



Year Five Site Visits

Formative Evaluation

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THIS IS A FORMATIVE EVALUATION REPORT

Formative evaluation studies like this one often:

- **are conducted quickly**, which may mean
 - small sample sizes
 - expedited analyses
 - brief reports
- **look at an earlier version** of the exhibit/program, which may mean
 - a focus on problems and solutions, rather than successes
 - a change in form or title of the final exhibit/program

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Background

Overview of Site Visits

As part of community building efforts, the NISE Network undertook regional site visits during Year 5 of the project. The Network's Community Group planned and carried out the site visits, with regional hub leaders in charge of the site visits for their region. In most cases, the regional hub leader brought along a NISE Network staff person to assist with the site visit. The purpose of the site visits was to deepen relationships with a small group of partners. The Network Community Group saw the site visits as an opportunity to create a stronger sense of community within the Network and build institutions' capacity to engage their local public in nano. The site visits were designed to reach the Network Community Group's goals and address the following partner outcomes.

As a result of the site visits, partners will...

1. Feel more closely connected to the NISE Network.
2. Increase their awareness about how nano could be incorporated into other topics or programs they currently have at their museum.
3. Learn how they may be able to share what they have created with others.
4. Increase their awareness about other local nano scientists and/or researchers to possibly consider for future collaboration.
5. Increase their awareness of the ways they could work with local scientists.
6. Increase their awareness of resources available from the NISE Network, including the online catalog.

Partner with the highest potential to infuse nano into their institution and/or become actively involved with the Network were chosen for a site visit. A total of 26 partner institutions were visited between April and August 2010. A list of the sites visited in each region can be found in Appendix A.

Formative Evaluation of Site Visits

Formative evaluation was carried out to improve the site visit process during Year 5 and help inform future work with partners in Years 6-10. The formative evaluation was based on six evaluation questions, which aligned with the partner outcomes.

1. To what extent do staff feel more closely connected to the NISE Network?
2. To what extent have partners' increased their awareness about how nano could be incorporated into other topics or programs they currently have at the institution?
3. To what extent have partners learned how they may be able to share what they have created with others?
4. To what extent have partners increased their awareness of the ways they could work with local scientists?
5. To what extent have partners increased their awareness about other local nano scientists/researchers to possible consider for future collaborations?
6. To what extent have partners increased their awareness of resources available from the NISE Network, including the online catalog?

The evaluation was carried out using a mixed-methods design. Data collection methods included 1) debrief forms, 2) debrief interviews, 3) partner interviews, 4) site visit observations, 5) content analysis of pre and post-visit correspondence and 2010 NanoDays reports, and 6) pulling information from the NISE Network Quickbase database.

Data collection methods

A *debrief form* was completed by the site visit team immediately after their visit. The form served as a tool to capture discussions and impressions from the visit to help the regional hub leaders support their partners in the future and help inform the work of the Network Community Group. The data from the debrief forms was entered into the Quickbase database and some of the data was used for the formative evaluation. A total of 26 debrief forms were completed.

Debrief interviews were conducted with the site visit teams within a few days of each visit. The purpose of the interviews was for the site visit team to reflect on the visit in terms of the six partner outcomes. A total of 24 debrief interviews were conducted. Three institutions in Memphis were combined into one visit so one debrief interview was conducted for that entire visit, which is why the total number of debrief interviews is less than the total number of site visits.

Partner interviews were conducted with one or two staff from the partner institution between four to eight weeks after the site visit. During follow-up interviews, partners were asked about the site visit experience and their nano educational efforts. A total of 20 partner institutions responded to requests for follow-up interviews.

Site visit observations were conducted at 10 institutions, which included at least one site per regional hub. The evaluators' observations were guided by an observation checklist organized by the site visits' partner outcomes. The purpose of the observations was to capture detailed information about what occurred during the site visits.

Content analysis was conducted on various data sources. Pre- and post-visit correspondence between the regional hub leader and the partner institutions provided additional insight into the site visit experience, partners' nano educational efforts, and their needs from the NISE Network. The 2010 NanoDays reports also provided insight into the partners' nano educational efforts.

The *NISE Network Quickbase database* includes information about all of the institutions involved in the NISE Network. Characteristics about the partner institutions were pulled from Quickbase for the purpose of the evaluation.

Results & Discussion

Characteristics of Partner Institutions

The NISE Network conducted site visits at institutions of varying size and type in the seven NISE Net regions. The list of institutions visited in each region can be found in Appendix A. As illustrated in Table 1, two-thirds of the site visits took place at science or technology museums and over half took place at children’s museums. Site visit teams also visited natural history museums, college or universities, and a zoo. In the NISE Network Quickbase database some institutions were placed under multiple categories, which is reflected in Table 1.

Table 1: Type of Institutions the NISE Network Visited (n=26)

	Percent of partners
Science or technology museum	65%
Children’s museum	54%
Natural history museum	12%
College or university	8%
Zoo	4%

Institutions of all sizes were reached by the visits. Using categories from the Association of Science - Technology Centers, institutions were categorized based on interior exhibit space (ASTC, 2009)¹. As illustrated in Table 2, half the site visits were conducted at small or very small institutions. Medium and large museums were also visited, with medium museums receiving the least number of site visits. As previously mentioned, some institutions were not museums so they weren’t included in the size categories.

Table 2: Size of Institutions the NISE Network Visited (n=26)

	Percent of partners
Very small (less than 12,000 sq. ft.)	19%
Small (12,000 – 25,000 sq. ft.)	31%
Medium (25,000 – 50,000 sq. ft.)	12%
Large (more than 50,000 sq. ft.)	27%
Not a museum	12%

The site visits focused on the institutions that have been involved in the NISE Network for several years. Two-thirds (65%) have been involved in the Network for two or more years

¹ Association of Science - Technology Centers. (2009). *The 2009 ASTC statistics analysis package*. Washington, DC: Author.

(see Table 3). Less than a fifth of the institutions (16%) were involved with the Network for less than a year.

Table 3: Years of NISE Network Involvement (n=26)

	Percent of partners
Less than 6 months	8%
6 months to less than a year	8%
1 year to less than 2 years	19%
2 years to less than 3 years	46%
3 or more years	19%

The institutions involved in the NISE Network are categorized into three tiers that describe their level of involvement in the Network. The site visit teams were composed of individuals from Tier 1 (also called “core partners”) meaning their institutions receive funding to operate the NISE Network. The site visits primarily reached Tier 2 partners (77% of site visits). Tier 2 partners are considered “nano-infused partners” because a goal of the NISE Network is that nano content will be “infused” into Tier 2’s institutional programming by the end of year 10. The rest of the site visits (23%) reached institutions considered Tier 3 or “broad reach partners.” The goal of the Network is that nano informal education will be “introduced” into these organizations for at least a limited activity like participation in NanoDays or some other type of nano educational outreach. The hope for some of the site visits was to build institutions’ capacity so they could move from Tier 3 to Tier 2.

Many of the partners had been involved in a variety of NISE Network activities. Most have used the NanoDays kit (92%) and participated in NanoDays (85%). Almost all of the institutions (24 out of the 26 sites) have attended at least one NISE Network event. As illustrated in Table 4, three-quarters had attended a regional workshop and two-thirds participated in one of NISE Network’s annual meetings. Less than half had taken advantage of at least one of the NISE Network’s professional development opportunities (ASTC forums workshop, ACM workshop, online NanoDays workshop).

Table 4: NISE Network Events Attended by the Partner Institution (n=26)

	Percent of partners
Regional workshop	73%
Annual meeting	65%
Professional development workshop	42%

Site Visit Characteristics

Site visits included a variety of activities to help address the six site visit outcomes. All of the visits included a tour of the museum or institution (see Table 5). Most visits involved meeting with staff associated with nano education and/or other staff at the institution.

The site visit team met upper management staff in over three-quarters of the visits. Meetings with upper management ranged from a quick hello to having them present for part, if not all, of the visit. During half the visits, the site visit teams had a meal with partners. Site visit teams often commented that meals were useful times to have informal conversations with the partners and often included additional staff from the partner institution. Presentations, demos, and/or training occurred at less than half the visits. Presentations and demos focused on Nano 101, current and future work of the NISE Network, and the catalog. Training sessions with staff most frequently were related to the NanoDays kit and the Introduction to Nano demonstration. Other activities happening at site visits included providing feedback on institutions' nano educational activities and meeting with researchers.

Table 5: Activities During the Site Visit (n=26)

	Percent of site visits
Toured museum or institution (if not museum)	100%
Met with staff doing nano education	92%
Met with other staff	81%
Met with upper management	77%
Had lunch or dinner with partner	50%
Did a presentation or demo	46%
Trained staff	35%
Other	27%

Site visits varied in length from two hours to multiple days. As shown in Table 6, three-quarters of the site visits (74%) lasted four hours or longer, with the most frequent length from four to five hours.

Table 6: Length of Site Visits (n=26)

	Percent of partners
Two to less than three hours	12%
Three to less than four hours	15%
Four to less than five hours	35%
Five to less than six hours	12%
Six to less than seven hours	12%
Seven to less than eight hours	0%
Eight hours or more	15%

Overall Site Visit Experience

Partners' Reflections on the Overall Visit

During interviews, partners reflected on what they felt were the most and least beneficial parts of the site visit for their institution. Partners found site visits beneficial for a variety of reasons. As illustrated in Table 7, over a third of partners felt it was beneficial to receive feedback on their nano educational efforts and gain new ideas on how to integrate nano into their activities (Outcome 2). One partner said the most beneficial aspect was, *“Looking at programs and saying ‘Well, have you tried this?’ It was great to get some new ways to try the same concepts on the floor.”* Another mentioned, *“Just being reminded of some of the stuff that I either haven’t heard about or the stuff I have heard and has dropped below my radar.”* Some partners felt it was beneficial to expose other staff members to the NISE Network (Outcome 1). One partner stated that having someone from the NISE Network visit got *“more staff invested and knowledgeable about what’s going on with NISE Net.”* Hearing information about the current and future direction of the NISE Network was also beneficial. As one partner noted, *“At the big meeting [annual meeting] we get that but there are usually 100-200 people and it was nice to have a smaller setting and be able to chat about opportunities that exist.”* A quarter of partners liked being able to meet NISE Network staff in person and *“put a face to the name”* (Outcome 1). A small percentage of partners mentioned it was beneficial to talk about opportunities for partnerships within the Network. Two institutions commented on other things that were beneficial. One stated that, *“the Network understands that we, as a small center, that we can’t pull the same weight as the bigger institutions. It was a confidence builder for me.”* Another said they were reminded that they should write some haikus for the Nano Bite newsletter.

Table 7: Most Beneficial Part of Site Visit for Partner Institutions (n=20)

Theme	Percent of partners
Receiving feedback and new ideas to integrate nano	35%
Exposing other staff to the NISE Network	30%
Hearing information about the Network	30%
Meeting NISE Network staff	25%
Discussing partnership opportunities	15%
Other	10%

Note: Some partners cited more than one thing that was most beneficial.

Overall, partners found site visits to be a positive experience, citing few things they found least beneficial about the visit. In fact, two thirds of partners (65%) could not think of anything that was not beneficial about the visit (see Table 8). A small percentage felt aspects of the NISE Network presentation were least beneficial. One partner felt that an *“elevator speech”* to introduce new people to the NISE Network would have been helpful, a second partner felt the presentation was too long and could have been *“more clear and more concise,”* and a third partner thought the overview of the past was least beneficial since *“I’ve been involved so long.”* Two partners felt there could be more information on how to be involved in the future of the NISE Network and who to contact for specific information. *“It was more of just a ‘how have things been going? What have you been*

doing?’ But there wasn’t any nailing down to the specifics that the Network can do.” The other aspects included one partner that wished he/she would have had gotten a larger group involved in the visit and a second partner that felt it wasn’t beneficial for the site visit team to ask about what they did for NanoDays because “we already write those things in the evaluation report.”

Table 8: Least Beneficial Part of Site Visit for Partner Institutions (n=20)

Theme	Percent of partners
Nothing was least beneficial	65%
Aspects of the NISE Network presentation	15%
Not discussing specifics about future involvement in the Network	10%
Other	10%

Note: Some partners cited more than one thing that was least beneficial.

After the evaluators completed site visit observations, it became clear that the purpose of the site visits was being communicated differently to some of the partners. For this reason, a question was added to the second half of the partner interviews to find out what partners were expecting from the site visit. Ten partners were asked this question, with one of the partners citing multiple expectations. Seven partners said they expected that the site visit team was coming to find out what they were doing in their institution related to nano education. One of these partners was excited about the opportunity to show off what his/her institution does with nano education. “I wanted to show what we do. Because the proof is in the pudding, you know?” Two of these partners specifically saw the visit as the Network checking up on them. One partner said, “Checking up to make sure we are doing what we say we’re doing.” Another partner mentioned, “I honestly expected to be chastised for not running a NanoDays event right out of the box. I thought we were in trouble. That didn’t happen. I was expecting to get in trouble.” Four partners were expecting to learn more about the Network. They specifically talked about learning more about what the NISE Network is, the resources the Network has to offer, and the Network’s plans for the future.

Site Visit Teams’ Reflections

Site visit teams reflected on what they felt went well during their site visits. As illustrated in Table 9, at over half the visits it was useful talking to the partners’ about their various nano education efforts and seeing how NISE Network resources are being used and adapted. Site visit teams felt seeing the partners’ educational activities in person was beneficial for understanding what actually occurs at various institutions. “Something we couldn’t have foreseen with a phone call. Isn’t obvious until you see it.” At a few site visits, the partners also provided ideas to improve NISE Network products. “[The partner] provided us with ways to change our own kits and modify programs.” Site visit teams felt the face-to-face conversations with partners went well at around two fifths of the visits. Site visit teams liked the opportunities for one-on-one conversations as opposed to talking to a large group at places like regional workshops and the annual meeting. They felt they were also able to meet in-person more staff at partner institutions through the visit, including senior staff. Different types of conversations worked well at site visits including discussions about partners’ needs, the NISE Network, partnerships,

and opportunities for partners to provide feedback to the Network. Site visit teams also felt it was useful to provide personalized training to the partners in relation to general nano content and/or specific NISE Network activities. A few site visit teams commented on the benefits of seeing the partner institutions. See Appendix B for the site visit teams' responses that correspond to each theme.

Table 9: What Site Visit Teams Felt Went Well During Their Site Visits (n=24)

Theme	Percent of site visits
Seeing partners' nano education efforts	58%
Having face-to-face time	42%
Talking about partners' needs	29%
Providing training in nano content and/or programming	29%
Talking about various aspects of the NISE Network	25%
Talking about partnerships	17%
Requesting feedback from the partners	13%
Seeing their institution	13%
Other	25%

Note: Some site visit teams mentioned more than one thing that they felt went well.

Site visit teams were also asked what they would have done differently during their visit or would do differently for future site visits. There were a variety of things teams would change about the site visit experience (see Table 10). The most frequently mentioned change was related to the partner staff present for the site visit. This included making sure key staff are able to participate in the visit, find time to meet with senior staff, and if senior staff are part of the visit, ensure there are times when staff can talk to the site visit team without senior staff present. A quarter of site visit teams would have like more time with the partner institutions and would have talked more about various aspects of the NISE Network, such as the catalog and specific resources. For specific suggestions under each theme in Table 10, see site visit teams' full responses in Appendix C.

Table 10: What Site Visit Teams Would Do Differently During Site Visits (n=24)

Theme	Percent of site visits
Changes to the partner staff participating in the site visit	42%
Spend more time at the site	25%
Talk more about various aspects of the NISE Network	25%
Better tailor the nano content training to partners' prior knowledge	21%
Include researchers/scientists in the visit	13%
Changes to the roles of NISE Network staff at the visit	13%
Ensure there is detailed pre-visit communication	8%
Send post-visit communication	8%
Do more research about the institution before the visit	8%
Other	25%

Note: Some site visit teams mentioned more than one thing they would do differently.

Outcome 1: Feeling Connected to the NISE Network

One of the outcomes of the site visits was that partners would feel more closely connected to the NISE Network. Site visit teams were asked what they did during their site visit to help partners feel more connected. As illustrated in Table 11, the teams felt they addressed this outcome through a number of activities. Site visit teams most frequently mentioned sharing the wealth of NISE Network resources with the partner institutions and talking about how the partners could contribute back to the Network by posting something online or sharing their work at a NISE Network meeting. One site visit team felt they did things during the visit to help partners feel more connected but were not sure about future opportunities for partners to be connected. *“They are ready, but what is it we are asking them to do? There is kind of a gap of what the next step is. Would be helpful to have language that the Network could use around this.”* In addition to helping the partners feel more connected, one regional hub leader said the visit helped her/him feel more connected to the partners. *“Going to their site was hugely valuable. I understand their culture and what their resources are. A lot of this doesn’t get captured in the meetings and in their reports...Feels like we didn’t really have the full picture until we were there.”*

Table 11: How Site Visit Teams Worked to Make Partners Feel More Connected to the NISE Network (n=24)

Theme	Percent of site visits
Shared NISE Network resources	46%
Talked about how partners can contribute to the Network	42%
Invited partners to attend a NISE Network meeting and/or workshop	33%
Met with a variety of people at the partner institution	29%
Provided information about the current and future work of the Network	29%
Encouraged partners to provide feedback to the Network	25%
Encouraged partners to contact NISE Network staff with any questions	21%
Talked about NISE Network Facebook groups	8%
Other (discussed possible partnership, provided letter of support)	8%

Note: Some site visit teams cited more than one way they helped partners feel connected.

Partners reported various ways they saw their institution being connected to or involved in the NISE Network in the future. As shown in Table 12, two fifths said they would like to contribute or share something with the Network. One partner expressed this general sentiment by saying, “*I would hope that we’d also be able to add something into NISE Net. That we might provide programs and ways of working with people that are helpful.*” Some partners felt contributing was a key way for them to have a meaningful connection to the Network. “*Our connection will be successful when we can feel like we’re a contributing member.*” Another partner said, “*If it’s a possibility for us to contribute, then I can really see ourselves [staying involved].*” Partners also talked about using NISE Network resources, partnering with other institutions involved in the Network, creating their own nano-related experiences, and attending a NISE Network meeting or workshop. One partner was interested in being involved but wasn’t sure how they could because the site visit team didn’t talk about specifics. “*It was more like, ‘If round two gets funded, would you like to stay involved?’*” For full responses of how partners see themselves being involved in the Network, see Appendix D.

Table 12: How Partners See Themselves Being Connected to or Involved in the NISE Network (n=20)

Theme	Percent of partners
Contributing to the Network	40%
Using NISE Network resources	35%
Partnering with other institutions in the NISE Network	15%
Creating their own nano-related educational experiences	10%
Attending a NISE Network meeting and/or workshop	10%
Other	20%
Partner was not sure what future involvement would entail	5%

Note: Some partners saw themselves being connected in multiple ways.

Partners were also asked about the support they envisioned the NISE Network providing their institution in the future. As illustrated in Table 13, partners envisioned the Network supporting them in a variety of ways. They talked about the support provided by the educational materials available in the Network, including NanoDays kits, programs, and exhibits. A third of partners talked about the Network supporting them in connecting with other members of the Network at both NISE Network gatherings and online. They felt the connections would be helpful *“to find out what other sites are doing.”* One partner said it would be beneficial *“being part of a network online and having a support system of other professionals in the field that are trying things in new ways and that we could bounce ideas off of.”* Partners also requested personal support from NISE Network staff and professional development opportunities. For full descriptions of the types of support partners envision from the NISE Network, see Appendix E.

Table 13: Types of Support Partners Envision the NISE Network Providing Them in the Future (n=19)

Theme	Percent of partners
Giving out NanoDays kits	37%
Connecting people in the Network (at meetings, workshops, and online)	32%
Providing more programs	32%
Providing or sponsoring exhibits	26%
Offering personal support	21%
Offering professional development	16%
Other	21%

Note: Some partners discussed more than one type of support.

Although not asked directly during site visits, 10 partners talked about their preferred formats for receiving training on nano content and activities. As shown in Table 14, half of these sites preferred training videos. They liked the videos because they let people learn at their own pace and schedule. They also found videos made it easier to understand the activities available in the catalog. A few partners mentioned online workshops, in-person training, and print resources.

Table 14: Partners’ Preferred Formats for Receiving Training for Nano Content and Activities (n=10)

Theme	Percent of partners
Videos	50%
Online workshops	20%
In-person training	20%
Print resources	20%
Personal contact	10%

Note: Some partners discussed more than one preferred training format.

Outcome 2: Awareness of How Nano Could be Incorporated Into Partner Institutions' Current Topics or Programs

The second outcome of site visits was that partners would increase their awareness of how nano could be incorporated into other topics or programs they currently have at their institution. Site visit teams discussed a variety of means for institutions to do this. As illustrated in Table 15, programming, signage, and exhibits on the museum floor were areas where suggestions were most frequently made on how to incorporate nano into educational experiences. Integrating nano into a variety of other types of programming (school, adult, and camp programs) was also discussed at some visits. Site visit teams said this outcome wasn't directly addressed at four of the visits (17%). In a few of these cases, site visit teams said they focused instead on the variety of things the institution was already doing and didn't provide additional suggestions to incorporate nano.

Table 15: How Site Visit Leaders Addressed Incorporating Nano into Institutions' Topics or Programs (n=23)

Theme	Percent of site visits
Talked about floor programming	57%
Talked about exhibit floor (signage, exhibits)	48%
Talked about school programming	22%
Talked about adult programming	13%
Talked about camps	9%
Other topics discussed (museum's green initiative, scout badge)	9%
Didn't discuss any means to integrate nano	17%

Note: Some site visit leaders mentioned multiple ways partners could incorporate nano.

Partners were asked if the site visit helped them think about new ways to incorporate nano into topics or programming at their institution. Of the 20 sites, 80% said they gained new ideas. Partners talked about a variety of new ideas that came out of the site visit (see Table 16). Incorporating nano into their institutions' floor programming (carts, demonstrations, lab activities) was most frequently mentioned. Partners also talked about exhibits and a variety of other programming formats (community outreach, teacher programs, camps, school programs, and adult programs).

Table 16: Partners' New Ideas for Incorporating Nano into Current Topics or Programs (n=20)

Theme	Percent of partners
Floor programs	45%
Exhibits	20%
Community outreach	15%
Teacher programs	10%
Camps	5%
School programs	5%
Adult programs	5%
Didn't gain any new ideas	20%

Note: Some partners talked about more than one new idea they gained from the visit.

Outcome 3: Sharing what Partners Created with Others

A third outcome of the site visits was for partners to learn how they may be able to share what they have created with others in the Network. At three quarters of the site visits (74%), site visit teams talked about opportunities for partners to share what they have created. As illustrated in Table 17, site visit teams talked about uploading products to the catalog, sharing at a NISE Network meeting or workshop, and posting a comment in the catalog about how they hacked a program. At a quarter of the visits (26%), partners didn't learn about opportunities for sharing what they created. During two visits, the site visit team said that the Network doesn't yet have a mechanism to share with others and in close to a fifth of the visits the site visit team didn't even discuss opportunities to share with the Network. In one of the cases, the site visit team said a partner had marketing materials they were interested in sharing but didn't know how to facilitate that contribution. *"They are going to give us samples, but [we're] not sure how to funnel those to the Network."*

Table 17: What Site Visit Leaders Discussed About Sharing What Partners Have Created With Others (n=23)

Theme	Percent of site visits
Upload products to the NISE Network catalog	39%
Share at NISE Network meeting or workshop	35%
Post a comment in the NISE Network catalog	17%
Talked about sharing, but site visits team didn't specify what methods they discussed with the partner	9%
Other (connecting partners working on a scout badge)	4%
Said Network doesn't yet have a mechanism to share	9%
Didn't talk about how partners can share what they created	17%

Note: Some site visit teams discussed more than one way for partners to share what they created.

Outcome 4: Awareness of Local Nano Scientists and Researchers

One of the site visit outcomes was that partners would increase their awareness of local scientists and/or researchers in their area they may not already be working with to deliver nano education. A majority of the partner sites (70%) had involved scientists or researchers in nano education efforts prior to the site visit. Site visit teams said they worked to further increase partners' awareness of local scientists and researchers in over half (58%) of their site visits. On a third of the visits the site visit team either provided the partners with names or said they would send a list of names after the visit. A fifth (21%) of the site visit teams said they were going to provide personal help in connecting partners with scientists. One of the site visit teams didn't provide names of individuals but discussed the Materials Research Society database that provides a list of scientists from around the country who have volunteered to be on call supporters of educators. When asked why names of scientists weren't provided at 10 of the 24 site visits, site visit teams most frequently said it was because the partners already had connections and felt that they didn't need any more names or weren't sure of who else to connect them with. *"We didn't because we don't need to. They are really well connected. She has her finger on every potential collaborator."*

Outcome 5: Awareness of Ways to Work With Local Scientists

In addition to increasing partners' awareness of scientists and/or researchers in their area, the site visits were meant to increase partners' awareness of the ways they could collaborate with scientists and researchers to deliver nano education to the public. This outcome was addressed at most (86%) of the site visits. Site visit teams provided partners with examples of how various institutions in the NISE Network have utilized scientists and researchers. They also provided suggestions specific to partners' programming. As illustrated in Table 18, site visit teams talked about having researchers, scientists, and/or college students help with adult programming, NanoDays activities, floor programming, and teacher training. Training for scientists and researchers about informal science education techniques was discussed at a small percentage of visits. At two visits, site visit teams talked about how researchers might be able to help fund nano educational experiences. Three site visit teams talked generally about partnerships, but didn't specify the ideas they shared with partners.

Table 18: Ideas the Site Visit Teams Shared for Partnering with Scientists and Researchers (n=22)

Theme	Percent of site visits
Adult programming (forums, cafes, pubs)	27%
NanoDays	23%
Floor programming	23%
Scientists/Researcher ISE training	14%
Funding opportunities	9%
Teacher training	5%
Site visit team didn't specify what was discussed	14%
Didn't discuss ideas at site visit	14%

Note: Some site visits teams discussed multiple ways to work with scientists and researchers.

Outcome 6: Awareness of Resources Available from the NISE Network

One desired outcome of site visits is that partners would become more aware of the resources available from the NISE Network, including the online catalog. The various data sources for the site visit formative evaluation were reviewed to see what resources were shared at the various site visits. As illustrated in Table 19, the catalog and programs were discussed at almost all of the visits. Exhibits and adult programming were mentioned at around two thirds of the visits. The other resources listed in Table 15 were discussed at less than half of the visits.

Table 19: Resources that the Site Visit Team Shared With Partners (n=26)

Theme	Percent of partners
Catalog	92%
Programs	92%
Exhibits	69%
Adult programming (pubs, cafes, forums)	62%
Professional development opportunities	42%
Media	27%
Posters	23%
Evaluation Resources	19%
Giveaways	15%

Partners had some familiarity with NISE Network resources. Most of the partners (92%) had used the NanoDays kit and around three quarters (73%) had used the catalog before the site visit. Partner were asked if there were any NISE Network resources their

institution was not aware of before the site visit that they were now interested in trying out. Three quarters said there were resources they learned about that they were interested in trying out. As illustrated in Table 20, there was a range of resources partners were interested in with close to a third mentioning the tabletop exhibits.

Table 20: NISE Network Resources Partners Weren't Aware of, But Are Interested in Trying Out (n=20)

Theme	Percent of partners
Tabletop exhibits	30%
Website	20%
Programs	15%
Science Cafe	15%
Mini grant	10%
Media	5%
Other (NanoDays, SEI ² materials)	10%
Nothing	25%

Note: Some partners were interested in more than one resource.

Conclusion & Recommendations

Major Findings

Overall, the site visits were beneficial to the NISE Network and the partners visited. Site visit teams felt the visits were useful for understanding partners' various nano education efforts, seeing how NISE Network resources are being used and adapted, having face-to-face conversations about partners' needs, meeting a variety of staff at an institution, and engaging in a variety of conversations about the Network and its resources. Partners reaped a variety of benefits from the visits including feedback on their educational efforts, ideas to integrate nano in their activities, personal time with NISE Network staff, and increased exposure of their staff to the NISE Network and nano in general.

Outcome 1: Feel more closely connected to the NISE Network.

The site visit teams were successful in addressing the first outcome. They did a variety of activities and covered a variety of topics to help partners feel more connected to the NISE Network. Almost all of the partners (19 out of 20) talked about ways they planned to stay connected to the Network. Only one partner was not sure how they could stay involved. Partners most frequently talked about increasing their connection to the Network through their contributions. Some partners felt contributing was key to having meaningful involvement in the Network. Partners also talked about staying connected by using NISE

² SEI stands for "societal and ethical implications."

Network resources, partnering with other institutions involved in the Network, creating their own nano-related experiences, and attending a NISE Network meeting or workshop. The topics the partners mentioned reflect the topics the site visit teams said they discussed to address this outcome. However, one site visit team said they were unsure what the future opportunities were for partners to stay connected and felt it would be helpful to have “*language that the Network can use around this.*”

Another way for partners to feel connected is through the support they receive from the NISE Network. Partners envisioned receiving various types of support. They talked about continued programmatic support through the Network’s NanoDays kits and programs. Some of the partners were interested in receiving support through access to nano-related exhibits. Partners liked connecting with other members of the Network and would like continued support from the Network to connect with partner institutions both in-person and online. Partners also requested personal support from NISE Network staff and more professional development opportunities.

Outcome 2: Increase partners’ awareness about how nano could be incorporated into other topics or programs they currently have at their museum.

Outcome two was addressed at a majority of the site visits. However, site visit teams said they did not address the outcome at close to a fifth (17%) of the visits and a fifth (20%) of the partners said they did not gain new ideas for integrating nano from the visit. Site visit teams discussed a variety of strategies for institutions to incorporate nano, with floor programming, signage, and exhibits most frequently mentioned. At some visits, site visit teams also discussed integrating nano into a variety of other types of programming (school, adult, and camp programs). The ideas site visit teams said they discussed align with some of the ideas partners said they gained. Partners most frequently cited gaining ideas to incorporate nano into their institutions’ floor programming (carts, demonstrations, lab activities). Partners also talked about exhibits and various programming formats (community outreach, teacher programs, camps, school programs, and adult programs).

Outcome 3: Learn how they may be able to share what they have created with others.

Partners learned how they could share what they created with the Network at only three quarters of the site visits. Site visit teams talked about uploading products to the catalog, sharing at a NISE Network meeting or workshop, and posting a comment in the catalog about how they hacked a program. At the other site visits, the partners did not discuss sharing with the Network for a variety of reasons. In two cases, the site visit team told partners that the Network doesn’t yet have a mechanism to share with others. In another instance, the site visit team said a partner had marketing materials they were interested in sharing but did not know how to facilitate that contribution.

There is interest among partners to be able to contribute products and resources to the NISE Network as evident from partners’ responses to how they want to remain involved in the Network. However, there seems to be mixed messaging among the site visit teams

about what “sharing” with the Network entails or how it can occur. Some site visit teams were describing means to share with the Network, while at a small percentage of visits the site visit teams said the Network did not currently have a mechanism to share.

Outcome 4: Increase their awareness about other local nano scientists and/or researchers to possibly consider for future collaboration.

Outcome four was only addressed at a little over half (58%) of the site visits. Site visit teams addressed the outcome by providing partners with names of researchers and/or scientists and offering to personally help set up connections. The MRS database was only mentioned in one of the site visits. When asked why names of scientists and/or researchers weren’t provided at 10 of the 24 site visits, site visit teams most frequently said it was because the partners already had connections and felt that they did not need any more names or weren’t sure of who else to connect them with. Although a majority of the partner sites (70%) had involved scientists or researchers in nano education efforts prior to the site visit, the outcome was to increase partners’ awareness of other local scientists and/or researchers and almost half the partners did not gain additional names to possibly collaborate with in the future.

Outcome 5: Increase their awareness of the ways they could work with local scientists.

Although only a little over half of the site visit teams provided partners with names of scientists, most partners (86%) were exposed to new ways to work with scientists and researchers. Site visit teams provided partners with examples of how various institutions in the NISE Network have utilized scientists and researchers. They also provided suggestions specific to partners’ programming. Site visit teams talked about having researchers, scientists, and/or college students help with adult programming, NanoDays activities, floor programming, and teacher training. Training for scientists and researchers about informal science education techniques was also discussed at a small percentage of visits.

Outcome 6: Increase their awareness of resources available from the NISE Network, including the online catalog.

Prior to the site visit, most partners had some familiarity with NISE Network resources. Almost all of the partner institutions (92%) had used the NanoDays kit and around three quarters (73%) had at least one person reporting that they had used the catalog. The site visits were successful in further increasing partners’ awareness of NISE Network resources. Site visit teams discussed the catalog and programs at almost all of the visits and exhibits and adult programming were mentioned at around two thirds of the visits. A variety other resources were discussed less than half of the time. When partners were asked if there were any NISE Network resources their institution was not aware of before the site visit that they were now interested in trying out, three quarters mentioned at least one resource they were now interested in trying.

Recommendations

Clearly communicate the purpose of the site visits

- Ensure the purpose of the visits is clearly communicated to partners. A few partners felt the Network was monitoring or checking up on them, even though that was not the purpose of the visits. One partner even expected to be chastised for way they used their NanoDays kit.

Consider the minimum length of the site visits

- There isn't an ideal length for site visits, however the Network Community Group may want to consider if there should be a minimum length for a visit. According to the formative evaluation data, the site visit teams identified aspects of the site visits that they felt worked well and may want to be considered as necessary components of future visits. These included a tour of the institution, seeing and providing feedback on partners' nano education efforts, and a meal with partners. In some cases they felt training on nano content and/or activities was necessary depending on partners' needs and prior knowledge of nano. The overall length would then depend on the time it takes to address the necessary components of a visit as well as the activities that are tailored to the needs of the institution and the outcomes of the visits.

Include a variety of partner staff in the site visit

- Include a mix of partner staff in the visit, both people familiar with NISE Network and new to the Network. This helps to integrate nano into the partner institution, especially because at a number of sites staff familiar with the Network were leaving, had already left, or moved into a different position in their institution. Site visit teams had additional suggestions including make sure key staff are able to participate in the visit, find time to meet with senior staff, and if senior staff are part of the visit, ensure there are times when staff can talk to the site visit team without senior staff present.

Find ways to ensure partners receive new ideas for integrating nano

- A fifth of the partners did not gain new ideas for integrating nano into their institution. There are a variety of things site visit teams could do to help ensure they provide partners with ideas appropriate for their institution. These include conducting research on the institution's programming and exhibit galleries before the site visit, pre-visit communication with the partner to help site visit teams start thinking about possible nano connections and needs of the partner, touring the museum with partner staff to discuss areas of possible nano integration during the tour, and setting up the expectation from the beginning that the Network is coming not only to see what the partner is doing but to help them enhance their nano educational efforts.

Clearly identify what it means to contribute to the Network

- Partners are interested in contributing to the Network, but a quarter of them did not hear from their site visit team how they could share what they have created. It is important that all Network Community Group members are clear on how partners can share what they create, since some site visit teams said they didn't address the outcome because they didn't think there were opportunities for partners to contribute their products to the Network.

Define the role of the Network in connecting partners to researchers and/or scientists

- Consider if there is a point in which the Network refrains from helping partners connect with scientists and/or researchers. In close to half of the visits, the site visit team felt the partners did not need to make any more connections with scientists or researchers. For this reason, they did not share any additional names of researchers or scientists even though it was an outcome of the site visits.

Ensure site visit team members have extensive knowledge of the NISE Network's activities and resources

- Make sure site visit team members have a vast range of knowledgeable about the direction of NISE Network and its wide variety of resources so that similar information is communicated to the partners. The information partners' received was influenced by what the site visit team knew about the Network, what they had been using in the Network, and what they were enthusiastic about. For this reason, the site visit team did not always have the ability to tailor to the partners' needs because they were limited by their own knowledge of the Network. For instance, discussions of tabletop exhibits varied depending on who was involved in the site visit. Individuals that were part of the NISE Network Exhibits Group were able to provide much more specific information about tabletops than those who were not in that working group. Similarly, evaluation resources tended to be brought up when evaluators were present at the site visit and site visit teams could turn to evaluators to provide additional information about the evaluation tools available to partners.

Appendix A: Institutions Visited In Each NISE Network Region

Mid-Atlantic Region

- Boonshoft Museum of Discovery
- Cincinnati Museum
- Port Discovery Children's Museum

Midwest Region

- Children's Museum of Indianapolis
- Duluth Children's Museum
- Science Center of Iowa
- St. Louis Science Center

Northeast Region

- Brookhaven National Lab
- Children's Museum of Science & Technology (CMOST)
- Connecticut Science Center
- Long Island Children's Museum
- Milton J. Rubenstein Museum of Science & Technology (MOST)
- Schenectady Museum

South Region

- Don Harrington Discovery Center
- Museum of Nature & Science
- Science Spectrum

Southeast Region

- Creative Discovery
- Memphis Zoo
- Pink Palace
- University of Tennessee Health Services

Southwest Region

- Arizona Science Center
- Leid Children's Museum
- The Tech

West Region

- KidsQuest Children's Museum
- Palouse Discovery Science Center
- Science Factory

Appendix B: What Went Well During Site Visits

What Site Visit Teams Feel Went Well During the Site Visit (n= 24)

Note: Some site visit teams mentioned more than one thing that they felt went well.

58% (14) Seeing partners' nano education efforts

- Really great to have a nano training that is similar to what's in the catalog, but also different and they've done their own things. Provided us with ways to change our own kits and modify programs. (Interviewer: Explain what you mean about the nano training.) The nano training is different than what we do. [One of the staff at the partner institution] found it interesting because it would be good for k-12. Going forward it will help us think about how we can modify our own programs to the formal classroom. The primary activity was looking at the height of aluminum foil and how many nanometers long it was. We both came back with ideas about how we can bring back some of that stuff in our other programs. Gave us good ideas about how to modify or add programs.
- Get to know what they are doing. [One of the staff at the partner institution] – as a newcomer to process – it is probably a big challenge to be in a museum without colleagues since you don't have other people to check in with on kit and programs. We provided a way for her to check in with us to see if they are doing this right.
- Seeing how the NanoDays kits have been integrated into their floor programming. The pre-visit conversation led us to believe that very few staff were comfortable with nano, but actually several seemed to be actively doing nano on the floor.
- I think they were very candid with us about what they're doing and what they haven't done yet. The possibilities they have to be involved in the future in implementing nanoscience programming. [The site visit was] helpful in seeing how the organization works and understanding the organization's history and what's been going on. I don't know if I would have gotten as much information if I hadn't had the relationship earlier than that. I had met one of the partner staff and invited a second partner staff to come out to our NanoDays.
- One thing that really worked, but might not work everywhere; we spent almost the whole day out on their floor. I think that really worked well for this particular visit because we could talk about their plans for expanding nano activities given hard buy-in from the organization. See that they have an established space where they do programming for nano. Talking about ways they can integrate. Being out there and seeing their stuff. We knew that [the partner staff person] wanted some help with his activities, but being able to see them presented before talking about it made it more productive. Was important to see how they are using the spaces – even for non-nano activities – helped to see how they might make those connections and what nano products they might be able to sell and get the buy-in from others.
- We learned a lot of what they are doing. Workshop is something the programs group can look into. Trial year of it – they went to four different sites. Started off with a group of 8th graders going into 9th grade. Introduced them to some activities from the nano kits and a few other activities. Introduced them to gecko tape. Then they had the kids create companies and they would have to create business plans and figure out a product that they might utilize gecko tape for. Create a business plan, marketing plan, decide what role they wanted to play in the company, had to create a presentation

where they explain nanotechnology and pitch their product to people in the community. They would practice their presentations on each other. Bring people in from the community to pitch their ideas to. All done in two half-day sessions and one judging session. This was done as school outreach. Specifically geared toward students who were struggling in school.

- I think most of it went well. We had good discussion. A good tour. The most valuable thing I learned is how they are repurposing nano things. Bring out nano twister for family game night. Put nano out for science Saturday. They are really thinking about ways to go beyond NanoDays.
- We learned things that will be useful to the NISE Net going forward. They talked about a camp they do – good to get some of the details of. They talked about this year’s NanoDays activities, which focused more on size than applications. They thought it worked better (last year) with applications because that is what people come to the table for. People don’t necessarily consider last year’s NanoDays activities as something they do this year. They compartmentalized it into that was last year’s activities – this is this year’s. Felt timing of NanoDays bad for them. They didn’t realize they could do it anytime they want. Being anxious of knowing when it will be next year because of MRS meeting and students will be there. They didn’t realize they can do it at a different time.
- We asked them what they were doing first rather than telling them about NISE Net. That was great because they are doing lots of stuff. Walk through the museum was really helpful to understand how useful the kits are in terms of being interactive on a floor that is pretty inactive. They rely on programming to bring interactivity to the museum. Something we couldn’t have foreseen with a phone call. Isn’t obvious until you see it.
- The reassurance that they want to do nano. When a museum restructures and has a new vision for how they are going to incorporate new content you have to get in quickly to get in there with them. Our discussion about the kids’ videographer went well too – has a lot of promise. Could serve NISE Net really well. Something they could get a mini-grant to develop.
- Seeing their video conferencing setup was really interesting for me. And then just talking about the entire range of nano activities that they do.
- I thought the morning meeting with the partners was useful - for us to figure out what they’re doing.
- Hearing what they are doing. In regional or annual meetings you don’t get to really understand what they are doing.
- We had a good, concrete discussion about nano related plans that they have.

42% (10) Face-to-face conversations

- The feeling of camaraderie - we all know what to expect. There are some folks visiting and we all can relate to the challenges of presenting nano or anything on the floor. That connection allows us to have a meaningful conversation about incorporating nano into demos. Their comfort level in coming to me, if [Staff person 1 at the partner institution] wants to email me without [Staff person 2 at the partner institution] knowing he would be more comfortable now. He could tap into my knowledge. ([Staff person 2] had been the only person involved in NISE Net although [Staff person 3 at the partner institution] has been involved in work with the local university).
- The fact that it was a one on six intro to the Network rather than an email. Being able to meet with so many people, education staff, outreach staff, program managers,

executive director, exhibits staff, marketing. Just me being in person. Afterward the Executive Director was really appreciative that I came by. At times I felt they were a little out of it, didn't know what ISE is.

- It was nice to meet staff members at the partner institution because now I feel like I pretty much have met all of their staff that do nano. It was nice to meet everybody.
- [Staff person at the partner institution] mentioned that the site visit was really important because it increased the visibility of NISE Net with other staff and will help to get more institutional buy in and involvement with Nano and NISE Net specifically.
- It was good to meet with the staff, particularly the senior staff. They liked that we actually came out to their site to see what they are doing and meet face to face.
- Meeting with individuals from multiple departments at the same time---great conversation and idea generation.
- There was one on one in that it is the Network and one group of folks. I think the one-on-one part and getting to know them more was something I enjoyed. Something I don't think I got out of the regional meetings.
- It was the right amount of time and then did lunch. If we want to know more about stuff we can follow-up by email or phone. Good to have at least some face time to get the picture.
- Forming relationships and making connections – having lunch together and chatting was a good thing. It was especially good to meet the new staff. To have the overlap of someone in institution who knows what NISE Net is.
- We had some good conversations. A lot of one-on-one conversations. President was very busy but he made time to talk. We talked about the Network and the great work [the staff person at the partner institution] is doing. He was very glad they could be a part of it.

29% (7) Talking about partners' needs

- Thought the morning meeting with staff members at the partner institution was useful - both for us to figure out what they're doing and what they need and what NISE Net can do for them in the upcoming years.
- We asked [one of the staff members at the partner institution] for her advice on the Network. They are very knowledgeable. The regional hub leader directly and specifically asked her for advice on what was needed in 6-10 in the community and the way the community group is planning to work with partners – asked about professional development and her advice going forward with those. Also the educational products side – things she is a potential user of. Very specific ways we would interact with partners. She was excited about mini-grants. When we talked about professional development, we would say what plans were and she would say that was exactly something she was looking for.
- They were able to articulate the things they need – better marketing materials and stuff for young children. Those were things that held them back. More activities with a focus on applications. They thought that those activities from previous nano kits were more accessible to the public than a focus on size and scale. This comment was emphasized by both the science center staff and the MRS/university staff. We haven't really gotten that feedback from them before. Sitting down and probing we were able to get a good understanding of what their needs were.
- Another useful conversation we had was hearing about what would be useful for them in terms of professional development needs. They really rely on partners to present all the STEM content because they don't have the expertise themselves. By watching

partners their own staff is getting excited. They did ask about concrete things like training videos. Their staffing seemed to be really lean – they have 15-18 full time staff and something like 85 part-time staff/volunteers. I wonder if this is a way we can use student chapters from physics, chemistry, and MRS clubs. Closing the loop so they have more places to go. I've heard this a number of times – they like the student chapters because they don't have to train them.

- Talking about ways they can integrate and ways we can help with buy-in. A big thing with buy-in - they want everything to be interactive and tie in to everything else. They have a process – every week they have to justify why they are doing certain things and how it connects to what is on their floor. For them that is what is tough about nano – don't have anything nano on the floor but need to make connections to what is on the floor. That is a big struggle for them – finding ways to make connections.
- When they identified some of their needs we could say that we are already doing that. They are on track with our thinking.
- Good for me to get an idea of what an institution needs in terms of help from the Network.

29% (7) Providing training in nano content and/or programming

- When the hub leader did the presentation to everyone. She did Intro to Nano as a model presentation with annotations so educational staff could use it themselves and see what it looks like. Maybe next time the hub leader would do presentation and the rest of the site visit team would break in. Then we played the video of Intro to Nano and talked about how particular parts of the demo you could do a whole program on it. [Staff person] has a very small staff. They do a whole nano summer camp and bring in part time summer staff. We had talked ahead of time for the need of a training and intro for her staff. The training met a need of hers and let us interface with that staff
- The demonstration of the NanoDays kit. The discussion over lunch. That was probably one of the better parts. It was a chance for them to see stuff and then discuss and brainstorm on how they might use it. There was a little of that during the demos. They didn't hesitate to ask questions. I was impressed with how much notes they were taking. Looked as if they were writing down notes on specific points or ideas. That was the sense I got.
- Introduced the kit to people who didn't know the museum had one. Making people more comfortable with the topic of nano through the staff training—now they're more willing to be adventurous in doing their own, and we gave good concrete examples of how it can be used in existing programs (scout programs, afterschool program, health and human services, and with local schools with a high percentage of free or subsidized lunches, and “nano hot spots” through out the exhibit floor) (Interviewer: Do you mean they're now more willing to create? Or more willing to do programs?) Now they're willing to do the programs at all. The Intro to Nano training is sort of designed on how this topic can be delivered to the public. They didn't know anything about nano. [So the training] gave more comfort level with subject matter.
- Training went well – two part time educators and educator that is leaving got excited about using activities in summer programs. If that hadn't happened stuff may have stayed in box until possibly NanoDays next year. Otherwise may not have been the continuity. We have invited the staff to come to the regional hub leader's museum for a visit when the new education director comes on. We could give them some more encouragement and nurture them some more to keep them involved.
- They were jazzed about presenting the tabletop demos to each other.

- I thought the training session sparked a good discussion of both practical applications to programs as well as general discussion about nano.
- The training went well.

25% (6) Talking about various aspects of the NISE Network

- We had a great conversation about the variety of programs and exhibits available in the catalog, and even though she'd known about it before, it really helped to have a person go through it to peak interest. [A staff person at the partner institution] asked specifically about exhibits and programs for adult audiences, i.e. forums and science cafes. She's particularly concerned about how to frame the conversation about the risks and benefits associated with nano, societal implications. The partner will be a good partner for thinking about nano and energy, identifying scientists. (Interviewer: You said you wished you'd looked through the website as a group. Did you just talk about what was in the catalog?) Talked about the catalog, didn't look through it. Later wish we'd brought it up during the PowerPoint - just to make them familiar with it. [This would be especially important for] the staff person at the partner institution who does the second arm of public education. [Staff person 1 at the partner institution] talked about how she's trying to get [staff person 2] more involved with NISE Net. Hasn't had much interest. The site visit was sort of a catalyst for getting [staff person 2] involved. These are all things that fit with their programming. That went well and we talked about what was specifically in the catalog.
- I think the meeting went better because there were three of us to balance the numbers. (Site visit team member 1): Trying to imagine doing the site visit by myself – would have been hard. (Site visit team member 2): We bring different perspectives – I have more of a role in the Network and you have more of an overview and history of the Network. It was valuable to have [a NISE Net evaluator] there to describe how evaluation works in the Network. As a practice it isn't well understood in the field. I felt good pointing them to evaluation resources as a professional development opportunity. When you have professional evaluators on staff what they produce and what we have learned.
- I thought the handout presentation went better than I thought it would. I was talking a lot but it brought out good information. And it tracked their questions and needs. Nice to leave something behind. It went well in terms of not derailing conversation. Probably do that [presentation] again. I think it was really helpful to have talked before hand. And know what the partner had in mind. She's always very articulate.
- Then we did the NISE Net presentation. We had already talked about some of it in our initial discussion about what they are doing with nano.
- They are interested in ACM workshop next year. Gave them info about Keith and Krystal and the hub.
- They were happy to see the catalog.

17% (4) Talking about partnerships

- We got a pretty good handle on what they are doing at their facilities. The visit this morning – a chance for their different partners to touch base on how the project went from their perspective and what they might be able to do next year and use us as a sounding board for their ideas. The later discussion of exhibits and NanoDays programming and working with researchers I think they got a few ideas from that.
- We had a good, concrete discussion about nano related plans that they have. They are thinking about becoming an outreach partners for the local university's MRSEC. We

had a conversation about how they could structure that partnership – that was really good. It was great to have one of the partners there at the meeting – someone from the local university’s MRSEC was at the working lunch. He had set up tables of activities in the morning so they could see how they do activity. The local university’s MRSEC and the partner collaborated on NanoDays this year. They have been talking about how to leverage this partnership around NanoDays into something independent and more long term.

- Hearing more about the Network is something I didn’t know. Only a couple weeks ago that I heard about a researcher at a local university being a part of it (NISE Net already had a connection with her) so it was neat to hear that connection.
- Had dinner with [partners from two different institutions]– to help them get to know each other better.

13% (3) Request feedback from partners

- Confirmation with [staff person at the partner institution] that it’s important to give NanoDays feedback. (Interviewer: Did she not think so?) As we were talking, it came to our attention that they’re doing NanoDays this summer and they haven’t sent in their survey yet. And we offered that next year when we select who receives kits, we’ll see that she hadn’t sent it in.
- Also, it worked really well to get [the partner’s] feedback on the direction of work in 6-10. She’s been part of the project and not only has great insight but can give good perspective on where the project has been helpful in years 1-5 versus what’s needed for partners in 6-10. In this way, year five is an especially good time to do these site visits.
- They liked the fact that we were open to their comments and we wanted to hear their feedback. Encouraged them to go on nisenet.org and leave their feedback.

13% (3) Seeing their institution

- Did a tour of the museum at the end – one of her goals is to integrate nano into the museum. This is something we have talked about in the Network but it is hard to visualize how we would do that with everyone because they are all different. Helpful to also think about how we could do that (integrate nano) onto the museum floor. Hard to visualize incorporating/ infusing nano into existing exhibits without seeing examples of partner museums.
- I always enjoy getting the tours to see the diversity of other museums. Everyone is really enthusiastic to show off their institution – showing off everything that they have. It has been really fun.
- I got to see their museum.

25% (6) Other

- Their seasonal staff may not be there next year but gives us an idea of what her seasonal staff are typically like. That was really helpful. Asked them to look through the catalog ahead of time. Process – us taking notes and showing the care in paying attention seemed to go well. Being aware of the relationship and being able to follow up.
- It was great to hear about a lot of the DEA-related activities they are doing at their museum already. Gave us ideas of how we might bring that in to more nano-related stuff. They had tried doing Spanish translation but they ended up getting more complaints because community is more multi-lingual than bi-lingual so people were

upset that their language wasn't there. Doing more graphic-related now to address those areas and helps with a lot of their visitors being pre-literate – have a study going on with education researchers now around this. Had good ideas for accessibility. The partner is committed to making sure their building, which is a historic structure (an old theater), is accessibility – making sure all parts are accessible and usable. How their facility can be improved for that.

- The upper management and other staff were interested in nano and putting it into their curriculum. They hadn't done NanoDays for a year. Their person left. They seemed very amenable to working with the Network.
- Having the diverse representation there was nice.
- Came with an agenda but checked in with them if we should readjust.
- The reassurance that NISE will still support nano at our institution.

Appendix C: What Site Visit Teams Would Do Differently

What Site Visit Teams Would Do Differently During Future Site Visits (n=24)

Note: Some site visit teams mentioned more than one thing they would do differently.

42% (10) Changes to the partner staff participating in the site visit

- If time, meet with upper management.
- We met with some staff actively doing nano on the floor or in classroom programs, but our point person was more of a manager and that presented a somewhat difficult group dynamic.
- Depending on the site – if it’s appropriate to reach out to more than one department, that makes sense. In this case we’re already expanding [past our currently infused nano personnel]. Or, if it’s needed, to get upper management support.
- I like the site visit team’s suggestions of meeting with staff separately – not having director there for the whole visit.
- It would be nice to talk with floor staff. Not just two people.
- I wasn’t completely aware that individuals in the morning would be leaving. I thought they would have been there longer. They missed the presentation about NISE Net and the future of NISE Net. Would have inserted more about NISE at the beginning before they left.
- Maybe planned it so we could have spent some time with [staff person at partner institution] before she got busy because she delivers a lot of the programs.
- Set aside specific time to meet with [staff person 1 at partner institution]. She is actually the point person for NISE Net. And she’s the one who gets the kit. We set up the site visit with [staff person 2] because she got back to us faster and handled the details. She’s the one who invited the other departments. I hadn’t understood the internal culture. If I had known more, I would have set aside specific time to talk to [staff person 1] and get her impression on how she’s used NISE Net.
- I would actually make sure that staff were available for me to do a presentation for them. Everyone was running around – they had camps going on so they didn’t have time for that. I would have liked to do an Intro to Nano presentation.
- It would have been nice to have the people from the training at lunch. They had cancelled some of their programming on the exhibit floor so they could come to the workshop, but weren’t able to come to lunch. It would have been nice to have them involved in some of the conversation about how they might try to adapt things. They had a range of familiarity with nano at this point. We had someone who had very minimal understanding at this point. I don’t think he would have felt comfortable contributing in the conversation yet. There were other people starting to think about stuff, but they were very reserved. Maybe they could have been involved in the discussion a little more and getting them involved in taking things and making them their own a little more.

25% (6) Spend more time at the site

- Spend a whole day at each site, or more? Spend more time with other frontline educators . We did [Site 1] and [Site 2] both in one day. I feel like it would have been more respectful to the site if we’d spent the whole day. For Site 2 we were there after 6:30. We were overly optimistic about what we could accomplish. It’s really not three

hours. It's more on the hour of four-five hours. Three hours wasn't enough. Doing two half days in the same day doesn't allow for the flexibility. Maybe it is just a half-day, but they should be on separate days so that there's a cushion of time.

- I really wanted to know more about their interests. I wish I had more time to ask why they are interested in the Network. I wish I heard more from them, more time. We set this meeting up a week in advance. I figured since I was here I would call to see if I could do one. There wasn't much planning ahead of time like there was in one of my other site visits. I sent them a thank you email and in the email I typed up a bunch of links to stuff they had asked about during the meeting. It would have been nice to provide that ahead of time so they could have looked at it. When I was explaining the catalog or website they really hadn't been there.
- I don't know if I would do anything differently for this one – maybe spend more time there. Go out afterwards [and] maybe to talk some more. Maybe more time would have allowed us to try out changes to his activity he was struggling with. We didn't get to the other program he had concerns with. That is one that someone from the NISE Network will be following up with as we continue to talk about the butterfly activity he is working on and trying to get more nano in.
- Spend more time at institution.
- We were lucky that we go to meet the institution's President – maybe a longer period of time.
- I brought examples of our gecko feet stuff. We didn't play with it and I kind of wish we would have played with it. We didn't have enough time – got cut short half an hour because of rain.

25% (6) Talk more about various aspects of the NISE Network

- Share with them the Facebook and Twitter stuff? Didn't mention.
- Maybe talk more about available programs they could take advantage of. I don't feel like there was really much else to do for these people. They were pretty on top of things.
- Also, should have done overview as a PowerPoint, and should have pulled up the website to look at as a group.
- I don't feel like I talked that much about the Network itself. I think where they could have used a little more info would have been about the Network because they are so new.
- We could have showed them some of our multimedia offerings. I didn't show them some of the NISE Net produced videos.
- Works well sometimes to talk about what they are doing and then talk about NISE Net. But because that means we've covered much of the presentation it can be awkward. While it went well this time, we may need to find a way to balance listening to their needs and ensure them that we have it covered and present the Network overview. Maybe do that better.

21% (5) Better tailor the nano content training to partners' prior knowledge

- I would actually do a quick presentation about nanoscience and nanotechnology. Hard to gauge because at some institutions they have it fairly well in their program but in this case they did not. I feel they could have used some more general nano content because a lot of their part time staff haven't dealt with NanoDays. Really only one or two people are familiar with materials in NanoDays kits. So basically it is up to

those people to train others on it. I actually may go up there in the winter and do a demonstration/presentation for them.

- For future site visits where the sites don't have much expertise, I would spend the time doing more training.
- Since they are relatively new at this, I touched on societal and ethical implications in my Intro to Nano presentation. They were very receptive to the SEI message and we went on a tangent about SEI. We needed to stick to the fundamentals so we had to bring it back to the presentation. I can see in a future visit to do SEI stuff.
- They knew more about nano than we'd understood of them from the pre-visit discussion. So doing the Intro to Nano didn't feel worthwhile.
- Or to provide more content focused training. Intro to Nano, etc. [then we would meet with upper management or conduct a focused training.]

13% (3) Include researchers/scientists in the visit

- Spend more time with the researchers interested in nano outreach. Plan to connect [staff person at partner institution] to RISE and hope to invite to Network wide meeting.
- I might have planned to go up to the Community College and visit their site too and know more about their program. Could maybe still do [this] because we are going to do a visit to a nearby museum – could combine it and drop in there.
- Recommend to others – the value of having the researchers there in the room versus just the one potential partner. Having those different people in the room. They have done this with some of my help but not all of my help. The more people who are on board, the more they feel gung ho about carrying out some of this work.

13% (3) Changes to the roles of NISE Network staff at the visit

- The NISE Net presentation and staff training that [one of the site visit team members] did by herself. I don't think I would have the same person do all parts of it. That was too much of me talking. Agreed afterward, that regional hub leader should talk about NISE Net because she is serving as the Hub interface. When doing training and presentations, it's good to have one person do the presentation and another person insert points. We could have used the three of us a little better.
- Have [one of the site visit team members] there both days. (One of the site visit team member was only there the second day).
- Because they had a lot of resources we felt okay not bringing a NISE Network program person, but even so, one of the things they asked for was hands-on professional development workshops where they do the activities and then deliver them on the floor. Not just giving them the activity. Might be easier when working with visitors on the floor to talk about how it fits into the context.

8% (2) Ensure there is detailed pre-visit communication

- I was really aware of the comments you [the site visit evaluator] had made of the importance of the pre-visit information sharing. The regional hub leader had already started that before the subawardee meeting. [Staff person at partner institution] really grabbed on to that and made sure she had all her ducks in a row and circulated what she wanted to get out of the visit as opposed to what the Network wanted to get out of the visit. I wouldn't do anything different – just seconding what you [the site visit evaluator] had said. No, I felt like we were pretty prepared for what they needed from us and how we could help them.

- It might have helped us if we had known ahead of time that [staff person at the partner institution] was leaving and other staff we were meeting were all new. I knew they had a new director but I didn't understand how much turnover there was there because they have done NanoDays all three years. Maybe that is a question to ask – how much do your staff know about the NISE Net? It is a really small museum and one person tends to run a particular thing – Staff person had been doing NanoDays all on his own. Surprised they hadn't tapped more resources at the University – having grad students come out. I think because of turnover, those relationships keep getting dropped. I wish there would have been some way we could have known that ahead of time so we could have prepared better. I maybe would have asked them to do more ahead of time like ask more staff to visit the NISE Net website.

8% (2) Send post-visit communication

- After we went to the partner site we sent them nano shirts. At this one we gave them the shirts right away. I think we would rather do it afterwards as an extra point of contact after the visit.
- Maybe a nice thank you letter that gets written to [staff at the partner institution] and their boss. To say how impressed we are with what they are doing.

8% (2) Do more research about the institution before the visit

- They have a big push to do things that are green and green energy. There were obviously some issues around terms – they were talking about biomimicry but there are other energy applications they could use around this same thing. Finding a way to work more on those connections – although I didn't know about the push going in so it was something we couldn't prepare for ahead of time.
- I should have known that they had a solar activity. I should have went to their website ahead of time. I should have known they were opening up that exhibit so I could have come with that activity ready to give to them.

25% (6) Other

- Try to plan it so we could get lunch with them because when we provide food it is seen as a good gesture. Very open to any ideas you might have because of some social obligation. I think after eating for some reason it is conducive for open conversation.
- Talk to [the NISE Net point person at the partner institution] more about the nano program development and how NISE can serve her and act as a continuous resource as staff people change. Wish we could have seen more of their programs and delivery. It would have been nice after the lesson that [one of the partner staff] gave, it would have been nice to go through how she developed the program and how NISE Net helped her or could have been more help.
- Hearing from [one of the partner staff] and [their local researcher] – what can we say to help justify what you are doing? If we could have said something about the offshoot grants that happened because of this. The offer of should they be interested to seek funding to further your partnership, please let us know how we can help with letters of support or technical assistance. In RISE we have talked about helping people develop proposals – that is why I mentioned Carol Lynn. They would have to write the grant and hire someone to do that but we can offer feedback. We could review it for them.
- Might be good to arrive early and take a private tour first. If we had taken a tour first, we might have had more suggestions on how to tie in, if we were able to say here are some concrete ways to integrate.

- Take pictures of the galleries and document that more. Photography for exhibit group – a few key photographs and extremes of museums would be helpful to picture what it is they are trying to produce for the broadest group of project. Helps to think about the medium. What are people really going to implement? If we are really serious in the exhibits group in finding ways of supporting people in their galleries we need to have a real sense of the range of what their exhibit galleries are like. If we really wanted to think about doing that we need to have a clear idea. Not everyone has the same types of exhibits. Even the feel of the gallery. Many of their exhibits are sponsored by local industry and that brings a different spin because they have a message they are trying to get across. Raises the question of how you would do exhibits for them and what hot spots you would think about. The exhibit floor is a visual thing and a photo is a visual representation for them.
- Remember the props for the demos. We forgot them. We went through the Intro Cart Demo and the whole NanoDays kit. We discussed several other options. Even the NanoDays kit we didn't do all of them. Practice Carbon Nanotube activity beforehand since we hadn't done it for a while.

Appendix D: How Partners See Themselves Being Connected to the NISE Network

How Partners See Their Institution Being Connected To or Involved in the NISE Network in the Future (n=20)

Note: Some partners saw themselves being connected in multiple ways.

40% (8) Contributing to the Network

- And that we can give back through our own programs. Put up things that we've had success with and other institutions would be able to draw on that.
- Hope that we have a strong tie to NISE Net because it's a really useful resource. I would hope that we'd also be able to add something into NISE Net. That we might provide programs and ways of working with people that are helpful.
- It sounded like, from what the regional hub leader said, that our area is doing some unique programming. It would be beneficial for us to be able to share what we're doing with other institutions. In doing so, maybe we can learn what others are doing. I know he mentioned the meeting in Oct. It would be nice if we could get the suitcase to where it is useful so we can show and share there. It's not going to be perfect. So sharing our mistakes if we even know at that point is even more important.
- Our connection will be successful when we can feel like we're a contributing member. Nature of those communications around the regional hub leader coming out here or us traveling to the NISE national event – it brushes away the cobwebs. Refocuses. And allows us to feel like maybe we can help also. Sharpen those arrows and make them go both ways.
- And helping the Network work for children's museums where you have a whole variety of age groups. I think we have a lot of experience with family learning and we're large and I think we could provide some great feedback from that perspective.
- Partnership perspective. I guess in terms of information sharing. We were able to share some cool things with them that we developed on this side. The info sharing and partnership is great. And if you're able to share with me somebody else that's doing what we're doing.
- I think I would like to make it stronger. Have more involvement. Be more of a contributing member.
- And if it's a possibility for us to contribute then I can really see ourselves [staying involved.]

35% (7) Using NISE Network resources

- (Partner 1): I definitely want to remain a part of this program. If for no other reason than the resources, I wouldn't have had the connections of meeting the people at the local university without the NISE Net. We've gotten a lot of good ideas for exhibits. The regional hub leader was really great at giving more information. (Partner 2): Content, we're always trying to look for new, bigger and better activities. It's definitely gotten there in NanoDays, but maybe we'll have a nano month someday. (Partner 1): I consider nanoscience and nanotech really cutting edge - something that the public hasn't seen yet. Really good for our audience here at the science center.
- I think that the NISE Net is a fantastic resource. The amount of things and resources in terms of programs and people and materials available to us have been so invaluable. If we didn't find the NISE Net. We wouldn't do nanotechnology. I hope the

resources continue to be available - the catalog and the network of people. The feedback and discussions about what they're doing and ways we could replicate something. Like they're doing a scout program and maybe we could do a scout program like that. I hope the network of people remains as well and that we can remain to be a part of it. We don't have a lot of funds and it's been key for us keeping up on what's going on.

- I think just continuing to add NISE programs and providing feedback for how do you reach different audiences. School groups. Teachers. Personally I would like to think about how we can incorporate nano in even more events. Trying to do more programming on the floor of our science gallery. Also, if more info comes to light and I think fits in my space I might add on with programs that fit in.
- I definitely see us doing the obvious - receiving the materials and actually using them. Not just special events, but infusing them into programs that we do on regular basis. I think the relationship that we built with our regional person is great. I can see us accessing the mini grants to be able to do more – maybe training. So we can better utilize the resources that are there. Any other initiatives that come forward that you guys are developing, we would be interested in hearing more about.
- Depending on direction of the NISE Network, I could still see them as a resource for our science center. I think that if the introduction of new concepts and new methods of delivering is something that they keep fresh then we could have a long-term relationship with them.
- I definitely think that we're gonna continue to pull from the wealth of resources that you offer through the online catalog.
- Definitely continuing NanoDays and delivering programs.

(15%) Partnering with other institutions in the NISE Network

- I don't ever see us not using them as a resource. Also having that knowledge that I could always contact the regional hub leader means a lot. Knowing that she's there is a comfort to me. But I know if I couldn't reach the regional hub leader, I could contact Margaret Glass. I could contact someone in Minnesota. These connections have been invaluable. Especially with one of the partners in Maryland. Our conversations have actually gone outside NISE Net. The partnership, the friendship. The relationships that have been made and nurtured. Support. I know that there's a support system there and as long as it's there, we'll be ok. I know one time I emailed Anders about the balloon and he responded in five minutes.
- Definitely keeping in touch with a lot of different other organizations. The Children's Museum of Houston. The site visit team mentioned that they're a great resource for developing activities for child. Keeping in touch with a lot of organizations and trading ideas back and forth. Other areas to explore more fully are the partnerships with other local museums and colleges and deepen the programming that we offer. There's a group that came from a local city that were looking for science-based programming. Think we could create deeper level of programming.
- There's a possibility that we will do some in collaboration with Fort Worth museum. We've done a little with that, but it's been a lot less than I thought. Moving to this museum, I thought there would be more collaboration between the two sites but they're remarkably separate.

10% (2) Creating their own nano-related educational experiences

- Number two would be developing programming. Or more. Or deeper. Or more comprehensive I should say, programming about nano. And possibly including a lab. Doing more here. I'm sure in the notes they mentioned the strategic plan – have a health exhibit. This would fit nicely in the health and technology. We don't have the luxury of doing something once and shelving it. If I think there is a program out there that has legs in the future we try to build on it. We're in our infancy and we've done unique things but there's still room to grow, improve and share. In a museum community there's no sense in creating something in isolation. Doesn't mean it's going to translate but more than likely it can transfer. You can tell that's what this program is. Some will take it and run with it. We've taken it a little further than what NISE Net had anticipated. Other institutions across country could mutually benefit.
- Rather than just doing programs once a year. Start working on creating them. Involve the information and topics into our new galleries.

10% (2) Attending NISE Network meeting and/or workshop

- I know my colleague and I are attending the annual meeting in October. I guess I feel really proud right now. It's been great to hear how much we're doing with nano and I like the fact that my institution can be in that higher level tier of active participation in the Network is great. It's great to be acknowledged and I hope to keep that level up there as time passes.
- One of the things that I was interested in was the training that was going on in San Francisco. We talked about one of our staff members going for that training. She writes our curriculum.

20% (4) Other

- I think the first thing is to get connected. Once we're connected it would evolve. Little premature for us to be able to answer.
- Probably I will stay on the email list and network. And it will most likely go through me. I don't see other educators going out to the conferences and picking it up. I imagine anything that's going to happen will happen because I bring it in and get it done.
- I want more of my staff involved. Our upper management. I want to spend time involving them. I offered next year, I'm happy to support the table at the Association of Children's Museum conference. You guys do so much for me that I don't mind volunteering and helping. I'm definitely not a passive participant.
- I hope they stay involved. When they get the new education director. I found that doing the various NISE Net trainings and meeting was really beneficial to me to build up my knowledge and do some networking as well. We've been experiencing growth; build up staff to offer more nano programs. Being a part of NISE Net can also offer credibility in bringing in the researchers. (Interviewer: Do you know anything about your upper management's opinions about future involvement?) Our executive director is on board. She's fairly new. I'm hoping that she will emphasize that to the next person. Part of what I'm doing in getting ready to leave is writing up how-to guides. And I'm also talking about emphasizing NanoDays. I've been doing informal education for over 10 years. NISE Net has been the best professional development I've done. They provide us with ideas. Activities that are already put together. I think these tabletop exhibits could be another opportunity to get nano out there. I'm trying as much as possible to bring in the latest in science. Make what we do somewhat relevant

so kids and adults can see that this is a useful thing. NISE Net is the cutting edge of knowing what's going on and giving you ways of showing that to the public.

5% (1) Partner was not sure what future involvement would entail

- Very open to that. That's the one thing by the regional hub leader coming and visiting. We had this staff person that had become very involved and once that person left, most of the content left with that person. For most of the staff, it was on the back burner. By the regional hub leader calling and coming and visiting with the staff, it's made it more apparent and up front in the thought process. Not that there were any specifics involved. It was more like, 'If round two gets funded, would you want to stay involved'. There could be more involvement or potentially training around that.

Appendix E: Support Partners Envision From the NISE Network

Support Partners Envision the NISE Network Providing Their Institutions in the Future (n=19)

Note: Some partners discussed more than one type of support.

37% (7) Giving out NanoDays kit

- We're always grateful for the NanoDays kit. We make use of most of the materials. Sometimes most of the materials end up getting incorporated into slightly different programs. Like "Plants to Pants" – using the individual kit materials was helpful as launching pad for creating our own. Broke up and replicated what was in there. And that makes life a little easier.
- Providing the NanoDays kit with refills and new activities that are out there. Because those have been really beneficial.
- One is the resource kit, which is connected to the Day [NanoDay].
- Well continued Nano kits are amazing. They're really a great resource.
- Continue on with the research with the kits. That gives us innovative experiments to share with kids to entice them about nano.
- Access to new materials and kits and lessons like we get for NanoDays.
- One. The kits that you're providing are wonderful.

32% (6) Connecting people in the Network (at meetings, workshops, and online)

- Perhaps participating in the annual NISE meeting.
- The site visit team talked about it, but some sort of regional workshop or conference would be helpful. Just to kind of see nano in other institutions.
- The other thing might even be to time for people to share within the region time to share ideas and speakers. If three people who were going to do NanoDays over three months you could line up that.
- Maybe more regional meetings so members of regional hubs can get together in a more centrally located place to meet. I'd like to see more collaboration happen within the region so we can be better partners to each other.
- We would love the opportunity to find out what other sites are doing. Other sites will have really great wonderful gems. I know Fort Worth has a great team. Exploratorium is unsurpassed. Same with MOS. And I'm sure there's more out there. That integration is really key. Maybe there needs to be a way that people can communicate pretty easily. Almost a facebooking sort of thing. Look what's happening at this place or at that place.
- And being a part of the network online and have a support system of other professionals in the field that are trying things in new ways and that we could bounce ideas off of. That they have a good approach to try.

32% (6) Providing more programs

- Prototype activities and a list of materials required for them. In terms of things like the nano kit. Not necessarily a kit of 20 things. That's awesome but having something that says "this activity, if you get the following supplies, will work". That's probably the most useful thing. Being able to go online and say I have the following science

standard and pull up activities for that. A lot of programs that we take into schools, teachers are only interested in booking if we sit down and map how the content applies to their standards.

- Expanding what's available for a variety of age groups. Continue to look at how can we create activities or experiences that are good for families of mixed ages or younger audiences.
- Want to keep in touch with the physical mat that we've been given and the learning mat online too. They're always updating the site. We've been using that as a good resource.
- Also resources just like the nano kit that were provided, any kinds of nano education experiences that are very specific and recipe style are great.
- More activities (not that you guys don't already have a huge catalog). Programming is something I'm really excited about.
- Same sorts of things seem to be most helpful. Programs and resources.

26% (5) Providing or sponsoring exhibits

- The tabletop exhibits.
- And I know there's been talk of tabletop exhibits and know, for us with a small budget, that would be super.
- I'm in a hub (in my city) of a lot of biotech. One of the things I'm looking for are the tabletop activities. But I'd really love it if NISE Net could sponsor a little kid nano exhibit to come to our museum. I'm hoping if I could bring that, it would bring financial presenters to the table. Ithaca did some beautiful nano exhibits for kids. For me to take someone from the Wineberg foundation would make a difference. For our state, fundraising is very difficult. Anything that we can do to raise awareness and set ourselves apart is key. Through MetLife – they brought an exhibit about special needs to our museum and we hosted a meeting for special needs organization of our state and it created huge partnerships. If something like this were to happen we would definitely take advantage of it.
- It would be nice and I think I suggested this - if they would consider sponsoring regional nano exhibits that can go to smaller museums that don't have the resources. We tend to get the ones that are small and have been around for a few years. A lot of smaller museums would benefit from that and to justify that we're reaching a lot of audience that wouldn't see the bigger museums. A shared expense by the Network.
- One of the things that I'm hoping they'll provide is that we're planning a new exhibit in fall/spring next year on energy and I noticed that 6-10 year has a strong emphasis on societal implications and green energy so ideas around that would be useful.

21% (4) Offering personal support

- If we're having trouble understanding how to explain or interpret an activity - NanoDays or nanoscience activity. I want to know there's someone there that I can call. That I can troubleshoot with. What are we doing wrong? In growing NanoDays, what have others tried? Good to bounce ideas off other people. Don't want to always make the same vanilla ice cream. That sharing of information and asking people what have you tried. But really, what have you learned? Asking another museum or organization. What they've learned. How have they presented? Who have they contacted? Brainstorming ideas to grow NanoDays. Ideas on how to take nanoscience activities outside of the museum and into the schools. Who else has done that and what have they done?

- One big thing is the university connection. That would be big if the NISE Net can help us get that started. I think the general support of knowing we having someone close to us – geographically, that understands how to tailor things to our location. I think that would be good. And being a part of the network online and have a support system of other professionals in the field that are trying things in new ways and that we could bounce ideas off of. That they have a good approach to try.
- Because of the site visit. I almost think there's going to be continued support. Anything that we have that would have a nano glint to it at all, I'm going to be emailing the people or looking on the website to see how those activities are done. .
- I think just continue supporting us as they have. They're a really easy phone call away. Maybe more site visits in the future.

16% (3) Offering professional development

- For us, the size of institution that we are, professional development is very important. For professional development whether it's a staff person going to a meeting, or someone from the outside coming in. The site visit was great. But the opportunity for someone from another museum or scientist to come in and train half dozen or a dozen people here vs. one person going out to get professional development; that would be the greatest part.
- Opportunities for professional development have been really instrumental in some of the diff programming what we're now able to offer.
- Hope they continue doing annual trainings

21% (4) Other

- At a meta-level having the NISE Network petition education boards to include nano material in the curriculum would make the demand go up and we'd have better luck taking it into school. Flipside, if we have a programs and having identified how the program applies to standards, that would work. In terms of getting off museum campus and into outreach that we take to schools. Supporting at museum – something that a volunteer can come in and you can hand them and say read the following three pages and that gives them a set of layman terms to be able to field visitor questions. That's asking a lot. Supporting museum programs training materials that quickly bring a random volunteer up to a level that's already been field testing.
- If we could get the micro grant that would be great. Other than the kit, all our resources are going toward generation of content. Doing NanoDays. There's no monetary support to be gleaned from it. It might not be a problem for us since we're trying to weave it into the fabric of our course offering. It would be great to have another staff person who has some fundamental level of nanoscience.
- What we want is recognition or some type of support from NISE Net stating that "this is one of our sub-centers" or one of our places, I don't care what you call it, that you can go and learn. That recognition is very important for the area.
- Lot of good inspiration on new and upcoming technologies.

Site Visit Observation Protocol

Community Building: Getting to Know Partners

Did they do any of the following community building activities?

Potential Activities	Yes	No
1. Discussed upper management's support and interest in nano *Make note of what they discussed	<input type="checkbox"/>	<input type="checkbox"/>
2. Gave an Introduction to the NISE Network presentation Who did they give the presentation to?	<input type="checkbox"/>	<input type="checkbox"/>
3. Discussed how the institution can get more involved in the Network	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

Site Visit Observation Protocol

Community Building: Getting to know what they do

Potential Activities	Yes	No
4. Discussed the variety of nano education activities the institution currently does with visitors *Make note of the format, content, audience, NISE Net vs non NISE Net, reasons stated for choosing to implement those programs and who implements those activities with the public	<input type="checkbox"/>	<input type="checkbox"/>
5. Discussed what educational activities or products the institution has created *Make note of the format, content, audience, practices used to develop activities (marketing, development process, scientist involvement, evaluation, what resources they pull from to develop), as well as reasons for developing those activities and who implements those activities with the public	<input type="checkbox"/>	<input type="checkbox"/>
6. Discussed what they've learned from the NISE Net about how to implement nano education experiences with the public	<input type="checkbox"/>	<input type="checkbox"/>
7. Discussed how staff members learn to implement nano education experiences	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

Site Visit Observation Protocol

Community Building: Getting to know what they do (cont)

Potential Activities	Yes	No
8. Discussed <u>how to</u> incorporate nano into existing activities and programming *Note what programs they discussed incorporating nano into and how the conversation became directed at those programs. Also note any described barriers for incorporation of nano.	<input type="checkbox"/>	<input type="checkbox"/>
9. Discussed what <u>resources</u> (physical, financial, content help, etc) the partner may want or need to incorporate nano products into other existing activities and programming	<input type="checkbox"/>	<input type="checkbox"/>
10. Discussed how the institution can share what they are doing with the network *If yes, what opportunities to share did they talk about?	<input type="checkbox"/>	<input type="checkbox"/>
11. Identified specific programs or products the institution created that would be good to share with the Network *Describe any programs or products identified, or any barriers for future sharing	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

Site Visit Observation Protocol

Connections with Local Scientists/Researchers

Potential Activities	Yes	No
12. Provided the site with a list of possible research connections	<input type="checkbox"/>	<input type="checkbox"/>
13. Discussed resources the NISE Network has to offer to help connect with scientists (MRS database, contacting hub leader, etc)	<input type="checkbox"/>	<input type="checkbox"/>
14. Discussed ways to involve scientists in delivering nano education at their institution	<input type="checkbox"/>	<input type="checkbox"/>
15. Discussed how the partner currently involves scientists in delivering nano education at their institution	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

Site Visit Observation Protocol

Capacity Building Resources

Potential Activities	Yes	No
16. Talked about NISE Net exhibits	<input type="checkbox"/>	<input type="checkbox"/>
17. Talked about NISE Net programs	<input type="checkbox"/>	<input type="checkbox"/>
18. Talked about NISE Net forums	<input type="checkbox"/>	<input type="checkbox"/>
19. Talked about NISE Net NanoDays materials	<input type="checkbox"/>	<input type="checkbox"/>
20. Talked about Viz Lab resources	<input type="checkbox"/>	<input type="checkbox"/>
21. Talked about NISE Net evaluation resources (reports, instruments, etc.	<input type="checkbox"/>	<input type="checkbox"/>
22. Talked about NISE Net DEA efforts or initiatives *Describe whether DEA efforts were discussed, and what was discussed. Possible topics include translations, universal design or partnering with community orgs.	<input type="checkbox"/>	<input type="checkbox"/>
23. Looked at the nisenet.org catalog together *Describe in general terms what they looked at in the catalog	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

Site Visit Observation Protocol

Overall site visit reflections (answer after visit)

24. Are there any other activities that happened during the site visit that weren't captured in the observation protocol?

25. How would you describe how widespread nano education seems to be within this institution?

26. How would you describe the influence the NISE Network has had on this institution's nano public engagement activities? If you don't feel it has, describe why it seems that way.

27. What factors seem to influence whether and how this institution engages the public in nano education activities?

28. Overall, what do you think worked well about the site visit? (Be specific and provide evidence supporting why you think that particular element worked well)

29. What suggestions for improvement would you have for future site visits? (Be specific and provide evidence supporting why you think that particular element worked well)

NISE Network Regional Hub Site Visits Debrief Form

Spring-Summer 2010

Process: Regional Hub Leader should fill this form out immediately after visit, this way we can capture some of our discussions and impressions and be able to share them in a systematic way with each other for planning purposes.

Please re-save this file and change the file name to include the site you visited. Then email the word document to Amy Grack Nelson <agnelson@smm.org>. We will want to enter this data later into Quickbase.

Region: _____ **Institution Visited** _____

City: _____ **State:** _____

NISE Network Regional Hub leader: _____

Other NISE Network Reps attending visit: _____

Date of Visit: _____

Length of Visit (# of hours) : _____

Key Institution Staff Name(s) met with. Indicate their name, title, and connection to nano education in their institution.

Which one or two of the staff members you met with should evaluators follow up with for an interview?

Name: _____

Email: _____ **Phone:** _____

Name: _____

Email: _____ **Phone:** _____

- 1. Activities that took place during visit:** (indicate with)
- met with staff doing nano outreach – in depth conversations
 - met with other staff _____
 - met with upper management _____
 - presentation or Demo – describe the presentation: _____
 - trained staff/volunteers program – describe the content of the training: _____
 - staff brown bag lunch and conversations
 - toured museum
 - other _____

- 2. Types of nano education/outreach this partners is doing now:** (indicate with)
- cart/demos on museum floor
 - stage shows
 - summer camp
 - overnight camp ins
 - after school
 - forums/adult programs
 - lectures
 - K-12 teacher training
 - K-12 school programs
 - K-12/school group field trip programs at museum
 - girl scouts/boy scouts/etc.
 - Other _____

3. Any key needs that would help them engage public more?

4. Researcher connections for Regional Hub leader to follow up on post-visit

5. Nano education product they have/are working on that we should follow up on post-visit that might be useful to share with the network (describe type of program and suggest possible follow-up people/options)

6. Any other specific requests/ideas for Regional Hub leader to follow up on post-visit

7. Any other overall reflections?

Interview Debrief Questions

Members of the evaluation team will call the Regional Hub Leaders after each site visit and ask them to participate in a debrief interview. This interview will take around an hour. The purpose of the debrief interview is to provide the regional hub leaders with an opportunity to contribute their understandings to both the findings of the Year studies and the design of studies in Years 6-10. The interview will also serve as an opportunity for the site visit leader to reflect upon his or her site visit experience.

- 1. Tell me a little bit about the site visit. What were the main activities you did and who did you meet with?** (Ask these only if Amy doesn't have a copy of the Standardized Debrief Form for that site visit at the time of the interview.)
- 2. Overall, how do you think the site visit went?**
- 3. In your view, what went well during the site visit?**
- 4. What would you do differently during future site visits and why?**
- 5. Now let's talk about the partner outcomes for the site visits. One of the outcomes is that staff will feel more closely connected to the NISE Network. How did you work to address this outcome in the site visit?**
- 6. Another outcome is increasing partners' awareness about how nano could be incorporated into other topics or programs they currently have at their museum. How did you address this outcome in the site visit?**
- 7. As a result of the site visits, the hope is that partners' will learn how they may be able to share what they have created with others. What did you discuss with the partner in relation to this outcome? Did the partner site have anything they wanted to share?**
- 8. Part of the site visits are to provide resources for connecting museum partners with research and/or industry scientists in their area. How did you help to make these connections while on the site visit?**
- 9. How did you work to increase their awareness of ways they could partner with scientists and researchers?**
- 10. The final outcome of site visits is that partners will be more aware of the resources available from the NISE Network, including the online catalog. How did you address this outcome? What resources did you share with them?**

The following questions are to help inform the summative evaluation and research that will happen in years 6 – 10.

Partner involvement with NISE Net

- 11. What, if anything, did you learn during the site visit about other ways this partner has interacted with NISE Net over time?** (For example, do they visit nisenet.org, and if so, why? Read NanoBites? Interact with other partners?)

Professionals and nano education

- 12. What, if anything, did you learn about how museum educators at the partner institution learn to conduct nano programs?** (For example, is there a formal training process? Did the regional workshops or the annual meeting influence their education practices?)

- 13. What kinds of professional learning experiences did the staff members at the partner institutions express they wanted or needed?**

- 14. What did you learn about the involvement of current museum leadership in nano education activities?**

Nano education resources

- 15. Where do the staff members at the partner museum acquire the nano education products they currently use?** (Describe both who they received the products from as well as where they received them. For example, you could say NISE Net through the on-line catalog or perhaps a university and they learned about the product through NSTA. There will probably be multiple sources. Whatever information you can provide will be useful.)

- 16. What kinds of nano education experiences have they created on their own?**
(Describe both type of program as well as the content. Describe as many experiences as you can)

- 17. What, if anything, did you learn about the process used to create the products?**
(Describe, as best you can, what you learned about the development process, including who helped them to create the products, sources of inspiration, sources for content, the involvement of scientists and evaluation)

- 18. If they use NISE Net products, how is their use the same or different from what was intended?**

- 19. What factors seemed to influence the kinds of nano programs they implement?**

Partner Interview Questions

The purpose of this interview is twofold. We want to get feedback about the site visit so we can improve the support you receive from the NISE Network. We also want to build on what the site visit team learned during their visit to help the NISE Network better serve informal science education institutions.

Overall Formative Questions

The first series of questions are about the overall site visit experience.

1. What impact do you feel the site visit had on your institution?
2. What was the most beneficial part of the site visit for your institution?
3. What was the least beneficial part of the visit?

Nano Education Experiences

The next series of questions are about nano education experiences offered at your institution.

4. How would you describe the nano experiences you currently deliver at your institution?
***Can skip if have good descriptions of what they deliver
5. What factors influence the kinds of nano programs you implement at your institution?
6. Where does your institution acquire the nano education products you currently use?
(Describe both who they received the products from as well as where they received them. For example, you could say NISE Net through the on-line catalog or perhaps a university and they learned about the product through NSTA. There will probably be multiple sources. Whatever information you can provide will be useful.)
***Can skip if we get a good description in debrief
7. Has your institution created any nano education experiences on your own? (How would you describe the type of experience and content covered? Any other experiences?)
***Can skip if we get a good description in debrief
8. How would you describe the process your institution typically goes through to create nano educational products and experiences?
 - who helped them to create the products?
 - sources of inspiration?
 - sources for content? Where are they pulling from?
 - Evaluation?
9. Did the site visit help you think about new ways to incorporate nano into topics or programming in your institution? (If yes) What were some of the new ways you thought about?

10. How would you describe the audiences your institution reaches through nano educational programming?
11. Have you done any nano educational experiences targeted toward reaching underserved audiences? (What are the audiences? What nano activities have you done for those audiences? Make sure these are nano-specific activities.)

Professionals and Nano Education

Next I'd like to talk a little bit about the educators who deliver nano experiences at your institution.

12. How do educators at your institution learn to do nano programs?
 - is there a formal training process?
 - How about learning for educators who didn't attend a NISE Network meeting or training?
 - Did the regional workshops or the annual meeting influence their education practices?

Catalog

13. The next questions are specifically about the NISE Network online catalog. Had your institution used the catalog before the site visit? (If yes) How had you used the catalog?
14. What did your site learn about the catalog during the site visit?
15. Are there any NISE Network resources your institution wasn't aware of before the site visit that you are now interested in trying out? (If yes) What resources would your institution like to try?

Universities/Researchers

A role of the site visit was to help institutions find ways to work with scientists and researchers.

16. How have you partnered with scientists and researchers to create or deliver nano education to the public?
17. What new ideas did your institution gain about working with scientists to provide nano education to the public?

Connection to NISE Net

Finally, I have some questions about your connection to the NISE Network.

18. How do you see your institution being connected to or involved in the NISE Network in the future?
19. What is your institutions' understanding of how they can share products or programs you've created with others through the NISE Network?
20. What support do you envision the NISE Network providing your institution in the future?