on May 24, 2012 | 0 comments



The 2012 MRS Fall meeting in Boston takes place November 25-30, but the deadline for abstract submission is just around the corner! All abstracts must be submitted by June 19th. Click here for more information on abstract submission guidelines and details about the meeting.

New in the Catalog

Catalog



Select NISE Network educational products are now available in Spanish!

Media

DIY Nano App

The DIY Nano app allows families to experience and learn about nanoscale science, engineering, and technology at home! The app provides free hands-on activities. Each activity includes material lists, step-by-step instructions, and detailed explanations. The activity materials are easy to find, inexpensive to purchase, and you probably have many of them in your own home! Our app includes an extensive list of family friendly video links and helps you browse the wholenano.org public website for more information, activities, and videos. The DIY Nano app was created by the Nanoscale Informal Science Education Network (NISE Net). Funded by the National Science Foundation, NISE Net is dedicated to engaging all audiences with fun, educational activities about nano-

Requirements: Compatible with iPhone 3GS, iPhone 4, iPhone 4S, iPod touch (3rd generation), iPod touch (4th generation) and iPad. Requires IOS 5.0 or later. [Read more »](#)

Programs

DIY Nano

These "Do It Yourself" Nano activities



nisenet.org

- Catalog of educational products
- News and events
- Member directory
- Social networking links



Website for educators - nisenet.org

Nanoscale Informal Science Education Network

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Become a partner of the NISE Network. Learn how to **get involved** or **sign up now**.

Catalog

- Programs
- Exhibits
- Tools and guides
- Media
- Image Gallery
- Evaluation & Research

NanoDays
The Biggest Event for the Smallest Science!

MARCH 30 - APRIL 7, 2013
The NanoDays 2013 physical kit application is now available - [Apply today!](#)


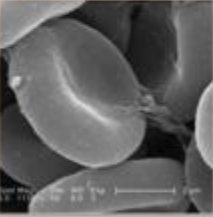


Image Collection



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Red blood cells carry a protein called hemoglobin which has a molecular structure adapted to transport oxygen to body tissues. This scanning electron micrograph allows the cells' characteristic donut-like shapes.

NISE Net News [Blog](#) [Newsletter](#)

NanoDays 2013 kit applications - due December 1, 2012
By Catherine McCarthy on September 24, 2012 | 0 comments

Apply now for a NanoDays 2013 physical kit!
[Read more](#)

NanoDays
The Biggest Event for the Smallest Science!

New in the Catalog [Catalog](#)

Español Select NISE Network educational products are now available in Spanish!


Programs

Nano Future Tellers
Nano Future Tellers are origami-folded, interactive pocket game to educate visitors ages 7-12 about future nano products! Everyone's favorite fortune telling game brings potential future nano products to life! [Read more](#)

Programs

Scientist Speed Dating
Scientist Speed Dating is a facilitated, yet informal and high-energy, social activity to encourage a large group of people to speak with one another, ask questions, and learn about specific areas of research and practice within the field of nanoscale science and engineering, as well as the related societal and ethical implications of work in this field. [Read more](#)

Tools and Guides



Search the Catalog

Search the catalog by audience, topic, or season

The screenshot shows the NISE Network Catalog website. The header includes the NISE network logo and navigation links: HOME, COMMUNITY, CATALOG, ABOUT, WHAT IS NANO. A search bar is located in the top right. The main content area is divided into several sections: 'Explore by topic' with icons for Art and nature (71), Information Technology (47), Bio and medicine (74), Materials, tools, and applications (149), Energy and environment (50), and Society, policy, and economics (64); 'Activity' with a list of latest, featured, and most popular items; 'Keyword search' with a search input field; and 'Browse by' with two columns of filters: Audience (All ages (109), 7 and up (39), 11 and up (38), 15 and up (17), 19 and up (3), Informal science educators (25), scientists (14)) and Nano topics (Art and nature (71), Bio and medicine (73), Energy and environment (50), Fundamentals (132), Information Technology (47), Materials, tools, and applications (148), Society, policy, and economics (64)).

Browse by

Audience

All ages (109)
7 and up (39)
11 and up (38)
15 and up (17)
19 and up (3)
Informal science educators (25)
scientists (14)

Nano topics

Art and nature (71)
Bio and medicine (73)
Energy and environment (50)
Fundamentals (132)
Information Technology (47)
Materials, tools, and applications (148)
Society, policy, and economics (64)

Programs

Cart demonstration (25)
Classroom activity (25)
Display (2)
Facilitated activity (46)
Game (4)
Museum theater (4)
Stage presentation (16)

Available translations

Spanish (61)



Nano throughout the year!
Browse products by **season**.



Select NISE Network educational products are **now available** in Spanish!

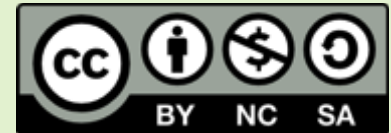
Find answers to your questions about the catalog on our **FAQ page**.

Products in Catalog

NISE NET PRODUCT 

NISE Net Products

- Created with NISE Network funding
- Development process:
 - scientist review, peer review, & visitor evaluation
 - content map as a guide
 - inclusive audiences approach
- Designed to be easily edited and adapted under a Creative Commons license



LINKED RESOURCE ►

Linked resources

- Created with other funding
- Different vetting process
- Different rights ownership/attribution

Website for the Public

whatisnano.org

English Español

Home | NanoDays | Nano Exhibition

Nano is all around us—
in nature and in technology.

NanoDays
NanoDays is a nationwide festival of educational programs about nanoscale science and engineering and its potential impact on the future.
> Learn more

NanoBuzz
Current nano news:
join the conversation!

- Bio Flash Mob
Posted May 11, 2012
- Itty-bitty Art
Posted May 9, 2012
- The Iceman bleedeth
Posted May 3,

K-12 Teachers
Curriculum and activity resources for K-12 teachers to use in their classrooms.
> Learn more

Resources

- Introductions
- Video
- Audio
- Games
- Products & Society
- Diff Nano

DIY nano
Downloadable from the iTunes store. Free.

Invisible Sunblock
What's in your sunblock? In this activity, kids find out why some mineral sunblock rubs in clear. Suitable for kids ages 5 and up. edit

Rainbow Film
How can you make rainbow colors out of clear nail polish? In this activity, kids use clear nail polish to create a beautiful iridescent pattern on black paper. Suitable for

Mystery Sand
Can sand keep itself dry? In this activity, kids play with surprising sand that doesn't get wet! Suitable for kids ages 3 and up. edit

Mitten Challenge
What's the right tool for the job? In this activity, kids try to put together toy bricks—wearing oven mitts on their hands! Suitable for kids ages 3 and up.

- Videos, podcasts, activities, links
- NanoDays locations
- List of mini-exhibition locations
- Audio Description in English and Spanish

whatisnano.org

DIY Nano App for iPhone and iPad



Activities to try at home



More info: whatisnano.org/diy-nano-app
nisenet.org/catalog/media/diy_nano

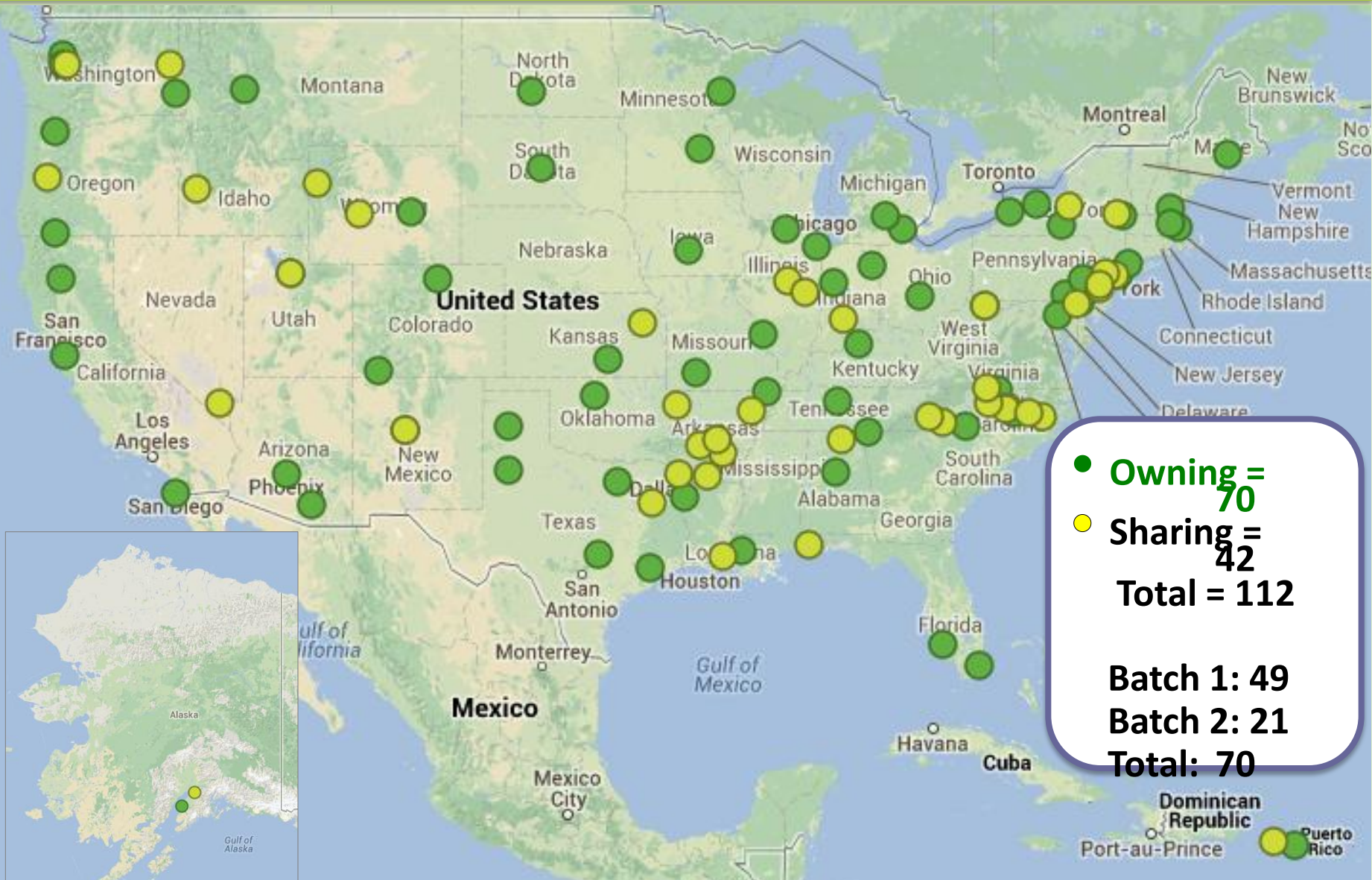
Nano Mini-exhibition



- Comprehensive content
- Small footprint: 400 square feet
- Flexible configurations, modular
- Bilingual – English & Spanish, accessible
- Making > 90 copies
 - Batch 1 = 49 copies (shipped in 2012-2013)
 - Batch 2 = 21 copies (will ship April – August 2014)
 - Batch 3 = 23 copies invitation process (ship 2015)

Waiting list for used copies and possible sharing

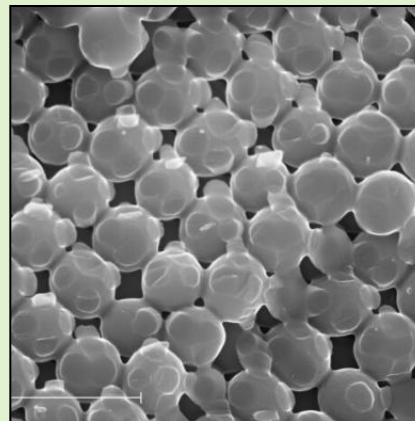
Nano Mini-Exhibition Reach



Programs - New in the Catalog



**Liquid Body
Armor**
Cart demo



**Colors at the
NanoScale:
Butterflies,
Beetles, and
Opals**
program



**Making
Molecular
Movies with
QSTORM**
Public
presentation



**More
coming soon –
watch the
Nano Bite**

Media – for the public in the Catalog



**Mr. O video –
A Little bit of
Sunshine**



**Invisibility
Cloak**



**Mr. O video– Liquid
Armor**



**What's Nano
about that
series
(coming soon)**

Media – tools for educators



**NanoDays
Training Videos
2013**



**America's Next
Top Presenter
(coming soon)**



**NanoDays
Training Videos
2014
(coming soon)**



**Speed-Ucate
Visitor
Conversations
Video
(coming soon)**



Professional Tools and Guides

- Museum-Scientist Collaborations
- Team Based Inquiry

Later on agenda:

- Inclusive Audiences
 - Bilingual Audiences
 - Universal Design
- Nano and Society
- Museum-Scientist Collaboration

More info: nisenet.org/category/catalog/tools

Museum-Scientist Collaboration Tools



RISE: Research Center – Informal Science Education Partnerships

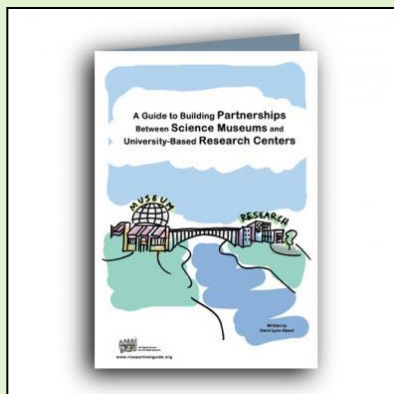
Encouragement, knowledge, and tools to support collaborations

Why Collaborate?

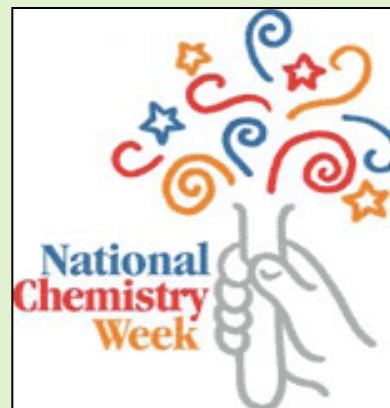
- Bring current science to museum audiences
- Connect scientists and students with the public
- Share resources and tools
- Mutual learning between scientists, museum educators, and the public

More info: nisenet.org/rise

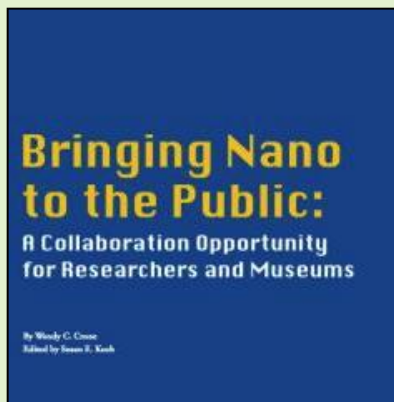
Museum-Scientist Collaboration Tools



Guide to Building Partnerships between Science Museums and University-Based Research Centers



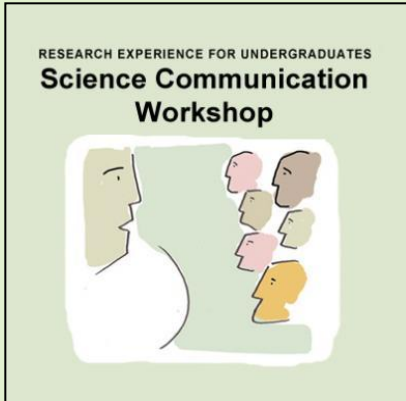
National Chemistry Week collaborations
Oct 20-26, 2013



Bringing Nano to the Public
collaboration introduction

More info: nisenet.org/rise

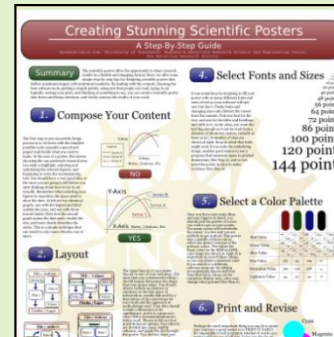
Science Communication Tools for scientists



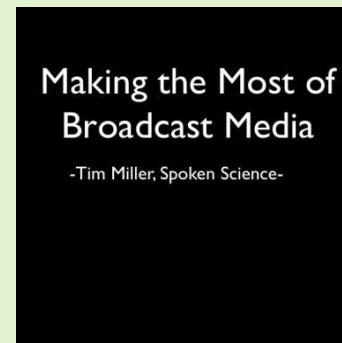
Science Communication Workshop
designed for
Research
Experiences for
Undergraduates
(REU) programs



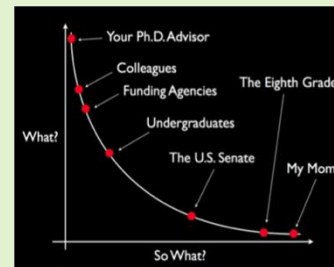
Sharing Science Workshop and Practicum
designed for
scientists and
students



Creating Stunning Scientific Posters Seminar



Making the Most of Broadcast Media Workshop



Mastering Science and Public Presentations Video



Upcoming Opportunities

- NanoDays
- Mini-grants
- Team-Based Inquiry Training
- Annual Partner Surveys
- And more!

NanoDays

NanoDays Applications
due **December 1, 2013**

- Annual event introducing the public to nanoscale science, engineering, and technology
- Involves hundreds of museums and universities over one week



NanoDays Reach and Impact



Reach:

- 225 physical kits in 2013
- 250 kits in 2014 and 2015
- Digital kit and materials available free online

Impacts:

- Local collaborations: over 60%
- Year round use of kits: 100%
- Audience: nearly 100% family audiences

NanoDays Reach



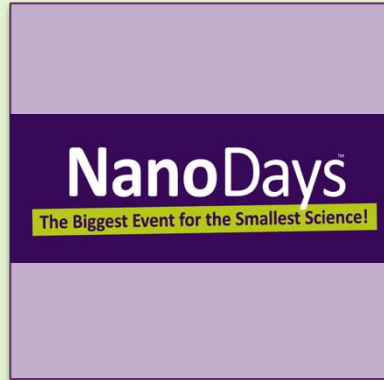
NanoDays 2014 kit

Applications are due
December 1, 2013



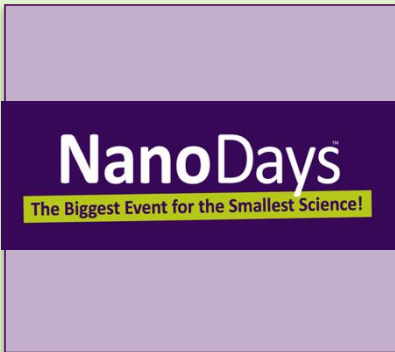
Training Videos for visitors & staff

- for each activity
- visitor conversations



Volunteer Survey

We'll be inviting all NanoDays volunteers across the nation to participate in a short online survey to learn about their volunteer experience



New activities

- Capillary Action
- Oobleck
- Piezoelectricity
- Electroplating

New Videos

- Invisibility Cloak
- more!



Online Brown-Bags

- What's Coming in the NanoDays kit
- Hosting a Bilingual NanoDays
- Science Behind NanoDays

NanoDays after 2015



Sustainability Plans

- Planning to create and distribute a compendium of all NanoDays activities (hard copy and digital)
- Continue to make NanoDays materials available online

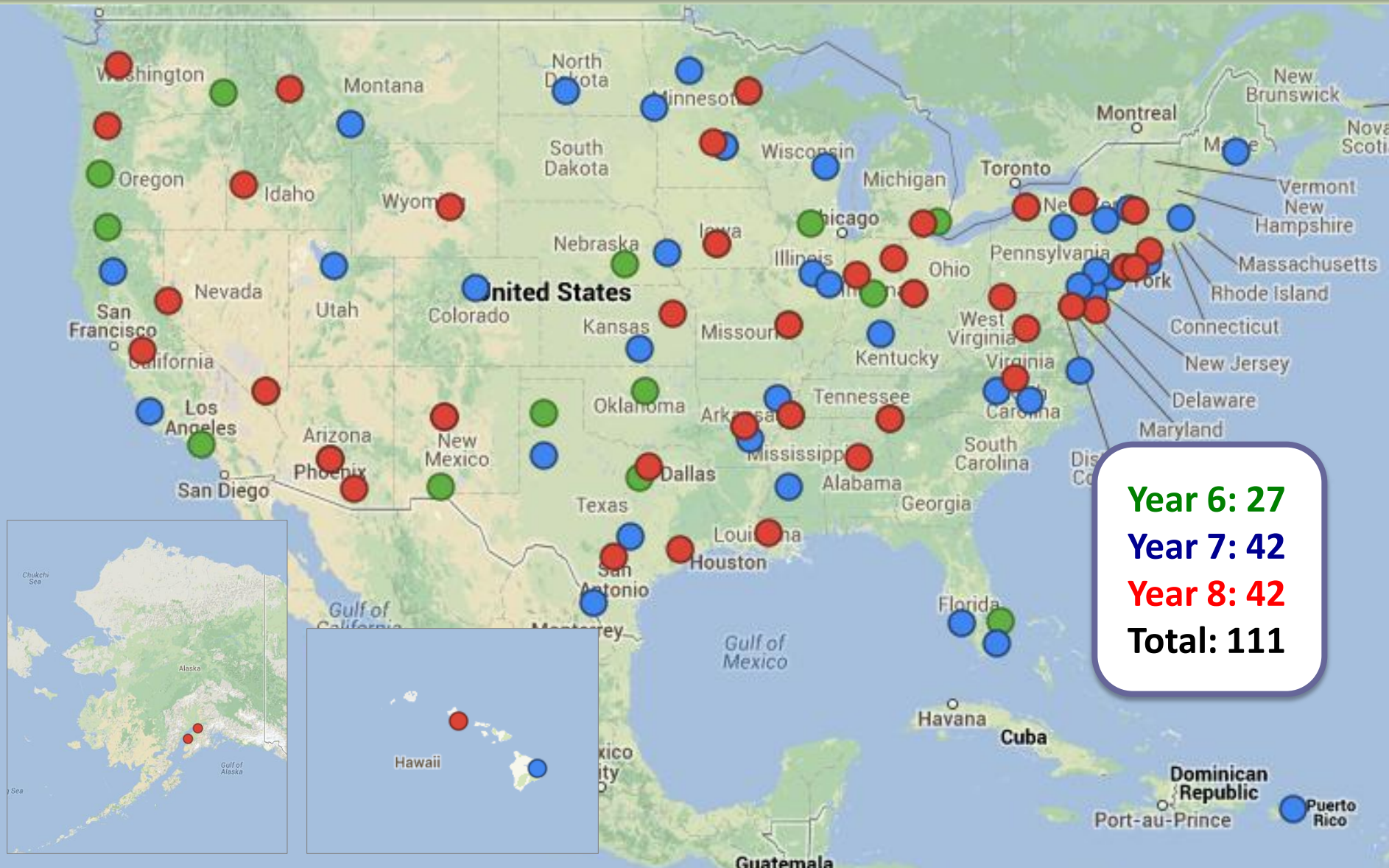
Mini-Grants

Applications are due
November 1, 2013



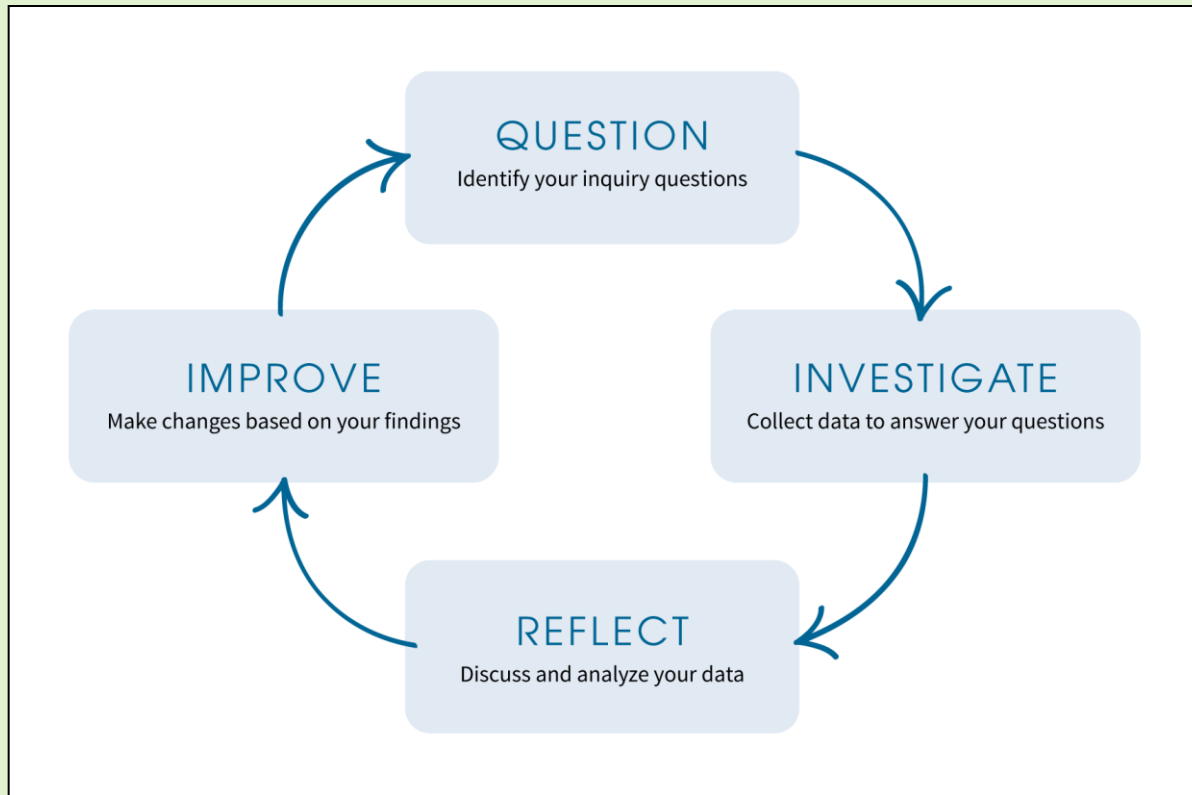
- 27 awards in 2011, 42 in 2012, 42 in 2013
anticipate 40 in 2014
- \$3,000 maximum
- Eligible activities:
 1. New efforts to integrate nano into existing programming
 1. New efforts to reach new audiences with nano programming (including traditionally under-served or under-represented audiences)
 1. New partnerships between museums and nano researchers, community--based organizations, and diversity serving organizations

Mini-Grants Reach



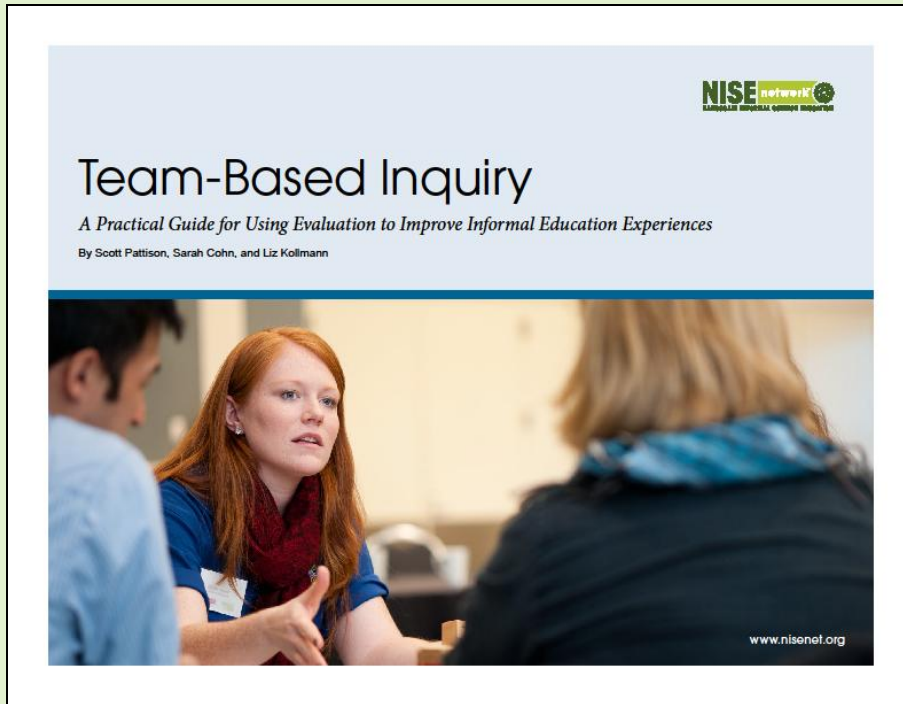
Team-Based Inquiry

TBI is an approach to empowering professionals to get the data they need, when they need it, in order to improve their products and practices and create successful educational experiences.



More info: nisenet.org/evaluation

Team-Based Inquiry Tools



Team-Based Inquiry Guide includes:

- Templates
- Observation forms
- Interview forms
- Worksheets
- Concrete examples

The guide will be included in the NanoDays 2014 physical kit

Team-Based Inquiry Professional Development



New Professional Development Opportunity

What? NISE Network is inviting a small number of partner institutions to participate in an intensive, seven-month professional development experience focused on team-based inquiry (TBI).

Team-Based Inquiry Professional Development



New Professional Development Opportunity

Why? The professional development will help institutions use TBI to incorporate evaluation and data-based decision-making into their nano education work.

Team-Based Inquiry Professional Development

The experience is offered at no charge but will require significant time from two staff January-July 2014:

- 1.5 hour phone call every two weeks
- 2 to 4 hours per month on professional development
- One-day workshop in Portland, OR, April 2014 (travel, lodging, & food covered by the NISE Net)

Participating will also impact the timeline of your mini-grant project:

- January-March 2014, participants learn about TBI and prepare for shared inquiry experience during NanoDays 2014
- April-July 2014, participants work on TBI studies at their own institutions specific to their mini-grant projects

*Participation will **NOT** affect selection process for mini-grant applications!*



More info: nisenet.org/community/mini-grants

Team-Based Inquiry Professional Development

How do I apply?

- Participants will be recruited through the **mini-grant application**.
- Indicate your organization's interest at the end of the application.
- Invitation e-mails will be sent out in January.

This opportunity is described in more detail in the **2014 Mini-Grants Program Overview**. Before indicating below if your organization is interested in participating, please read more about the opportunity and consider the timeline and required staff time commitment.

12. Would your organization like to be considered for this team-based inquiry professional development opportunity? *Your response to this question will NOT affect the selection and review process of your mini-grant application. **

- Yes
- No

Participation will **NOT** affect selection process for mini-grant applications!

Mini-grant application
due **November 1, 2013**

Evaluation and Research



Evaluation measures professional learning and practice, public learning, and Network growth.

- Professional Impacts
- Public impacts

Research studies provide the field with new knowledge and understanding

- Public Decision Making and Learning
 - Organizational Change
 - Museum – Scientist Partnerships
 - Nano in Traditional and Social media
-
- Find out what we have learned so far by visiting nisenet.org

More info: nisenet.org/evaluation

More info: nisenet.org/research

Help Us Learn – Annual Partner Survey



Help us to advance NISE Network and the field by participating in the Annual Partner Survey

Please fill out the survey when you receive an invitation

- even if you filled it out last year
- even if more than one person at your institution is filling out the survey

Survey invitation
via email in
October 2013

Professional Development Opportunities



- **ASTC (Association of Science-Technology Centers)**
October 2013 in Albuquerque
Sessions, booth, breakfast
pre-conference workshop on Team-Based Inquiry
- **Association of Children's Museums (ACM)**
May 2013 in Phoenix - sessions, booth
- **Materials Research Society (MRS)**
November 2013 in Boston & April 2014 in San Francisco
- **Online Brown-Bag conversations**
All year round, averaging one a month
Recorded and available to view online

More info: nisenet.org/community/events

Online Brown-Bag Conversations



*All past
brown-bags
are recorded
and available
online.*

This Fall:

- Nano for School Groups – October 1
- Universal Design Program Workshop Follow-up – October 28
- Nano in Food – November 13

Coming Up Winter/Spring 2014:

- For NanoDays:
 - What's Coming in the NanoDays kit
 - Hosting a Bilingual NanoDays
 - Science Behind NanoDays
- Nano for Summer Camps
- Nano and Society

More info: nisenet.org/community/events

Stay in Touch

Website networking tools



- Update your profile on the website
nisenet.org/faq
- Sign up for the monthly
Nano Bite newsletter
nisenet.org/community/nanobite
- Join our social networking sites
nisenet.org/community

The Facebook logo, consisting of the word "facebook" in white lowercase letters on a dark blue rectangular background.

The LinkedIn logo, consisting of the word "Linked" in black and "in" in white lowercase letters on a blue square background.

The Twitter logo, consisting of the word "twitter" in a light blue, lowercase, sans-serif font.

Thank you!

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



This presentation is based on work supported by the National Science Foundation under Grant No. 0940143. Any opinions, findings, and conclusions or recommendations expressed in this presentation are those of the authors and do not necessarily reflect the views of the Foundation.

Questions & Discussion



Are there robots
the size of a freckle or hair?



.1mm

Regional Meeting Agenda – Day 1

12:00 Lunch

1:00 Welcome and introductions

1:15 Improv Activity 1: *I Say Hi*

1:45 NISE Network update

2:30 Break

2:45 Mini-Grants: New Ideas for Doing Nano

4:30 Improv Activity 2: *Yes, And*

5:00 Break / *Science Playground* tour / Museum free time

5:30 Dinner - Pizza & Salad in OMSI Auditorium

6:00 Sherlock Holmes Opening Exhibition Event at OMSI

* Hors d'oeuvres & drinks served in *Theory*



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West Hub Mini-Grants

NISE Net Year 6

- Palouse Discovery Science Center
- Las Cruces Museum of Nature and Science
- ScienceWorks Hands-on Museum
- Science Factory Children's Museum & Planetarium

West Hub Mini-Grants

NISE Net Year 7

- Natural History Museum of Utah
- WOW! Children's Museum
- Burns Technology Center, Montana State University --
Extended University
- National Museum of Nuclear Science & History

West Hub Mini-Grants

NISE Net Year 8

- The Challenger Learning Center of Alaska
- Alaska Museum of Science & Nature
- Discovery Center of Idaho
- SpectrUM Discovery Area
- University of New Mexico
- Washington State University Vancouver
- KidsQuest Children's Museum
- The Science Zone

Applications are due
November 1, 2013

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Improv Exercise – *Yes, And*



More info: nisenet.org/catalog/tools_guides/improv_exercises

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THANK YOU!

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



Regional Meeting Agenda – Day 2

8:00 Breakfast



9:00 Nano & Society - Improv & Conversation

10:00 Break

10:15 NanoDays Share-out

11:00 Inclusive Audiences Bilingual and Universal Design

12:00 Lunch

1:00 *Nano* mini-exhibition share-out

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3:00 Break/List completion

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6:30 Group Dinner

Nano & Society Workshops

Set of four workshops in Fall 2012 focused on preparing museum educators to engage the public in conversations about the relationship between nanotechnology and society.



Nano & Society Three Big Ideas:

- Values shape technologies
- Technologies affect social relationships.
- Technologies work because they are part of larger systems.

Methods and practices for engaging The public:

- Conversational techniques for facilitating interactions with visitors.
- Team-based inquiry approaches to improving and learning from professional practice.

More info: www.nisenet.org/catalog/tools_guides/nano_society_training_materials

Improv Exercises



Incorporating improv exercises into staff and volunteer training helps create a supportive and upbeat environment for educators to practice and strengthen essential skills.

- **Warm up skills** required for interacting with visitors
- **Encourage conversations:** with visitors (rather than reciting scripts)
- **Be better listeners:** think on your feet and respond in the moment
- **Be responsive:** better tailor content to visitors responses and integrate visitor feedback
- **Be positioned as equals** with visitors not “the expert”
- **Foster teamwork & creativity:** create a fun, supportive, positive work environment to practice skills

More info: nisenet.org/catalog/tools_guides/improv_exercises

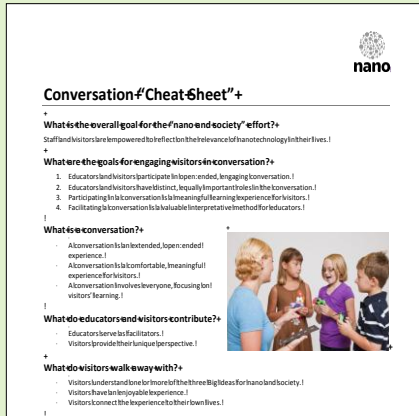
Game – *Nano Around the World*



More info:

nisenet.org/catalog/programs/nano_around_world

Nano & Society Tools

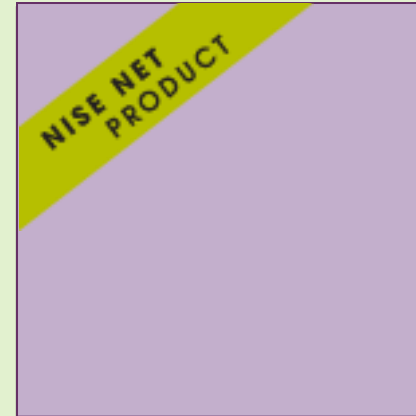


Nano & Society training materials

- slideshows
- videos
- tip sheets
- team-based inquiry sheets



Improv Exercises for staff and volunteers



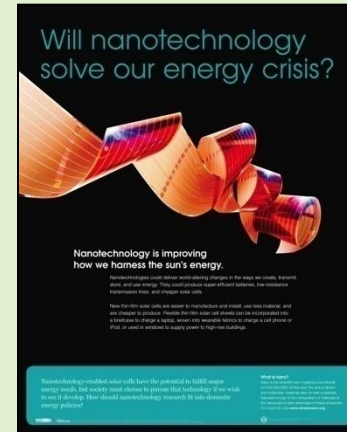
Technology & Society Guide (coming in NanoDays 2014 kit)

More info: www.nisenet.org/catalog/tools_guides/nano_society_training_materials

More Nano & Society Programs & Activities



Would you buy that?
Public program



Societal and Ethical Implications Posters



Wonders and Worries of Nanotechnology
Video episodes



Forums:

- Nanomedicine
- Energy
- Privacy
- Who Decides?
- Cognitive Enhancement

More info: nisenet.org/catalog

Nano & Society Activities



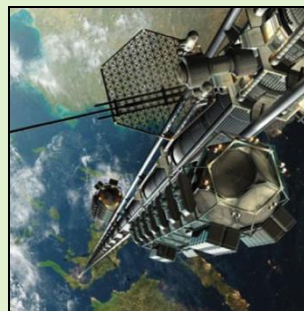
Nano Around the World card game



Exploring Nano & Society – Invisibility Cloak



Exploring Nano & Society – Flying Cars



Exploring Nano & Society – Space Elevator



Exploring Nano & Society – Tippy Table

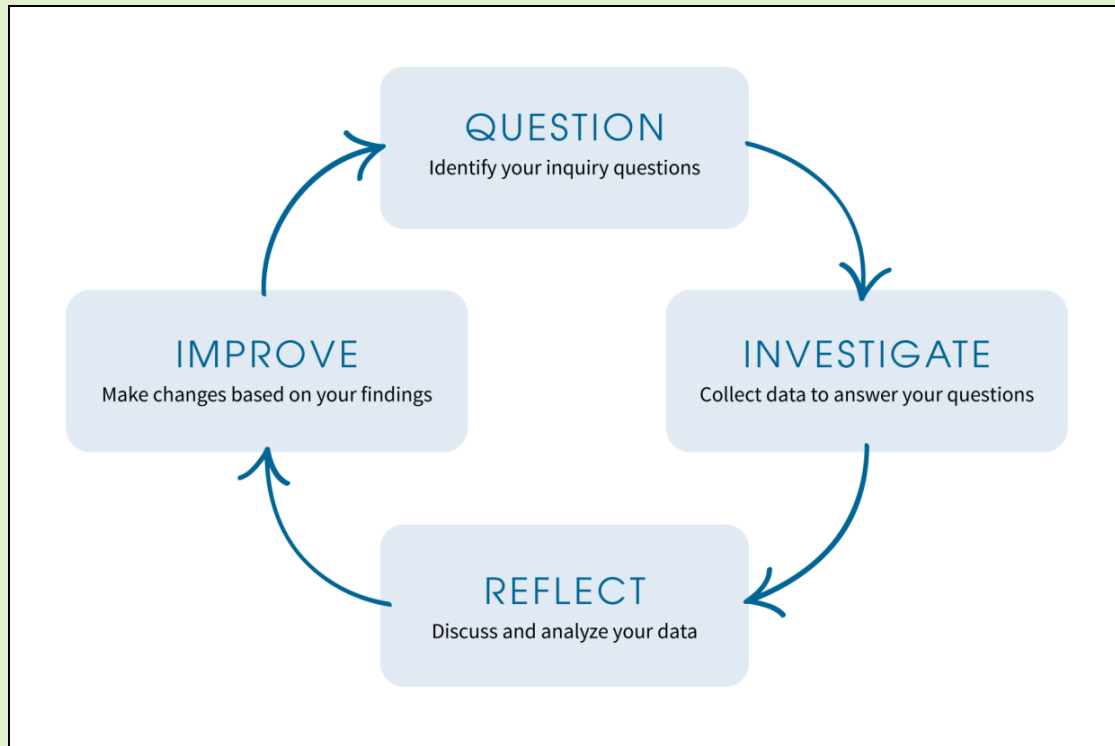


Exploring Nano & Society – You Decide!

More info: www.nisenet.org/catalog/tools_guides/nano_society_training_materials

Nano & Society Team-Based Inquiry

Words of wisdom from Scott P.



Participant Thoughts on Nano & Society Workshops

- What stood out as particularly helpful in the workshops?
- Have you been able to implement anything you learned back at your own institution?
- Are there any tips and tricks you would encourage other partners to use in bringing conversations around Nano and Society into their museums?



More info: nisenet.org/catalog/tools_guides/improv_exercises

Regional Meeting Agenda – Day 2

8:00 Breakfast

9:00 Nano & Society - Improv & Conversation

10:00 Break

10:15 NanoDays Share-out

11:00 Inclusive Audiences Bilingual and Universal Design

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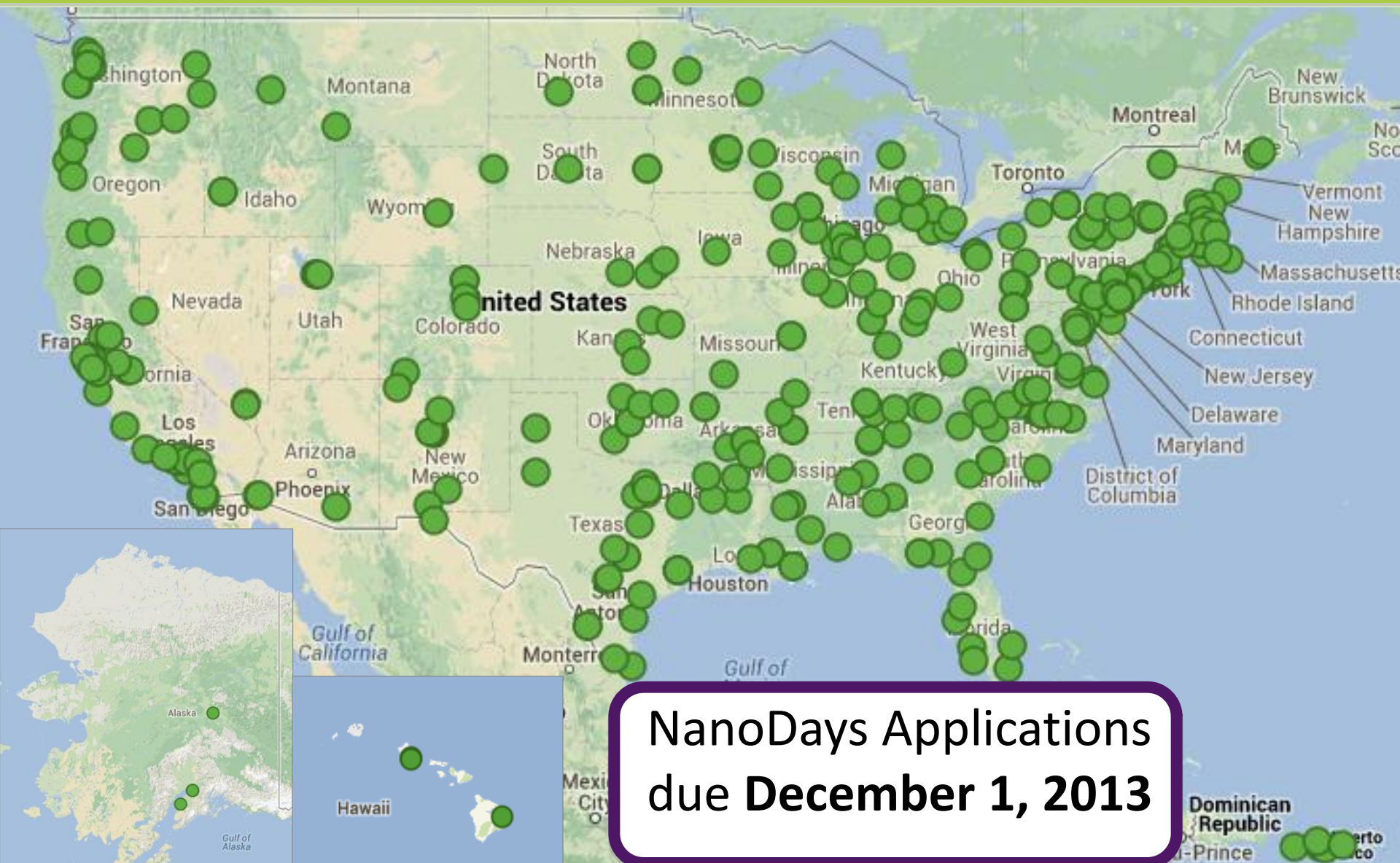
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Making the most of your NanoDays Kit Partner Share-outs



Making the most of your NanoDays Kit Partner Share-outs

- Briefly Describe your past NanoDays events
- Describe one success
- Describe one challenge
- Is there capacity & interest in hosting NanoDays after NISE Net year 10 at your institution?

NanoDays Applications
due **December 1, 2013**

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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.

Inclusive Audiences - Bilingual Audience Workshop



Workshop held in June 2013 in Houston

- Explored importance of engaging bilingual audiences in nanoscale science, engineering and technology
- Strategies to better engage Spanish speakers by building capacity, using techniques like:
 - sheltered instruction
 - team-based inquiry
 - marketing strategies

More info:

nisenet.org/catalog/spanish

nisenet.org/catalog/tools_guides/bilingual_audience_workshop_resources



Equity of Effort: Serving Underserved Audiences

Exploring Terms

Pair Share Activity:

Turn to the person on your right/left and take some time to define the following terms.

Equality/Equity

A Question of Equity

- Acting Equitably implies taking actions
 - that differentiate needs and
 - that apply policies and practices according to the different needs of groups
- Equity of Effort to reach underserved audiences

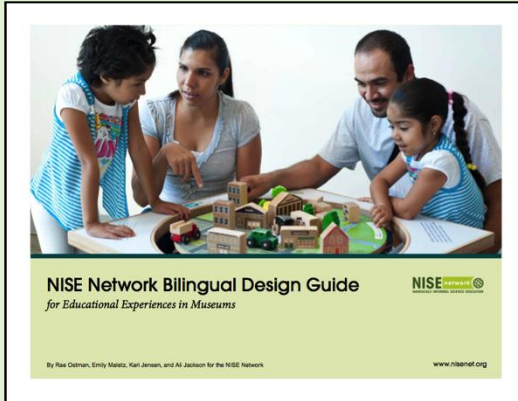
Equality



Equity



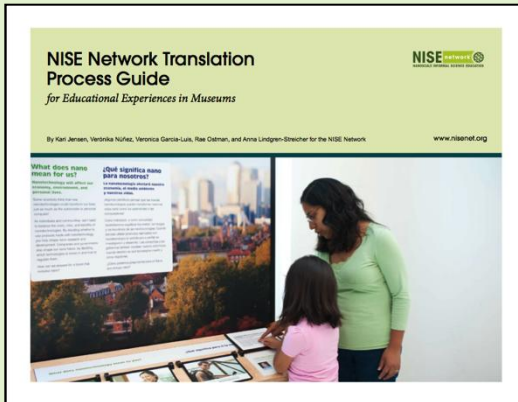
Inclusive Audiences - Bilingual Audience Tools



Bilingual Design Guide



Spanish Language Translations for many educational materials



Translation Process Guide



Bilingual Audience Workshop Resources

More info: nisenet.org/catalog/spanish

nisenet.org/catalog/tools_guides/bilingual_audience_workshop_resources

Inclusive Audiences - Bilingual Audience Tools

Spanish Language Translations

Email Print

Select NISE Network educational products are now available in Spanish!



Based on input from NISE Network partners, we have adapted our most popular programs for Spanish-speaking audiences! Follow the links below to explore Spanish versions of several NISE Network public programs, as well as other selected resources. We have placed the highest priority on translating products that directly serve public audiences. Professional resources, such as instructional materials and educator's guides are only available in English at this time.

Below are a set of products with Spanish translations of public materials

- Click on the **RESOURCE** tab
- Scroll down to the **SPANISH** files

Tools

- [Translation Process Guide](#)
- [Bilingual Design Guide](#)
- [NISE Net Bilingual Audiences Workshop](#)

Website

- Public website [Whatisnano.org](#)

Videos

- [Intro to Nano Video: "Nanotechnology: What's the Big Deal?"](#)
- [NanoLab Video: "How Small Is Nano?"](#)
- [NanoLab Video: "What Happens in a NanoLab?"](#)
- ["Nano and Me" videos: Aluminum, Gold, Gravity, Latex, Pants, and Silver](#)

Programs and Activities

- [Intro to Nano Cart Demo](#)
- [Sizing Things Down](#)

Browse by

Audience

All ages (109)
7 and up (39)
11 and up (38)
15 and up (17)
19 and up (3)
informal science educators (25)
scientists (14)

Nano topics

Art and nature (71)
Bio and medicine (73)
Energy and environment (50)
Fundamentals (132)
Information Technology (47)
Materials, tools, and applications (148)
Society, policy, and economics (64)

Programs

Classroom activity (1)
Display (2)
Facilitated activity (46)
Game (4)
Museum theater (4)
Stage presentation (16)

Available translations
Spanish (61)



Nano throughout the year!
Browse products by **season**.



Select NISE Network educational products are now available in Spanish!

Find answers to your questions about the catalog on our [FAQ page](#).

More info: nisenet.org/catalog/spanish

Inclusive Audiences: Universal Design Workshop



What is Universal Design?

The design of products and environments to be usable **by all people**, to the greatest extent possible, **without the need for adaptation** or specialized design.

More info: nisenet.org/inclusive_audiences

Inclusive Audiences: Universal Design Workshop



July 2013 at Museum of Science, Boston

Audience: Museum Educators

Hands-on opportunity to apply Universal Design guidelines:

- Gathered feedback on NanoDays activities from experts with disabilities
- Used Team-Based Inquiry (TBI) approach
- Identified barriers & modified activities

Inclusive Audiences: Universal Design Tools



Universal Design Guidelines
for programs



Universal Design Workshop Resources



Universal Design Guidelines
for exhibits

More info: nisenet.org/inclusive_audiences

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Mini-exhibitions around the country



Buffalo Museum of Science
Buffalo, NY



National Museum of Nuclear Science
and History, Albuquerque, NM



Da Vinci Science Center
Allentown, PA



Miami Science Center
Miami, FL



Saint Louis Science Center
Saint Louis, MO



Children's Museum of Houston
Houston, TX

Nano Mini-exhibition Public Impact



Summative Study Findings:

1. Reach is sizable and broad
2. Successful in:
 - Engaging visitors
 - Promoting learning
3. Successful for:
 - Different types of institutions
 - Small sample of Spanish-speaking visitors
 - Small sample of visitors with disabilities
4. Catalyzing new and enhanced programming

Nano Mini-exhibition Partner Impact



- 87% implementing new or expanded **public programming**
- 62% reported new and expanded **partnerships**
- Almost all partners have implemented new or expanded **staff and/or volunteer training**
- All plan to keep or share Nano **beyond the one-year commitment**, 52% said indefinitely
- Wide range of **impacts** described on visitors, staff, collaborations, and organizational

More info: nisenet.org/catalog/exhibits/nano_mini-exhibition

Nano Mini-Exhibition In the West Hub

- OMSI
Sharing with AC Gilbert Discovery Village
- Natural History Museum of Utah
Sharing with Discovery Center of Idaho
- Palouse Discovery Science Center
- ScienceZone
Sharing with Lander Children's Museum
- Durango Discovery Center
- Pacific Science Center
- Future of Flight
Sharing with KidsQuest Children's Museum
- ScienceWorks
Sharing with ScienceFactory
- National Museum of Nuclear Science & History
- Challenger Learning Center of Alaska
Shared with Alaska Museum of Nature & Science
- Fort Collins Discovery Center
- SpectrUM

Nano Mini-Exhibition Partner Share-out

Please share a few highlights on hosting the *nano* mini-exhibition.

Nano Mini-Exhibition National Museum of Nuclear Science & History



Nano Mini-Exhibition

National Museum of Nuclear Science & History



Nano Mini-Exhibition

Natural History Museum of Utah



Nano Mini-Exhibition Natural History Museum of Utah



Nano Mini-Exhibition Challenger Learning Center of Alaska



Nano Mini-Exhibition Challenger Learning Center of Alaska



Nano Mini-Exhibition Challenger Learning Center of Alaska



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Getting Nano into Your Building

Scientist & Research Center Partnerships



Why Collaborate?

- Bring current science to museum audiences
- Connect scientists and students with the public
- Share resources and tools
- Mutual learning between scientists, museum educators, and the public

RISE: Research Center – Informal Science Education Partnerships

Encouragement, knowledge, and tools to support collaborations

More info: nisenet.org/rise

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Future: Beyond Year 10

Project funding
ends in ~ 2 years
(August 2015)

Future: What remains after Year 10



What remains after the funding ends?

- Field-wide capacity to engage the public in nanoscience, engineering, and technology
- Relationships, including collaborations between scientists and museums
- Ongoing use of NanoDays and program materials
- Mini-exhibition copies on museum floors
- Website - online catalog
- Evaluation and research knowledge
- Network lessons shared with field

Future:



How can we sustain
the benefits of the
NISE Network?

Future - Funding Scenarios After Year 10



Range of Scenarios

Scenario 1:

No additional funding

Scenario 2:

Some additional funding for a core of activities

Scenario 3:

Funding for a new topic

Future – Individual Reflection & Share out

Scenario 1. No additional funding

- In the absence of any more funding, what would your institution be able to keep doing?
 - Are you taking any actions or pursuing any resources in the next two years to be able to continue nano education work in the years beyond the grant?
-
- How could the partners in this regional hub support each other's work moving forward? Which collaborations do you plan to initiate/continue and how will you sustain them?

What interest you the most?

Snacks & sticky dots

Scenario 2: Some additional funding for a core of activities

- If there was limited funding to support the NISE Network in the future, what activities would be most valuable to you?

- NanoDays physical kits
- NanoDays digital materials
- mini-grants
- exhibits
- regional hub structure
- in-person professional development
- online professional development
- new programs and media
- website with online catalog
- newsletter
- social networking (Facebook, LinkedIn, Twitter)
- other: _____

What interest you the most?

Snacks & sticky dots

Scenario 3: Funding for a new topic

- If we could repurpose the network for another topic, what topics interest you the most?

- engineering
- climate change
- energy
- synthetic biology
- big data
- computer science
- convergent technologies (nano-bio-info-cogno)
- new emerging technologies
- societal and ethical implications
- nano is the only topic that interests me
- brain and neuroscience
- maker spaces
- other: _____

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Last Minute Logistics



Logistics

- reimbursement forms
- luggage
- airport rides
- swap table

Dinner @ 6:30

Mama Mia Trattoria

439 SW 2nd Ave Portland, OR 97204

<http://mamamiatrattoria.com/>

THANK YOU!

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

