NanoDays™

The Biggest Event for the Smallest Science!

NanoDays 2012 Report

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Introduction

NanoDays is an educational, nationwide festival about nanoscale science, engineering, and technology. NanoDays events are organized by participants in the Nanoscale Informal Science Education Network (NISE Net), and take place at over 200 science museums, research centers, and universities across the country from Puerto Rico to Hawaii. NanoDays engages people of all ages in learning about this emerging field, which holds the promise of developing revolutionary materials and technologies. NanoDays 2012 took place between March 24 and April 1, 2012.

Each year (2008-2012), the NISE Network develops and distributes NanoDays kits. The kits contain educational products designed to introduce the public to basic concepts of nanoscale science, engineering, and technology, as well as supporting resources to help Network partners plan and implement local NanoDays events. The Network produces two kinds of NanoDays kits: physical kits and digital kits. Physical kits contain all materials and supplies needed to implement NanoDays, while digital kits include downloadable resources. Physical kit recipients are expected to provide feedback about their NanoDays events using an online report. The digital version of the kit can be downloaded for free from the NISE Network website (www.nisenet.org).

For NanoDays 2012, 225 physical kits were distributed on an application basis to informal science educators and research outreach specialists within the United States.[1] It is likely that additional institutions participated in NanoDays 2012 without receiving the physical NanoDays 2012 kit, using kits from past years and/or digital kit materials.

NanoDays Goals

The NISE Network leadership team has articulated a number of goals for NanoDays.

Related to network community, NanoDays seeks to:

1. Cultivate a national network of museums and research institutions working together to engage the public, through common participation in a national event related to nanoscale science, engineering, and technology (NSET).
2. Increase capacity in the field to engage the public in NSET content, building on and contributing to best practices in informal education.
3. Provide a tangible opportunity for NISE Net partners to develop and strengthen local partnerships between museums and scientists or research centers.
4. Provide an impetus and support for the network to create, share, and implement public engagement products related to NSET learning.

[1] Website analytics indicate that a total of 568 partners downloaded the NanoDays 2012 digital kit in its entirety. (The website does not track downloads of individual NanoDays products.)

Related to public engagement, NanoDays seeks to:

1. Provide engaging programming experiences for public audiences, related to NSET.
2. Engage the public in content learning related to NSET.

(See Appendix A for a more detailed description of the NanoDays goals.)

Several evaluation efforts contribute toward measuring the success of NanoDays, including analyses of the annual NanoDays reports filled out by kit recipients (such as this document), delivery and reach studies, and formative and summative evaluation of NISE Net products for both public and professional audiences.

Methods

The NanoDays team designed this study to gather two kinds of information:

1. Information related to NISE Net's network community goals for NanoDays. The Network uses data on recipients' use of NanoDays 2012 kits to inform kit awards for 2013.
2. Information related to NISE Net's public engagement goals for NanoDays. The Network uses data on partners' interests, needs, and capacities to inform development of materials for NanoDays 2013.
3. Information to help inform other Network initiatives.

All institutions receiving a NanoDays 2012 physical kit were asked to complete an online report and survey about their experiences with NanoDays. The survey instrument included two sections:

1. A report section, with questions about local NanoDays 2012 events. These data were analyzed and compiled for this report.
2. A survey section, with questions to help the Network improve future NanoDays kits and other initiatives. These data are not included in this report. They are being analyzed and documented separately.

The report and survey instrument was administered through SurveyGizmo. Survey participants were informed that the online instrument had two parts. Responses to the report section would be linked to their organization, while responses to the survey section would be anonymous.[2] (See Appendix B for the complete text of the online instrument.)

Regional hub leaders sent e-mail messages with the link to all kit recipients prior to the NanoDays national event. A link to the report was also posted on the nisenet.org website and included in the March and April Nano Bite e-newsletters. Survey administrators and regional hub leaders sent email

[2] Part 2 of the online SurveyGizmo instrument stated, "Your feedback helps us improve NanoDays and plan future NISE Net efforts and resources. Information from past NanoDays reports and evaluation has led to improvements to the kit and the types of additional resources that the NISE Net provides…For these last questions, your name and institution will not be associated with your response in any reporting of the findings, and your response will not in any way affect your kit eligibility next year. You may skip these questions or end the survey at any time by hitting the submit button at the bottom of the next page…Thank you for taking the time to answer these questions."

reminders to those who had not yet completed the report during the month of April. Institutions who did not receive the NanoDays 2012 physical kit, but did participate in NanoDays, were also invited to complete the 2012 NanoDays report. As an incentive for completing the report, respondents were offered the chance to win free supplies for future NanoDays events.[3]

Data were downloaded from SurveyGizmo on May 17th, 2012. By May 17th, there were 214 complete or nearly complete reports. (Only complete or nearly complete reports were included in the analysis.) In a few cases, multiple reports were submitted by the same institution. These were combined or reconciled as appropriate, depending on whether or not they represented duplicate reports for the same event or reports of multiple events.

Since May 17th, additional reports have been submitted, but were not included in data analysis. In total, data from 214 institutions were included in the analysis. They include:

- 211 of the 225 institutions who received a physical kit
- 3 institutions that did not receive a physical kit in 2012 but used either the digital kit or physical kit materials received in previous years.

For data analysis, the 214 complete reports were carefully read by the NanoDays working group. The team followed the NISE Net Data Discussion Guide for Team Based Inquiry to direct their conversation and analysis of the data. Together the group reported themes and observations in the data, and a sub-set of the team confirmed these general observations by going back and coding participant answers. We have reported this quick coding by including percentage numbers in the finding below.

Findings

The first portion of the online SurveyGizmo instrument took the form of an event report. Report results are summarized here. More complete report responses will be shared with regional hub leaders, to aid with ongoing partner development work and to help allocate future network resources. Respondents were informed that their responses to the event report would be linked to their organization.

Collaborations

Of the 214 partners who reported on their NanoDays events, 61% reported collaborations with at least one other organization for their NanoDays event. Many respondents collaborated with multiple partners. Overall, collaborations described in the event descriptions *(see below)* suggest well thought out and planned partnerships between museums and researchers. Many museum respondents described having researchers and private companies bring specialized activities, equipment, and/or programs to their NanoDays event.

Some examples of collaborations included:

- *We had [University] students as well as [University] scientists on hand with their own demonstrations, as well as pairing with our own.*

[3] Prizes included, temporary tattoos, extra puzzle blocks and games, and posters.

- *The [Museum's] NanoDays event featured Nano-based experiences throughout the [museum's] galleries. These experiences included staff facilitated tabletop activities using the NISEnet kits (2008 - 2012), an original stage demonstration created for NanoDays and NanoDays activities and demonstrations from partnering colleges and universities. These colleges and universities featured activities similar to those used in their lab setting.*

Event descriptions

All 214 respondents described their NanoDays events. Partner institutions held a variety of different kinds of events—in different formats and at varying locations. Events ranged from classroom visits and outreach workshops to incorporating NanoDays into city-wide science festivals. Some partners specifically describe using training materials (12%), reusing old kit materials (54%), and using a selection of activities from the 2012 kit (63%). Additionally, partners and their collaborators modified NanoDays activities and augmented the kit with their own demos and activities (50%). Many events took place over more than one day (throughout the week of March 24-April 1.) Nearly a third of the respondents (31%) also described particular ways their event this year expanded on previous work they have done with the Network (e.g., previous NanoDays, NISE Net mini-grants, *Nano* mini-exhibition.)[4]

Sample descriptions of NanoDays events:

- *This has been an exciting Nanodays year. The MRSEC shared the excitement of nanoscience and technology with teachers and students at local middle and elementary schools, on the [University] campus for a middle school fieldtrip combined with ethics discussion, cleanroom and lab tour, and with homeschool students using a bio inspired theme, on the [University] campus for an undergraduate hands-on nano seminar, and in coordination with the Nano exhibit pieces and NanoFabulous exhibit pieces at the [Museum].*

- *This year we changed the format of our NanoDays outreach event. We participated in the inaugural Science Festival of the [City], an event organized by the [Museum]. It was held in a large convention space. There were many other organizations also presenting, but I believe we were by far the largest group. 30 volunteers working in two shifts presented approximately 12 tabletop hands-on activities. Most of the activities were from the current or previous NanoDays kits. Some were augmented by ideas and supplies we provided. For instance, the new graphene kit was altered to enable the children to mark paper with pencil, crayon, and marker. They then checked the electrical conductivity of all three materials to discover that graphite is the only one that conducts. We also constructed our annual giant balloon nanotube for kids to stand inside.*

- *We hosted our NanoDays event in the Grand Hall of the museum, and we offered table activities from the kit, staffed by the students. And children were able to learn through experimentation at the tables, while also making items to take home as well. We also offered game areas, which were particularly popular among adults and younger children. The puzzle blocks game got a great deal of use! All of the activities offered were provided by the NanoDays kit, and materials that we have received through that program. Our partnership with [University] has continued to*

[4] The percentages detailed above reflect quick quantitative coding of partner's open-ended responses describing their events. These numbers don't add up to 100 because some partners reported engaging the public in more than one way.

provide us with knowledgeable and personable facilitators to man the activities, and to help impart the information and concept of Nanotechnology, in a way that our visitors (which are of varying age and skill level,) can understand.

- *We held two NanoDays events: one on March 10th from 1-5pm at the [Museum] and the other at the [Public Library] on March 24th from 1-3pm. Both events included activities from the 2012 NISE kits. [Industry partner] provided the following additional activities: making nano gold with each participant, 3d printing, and NITINOL. We utilized volunteers to run the activities including K-12 teachers and students and staff from the [University]. The presenters were middle school students from [School]. They were trained by both their science teacher from [School] and specialists in nanotechnology from [Industry partner]. This arrangement was well received by children and parents attending the event.*

- *This year we had our Nano exhibit from the NISE minigrant, in place in our 3rd floor Spineless gallery and our first floor early childhood gallery, with Nanoday activities all week for the public from this and previous year's kits.*

- *Our Nano Day was actually a Nano Night. We offer free admission to the Museum the second Thursday every month from 5:30 - 8:00 p.m. During the free night in March, we offered 10 of the table top activities from 2012 Nano Days kit as well as some of the most popular from the 2011 and 2010 kits. There was also a Nano Science Demonstration in our auditorium. We utilized the Surface Area cart demo activities from the NISE Net catalog.*

Audiences

One again, respondents reported that their primary audience for NanoDays 2012 was family groups with children (87%). However, this year, respondents were more specific about the different audiences they were trying to reach with the kits. Partners also highlighted school groups and students, underserved audiences, and teachers. 212 out of 214 respondents filled out this question. [5] For more information on audiences, see the section on Spanish-language materials.

The number of visitors reported by partners ranged from 18 attendees (in a single day) to 32,000 attendees (over the course of a month). These self-reported data were collected to help regional hubs allocate resources in future years, but are unreliable for estimating the total number of public participants reached by NanoDays 2012.

While we did not conduct a *Delivery and Reach Study* this year or in 2011, the *2010 Delivery and Reach Study* provides additional information related to annual attendance at NanoDays events nationwide. Pattison, Benne, and LeComte-Hinely (2011) found that there were over 470,000 public encounters at partner institutions during NanoDays 2010. (The term "public encounters" is used instead of "number of participants" because it was impossible to determine whether participant count estimates represented unique individuals or duplicates across several activities.) Because many of the same partners who held NanoDays 2010 also held events in 2012 (and an additional 25 physical kits were awarded in 2012), it is possible to speculate that we achieved as many or more public encounters at NanoDays 2012.

[5] The percentage detailed above reflects quick quantitative coding of partner's open-ended responses describing their audience.

In their audience descriptions some partners included specific information about venues or setting for their NanoDays events, including partnerships with festivals or science cafes, classroom visits, and afterschool or summer camps.

Sample descriptions of NanoDays event audiences:

- *We tried to reach a general family audience through the Science Carnival, an adult audience through the science cafe, and an underserved family audience through the Neighborhood NanoDay.*
- *By utilizing the materials in different ways, we hoped to reach different audience segments. Having new and updated activities helps to provide fresh experiences for repeat visitors and members. Featuring the activities during outreach events (like the Girl Scout event) is very helpful in reaching new audiences and increasing interest in attending our center.*
- *We made the event open to everyone coming through the museum, including school groups on field trips, families, birthday parties, etc.*
- *We intended to reach the local community including everyone who is interested in science and technology. For the outreach event, we were expecting more kids because the Nanokits are very nicely designed and many of them are for kids. For Science Cafe we were expecting more senior residents.*
- *The [Museum] event was geared toward families with children ages 0-12. The [University] event targeted families with children of all ages, including teens, as well as an audience of adults.*
- *We intended to reach audiences from 4 years old and up, including English and Spanish speakers.*

Use of educational materials[6]

Institutions were asked which educational materials they used at their NanoDays events.

- 98% of respondents reported that they used the **hands-on activities** (n=213)[7]
- 90% of respondents reported that they used the **games that could be staffed or unstaffed** (n=212)
- 37% of respondents reported that they used the "Nanotechnology—Small Science, Big Deal" **program** (n=204)
- 76% of respondents reported that they used the **key concepts posters** (n=208)
- 70% of respondents reported that they used the **societal and ethical implications posters** (n=204)
- 51% of respondents reported that they used the **educational videos** (n=204)

[6] See additional sections of the report (audiences, event descriptions) for specific examples and details on which products were well used. For example, several partners reported that the puzzle blocks were a big hit because they work so well for younger audiences. While only a few partners reported using the full-length Nanotechnology program, others reported including a variety of additional full-length programs in their events.

[7] The 98 % use for "Exploring Activities" reflects a manual correction for organizations that describe using the activities in the event descriptions. This is an adjusted number, only 95% of participants self-reported using the hands-on activities.

(See also Appendix C-1.)

Use of training materials

Institutions were asked about their use of the training materials included in the 2012 NanoDays kits:

- 50% of respondents said they used the **orientation training slides and notes** (n=204)
- 46% of respondents said they used the **"Museum Presentation" training videos and guide** (n=201)
- 87% of respondents said they used the **tips for engaging visitors** (n=208)
- 67% of respondents said they used the ***Engaging the Public in Nano*** **printed guide** (n=206)
- 37% of respondents said they used the ***Universal Design Guidelines for Public Programs in Science Museums*** (n=201)

(See also Appendix C-2.)

Use of marketing materials

Institutions were asked about their use of the NanoDays marketing materials:

- 57% of respondents used the ***NanoDays Planning and Marketing Guide*** (n=206)
- 79% of respondents used the **large promotional banners** (n=210)
- 53% of respondents used the **publicity photos** (n=205)
- 57% of respondents used the ready-to-print **promotional ads and posters** (n=205)
- 37% of respondents used the **sample press release** (n=202)

(See also Appendix C-3.)

Use of Spanish translations

Unique to the NanoDays 2012 kit, the Spanish-language activity materials were provided in hard copy. When asked about their use of Spanish-language educational materials, institutions' responses were as follows:

- 21% of respondents reported that they used the **hands-on activities** (n=211)
- 23% of respondents reported that they used the **games that could be staffed or unstaffed** (n=212)
- 8% of respondents reported that they used the "Nanotechnology—Small Science, Big Deal" **program** (n=209)
- 16% of respondents reported that they used the **key concepts posters** (n=209)
- 8% of respondents reported that they used the **educational videos** (n=208)

Institutions were asked about their use of Spanish-language marketing materials:

- 22% of respondents used the **large promotional banners** (n=210)

- 13% of respondents used the ready-to-print **promotional ads and posters** (n=210)

The numbers above can be compared to the 6% of partners who reported using *any* Spanish-language materials in 2011, when only the digital materials were included in the kit. Overall there was a similar usage pattern between the Spanish-language materials and the English.

(See also Appendix C-4.)

Use of kit materials outside of NanoDays

Of the 214 respondents who provided information about future use of NanoDays kits, nearly all gave specific examples of ways they planned use the kits as part of other, ongoing educational efforts. Respondents described incorporating the kits into cart demos on the museum floor, school field trips, outreach events, festivals, summer camps, local K-12 outreach, teacher workshops, and interactions with college students. Some respondents mentioned incorporating NanoDays activities into other NISE Net work (e.g., mini-grants or the mini-exhibition.) Some partners also describe linking NanoDays activities to other science related celebrations or initiatives (e.g. National Chemistry Week and National Lab Days)

Sample descriptions of future uses for NanoDays kit materials:

- *We will incorporate our NanoDays kit materials into our school programs, science classes, scout programs and summer camp programs. We reach a total of 22,000 children a year through the above mentioned programs.*
- *We've incorporated some of them, e.g. the Butterfly, into our Pocket Science program, in which staff walk around the floors engaging guests in short interactions focused on discrepant events. If our application for the Nanotechnology Mini-exhibit is successful, we would use a variety of the materials in associated walk-up activities.*
- *We are very excited to add the NISE Network Nano mini-exhibition to our floor exhibits. When we receive and install this exhibit, we will be able to expand our public nano programs and help our visitors have a truly meaningful and engaging experience with nano science.*
- *We've already incorporated several of the hands-on activities in to the rotation of facilitated gallery programs. Some of the un-staffed activities (like the puzzle) are being left out for interaction as long as they last. The posters (English and Spanish) will decorate the lab spaces where hold classes for field trips.*
- *National Chemistry Week, October 21-27, 2012 theme is Nanotechnology. [Museum] will incorporate NanoDays activities in our chemistry programming during this week.*
- *We use the materials on a regular basis for our discovery activities, which we try to do at least 5 days/week. We also use them sometimes for funder visits, wanting to use an interesting hands on STEM activity and to emphasize our partnership with the NSF funded NISEnet. The Discovery Team (young adults who do most of our presenting) use some of the materials so much that I tell them, put that away for a while.*
- *We actually use the activities every day and have already incorporated a few of the activities into existing programs. For example, the DNA extraction has been incorporated into a program about the patterns in DNA that we designed called Monster Manual. It is for children 2-4th*

grade and it has been a great way to end the program. The activities really fit well into our various galleries and so staff pull out the activities a lot outside of NanoDays.

Additional information

169 of 214 respondents provided additional comments, descriptions, or information about their NanoDays events. The team has reviewed these comments and responded to those with specific questions. The majority of respondents took this as an opportunity to thank NISE Net for the kit, and share how much they look forward to next year's kit. The team did not identify other themes in the data.

Sample comments:

- *We love it. Everything is fun, clearly explained and interesting. The teens in our Explorers program look forward to it every year.*
- *Not only did visitors have a great time using the kits and exploring the materials, but our staff and volunteers as well.*
- *Great job with the kits!!! This has made a tremendous difference in my ability to organize an event with limited volunteer support.*
- *We are very grateful to have been awarded the NISE NanoDays kit for 2012 and look forward to continue to provide high quality science education events in nanoscience. This year's kit and the past kit we've received have been very valuable in making our rural school Nano programs for our mini-grant successful.*
- *The change in format and venue allowed us to increase the number of visitors by 4-5x. We will seriously discuss participating in the Science Festival again next year in place of our typical Saturday at the [Museum].*
- *The Universal Design Guidelines for Public Programs in Science Museums is a very useful document and will be employed as we move forward on program development and training for all of our school and public programs. Thanks.*

Appendix A – NanoDays Goals 2008-2015[8]

Network community

1. Cultivate a **national network** of museums and research institutions working together **to engage the public,** through common participation in a **national event** related to nanoscale science, engineering, and technology (NSET).

    Network identity

    a. 2008-2015: Develop a national identity for the NISE Network and network community, through a signature, branded event.

    Participating partners

    b. 2008: Recruit 30 organizations to participate in the first NanoDays and receive a physical kit.[9] Involve 100 partner institutions in the NISE Network by the end of project year 5.

    c. 2009-2011: Recruit 200 organizations to participate in NanoDays and receive a physical kit. Provide support to additional partners who participate in NanoDays (without receiving a kit). Maintain an ongoing relationship with the organizations that participate in NanoDays.

    d. 2012: Recruit 225 organizations to participate in NanoDays and receive a physical kit. Provide support to additional partners who participate in NanoDays (without receiving a kit). Maintain an ongoing relationship with the organizations that participate in NanoDays.

    Participating organizations

    e. 2008-2011: Serve our core NISE Net partners, primarily US museums and research centers. (Generally, other kinds of partners—schools, libraries, community centers, international partners—can utilize digital kit materials but do not receive physical kits.)

    f. 2012: Explore the possibility of expanding the types and number partner institutions beyond our core partners.

    Organizational investment

    g. 2008-2011: Provide a turnkey, prepackaged programming event that can be easily implemented, requiring minimal staff training and other resource investment.

    h. 2012-2015: Provide a turnkey, prepackaged programming event with a set of core activities that can be easily implemented, and that require minimal staff training and other resource investment. Provide additional programming resources that require greater investment of staff training, but also provide deeper and more varied learning experiences for the public.

[8] From NanoDays Goals document dated May 4, 2011 (RO/negnog).

[9] This goal was exceeded: we created 100 physical kits for NanoDays 2008.

2. **Increase capacity in the field to engage the public** in NSET content, building on and contributing to best practices in informal education.

    a. 2008: Begin to engage the general public in NSET content, establishing that it is a feasible and desirable topic for informal education.

    b. 2009-2011: Continue to engage the public through network partners. Increase our knowledge and capacity in the ISE and research communities for effectively conveying NSET content in informal education experiences and research contexts.

    c. 2012-2015: Continue to engage the public through network partners. Increase our knowledge and capacity in the ISE and research communities for effectively conveying NSET content in informal education experiences and research contexts. Broaden the kinds of content, educational experiences, and practices we offer through the NanoDays kits to encourage greater public impact and professional growth.

3. Provide a tangible opportunity for NISE Net partners to develop and strengthen **local partnerships between museums and scientists or research centers**.

    a. 2008-2015: Create an easy, low-risk venue where informal science educators, research scientists, and the public can interact, share individual expertise and perspectives, and learn from each other.

    b. 2008-2015: Initiate and foster local relationships among ISE organizations and researchers, which have the potential to expand beyond NanoDays.

4. Provide an impetus and support for the network to **create, share, and implement public engagement products** related to NSET learning.

    <u>Kit development</u> (Tier 1)

    a. 2008: Complete and disseminate a coordinated, packaged set of educational products early in the project.

    b. 2008-2015: Develop a core set of common NanoDays activities that:

        i. are appropriate for a broad public audience

        ii. engage the public in fundamental concepts related to nanoscale science, engineering, and technology

        iii. can easily be supplemented by additional programming

        iv. are easily adaptable

        v. can be used in a variety of educational contexts, including beyond NanoDays

    c. 2012: Expand the range of educational programming included in the NanoDays kits beyond the core activities, to include a greater variety of experiences.

    <u>Implementation and delivery</u> (Tiers 1-3)

    d. 2008-2015: Use NanoDays kit materials—plus additional educational experiences developed by the NISE Network or elsewhere—to deliver local NanoDays events that reflect the mission of participating organizations and are appropriate for local audiences.

Public engagement

1. Provide engaging programming experiences for public audiences, related to NSET.
    a. 2008-2010: Deliver NanoDays experiences in a local NanoDays event, ideally during the national NanoDays week.
    b. 2011-2015: Deliver NanoDays experiences during the national NanoDays event week, as well as other times each year and in other educational contexts.
2. Engage the public in content learning related to NSET.
    a. 2008-2010: NISE Network public learning goals[10] for NanoDays:
        i. Nanometer-sized things are very small, and often behave differently than larger things do.
        ii. Nanotechnology is manipulating matter with control at a small (size) scale.
        iii. Nanoscience and nanotechnology lead to new applications.
    b. 2011: NISE Network public learning goals[11] for NanoDays:
        i. Nanometer-sized things are very small, and often behave differently than larger things do.
        ii. Scientists and engineers have formed the interdisciplinary field of nanotechnology by investigating properties and manipulating matter at the nanoscale.
        iii. Nanoscience, nanotechnology, and nanoengineering lead to new knowledge and innovations that weren't possible before.
        iv. Nanotechnologies have costs, risks, and benefits that affect our lives in ways we cannot always predict.

[10] From the nanoawareness goals articulated in the year 5 program summative evaluation. Note that an individual NanoDays event might not include programming options that address all these goals.
[11] From the big ideas articulated in the year 5 content map, v.1. Again, note that an individual NanoDays event might not include programming options that address all these goals.

Appendix B – NanoDays Report and Survey Instrument[12]

Thank you for participating in NanoDays!

We ask that partners hosting NanoDays events report back to the Network about your experiences through this online survey. There are two sections in this survey:

- A report section, with questions about your NanoDays 2011 event.
- An information-gathering section, with questions to help us improve kit materials for future NanoDays.

The reporting deadline for NanoDays is May 1. Once you complete the report (on time!), your name will be entered into a drawing for paper fold-your-own buckyball models. Two drawings will be made, and winners will be notified in late May.

The survey takes approximately 15 minutes to complete.

Part 1: NanoDays Report
First Name
Last Name
Job title
Institution
Address 1
Address 2
City/Town
State
Country
Email Address

Please confirm your institution in the pull-down selection below. If your institution is not listed, choose "other."
[Pull-down list of institutions]

Did you receive a physical kit for NanoDays 2011?
[Yes, No]

Did you collaborate with other organizations on your NanoDays event?
[Yes, No]

[If yes] Which other organizations did you collaborate with on your NanoDays event?
Organization Name
Role at NanoDays event

Please briefly describe your NanoDays event. Include the types of activities you offered, either from the NanoDays kit or from another source.
[Free text]

[12] Text used in online SurveyGizmo instrument.

Please describe the types of audiences you intended to reach during your NanoDays event.
[Free text]

Approximately how many people attended your NanoDays event(s)?
Please estimate the total number of people you reached. If you held multiple types of events (lectures, hands-on activities, exhibits) or held events over multiple days, please try to estimate the overall attendance.
[Free text]

How do you plan to use NanoDays kit materials outside of NanoDays (May 2011 through April 2012)?
[Free text]

Do you have any other comments about your experience with NanoDays?
[Free text]

Photos
You don't need to attach photos to this report, but if you have great NanoDays photos to share, call or email Eli Bossin at the Museum of Science: ebossin@mos.org, 617 589 4411.

Please note: to be able to use and share photos of your local NanoDays events, we must have a signed NISE Network release form from each person in the photo. In the NISE Network, photos are often shared and used by multiple institutions, so we need permission for not just your institution to use the image, but also for other institutions in the NISE Net to use the image.
The release form was included in the NanoDays kit and can be found in the nisenet.org catalog as part of the NanoDays Promotional Materials package.

Part 2: Help Us Improve NanoDays

Your answers to these questions help us improve NanoDays and plan and develop future NanoDays resources. We pay attention to your feedback! Information from past NanoDays reports and evaluation has led to changes in the kit activities, supporting materials such as banners and signs, and the kinds of additional resources that the NISE Net provides.

For the following questions, your name and institution will not be associated with your responses in any reporting of the findings, and your responses will not in any way affect your kit eligibility next year. You may skip questions or end the survey at any time by hitting the submit button at the bottom of the next page.

Thank you for taking the time to answer these questions.

How likely do you think your institution would be to use the following <u>educational materials</u> if they were included in your NanoDays kit (in addition to the materials we already include)?
[Very unlikely, Somewhat unlikely, Not sure, Somewhat likely, Very likely]

- Longer demos and programs
- Unstaffed, simple exhibits and displays
- Educational banners and posters
- Experiences that engage the public in societal and ethical implications of nano
- Videos

Please provide any additional comments about the types of educational materials that would be most useful to you.
[Free text]

Did you or your institution use the Spanish-language NanoDays materials?
[Yes, No]

If no, were you aware of the availability of the Spanish-language NanoDays materials?
[Yes, No]

How likely do you think your institution would be to use the following additional <u>training materials</u> if included in your NanoDays kit?
[Very unlikely, Somewhat unlikely, Not sure, Somewhat likely, Very likely]

- More comprehensive staff/volunteer training guide
- Slideshow to train staff and volunteers, providing an overview of nano content and NanoDays activities
- Videos to train staff, providing an overview of nano content and NanoDays activities
- Training materials to help you and your staff/volunteers engage the public in societal and ethical implications of nano
- Training materials to help you engage diverse audiences

Please provide any additional comments about the types of training materials that would be most useful to you.
[Free text]

Did you or your institution use any of the following NanoDays marketing materials?
[Yes, No]

- Logos and graphic elements
- Taglines
- Publicity photos
- Ready-to-print promotional ads
- Ready-to-print posters
- Promotional banner
- Sample press release
- PowerPoint template
- “I Heart Nano” t-shirt logo

What would make our marketing materials more useful to you?
[Free text]

Do you have any other comments or suggestions to help us improve NanoDays resources for 2012?
[Free text]

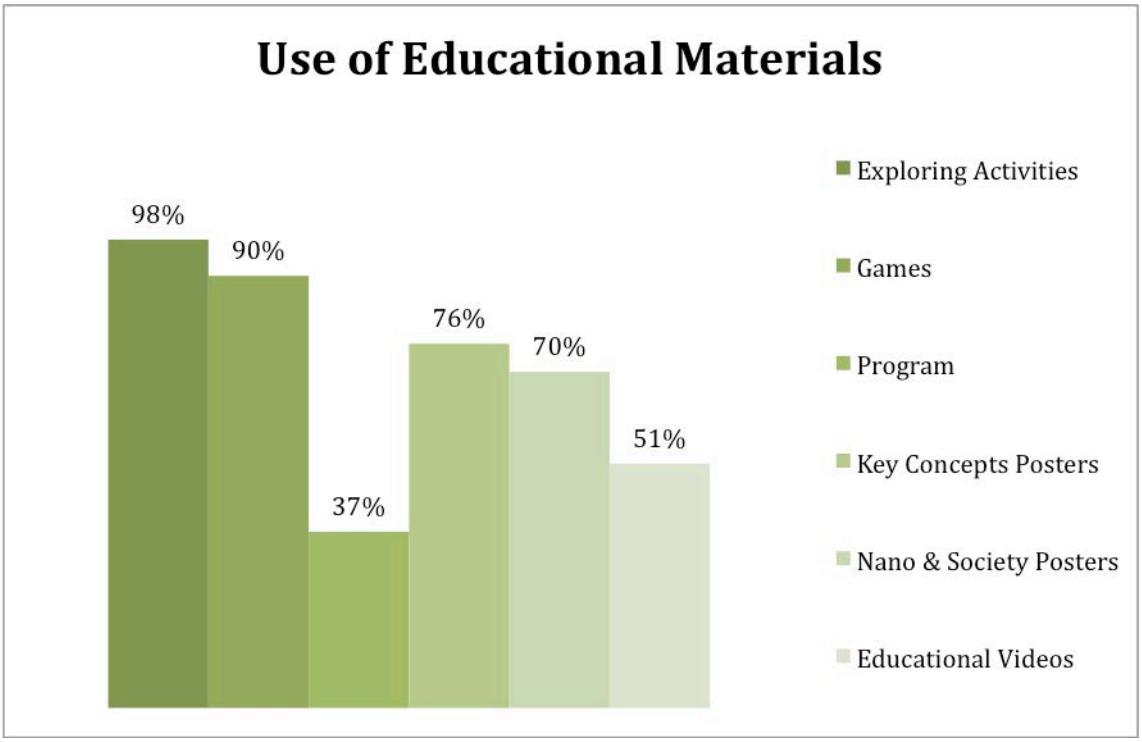
Thank you!
Thank you for taking the time to answer these questions! Your feedback is important to us.

As a special thank you for filling out the report by May 1st, your name will be entered into a drawing for a set of prizes including paper fold-your-own buckyball models, tattoos, t-shirts, and more. Two drawings will be made, and winners will be notified in late May.

Appendix C – Use of NanoDays Materials

Appendix C-1: Use of Educational materials

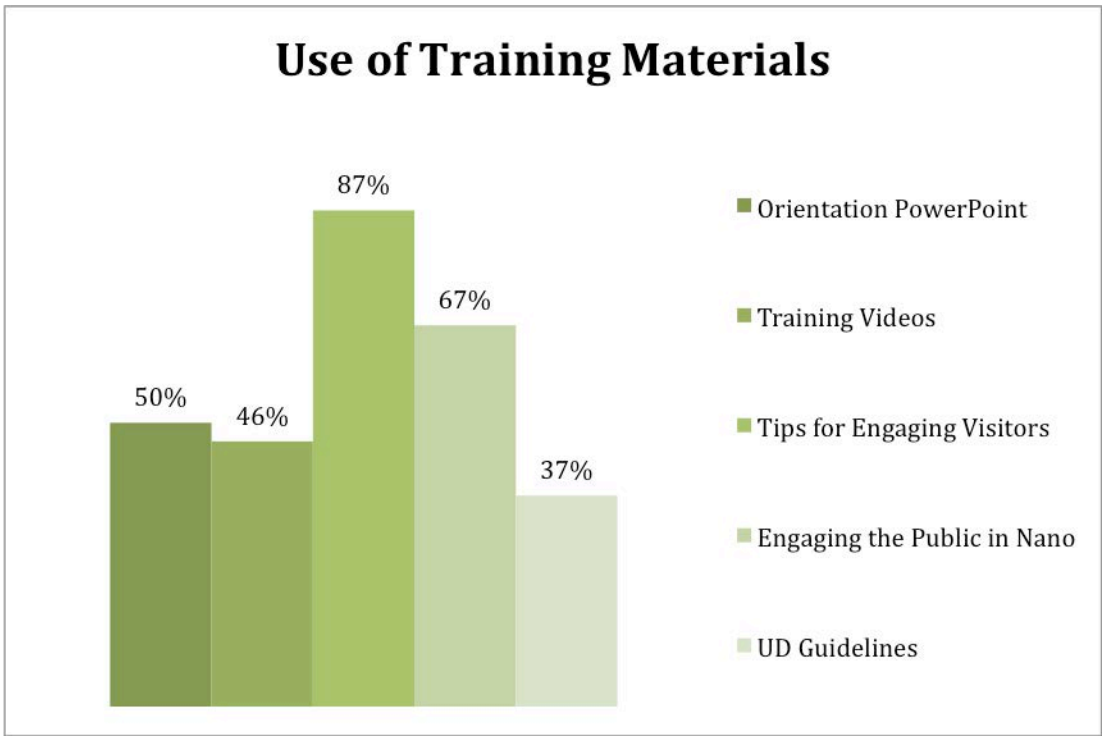
Did you any of the use the following educational materials from this year's NanoDays kit?[13]



[13] The 98 % use for "Exploring Activities" reflects a manual correction for organizations that describe using the activities in the event descriptions. This is an adjusted number, only 95% of participants self-reported using the hands-on activities.

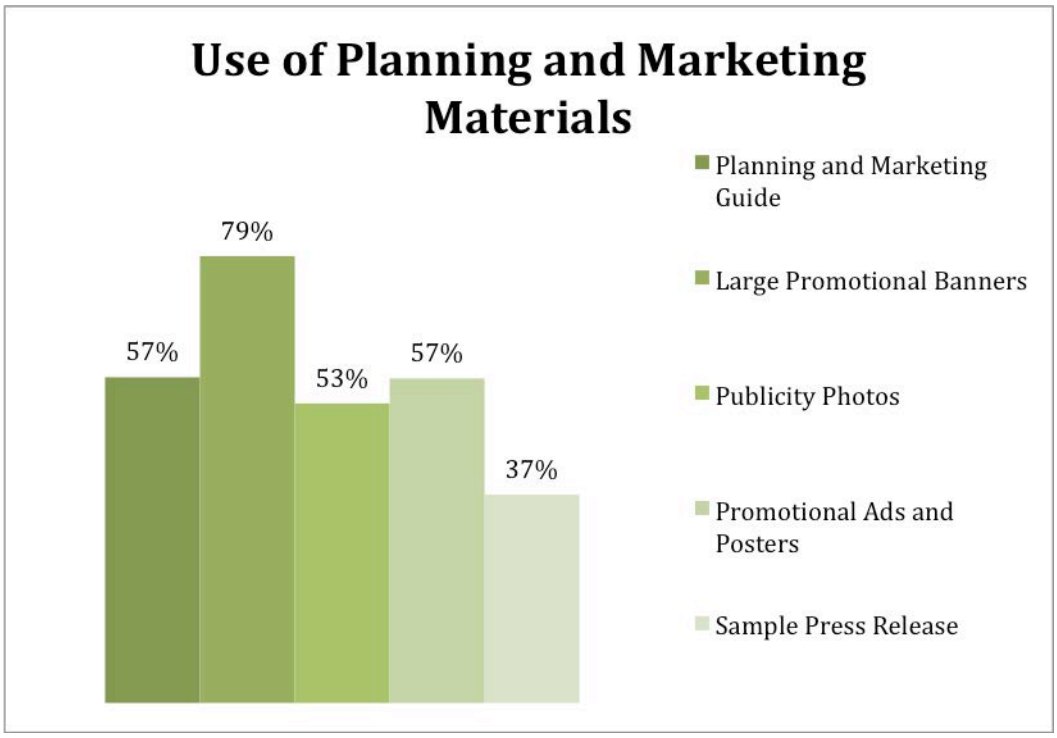
Appendix C-2: Training materials

Did you use any of the following training materials from this year's NanoDays kit?



Appendix C-3: Planning and Marketing materials

Did you or your institution use any of the following NanoDays marketing materials?



Appendix C-4: Spanish-language materials

Did you use and of the following Spanish-language educational materials?