

# Welcome NISE Network Partners !



# NISE Network Regional Meeting

Fall 2013



# 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



- 9:00 Welcome and introductions
- 9:15 Improv Activity 1: *I Say Hi*
- 9:45 NISE Network update
- 10:30 Break
- 10:45 Mini-Grants: New Ideas for Doing Nano
- 12:00 Lunch and museum visit time
- 2:00 Improv Activity 2: *Nano Around the World*
- 2:15 Nano & Society Conversations
- 3:15 Break
- 3:30 Making the Most of Your NanoDays Kit
- 4:30 Inclusive Audiences Bilingual and Universal Design
- 5:30 Break
- 6:30 Group Dinner

# Regional Meeting Agenda – Day 2

- 9:00    Improv Activity #3: *Red Ball*
- 9:15    Getting Nano into your building  
(exhibitions, signage, partnerships)
- 10:15   Beyond Year 10 Discussion Part 1
- 11:00   Break/List completion
- 11:15   Beyond Year 10 Discussion Part 2
- 11:45   Meeting wrap-up

# Regional Meeting Welcome



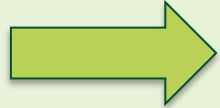
## Introductions

## Logistics

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

## Swap Table

# Regional Meeting Agenda – Day 1



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# Improv Exercise – *I Say Hi!*



**More info:** [nisenet.org/catalog/tools\\_guides/improv\\_exercises](https://nisenet.org/catalog/tools_guides/improv_exercises)



# Why implement improv exercises ?



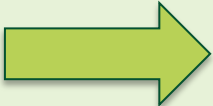
Incorporating improv exercises into staff and volunteer training helps create a supportive and upbeat environment for educators to practice and strengthen essential skills.

- **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](https://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.





# 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

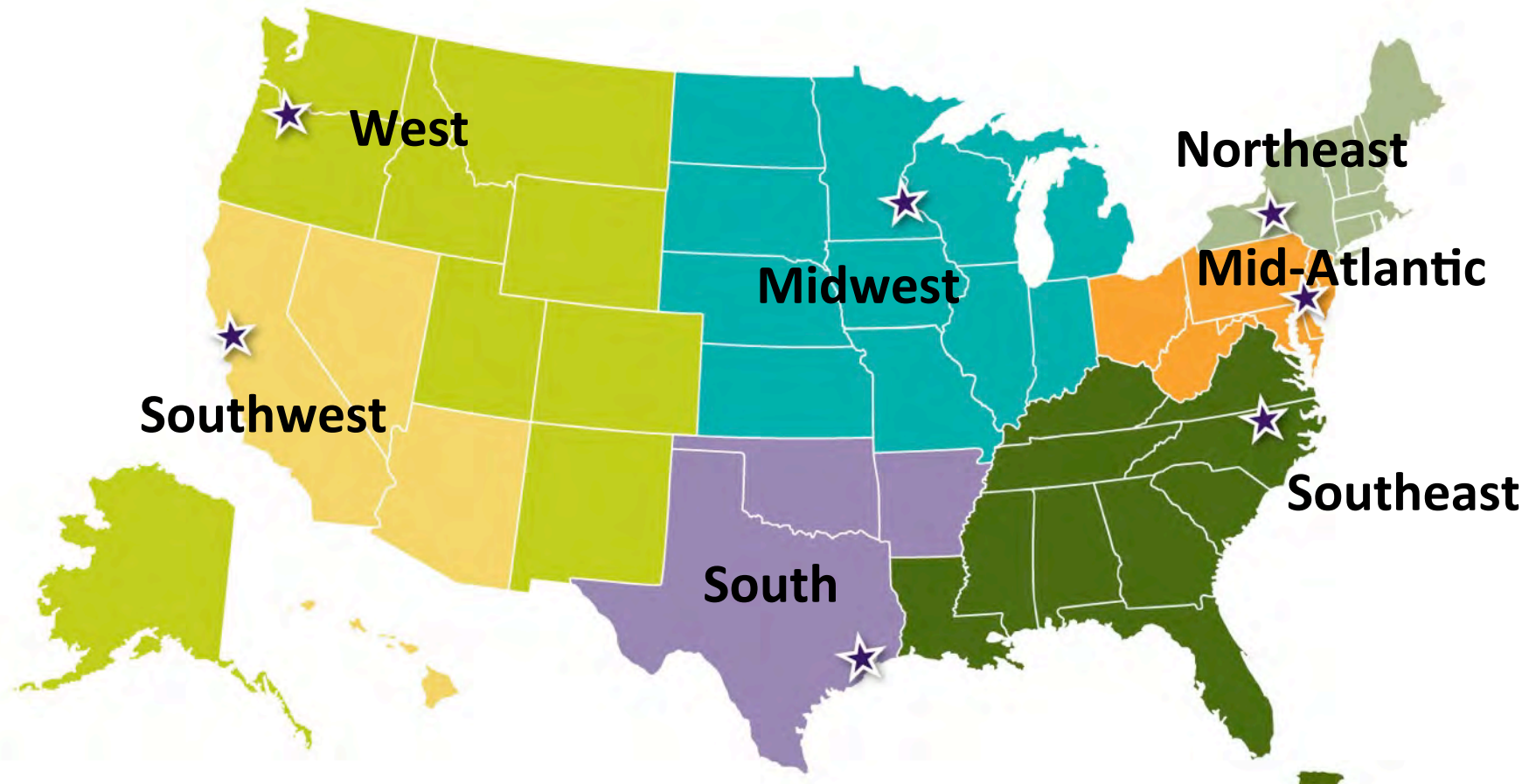
- Generate and document learning through evaluation and research
- Communicate broadly in ISE and research fields



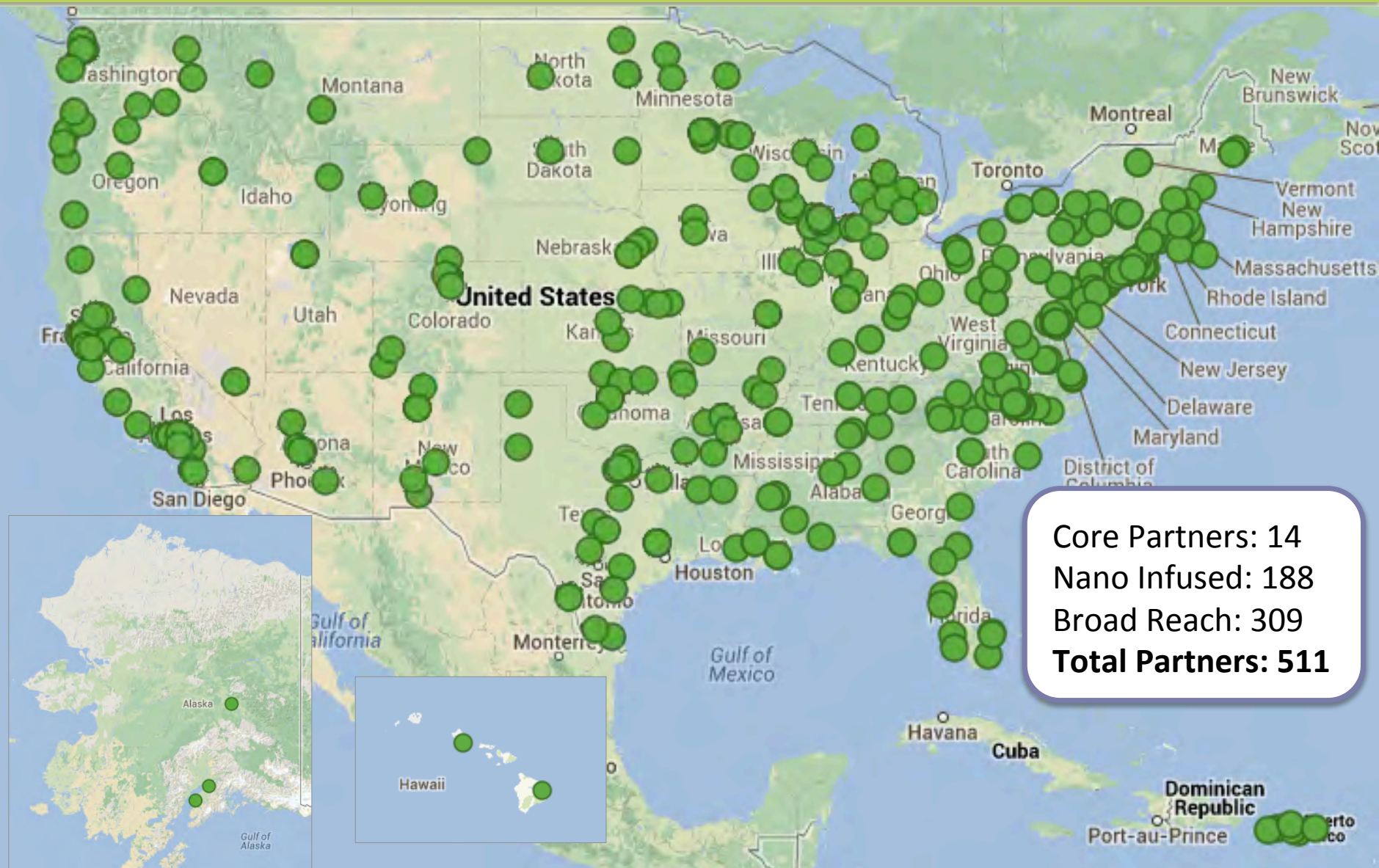
# Network Community



# 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:**

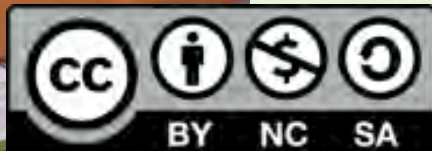
- ✓ Scientist review
- ✓ Peer review
- ✓ Visitor evaluation

## **Audiences and Content**

- Content Map as a guide
- Inclusive audience approach

## **Designed for sharing**

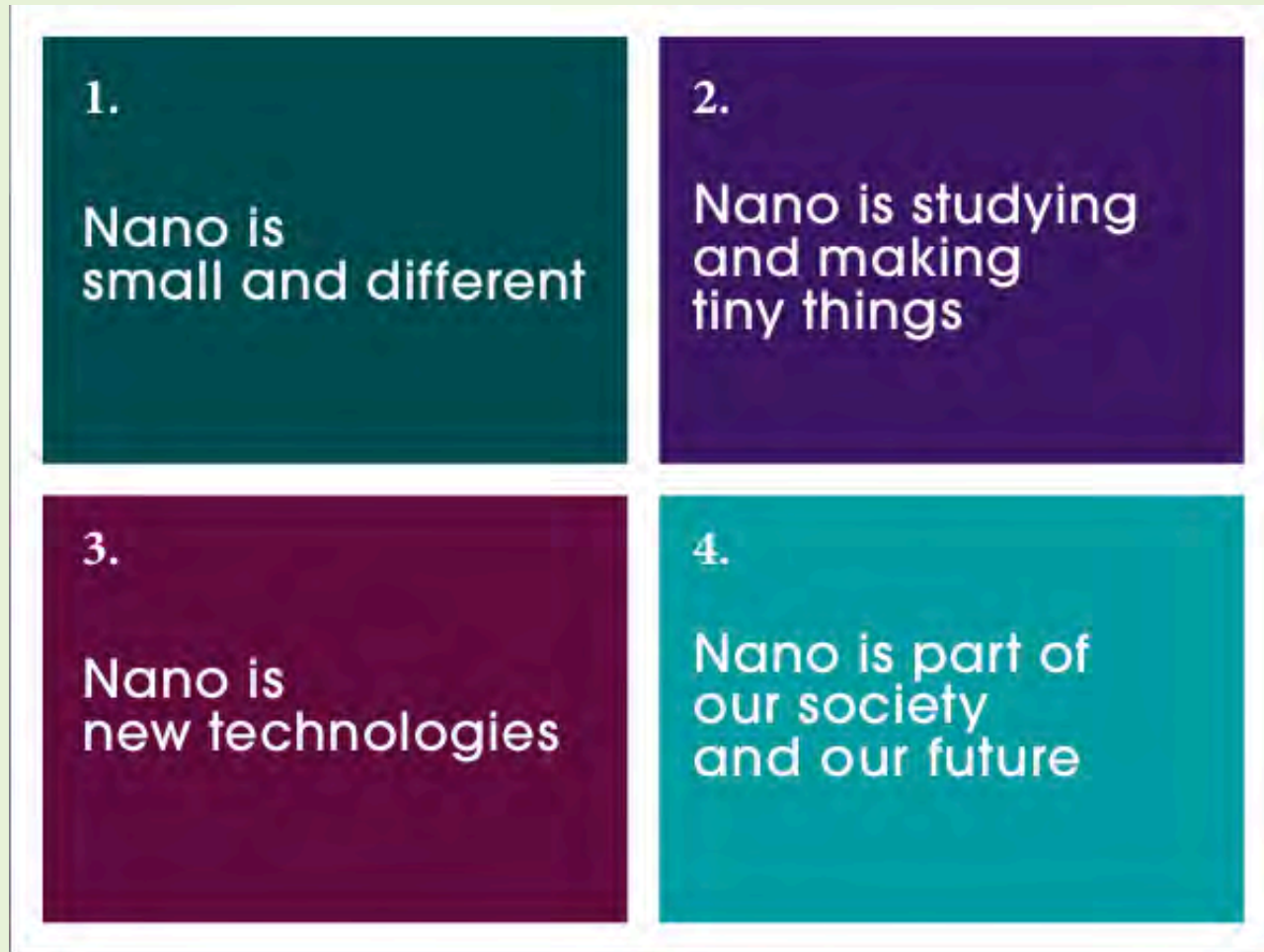
- Easily edited and adapted
- Creative Commons license



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



# Content Map



# 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



Search:

[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**.

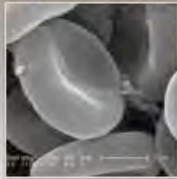
### NanoDays

MARCH 30 - APRIL 7, 2013

Be sure to fill out your NanoDays 2013 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](#) [Newsletters](#)

#### NanoDays 2012 report - winners chosen

By Catherine 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 Catherine 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 KIC 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



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 [whatsnano.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

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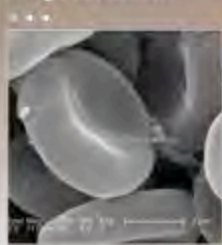
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The Biggest Event for the Smallest Science!

MARCH 30 - APRIL 7, 2013

The NanoDays 2013 physical kit application is now available - [Apply today!](#)

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[Blog](#) [Newsletter](#)

[Blog](#)

#### NanoDays 2013 kit applications - due December 1, 2012

By Catharine 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!

[Blog](#)

#### Annual Partner Survey to launch in late October 2012

By Catharine McCarthy on September 24, 2012 | 0 comments

We are excited to announce that the NISE Net Annual Partner Survey will be launched in late October.

[Read more](#)



### New in the Catalog

[Catalog](#)



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

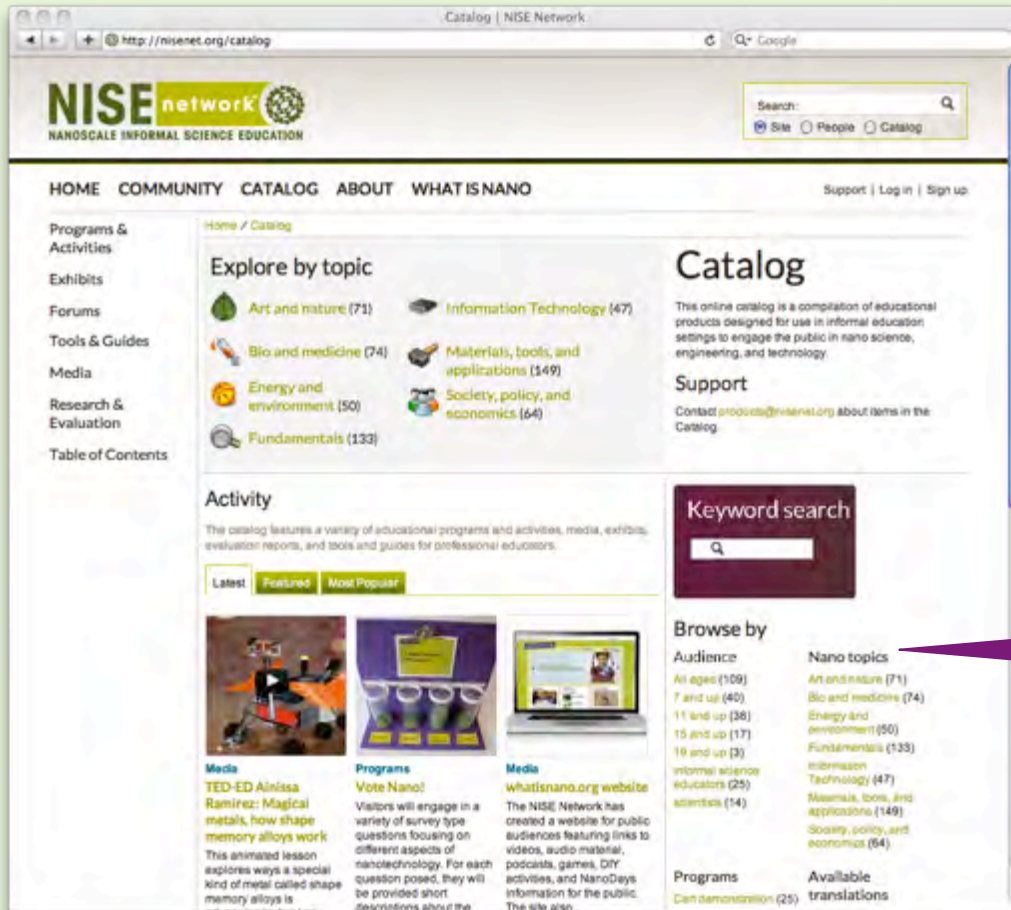
## Catalog

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



# Search the Catalog

Search the catalog by audience, topic, or season



## 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!

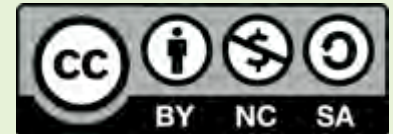
Find answers to your questions about the catalog on our **FAQ page**.

# Products in Catalog



## NISE Net 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 resources

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

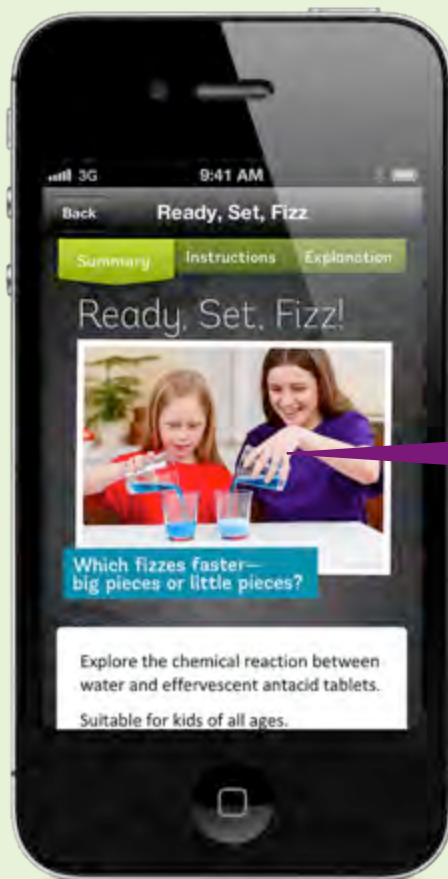
# Website for the Public



- 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





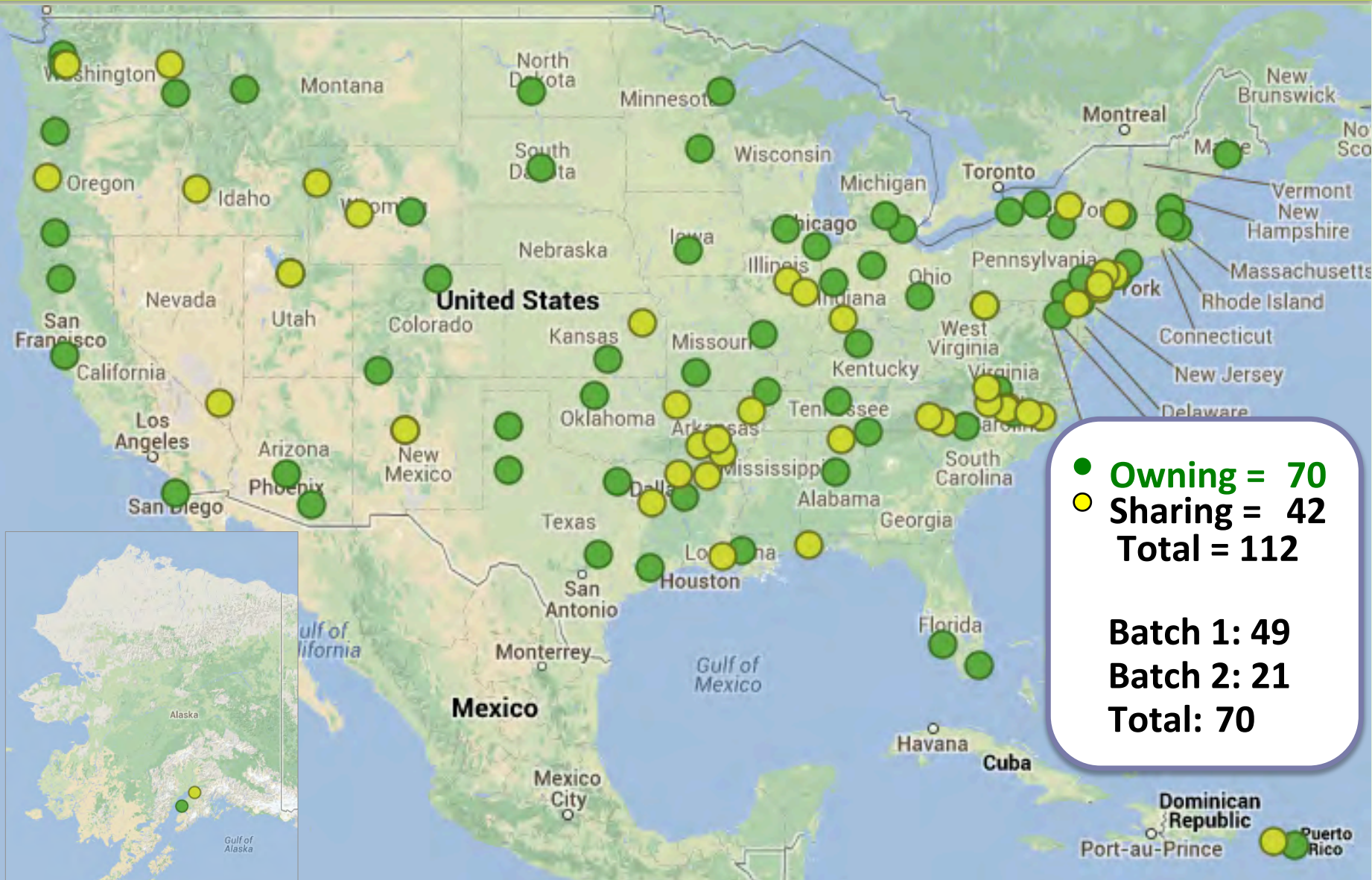
# Nano Mini-exhibition



- 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)

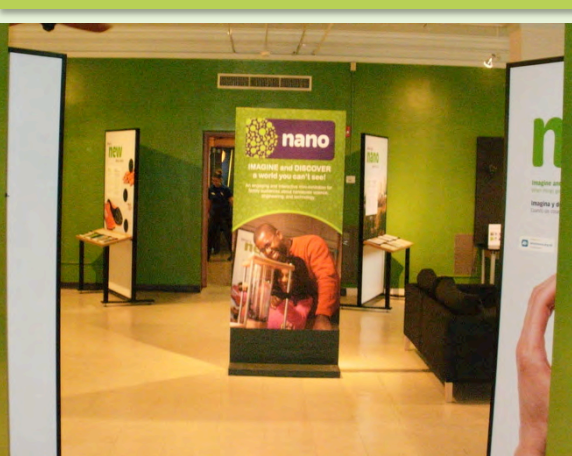
Waiting list for used copies  
and possible sharing

# Nano Mini-Exhibition Reach





# Mini-exhibition 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



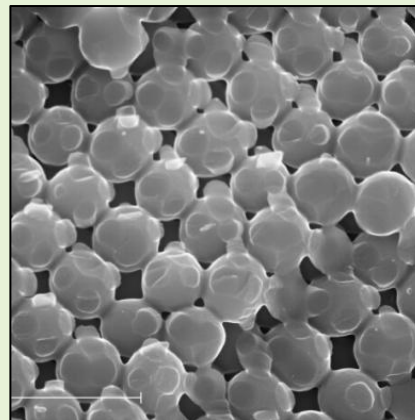
- 87% implementing new or expanded **public programming**
- 62% reported new and expanded **partnerships**
- Almost all partners have implemented new or expanded **staff and/or volunteer training**
- All plan to keep or share Nano **beyond the one-year commitment**, 52% said indefinitely
- Wide range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

**More info:** [nisenet.org/catalog/exhibits/nano\\_mini-exhibition](https://nisenet.org/catalog/exhibits/nano_mini-exhibition)

# 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 Tools



## **RISE: Research Center – Informal Science Education Partnerships**

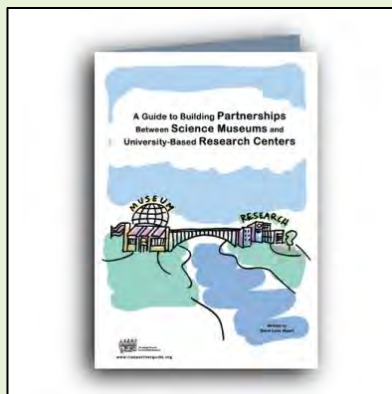
Encouragement, knowledge, and tools to support collaborations

### **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](http://nisenet.org/rise)

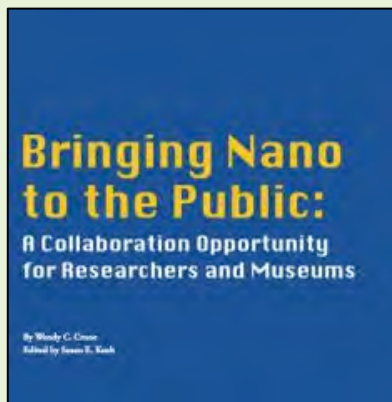
# Museum-Scientist Collaboration Tools



**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

# Science Communication Tools for scientists



## Science Communication Workshop

designed for Research Experiences for Undergraduates (REU) programs

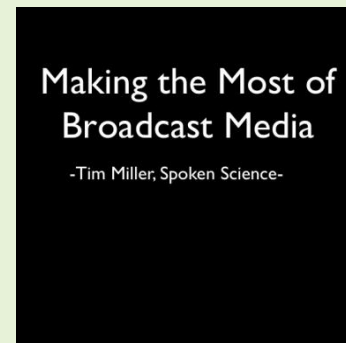


## Sharing Science Workshop and Practicum

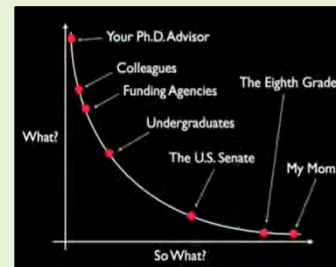
designed for scientists and students



## 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



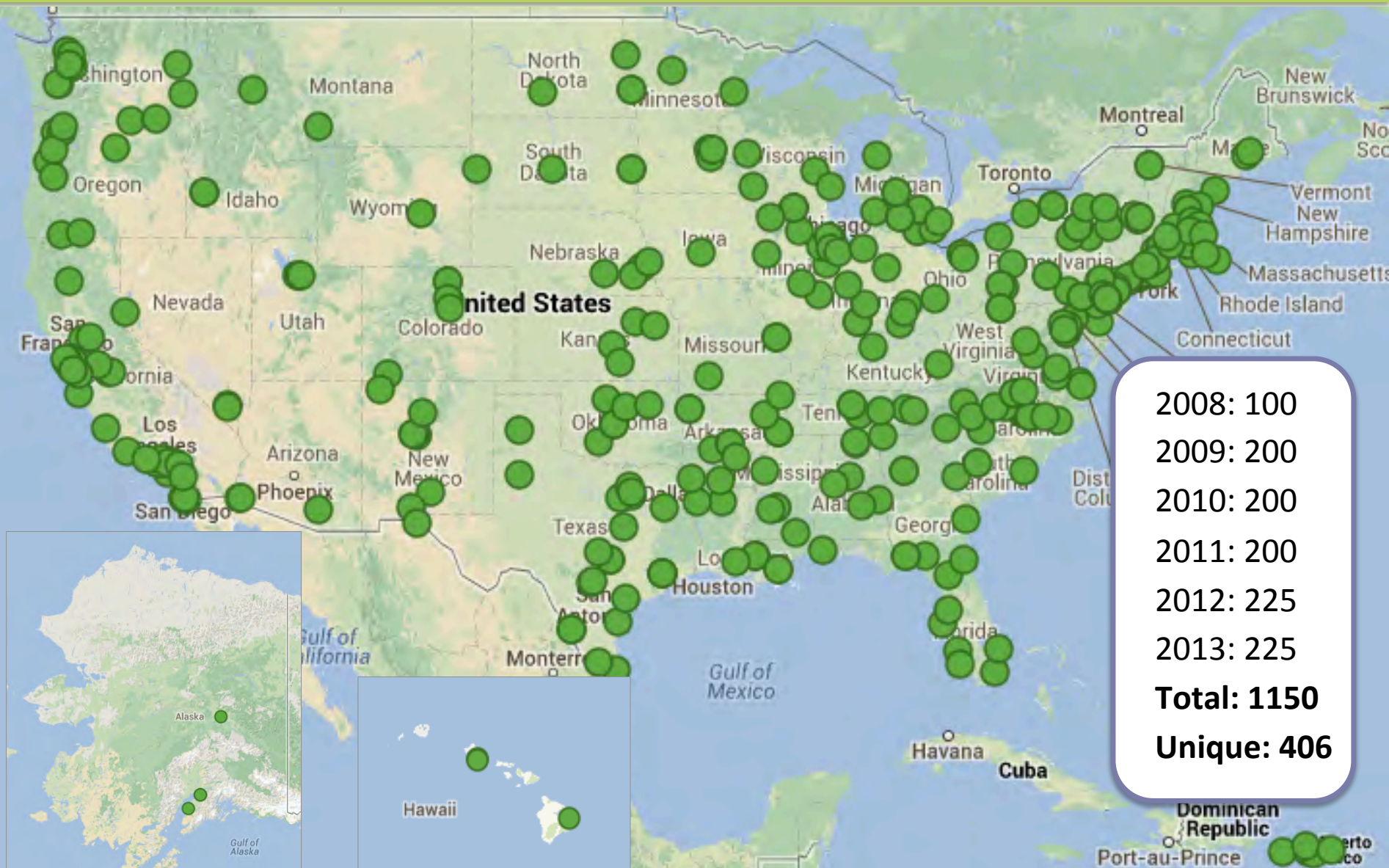
## Reach:

- 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





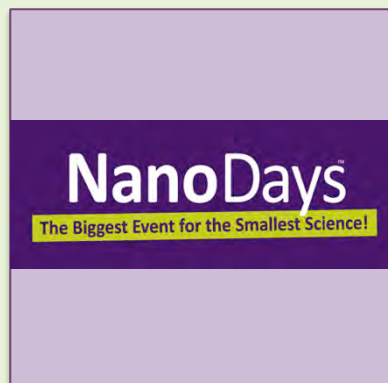
# NanoDays 2014 kit

Applications are due  
**December 1, 2013**



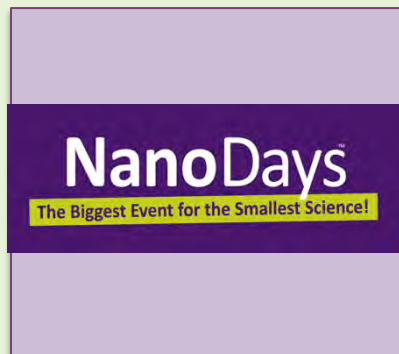
## Training Videos for visitors & staff

- 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

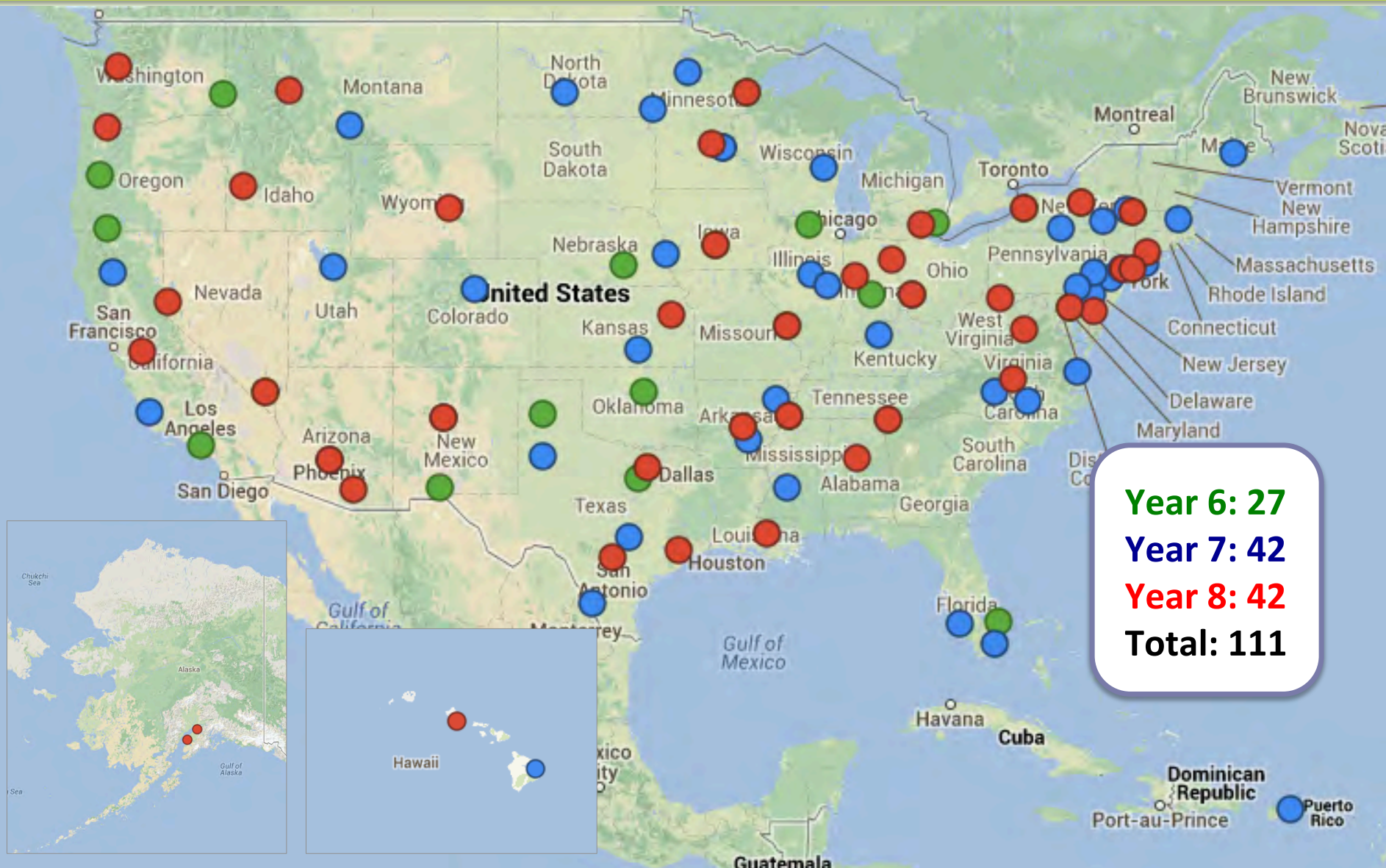
Applications are due  
**November 1, 2013**



- 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
  2. New efforts to reach new audiences with nano programming (including traditionally under-served or under-represented audiences)
  3. New partnerships between museums and nano researchers, community--based organizations, or diversity serving organizations

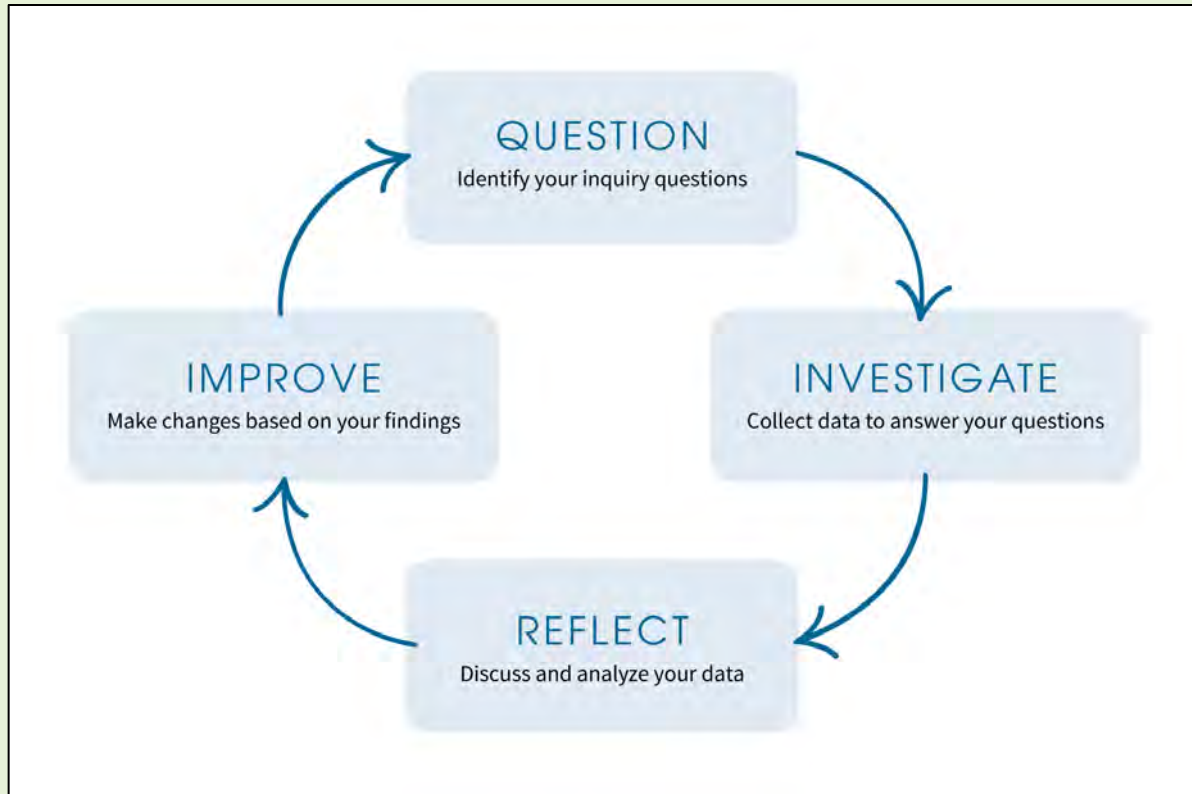


# Mini-Grants Reach

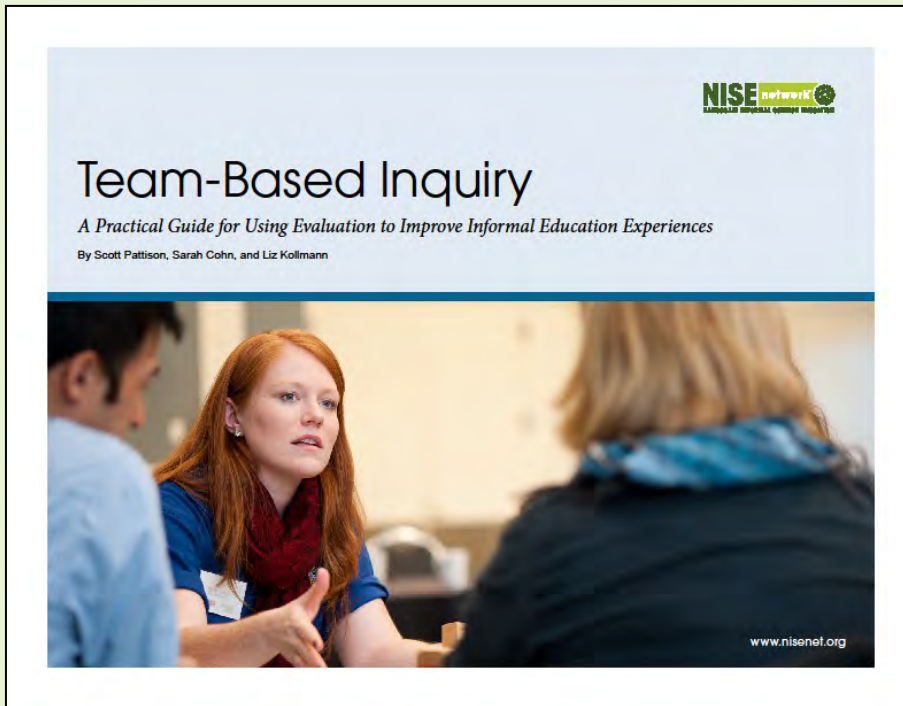


# Team-Based Inquiry

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.



# 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](http://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. \**

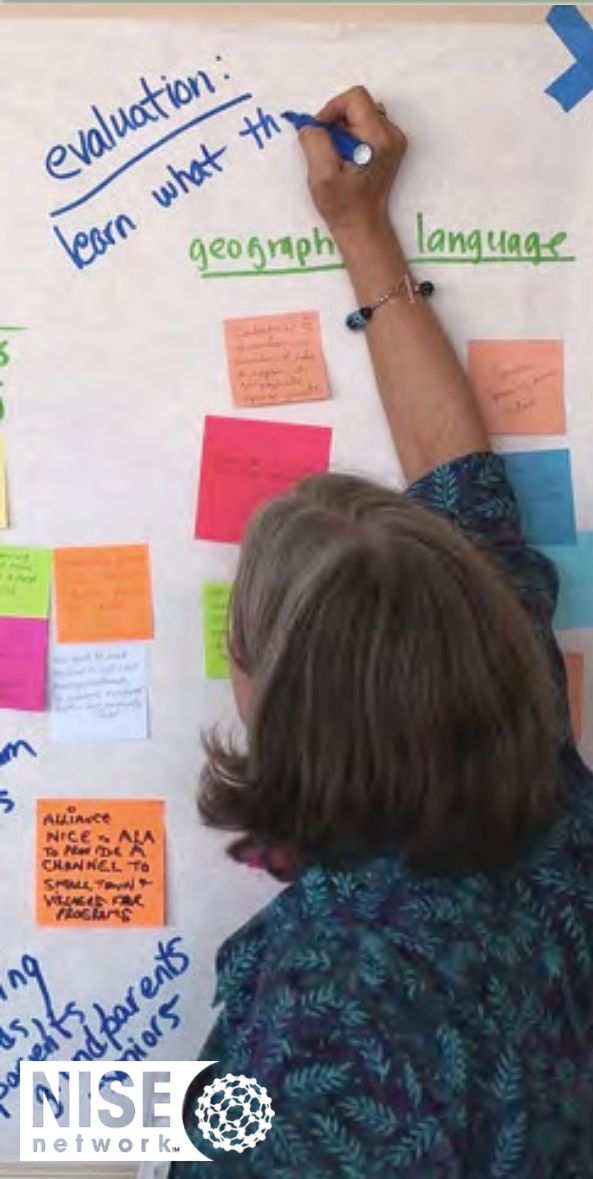
☐ Yes

☐ 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](http://nisenet.org)

**More info:** [nisenet.org/evaluation](http://nisenet.org/evaluation)

**More info:** [nisenet.org/research](http://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](http://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](http://nisenet.org/community/events)



# Stay in Touch

## Website networking tools



- Update your profile on the website  
[nisenet.org/faq](http://nisenet.org/faq)
- Sign up for the monthly  
*Nano Bite* newsletter  
[nisenet.org/community/nanobite](http://nisenet.org/community/nanobite)
- Join our social networking sites  
[nisenet.org/community](http://nisenet.org/community)



# 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





# Regional Meeting Agenda – Day 1

9:00 Welcome and introductions

9:15 Improv Activity 1: *I Say Hi*

9:45 NISE Network update

10:30 Break

10:45 Mini-Grants: New Ideas for Doing Nano

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5:30 Break

6:30 Group Dinner



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6:30 Group Dinner



# Mini-Grant Presenters

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization

Applications are due  
**November 1, 2013**



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# Game – *Nano Around the World*



**More info:**

[nisenet.org/catalog/programs/nano\\_around\\_world](http://nisenet.org/catalog/programs/nano_around_world)



# 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](https://nisenet.org/catalog/tools_guides/improv_exercises)

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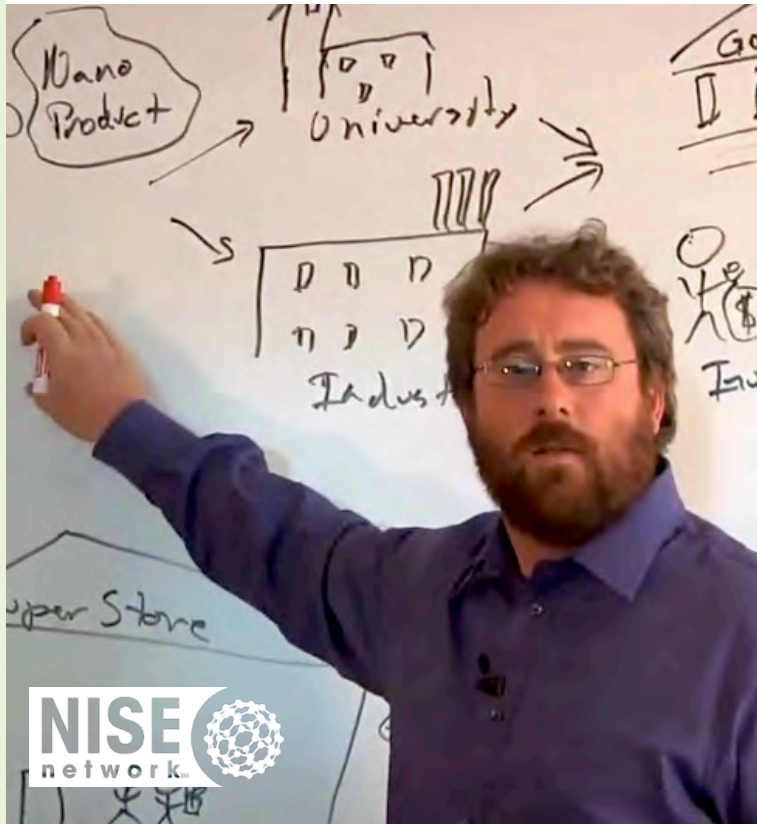
5:30 Break

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](http://www.nisenet.org/catalog/tools_guides/nano_society_training_materials)

# Nano & Society Activities



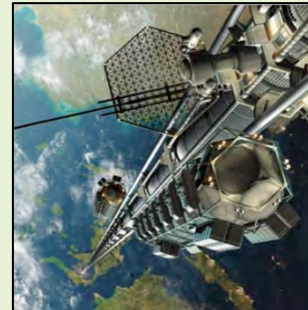
**Nano Around the World card game**



**Exploring Nano & Society – Invisibility Cloak**



**Exploring Nano & Society – Flying Cars**



**Exploring Nano & Society – Space Elevator**



**Exploring Nano & Society – Tippy Table**

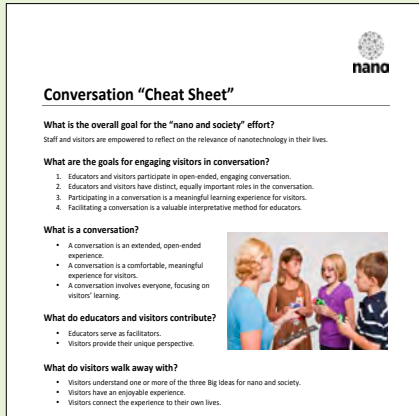


**Exploring Nano & Society – You Decide!**

**More info:** [www.nisenet.org/catalog/tools\\_guides/nano\\_society\\_training\\_materials](http://www.nisenet.org/catalog/tools_guides/nano_society_training_materials)



# Nano & Society Tools

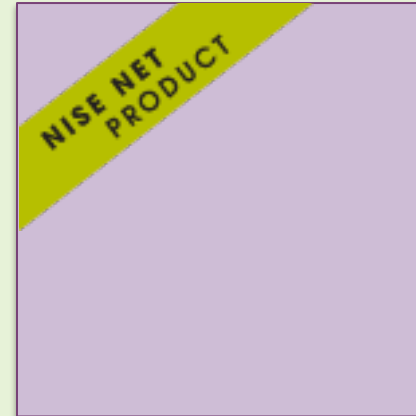


## Nano & Society training materials

- 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](http://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

# Nano & Society Workshops - Share-outs

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization

# Regional Meeting Agenda – Day 1

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# Making the most of your NanoDays Kit - Share-outs

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization

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

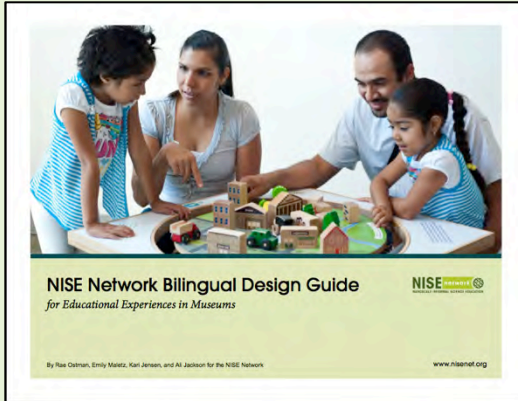
### More info:

[nisenet.org/catalog/spanish](http://nisenet.org/catalog/spanish)

[nisenet.org/catalog/tools\\_guides/bilingual\\_audience\\_workshop\\_resources](http://nisenet.org/catalog/tools_guides/bilingual_audience_workshop_resources)



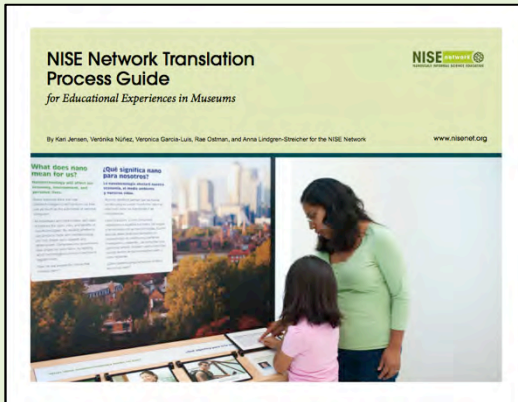
# Inclusive Audiences - Bilingual Audience Tools



## Bilingual Design Guide



**Spanish Language Translations** for many educational materials



## Translation Process Guide



**Bilingual Audience Workshop Resources**

**More info:** [nisenet.org/catalog/spanish](https://nisenet.org/catalog/spanish)  
[nisenet.org/catalog/tools\\_guides/bilingual\\_audience\\_workshop\\_resources](https://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](http://nisenet.org/catalog/spanish)

# Bilingual Audience Workshop – Share-outs

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization
- Name  
organization

# 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.



# Inclusive Audiences: Universal Design Workshop

**NISE network**  
HANDSCALE INFORMAL SCIENCE EDUCATION

www.nisenet.org



## Universal Design Guidelines

for Public Programs in Science Museums



Produced by the NISE Network

**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](http://nisenet.org/inclusive_audiences)

# Universal Design Workshop– Share-outs

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization
- Name  
organization

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# Regional Meeting Agenda – Day 2



9:00 Improv Activity #3: *Red Ball*

9:15 Getting Nano into your building  
(exhibitions, signage, partnerships)

10:15 Beyond Year 10 Discussion Part 1

11:00 Break/List completion

11:15 Beyond Year 10 Discussion Part 2

11:45 Meeting wrap-up

# Improv Exercise – *Red Ball*



**More info:** [nisenet.org/catalog/tools\\_guides/improv\\_exercises](https://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
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# Getting Nano in Your Buidling – Share-outs

- Name,  
organization
- Name,  
organization
- Name  
organization
- Name  
organization
- Name  
organization

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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



# THANK YOU!

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

