



A Park for Every Classroom

8 Case Studies



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A Park for Every Classroom

Executive Summary

“One of the biggest benefits is that this is such a departure of philosophy for NPS—a beachhead to the future, a fluid and open platform, and our role as facilitators. That concept in and of itself is huge and a big leap.”

**Jonathan Parker, Chief of Interpretation and Education
Salem Maritime National Historic Site**

Partners

Representatives from the National Park Service's Northeast Regional Division of Interpretation and Education, Shelburne Farms, Marsh-Billings-Rockefeller NHP and NPS Conservation Study Institute work in close collaboration to develop and coordinate *A Park for Every Classroom*.

Currently there are eight PEC pilot teams in the Northeast:

- Fort McHenry NM & HS
- Gateway NRA
- Weir Farm NHS
- Valley Forge NHP
- Salem Maritime NHS
- New England NST
- Marsh-Billings-Rockefeller NHP
- Morristown NHP

A Park for Every Classroom (PEC) was created in 2011 to encourage education partnerships and community engagement. **The purpose of PEC is to build collaborations among National Park Service staff, local community and educational partners, and teachers to engage students in place-based learning that promotes stewardship of parks and communities.** A pilot program of the National Park Service's Northeast Regional Office, Interpretation and Education, PEC's three main strategies include:

1. Building robust relationships that draw upon the unique strengths and capacities of each partner to co-develop professional development experiences for educators and generate new approaches for park educational and interpretive programs
2. Providing teachers the resources and support they need to create and lead curriculum-based units in national parks that provide relevant, hands-on learning experiences for their students
3. Creating a Community of Learning, Inquiry, and Practice (CLIP) across participating parks to provide mutual support, share lessons learned, collectively address barriers, and identify and apply successful, innovative practices

A key tenet of *A Park for Every Classroom* is that program development must be adapted to fit the specific needs, assets, culture, and goals of each park. It is not a “cookie-cutter,” one-size-fits-all approach; each team is provided tools to help make the PEC model their own. As a result, although each PEC pilot park shares similar foundational premises and overall aspirations, each team created its own distinct program.

Lessons Learned

Parks used the PEC program in a variety of ways including:

- As an organizing tool to partner with existing programs or as an umbrella for all park education efforts
- To encourage a whole park approach and integrate cultural and natural resources
- To develop a deep engagement with a school and community
- To develop teacher professional development on place-based service learning
- To leverage outside resources to build a more integrated approach to education services
- To support the park's development of programming and services

Process

“Another factor that helped make the program a success was that WEFA was given the flexibility to formulate a plan that realistically took the PEC model and adapted it to [each] park's situation. Being able to be strategic about the park's new PEC approach based on staffing limitations, skill sets of staff and partners, funding, partnership support, and accessibility of local schools was essential.”

Kristin Lessard, Park Ranger, Weir Farm National Historic Site

Modeled after the successful teacher professional development programs, *A Forest for Every Classroom* and *A Trail to Every Classroom*, *A Park for Every Classroom* was designed to cultivate partnerships that foster the development of high-quality, teacher-created curricula

“In times of small staffs and smaller budgets, the ability to link missions with allied institutions is more important than ever.”

which use park resources and place-based education practices.

As a pilot in the Northeast Region, parks were invited to apply to the program with a team that included a teacher-leader and community partner. The PEC Teams were selected through a review process that assessed “readiness” factors, including:

- Support from park leadership and park staff with strong leadership skills
- Strong working relationships with school and a community partner
- Additional resource availability (time and money)
- Experiences in hosting workshops
- Willingness to try something new

The selected PEC teams participated in a series of workshops and webinars over the course of a year. This engagement series was designed to:

- Introduce parks to the core elements of PEC and assist them in collaboratively developing their pilot program
- Create a Community of Learning, Inquiry, and Practice (CLIP) to collectively advance the program design and address barriers
- Share Promising Practices of Place-based Education and assess how they can be applied to advance park relevance
- Design common evaluation strategies and tools and a reflective case study format to share lessons learned
- Prepare parks to implement a successful PEC program with local school and community groups and to become mentors for other parks that want to develop similar programs

Results

Every team’s implementation of the PEC program was unique, allowing for a rich array of adaptations to the model and approaches to teacher-park-community partnerships, place-based education professional development, and park-based unit creation by teachers.

Case studies provide a summary of each park’s PEC program, partners, process of development, early successes, and challenges. The concluding chapter analyzes the trends across all eight sites. While the implementation the PEC pilot programs are still in their early stages, findings from the case studies reveal positive trends in impacts for parks, partners, teachers and students.

For Parks

The PEC program directly addresses NPS priorities related to education, relevance, stewardship, and professional development. It advances several of the *Call to Action* items, most notably #16, Live and Learn. The eight participating pilot parks reported numerous impacts of this program, some of which were localized to an individual park while others crossed project boundaries.

- A more cohesive framework and direction for education programs
- New and better working partnerships with teachers, administrators, community non-profits, and other public lands
- Greater awareness of the park and its resources
- Increased visitorship and student involvement
- Increased understanding of what partners, teachers, and students need; helping make the park more relevant, visible, and valuable to community
- New park-based programs and units
- Education and interpretive programs became richer, more diverse, relevant, and more directly connected to what the students were learning in school

*“What I gained?
Rediscovery of ‘the
place’ our students
live and learn in and
how to breathe new
life into our study of
it!”*

*“It is different
learning outside.
When you are in the
classroom learning,
the teacher teaches
the information. But,
when we’re outside
we are teaching it to
ourselves.”*

*“Place-based
Learning is not
something I was
familiar with and
it opened my eyes
to something—A
whole community
coming together to
educate students is
beautiful.”*

For Teachers

Teachers are the primary audience for the PEC program. The PEC model involves teachers on multiple levels ranging from first-time participant in a park program to serving as teacher-leaders as part of the PEC planning team. Teachers who participated in the PEC program reported numerous benefits, including:

- Increased access to park’s resources and staff to support curricular goals
- Professional development in place-based education, curriculum design and other promising practices
- Fresh ideas and support from other teachers and resource specialists
- Re-invigoration in their teaching and connection to their community
- Leadership opportunities in serving on the PEC team

For Students

The PEC program recognizes that the investment in professional development and relationships with a single teacher can touch the lives of hundreds of students who enter their classroom throughout the course of their career. The PEC program aims to give teachers the tools, resources, and support they need to create experiential and engaging curriculum that enhance student learning and provides for opportunities for them to become active stewards of their parks and community. Early evaluation results from the PEC pilots report positive impacts on student learning. Specifically, students who participate in PEC programs:

- Increased their level of engagement and active learning
- Experienced stronger connection between classroom learning and real world application and problem-solving
- Developed greater familiarity with the parks and their resources through multiple exposures

- Learned about park employment and internships, and capitalized on these career development opportunities
- Accomplished major learning milestones in alternative high school programs

For Community Partners

Partnerships are essential to the PEC approach. Partners increase and leverage resources and provide opportunities that a single organization cannot support. PEC community and educational partners helped to plan professional development, offered technical expertise, created links to specific schools and new networks, and created a sense of importance of place-based learning to all the stakeholders. Partners reported benefits that included:

- Greater capacity to help fulfill their missions, and connect with the community
- Increased access to teacher and student networks
- Professional development in place-based education, curriculum design and promising instructional practices

Looking Across the Eight *A Park for Every Classroom* Case Studies

LESSONS LEARNED

PEC PLANNING TEAM FOR PHASE 1: PILOT TEST

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FORT MCHENRY NATIONAL MONUMENT & HISTORIC SHRINE



NEW ENGLAND NATIONAL SCENIC TRAIL



GATEWAY NATIONAL RECREATION AREA



SALEM MARITIME NATIONAL HISTORIC SITE



MARSH-BILLINGS-ROCKEFELLER NATIONAL HISTORICAL PARK



VALLEY FORGE NATIONAL HISTORICAL PARK



MORRISTOWN NATIONAL HISTORICAL PARK



WEIR FARM NATIONAL HISTORIC SITE

A Park for Every Classroom

Lessons Learned

This section looks across the eight case studies and identifies universal concepts and ideas or lessons learned from the first year of implementation. It is organized around the major case study headings of Overview, Partnership Issues, Resources, Celebrating Success and Addressing Challenges, Impacts, Looking into the Future, and Concluding Thoughts. The purpose of this section is to provide a road map for readers, to show them a bird's eye view of the findings and help them navigate to the sections relevant to their needs.

Overview

PEC does not have a “cookie-cutter” one size fits all approach.

A key tenet of A Park for Every Classroom (PEC) is that the program and associated activities must be adapted to fit the specific needs, assets, culture, and goals of each park, school and community. PEC does not have a “cookie-cutter” one size fits all approach, instead each team is provided tools and professional development to help make PEC their own. As a result, although each of the eight pilot sites shares similar foundational premises and overall aspirations, each team has created its own distinct PEC program for their unique situation.

What is the PEC Program?

PEC is a program model based on a strategic approach and a way of thinking about how parks and communities can work together. It is not a strict series of steps that has to be followed; it is not a template. One of the most important aspects of PEC is that each site is asked to adapt the model to fit the needs of all the stakeholders. This approach resulted in a variety of ways in which parks and partners applied the model. While each project was unique and focused on its own elements, every project still contained the same ingredients of collaborative partnerships, a Community of Learning, Inquiry and Practice (CLIP), professional development, student engagement, and evaluation. All the projects:

- Developed new or enhanced existing partnerships;
- Partnered with at least one teacher and one community organization;

- Participated in a geographically centered CLIP and in the combined CLIP;
- Provided teacher professional development on some level but those experiences differed in size, scope, scale, and number of interactions;
- Engaged students being engaged in park/community resources;
- Developed an evaluation plan and are in different stages of completing the program evaluations

Cool and Exciting!

Each project resulted in a revelation or identified a “Cool and Exciting” outcome of their efforts. Individual case studies provide more details about each of these items. The list below shows the diversity of ways PEC can play out:

- The Gateway Team developed “The Steps of Engagement” as a conceptual model for engaging teachers on different levels and through a variety of programs.
- The Fort McHenry Team used PEC as an organizing tool to partner with existing programs. This approach allowed this team to add value to their programs and think more holistically about how their community can work together to better meet the needs of students, teachers, and the community partners.
- The Marsh Billings Rockefeller Team

...a model based on a strategic approach and a way of thinking about how parks and communities can work together.



used PEC as an umbrella for all education efforts and focused on a whole-school/whole-district approach to integrating sustainable practices throughout the community.

- The Morristown Team focused on bringing the park's Cultural Resources division into meaningful engagement with education programming to encourage a whole park approach, something that had not been tried previously on the park level.
- The New England Scenic Trail Team, in its second year of operation, developed a deep engagement with one school and successfully integrated cultural and natural resources along the trail.
- The Salem Maritime Team partnered with local organizations to develop teacher professional development on place-based service learning in their community; two of the six PEC teacher-developed projects took place in the park; the other were located in the surrounding communities.
- The Valley Forge Team made a strong connection with the National Writing Project that enabled them to leverage resources to build a more integrated approach to education services.
- The Weir Farm Team started small, built on success, and grew its program with the park so education is integral to the park's development and supports the opening of three significant structures.

Existing Conditions

Each partnership site was in a different place in terms of existing conditions that could support their PEC work. Applications submitted by the parks were evaluated on the following criteria:

Infrastructure:

- Strong leadership among park staff
- Strong school/teacher relationships
- Evidence of community partner

Readiness

- Track record of successful collaborations
- Some level of experience with hosting workshops
- Willingness to try new things

Support

- Management support
- Staff time to devote to the project
- Travel resources
- Staff to facilitate immersion experiences

SAMA and FOMC brought strong partnership experience. VAFO and MORR built on a history of offering school programs and experiencing challenges with meeting the demand from school audiences. WEFA, NET, and GATE had few staff but other elements in place. WEFA had just hired a new employee, and GATE had funds to leverage. MABI had strong readiness components in place and the ability to leverage resources. WEFA, NET, and GATE had fewer available park staff to support the PEC project but worked to leverage partnerships to meet that gap in staff resources.

Partnerships

Partnerships are an essential element in the PEC approach.

...communication was a key characteristic of a successful partnership project.

Partnerships are an essential element in the PEC approach. Partners can increase and leverage resources and provide opportunities that a single organization cannot support. But as all the case studies demonstrated, the development and maintenance of partnerships can be a bumpy road with many challenges as well as successes along the way.

Types of Partners

In each park, the PEC partnership composition varied and in many cases changed as the project progressed. Many sites with well-established partners expanded and deepened those pre-existing partnerships. In other case studies, some parks chose a community partner, such as a higher education institution, while others worked with a variety of nonprofit or community-based organizations with similar missions or foci. GATE, SAMA, and MORR worked with universities while MABI, WEFA, and FOMC worked with other community-based organizations. NET sought new school partners to expand their community outreach along the trail while working with the federally designated partner, CFPA. VAFO added partners as opportunities arose, as did SAMA, demonstrating the ever-evolving nature of partnerships throughout the pilot.

Successful PEC Partnership Characteristics

Once they formed the team partnerships, each team had to create a shared vision and goals, learn about each other's organization and culture, and figure out ways to work together suc-

cessfully to begin developing the partnership. After they developed this, the teams had to provide ways to maintain the partnerships by caring for and feeding partnership needs and taking the pulse of the partnership process. Each of the case studies commented on the evolution of the PEC partnerships and called out examples of how its processes contributed or not to success.

The most common thread that ran through all the case studies was that communication was a key characteristic of a successful partnership project. Each partnership developed channels of communication. Through these established channels, sites were able to:

- Develop an understanding of the culture of each partner and address issues such as language and terminology (MABI, SAMA, NET);
- Ensure the project was addressing the needs of all partners (NET, VAFO);
- Address issues of scheduling and working around already existing commitments (MABI, GATE, MORR);
- Resolve issues such as how decisions are reached or what role each partner plays (FOMC, GATE);
- Take the partnership beyond the personal level to the institutional level (WEFA, SAMA).

Other key successful partnership characteristics illustrated in these projects were:

- Be flexible to address issues and capitalize on opportunities (FOMC, WEFA, GATE);
- Celebrate successes by setting small milestones and achieving them (FOMC, MABI);
- Use on-going evaluation to take the pulse throughout the project, not just at the end (VAFO, MORR); and
- Make changes as needed to support the overall project (FOMC, SAMA, MORR).



Celebrating Success and Addressing Challenges

The adaptable and flexible PEC program model allowed for these unplanned events to emerge and for parks to still find success.

The increased use of park and community resources provided students with ways to engage in place-based learning.

While challenges are often difficult to overcome, each of the teams found ways to address the issues and move the project forward.

Every project team had unexpected events, successes, and challenges that needed to be addressed as the projects progressed. The adaptable and flexible PEC program model allowed for these unplanned events to emerge and for parks to still find success.

Surprises and Successes

Sometimes surprises can lead to success like FOMC's recruitment of a school coordinator that led to increased participation by others and an expansion beyond the original vision. Sometimes a surprise can be devastating as was the case of the GATE team having to deal with the aftermath of a major hurricane. While all parks had surprises in one form or another, they persevered, discussed challenges with their CLIPs, changed course if needed, and as a result, experienced success throughout the pilot project. Many of the accomplishments focused on the results of professional development and the increase in use of park/community resources through the development of place-based learning activities.

The professional development conducted by all of the sites was cited by each of the teams as a success. SAMA commented on the overwhelming success of their workshop with many unanticipated outcomes, such as the enthusiasm of the teachers and the expansion of the program to facilitate teachers' developing place-based learning experiences in their own community. NET and their community partners were excited by the warm welcome they received from teachers and will build on that in the future. MABI connected both teachers and staff to high quality training on a variety of topics such as education for sustainability and whole school development. VAFO was able to incorporate their workshops in schools on professional development days thereby increasing their reach.

The increased use of park and community resources provided students with ways to engage in place-based learning. WEFA was able to reach teachers and students in five additional schools and increase use of park resources. VAFO was able to reach an increased number of students. FOMC, MABI, and VAFO began

using PEC as an umbrella under which all education efforts could reside and therefore could leverage park wide efforts to increase participation.

Overcoming Challenges

The challenges faced by the PEC teams fall into three main categories: PEC team turnover, institutional differences, and getting teachers to workshops. While challenges are often difficult to overcome, each of the teams found ways to address the issues and move the project forward. A couple of examples are used to illustrate some of these challenges.

Turnover of key personnel, whether park, partner, or teacher, is a common challenge for partnership projects. Several teams had to resolve this issue. FOMC lost both a key park staff person and two teachers mid-way through the pilot project. This loss could have negatively impacted the project because of a loss of institutional knowledge. The partner, Maryland Historical Society, stepped up to fill the void and the park added another staff person to the project. A curriculum coordinator joined the project which opened up additional doors later on. For VAFO, the primary contact person for the park took another position. The Chief of Interpretation and Education stepped in and took over the project shifting the focus from natural resources to more of a cultural resource emphasis. MORR faced the loss of a core teacher due to a promotion. When it was not possible to recruit another teacher from the targeted district, the partner from a university acted as the liaison to local teachers.

Institutional differences, both internally and externally, can make partnerships difficult especially when it comes to expectations and communication. Two sites, WEFA and MABI faced a similar issue of teacher-led programming. At WEFA, teachers wanted the ranger to present programming for students to capitalize on the depth of knowledge of ranger staff. At MABI, teachers had similar wants, and rangers were more than happy to share their expertise. In fact, at times rangers were uncomfortable with teachers taking the lead because of rangers' roles as protectors of the resource.

WEFA resolved this issue by working with teachers to provide support where needed. MABI staff worked with both teachers and rangers to encourage more teacher-led activities in the park.

Recruiting for the teacher workshops proved to be more of a challenge than anticipated for some sites. In light of significant issues in teacher accountability, a comprehensive overhaul of educational standards, and less funds for off-site learning SAMA offered

a sail on the ship Friendship to school administrators as a way of introducing the project. The team thought it would help with recruiting teachers for a summer workshop. The team had to use a variety of other methods when this first effort proved fruitless. With the loss of key teachers, FOMC used introductions by the new coordinator to bring in teachers. WEFA found that changing the length and time of workshop offerings increased teacher participation.



Resources

Sites used a variety of means to obtain funding to support this pilot project.

Start-up Resources

PEC seed funding was very limited. There was enough funding to support the planning team partners and workshops, but PEC did not provide any funding for individual sites. Sites applying knew that resources were scarce for this project and therefore sought other ways to fund the startup of their project. Parks relied on staff time and internal funding initially), but soon realized if they wanted to move beyond the status quo, there was a need for outside funding. Park teams looked to internal NPS grant programs and base funding, grant writing, and external partnership donations and support. One of the most challenging areas for parks was how to provide stipends to teachers or transportation for classes engaged in the program.

Money Matters

So how were funding needs addressed? Sites used a variety of means to obtain funding to support this pilot project. For all projects, considerable support came from park base funding. Partner sites provided staff and in some cases were able to seek grant funding unavailable to parks. Both GATE and SAMA leveraged relationships with university partners as well as obtaining grants. VAFO and MORR relied on donations from their friends group or cooperating associations to assist with providing small amounts of funding. MABI sought funding from a local foundation.

Going forward, funding will remain a challenge for all sites, but with the success to date, parks have developed strategies to obtaining resources and continue to work closely with partners on this issue.

Impacts

Teachers are a primary audience for the PEC program.

Teachers enjoyed the opportunity to learn as students and saw the value of this type of learning, firsthand.

...several community partners saw the increasing opportunities for this type of work in the future as a benefit.

The case studies are a snapshot of where these projects are now. As with any project, delays and serendipitous events, like Hurricane Sandy, impacted the progress of these projects. That said, the case studies reveal impacts on teachers, students, community partners and parks. These impacts are highlighted below but are more fully described in the individual case studies.

Teachers

Teachers are a primary audience for the PEC program. In the PEC case studies explored in this report, there were teachers who participated on multiple levels of this project, from being a participant in a park program for the first time to being part of the core PEC team. In general, teachers were more engaged in the resources of not only the park but also of those resources that exist within the community. Teachers enjoyed the opportunity to learn as students and saw the value of this type of learning, firsthand (VAFO and SAMA). Using place as the context for learning was not something that all these teachers had done in the past and many found great value in being in the place where historical or scientific events occurred (MORR, GATE). MABI and GATE pointed out that teachers experienced working with colleagues from different schools and disciplines in new ways and learning from each other. FOMC and NET teachers reported that the project provided engaging ways for students to learn new content and skills.

Students

All sites reported positive impacts on students participating in PEC developed projects. Many sites (GATE, VAFO, WEFA, MABI) noted that students engaged with park resources in more meaningful ways, such as an increased comfort level learning outside, demonstrating active learning, richer and more hands-on experiences with resources, and having students take advantage of employment opportunities they discovered through park/school experiences.

Other impacts included an increased number of students having the opportunity to engage with the park (FOMC), strong connection of inner-city students to park cultural and natural resources (WEFA and MORR), and alternative high school students accomplishing a major milestone in their learning (NET).

Community Partner(s)

Throughout the program, engaging community partners in the process was a challenge and new experience for several of the parks. As with other stakeholders, several community partners saw the increasing opportunities for this type of work in the future as a benefit. Partners helped to plan professional development, offered technical expertise, created links to specific schools and new networks, and created a sense of importance of place-based learning to all the stakeholders. Parks were seen as a more active part of the community (FOMC) and helped local people realize the value of the park (MABI).

Park

Parks reported several impacts of this program. Some of these impacts were localized to an individual park while others crossed project boundaries. While all parks saw an increase in school visitation, perhaps the most dramatic was at WEFA where visitation increased forty-four percent. Increased interface between working groups at the park was noted at several sites, yet there still was a feeling at SAMA and MORR that it would take more time and effort to make PEC recognized as a whole park project. NET commented that this project enabled the trail to make meaning and authentic connections with communities along the trail.



Looking into the Future

As PEC enters its next phase, each site is identifying its anticipated successes and assessing its next steps. Six of the projects will be taking on an additional site to mentor in the next phase. Two sites are going to continue their current level of work but feel that due to capacity issues they cannot expand the scope of the project at this time, however they do hope to do so over time.

The anticipated outcomes vary from site to site.

Anticipated Successes

While many of the sites are looking to expand the reach of the project and offer increased numbers of teacher and student experiences associated with the PEC project, the anticipated outcomes vary from site to site. Individual site highlights are provided:

- The GATE team is looking forward to new teacher developed lesson plans along with innovative adaptations of existing lessons and park field-based activities. They have a commitment from existing cadre of PEC teachers and are looking forward to engaging new teachers through professional development through a grant developed in cooperation with their partner, Brooklyn College.
- The FOMC team plans to expand its reach into Baltimore City school districts through a variety of activities, including their continued work with Baltimore School for the Arts. One partner, Maryland Historical Society, will reach every county in the state through PEC.
- The MABI team will focus on the continued development of local schools using the whole school model, the integration of the Common Core State Standards into existing programs and work to incorporate park-based learning through a senior capstone project.
- The MORR team will continue its work to engage other work divisions in the park, broadening an internal understanding of using collections in educational programming and services.
- The NET team will roll out the final version of a video and QR code projects that are result of PEC work. They also will

continue building their partnerships as a strong step forward in visibility, public awareness, and use of the trail.

- The SAMA team will process the results of the pilot to inform their next steps. Emerging partnerships will be strengthened. There will also be a new focus on internal and external communication about the project.
- The VAFO team is working on many different levels and will continue this work to bring the pieces together to strengthen the project.
- The WEFA team has secured funding to expand the program and bring the newly reopened structures into the project as valuable resources for teachers and students.

Advice to Others

As mentioned above, every team's implementation of the PEC program was unique, allowing for a rich array of experimental forays into teacher-park-community partnerships, place-based education professional development, and the creation of park-based programs and materials. The case study process helped teams come together to reflect on what worked, what didn't, and how they would advise others to proceed.

The thoughtfulness of the case studies and lessons learned demonstrated a real commitment to the Community of Learning, Inquiry, and Practice approach of the program.

Move Beyond the "Build It and They Will Come" Approach to Program and Materials Development—PEC Teams all recognized that engaging teachers in the development of their education programs was essential, but that they would need to compete with a myriad of other pressures on teachers' time. To facilitate participation, they tried to meet teachers more than halfway, providing incentives such as graduate credits or recertification points, food, and stipends. Some also recommended connecting with school administrators to earn their support. Teachers, acknowledged as professionals who knew their students, curriculum,

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standards, and pedagogy, were encouraged to take leadership in park-based, place-based unit development and implementation. Advice from the PEC Teams included:

- “Adapt to the teachers’ needs and interests while incorporating the park’s most compelling resources. (GATE)
- “Find ways to capitalize on the teachers’ strengths. They are our best resource. They have experience and expertise that will blossom into amazing outreach opportunities as we work side-by-side.” (VAFO)
- “Ask teachers what they want!” (WEFA)
- “Have realistic expectations of teacher/community partnerships. Be cognizant of their contributions and respectfully honor their service to the park—acknowledgment, honorariums, and other small tokens of appreciation go a long way.” (MORR)

Get Limber, Perhaps Beyond Your Comfort Zone

—Many PEC members reported that they had to learn how to “let go” a little and accept the amorphous nature of the process. The models they were creating often did not look like anyone else’s and moved in a completely different direction than expected. Many teams mentioned keys to their successes were flexibility and the ability to adapt and change as they moved forward, were keys to their success. If one direction didn’t seem to be working, they were encouraged by other PEC Teams to look at it from a different perspective or try another direction,

- “Keep your mind open to possibilities.” (FOMC)
- “Everything does not have to be defined and fine-tuned at the beginning, because it is a work in progress, and often times, unexpected plot twists add new and wonderful possibilities. Sometimes the biggest surprises become our best components.”(VAFO)

- “Adapt and change as you move forward. It would not have been beneficial to hold on to some decisions that were made early on.” (SAMA)
- “Start with your low-hanging fruit; start with what you know. But don’t be afraid to take risks. If it doesn’t work, it is okay, at least you tried.” (SAMA)

Stretch Your Capacity by Using the Energy

that Is Already There—Some of the most successful outcomes were the result of PEC Teams taking advantage of initiatives and/or events that were already going on. The whole game plan was about leveraging resources and going for synergy. As one PEC Team reported,

- “Realize and respect that the park is not the only interpreter of park resources. Community experts have a lot of valuable things to tell us about this place we preserve and protect. Collaborate with existing programs and let the park simply be the place. For example, encourage the use of our park as the venue for an existing water watchers group or hiking club. Groups that spend more time in the park are more likely to be allies/partners on future projects. These collaborators become park stewards and park resource experts.” (MORR)

Energy Spreads—Partners are a lot more likely to get excited about joint efforts and want to devote their time and resources to them if the collaborative atmosphere is open, supportive, and fun. Good food certainly does not hurt, either. PEC Team members agreed,

- “Help your team be in-sync, invested, creative, most of all, flexible, and have the ability to ‘get it done.’” (VAFO)
- “If you don’t have a lot of partners in the beginning, remember that you will find people who want to come on board as they learn about the project and see what is happening. Energy spreads. Ideas multiply.” (VAFO)

Forget Quantity; Focus on Quality—This was a mantra of the PEC effort because meaningful learning experiences and relationships are difficult to develop on an industrial scale.

- “Start small and build on your success.” (MABI)

- “Start smaller, build on a good reputation, get a few teachers who are well versed in your park, let them help spread the word.” (MABI)
- “Start by engaging teachers that already utilize park resources or attend education programs.” (WEFA)
- “Go slow to go fast—don’t take on too much especially in the early stages of learning to work together as a partnership.” (NET)

The Right Partners are Worth Their Weight

in Gold—Our PEC team members repeatedly testified that an investment in the right partners with the right structure paid off in big dividends. Conversely, if a partnership or person was not working out, changes had to be made. Some of the advice for healthy partnership development included,

- “Develop high quality relationships with a few logical partners and teachers, even if it is with only one of each. These partnerships will be more important than any products that come out of the first year.” (MABI)
- “Recognize and appreciate everyone’s contributions. Not only is clarity about each partners’ mission and goals critical to developing successful program activities and projects, it also injects vital energy and momentum into the mix. By designing projects that meet the needs of all three partners, we found that the interest and commitment of all three was enhanced.” (NET)
- “Solid strategic partnerships are very important. BOTH strong personal relationships as well as good institutional ties are important. As noted, several positions shifted, so the institutionalization of PEC is important. That is, communication and relationships should not just be restricted to one person at each of the partner organizations, but should extend beyond to others so that they can step in if needed.” (FOMC)



- “The three organizations all brought different resources, skills, perspectives and networks to the table. Look for good people for your team. Strive to unite your team in philosophy, objectives, and continual communication.” (VAFO)

Settle in for the Long Haul and Keep Checking Your Compass. PEC Team members agreed that the important work of stewardship development is inherently a marathon, not a sprint, so partners need to pace themselves and continuously check that they are on course. Built in reflection time was mentioned as an important component of the process.

- “Keep coming back to clarification of goals, roles and responsibilities as priorities shift.” (MABI)
- “Invest in planning, reflection and communication time so that your team can be very strategic about how they invest their resources—work smarter, not harder.” (MABI)
- “Don’t rush the process. When working under the constraints of a pilot initiative, it is easy to feel pressured to emulate other parks/projects, but it is important to realize that each park is unique and has its own unique limitations.” (MORR)
- “Have the guts to cut people who aren’t making it happen (you can’t make an omelet if you don’t break some eggs).” (FOMC)

Partner Support is Important; Institutional Support is a Must—Support from senior management, supervisors and other staff members appeared to be a significant factor in the success of the PEC Team efforts.

- “Need [supervisors] to buy-in and support the process as much as possible. If we did not have the support and approval of supervisors, this would not have gone well. They allowed me the time and permission to do it. (SAMA)
- “It helped to have partners who were capable of making decisions. Because each of the main partners had a fair measure of control over their own budgets and work, the PEC team was able to make decisions and take action without a lot of hold-ups.”(FOMC)

Get Your Act Together—While PEC strongly encourages flexibility, it also supports the idea that there is freedom in structure and being proactive. PEC teams concurred,

- “Create a unified programming policy (park-wide). It seems basic, but putting in place a clear policy about class size, teacher engagement level, and chaperone per child numbers reduces the number of incidents (and ensures both student and resource safety).” (MORR)
- “Establish a park-wide protocol for resource use beforehand. It can get confusing as different folks make up rules/guidelines on the fly—stay consistent. For example: Who do teachers call to schedule tours? How do they go about looking at artifacts? What types of experiments/sampling is allowed on the trails? How can a teacher arrange for a special presentation/program to be given at a specific time? Where does the bus park? etc.” (MORR)
- “Timing is important. Make sure the heavy planning/work for the project doesn’t coincide with other staff/teacher/partner obligations.” (MORR)
- A schedule consisting of spring recruitment, summer workshops, and fall/ spring classroom visits would [work] best. “Commit to a date and work from there—teachers need lots of lead time to plan for workshops.” (MORR)

Concluding Thoughts

From the PEC Planning Team Perspective

Critical Components:

A planning team with diverse skills and experiences

At least one face to face CLIP meeting

Having one person act as a liaison for each park team

Horizontal and vertical communication

These eight case studies provide many lessons for people interested in applying this strategic model to their own parks. The identified lessons learned by looking across the case studies are examples of how strategic thinking shaped each project. Those looking to apply these lessons should keep in mind that each PEC project is unique in how the core elements played out and that their own project may look very different from these projects.

The team has a few final thoughts to share:

- The PEC projects exceeded the expectations of the team in terms of their reach, successes, level of complexity, and ability to leverage resources (people, time, and funding).
- The planning team consists of individuals with complementary skill sets so that together there is a strength to the team. As one of the local teams stated – you need depth in the bench. This team has that depth so that the project can be sustained even when a key player leaves.
- Each of the partner organizations in the planning team had a strong representative that provided both horizontal and vertical communication within her own organization, which can support the sustainability of the project.
- The opportunity for at least one face to face meeting of the CLIP really helps to establish the bonds and trust level between the local teams. It also facilitates networking so that teams rely on each other for help and support, not just the planning team.
- Supporting the teams is an essential element to success. Having one person act as a liaison from the planning team to the local team helped to build strong support and facilitate communication.
- Finally, even a small amount of funding to each park would help support the program and move it forward. One of the challenges to the planning team is how to move this project forward with the existing eight teams and engage new sites in the current economic climate and limited budgets.





From the Park Team Perspective

Each of the project teams was asked to summarize the PEC experience. As expected, each team took a slightly different tact and focused on different aspects of the program based on team goals and outcomes. The quotes below represent recurring themes throughout these projects.

Strategic Thinking

FORT McHENRY NM & HS

PEC provides a model, a framework and method in which parks can connect and stay relevant on multiple levels – with community institutions and urban schools. Fort McHenry always wanted to go in that direction and PEC showed us how to get there.

– FOMC Chief of Interpretation

WEIR FARM NHS

For Weir Farm National Historic Site, adopting the PEC model has been incredibly liberating! We don't always have to be the messengers or presenters and we definitely don't own the park's stories. By sharing knowledge and resources with teachers, we're also sharing the workload. Teachers are empowered to develop and present their own lesson plans integrating the park and PBL principles. Teachers know their students' needs better than we do. PEC has totally changed how we view our role in resource education - as partners and peers rather than proprietors. The first step is just letting go.

– WEFA Management Assistant

MORRISTOWN NHP

PEC is the most innovative and provocative initiative the NPS has undertaken from the cultural resources perspective in twenty years. PEC provides a working model for the OAH study Imperiled Promise, which calls out loudly for the integration of the interpretation and historical/cultural resources fields. May PEC continue to provide the impetus for change. – MORR Chief of Cultural Resources

Partnerships

MARSH-BILLINGS-ROCKEFELLER NHP

Participating in PEC has allowed our MABI team to understand how the way we partner with our local school systems fits into a larger movement in the NPS. It is uplifting to recognize that changes in interpretive trends are in a great parallel movement with that of the

public education system. We are all seeking to serve students and educators by engaging in true dialogue, effectively using the resources of our community and sites, and allowing space for critical thought and authentic experience. PEC reinforced the notion that we're all in this together--park staff, teachers, and partners alike.

– MABI Teacher

Impact on Teachers and Students

SALEM MARITIME NHS

It was made abundantly clear after our first trek out on the trails, that what we were doing was a special kind of teaching. It is difficult as a teacher sometimes to keep our students engaged in something that is not only meaningful to their learning, but can hold their attention enough that they connect to its importance in their own lives. This project did just that. Our students were unsure of what we were asking them to participate in at the start of the school year, and very soon after our first trip out on the trails, they were begging for more.

– SAMA Teacher

NEW ENGLAND NST

This program has been a wonderful opportunity for our students to contribute in a meaningful way to a project that is a real benefit to the community.

– NET Teacher

NEW ENGLAND NST

This has been one of the most challenging & rewarding teaching experiences. My students and I not only practiced 20th century skills of problem-solving, communication, and cooperation but we developed a deep connection with our community and the environment. We have built partnerships that I hope will extend beyond this year.

– NET Teacher

Community-based Service Learning

GATEWAY NRA

Park for every classroom gave Gateway NRA the opportunity to better connect natural resources with the students of the local community around Jamaica Bay, enhancing sustainable stewardship in a down-top approach. Thanks to the collaboration with a middle school science teacher, students had

the opportunity to analyze the water quality and collect data. They also collected clay pots and food, left over after religious rituals from the Hindu community living around the bay. The class decided to reuse the clay pots by beautifying them with colorful design patterns. Then they used the artistic vases to grow American beach grass as part of a restoration project of the dunes wrecked by Hurricane Sandy in 2012. "This is so much fun! My grandmother will love my artwork" said a 7th grade student from the Hindu community during the artwork activity. The project allowed the new generation to learn to take care of their natural environment enhancing sustainable living messages for their families and ultimately for the local community.

– GATE Sustainability and Outreach Coordinator

Flexibility

VALLEY FORGE NHP

Thank you for everything the NPS staff did for my Cadets during the Experiential Learning Day at Valley Forge. It was an outstanding learning experience, myself included.

I learned that teaching distance education classes is much more difficult than I had anticipated. I think the third time I gave the strongest lesson. It was a great professional experience. This interactive collaborative lesson was a productive and enlightening experience not only for my cadets, but for me as well. Thank you for giving me that opportunity. I can tell that the ranger's presentations at the learning stations made an impact on my students from the high level, analytical questions they were asking me on the way back to campus. Our cadets participated in an "After Action Review," and offered their perspective on the strengths of the program and how they felt it could be improved. Their critique identified insights into the pedagogy of distance learning and their suggestions will be implemented in future education doctrine. Too cool! Thank you for everything!

- VAFO Teacher

A Park for Every Classroom

CASE STUDY

Fort McHenry National Monument and Historic Shrine

Kristin Schenning

Director of Education
Maryland Historical Society

Rae Lynne Snyder

Social Studies Coordinator
Baltimore City School System

Vince Vaise

Chief of Interpretation
Fort McHenry National Monument and
Historic Shrine



A Park for Every Classroom

Fort McHenry National Monument and Historic Shrine

What is the PEC Program? Fort McHenry's A Park for Every Classroom program constitutes the keystone for a number of educational initiatives between Fort McHenry National Monument and Historic Shrine (FOMC), the Maryland Historical Society (MHS), and the Maryland State Department of Education (MSDE). These initiatives focus primarily on the Bicentennial of the War of 1812, however, the on-site activities, lesson plans, and partnerships will stand as a legacy after the bicentennial commemorations conclude in 2015.

Cool and Exciting!

A Park for Every Classroom drives six major initiatives at Fort McHenry National Monument and Historic Shrine.

The First, "200 for 200," challenges the park to host 200 additional school groups each year of the bicentennial, targeting especially inner-city youth from Baltimore. To this end, the strong support from the Department of Humanities, the Baltimore City school system (the current Social Studies Coordinator served as the park's PEC teacher before being promoted), and the expertise of the Maryland Historical Society proves invaluable. As part of this program, teachers pick one of fifteen newly developed lesson plans (<http://www.friendsoffortmchenry.org/education-programming.html>) and visit the fort for an on-site activity that reinforces the themes and objectives of the lesson. Activities are both land- and water-based, using sailing craft like skipjacks and schooners from park partners such as the Living Classrooms Foundation.

The Second initiative, titled "Precision and Discipline," involves fifteen Junior ROTC groups from various city schools. Each JROTC group (approximately twenty students per group) will not only receive a curriculum-based program at the fort, but will perform in front of a large audience at one of the summer twilight "Tattoo" ceremonies.

The Third initiative, titled "Music and Maritime!—The Privateers of Baltimore!" involves music departments in Baltimore City schools. In this initiative, park staff train participants in fife and drum as part of their weekly band electives. Once they are proficient, partici-

pants perform historical music at the fort and in Baltimore for events such as Memorial Day; Defenders' Day (anniversary of the writing of "The Star-Spangled Banner" in 1814); and the annual Martin Luther King, Jr. Parade.

The Fourth PEC program, titled "The Drama of History," is spearheaded by the Education Department at the Maryland Historical Society (MHS) and the Baltimore School for the Arts (BSA). Students research primary source documents at MHS, visit Fort McHenry and then students take over all aspects of developing and implementing an educational play. For example, they write the character treatments, make costumes, handle all elements of stage management, and deliver a play based on their research. Last year, the play focused on the home front during the War of 1812. This year it will highlight the effect the Emancipation Proclamation had on Maryland.

The Fifth PEC initiative centers on historic preservation. PEC teachers take an active role in light maintenance duties, such as painting historic rooms in the fort and developing lesson plans from the historic structures report.

Lastly, *the Sixth* initiative blends history and nature for the first time at FOMC. At a workshop held in November, city teachers slogged through the fort's wetland and heard a brief overview of the fort's history. They are developing lesson plans on the changing landscape, comparing the current state of the natural environment to the way it was in 1814 when Francis Scott Key saw the "Star-Spangled Banner." The first test-pilot groups are scheduled for March of 2013.

Partnering through PEC enables them to reach more underserved students and link these objects with one of the highest-profile historic sites in Maryland, Fort McHenry.



Partner Organizations

These six initiatives meet the combined missions of the Maryland State Department of Education, Baltimore City School System, Maryland Historical Society (MHS) and the fort. While the site receives over 100,000 school students per year, few are from Baltimore City. City and county educators want to visit the fort but want a user-friendly infrastructure; specifically, well-developed lesson plans which they had a role in developing, streamlined reservation system, free transportation, and involvement by a community institution (in this case MHS). The Maryland Historical Society's mission is to reach students in every county in the state, with a special emphasis on the underserved. In addition, MHS boasts one of the most comprehensive collections of primary source documents and historical artifacts related to the history of

Beginnings

Existing Conditions

The strength of the PEC program relies solely upon the skill and dedication of the core members. Specifically, the condition that makes the start of the program possible is the way that the members work together prior to the creation of PEC. Some examples are: one PEC teacher had served as a Teacher-Ranger-Teacher, the Education Director of MHS "moonlighted" as a Seasonal Park Ranger at FOMC, other PEC teachers worked extensively with MHS for years, and the Chief of Interpretation at FOMC assists MHS with educational programming (through a living history medium) and cross-promoting the sites during high-profile media events. PEC provides the structure to make the existing partnerships more effective.

Developing and Maintaining Partnerships

Partnership Issues: Communication, Leadership, and Visibility

The organizing structure evolved as the program progressed. For example, the Director of Education at MHS recruited the teachers, as she already had a network of proactive educators to draw from. Park staff developed engaging activities that were fun and educational. Teachers experienced cool "extras" in addition to learning the history of the fort;

Maryland and the nation. Partnering through PEC enables them to reach more underserved students and link these objects with one of the highest-profile historic sites in Maryland, Fort McHenry. Finally, PEC enables the park to improve the level of educational programming on-site while reaching numerous National Park servicewide goals in the Call to Action (C2A); such as, #2 Step by Step—creating deep connections between the younger generation and parks through a series of diverse park experiences (Note: the park is also targeting actors from the Baltimore School for the Arts for seasonal employment), and others (#3 History Lesson, #4 My Back Yard, #5 Parks for People, #7 Generation of Stewards, #?? Arts Afire, #13 Stop Talking and Listen, and #18 Ticket to Ride) listed in the plan.

such as, firing a large cannon, dressing in 1814 reproduction uniforms, taking off-site tours of battlefields, and volunteering for special events. Members of the PEC team communicated primarily via internet and old-fashioned phone calls. They also forged a sense of camaraderie was forged through social activities such as going out to eat, sports, etc. PEC leadership is balanced among the members of the group. For example, there were representatives for teachers, MHS, and FOMC. The title "the Triumvirate" shows the esprit de corps that developed during the course of this process.

Startup Resources

Startup resources from the PEC project provided some seed funding to support teacher travel and to cover some initial meeting supplies to launch the program. The PEC program began with interested teachers, the park's Education Coordinator, and the Director of Education from the Maryland Historical Society. Time was the primary resource; there were four meetings to get the program off the ground and to orient the teachers to the community institution and park. The enthusiasm of the participants and park management team drove the program in a major way.

Evolution of the PEC Project

Moving from Idea to Implementation

The largest change in the PEC program as the organization moved from idea to implementation was broadening the mission. Following the initial PEC meetings, MHS, and FOMC engaged four teachers to write new lesson plans and on-site activities. During the course of the program, two teachers were unable to continue (they didn't have time to devote to it) and three were recruited. The three new teachers pushed the program into new directions. They spearheaded the efforts to develop the historical scenes, worked with the FOMC Park Ranger and Music Director to develop a junior fife and drum corps, and now continue to work with the park to conduct training and the large-scale drill competition. None of these initiatives was planned at the initial stage of the program. This is a classic example of a teacher-driven program. Moving PEC into these avenues represented a strategic choice, as participants did not know whether they had the time or the money to sustain such an effort. It should also be noted that the Chief of Interpretation at FOMC sometimes needed a "reality check" to avoid over-committing staff and straining financial resources. In this case, PEC partners, motivated by a spirit of adventure, decided to risk launching multiple initiatives at once. The gamble paid off, as these new partners were so enthused and motivated they wanted to work with MHS and the park and they made it happen.

...the project can have a far greater impact than originally planned.

Success and Surprises

The single greatest success for the PEC project was embodied in a teacher who earned the nickname "the Super Teacher"—her personality motivated other members of the program. She rapidly developed an institutional knowledge of the park that rivals permanent employees. She had worked extensively with Maryland Historical Society before PEC. Her work ethic landed her a promotion within the Baltimore City School system where she now works as coordinator for social studies and humanities. Since her promotion, the "Super Teacher" has helped the park work with the most promising schools and students. For example, she introduced the park to a Major who, in turn, pushed the JROTC effort. She engaged heads of music departments in city schools to develop the fife and drum corps, and she vetted the application system for "200 for 200" to make this as efficient as possible. The take home lesson here is that the PEC model is designed to be flexible. Park goals change and so do the needs of the partners. While the outcome of the project may be different than what was initially intended, the project can have a far greater impact than originally planned.

Problems and Challenges

Problems and challenges took the form of staff turnover. For example, when the project began, the park had a designated Education



You can make your PEC program as formal or as informal as you want—sometimes starting small is a good thing...

The members of the PEC program are really motivated because they see the program as fun, as well as beneficial, to students and their institutions.

Coordinator. Unfortunately, over the course of time this individual did not share the same vision as other members of the team. In addition, this member was unable to perform the basic duties of the position and lacked adequate knowledge of resources, resulting in their dismissal from the PEC project. Losing a key NPS park player months into the program presented a hard “bump in the road” for the project. At around the same time, two teachers left due to work and other commitments, and new members recruited. In short, institutional knowledge was lost at a time when new members were being brought onboard. In this instance, the Director of Education acted as the needed glue to hold the program together. Working also as a seasonal Park Ranger, she knew FOMC and the NPS and was able to bring the Chief of Interpretation up to speed.

Lessons Learned about Early Transitions

In a nutshell, lessons learned:

- Expect turnover and develop “depth in the bench” for all participants. There are benefits to having more than one staff member involved in PEC. Staff are pulled in many directions; follow-through can happen more efficiently when they can cover for each other.

- Teachers are more likely to come and go; make the network between the park and community institution strong, so key players will be less likely to turnover.

- Have the courage to cut people who aren’t contributing (you can’t make an omelet if you don’t break some eggs).

- You can make your PEC program as formal or as informal as you want—sometimes starting small is a good thing

The “Key” (pun intended) partnership factor contributing to the success of the program is the strong relationships between the individuals. The members of the PEC program are really motivated because they see the program as fun, as well as beneficial, to students and their institutions. While a social component is not needed, in this case it helped create friendships that broke down natural barriers naturally existing between different agencies. Advice to future PEC coordinators: Set a trajectory, but expect to be pushed in new directions (this was part of the reason for PEC). Your relationships with your partners, as well as your end product, will evolve over time.

Later Strategic Choices, Turning Points, Transitions

The main turning point for the PEC program occurred five months after the program was underway. The program lost some of the teachers who were initially involved and the park lost a key staff member. One lesson learned is that it is critical that the teachers involved receive either financial compensation or continuing education credits. Teachers have very busy lives and while they may love the PEC program, the reality is that they, like many, juggle families, mortgages, and additional requirements demanded by their school districts. Had the program been able to offer Maryland Department of Education credit, it is very likely all of the teachers would have continued. A second turning point occurred when time was given for teachers to talk more. They have really good ideas and both the Maryland Historical Society and park learned from them.

Procedures for Handling Recurring Issues

There were no recurring issues with the program. Frequent communication kept things on track.





Patches, Stiches, and Seams

Leaders in the PEC program were also managers at their institution.

Staff Roles, Functions, & Supervision

From early on, staff roles and functions were clearly delineated. For example, the Director of Education from Maryland Historical Society made the final decision on all things PEC-related pertaining to that institution. The teacher representative proved especially beneficial once she was promoted to be Social Studies Coordinator for Baltimore City. The Chief of Interpretation at FOMC represented the park. In retrospect, it was fortuitous that leaders in the PEC program were also managers at their institutions. This makes things move faster as people didn't have to "wait for permission." (Note: the Director of Education at MHS also knits as a hobby so patches seams and stiches were easy for her.)

Addressing Key Issues

The PEC team handled key issues through regular communication. Generally, PEC coordinators met once or twice a month to touch base regarding major projects. For example, when scripts for the Baltimore School for the Arts play were being developed, the PEC team met to review content for accuracy and to make sure mutual goals were met. Staff and capacity were major issues as well. In this regard, the benefit of having department chairs as PEC leaders was very beneficial because they had the power to allocate more staff for a particular project. For example, the Chief of Interpretation simply assigned two

intermittent Park Guides and a Park Ranger to monitor and mentor members of the "Baltimore Privateers!" fife and drum corps. The department chairs also have control over budgets (within reason) and that helps as it kept goals realistic and manageable.

The Current PEC Program Model

The current PEC program model serves well in providing a structure for a three-way partnership. Prior to PEC, the park's partnership initiatives were on a one-on-one basis. While useful, the PEC principal, in providing a template for a three-way partnership helped leverage talent, funding, and student opportunities in a better way; for example, some of the teachers and targeted schools worked with Fort McHenry and MHS separately, but this program enabled them to work together, speeding communication. Perhaps most importantly, it enabled each institution to learn the "culture" of the other and to understand and appreciate each other's desired outcomes.

The PEC program also evolved in terms of expectations. Initially, the objective was to develop new lesson plans and on-site activities. This became a long-term, active learning initiative with schools. Instead of a class visit, for instance, the teachers and students from Booker T. Washington Middle

Perhaps most importantly, it enabled each institution to learn the "culture" of the other and to understand and appreciate each other's desired outcomes.

PEC provides a template for developing sustainable programs and services with partners.

The members of the PEC team avoided many problems by communicating frequently...

School invested in a long-term relationship with MHS and the park through continued practice in the fife and drum corps. The Baltimore School for the Arts works every year with MHS and the park. PEC provides a template for developing sustainable programs and services with partners.

Resolving Problems

Problems are resolved collegially and through open communication. Members of the PEC team know each other well enough to be frank. As noted, since they are department heads of their respective institutions, they have the ability to take action; for example, when a school failed to come to a prescheduled class trip, the Social Studies Director for the Baltimore City school system was able to call the principal of that respective school and the principal talked to the teacher who missed the trip. The members of the PEC team avoided many problems by communicating frequently, sharing a common vision, and clarifying the expectations of the program.

Money Matters

Given the size of the PEC project at this stage, having three leaders, each of whom represents a pillar of the project, was the right fit. In terms of funding, each had access to different funding sources; for example, the Baltimore City School System had access to leftover grant monies, MHS used a grant from Wells Fargo to fund the play, and the park's friends group funded \$20,000 in bus transportation. In addition, the park committed approximately \$3,000.00 in base funding to the project.

Financial resources proved limited in the beginning. Teachers volunteered their time and staff from MHS and FOMC worked a number of hours both on and off the clock. One perk was transportation funding #18 C2A Ticket to Ride, which came in the form of a humanities grant by the park. This grant paid for bus transportation for forty-four schools to attend "Young Defenders!" the annual commemoration of the Battle of Baltimore and writing of the National Anthem, and a teachers' workshop (30 teachers), held in the spring of 2012.

Bridging Cultures

Rules, Values, Language, and Terminology

One way in which PEC has benefited all three institutions (Maryland Historical Society, Baltimore City School System, and Fort McHenry) is that it forced members to get outside their own institutions. This also meant minimizing institutionalized acronyms, lingo and other "newspeak" terms. Members work as colleagues, equally sharing input and decision-making. A benefit in terms of "language" is that members act as translators for their own institutions. For example, "Project Management Information System" or "PMIS" isn't known about outside the government, but when it is explained as a funding tool and the funding cycle is explained, partners more fully understand why the park does things the way it does. Currently, MHS and Maryland State Department of Education are helping the National Park Service understand the

Common Core State Standards. One result of this PEC project will be a webinar whereby NPS sites in the Northeast Region will more fully understand the concepts and language of Common Core.

Decision Making

Decisions are made among the three individuals who represent their respective institutions; the community institution, The Maryland Historical Society, the Baltimore City School System, and the park. Although not formally established as a rule, all decisions have passed by unanimous vote and are made to fulfill the objectives of each institution. Since all members are heads of their respective departments, they can easily reach decisions. An additional result is that meetings are more efficient.

Evaluation: Learning from Your Program

MHS sees the park as an active partner and part of the broader museum community of Baltimore.

The park has helped to reinvent itself and now has the infrastructure to implement its key bicentennial initiative, “200 for 200.”

Impact for Students, Teachers, Community Partners, and the Park

The impact of PEC at all three institutions has been huge. The historical scenes developed by the Baltimore School for the Arts were performed in multiple middle schools in Baltimore City and County. Because of the involvement with FOMC, the scenes received widespread media coverage—being featured in The Baltimore Sun paper and CBS affiliate, WJZ-TV. Their audience trebled in size from the previous year. The teachers and students loved the exposure and they got greater fulfillment out of performing this educational activity. Maryland Historical Society was able to reach more students and draw from the park’s professional interpretive staff for specialized

programs, not only of the War of 1812, but the American Civil War. MHS sees the park as an active partner and part of the broader museum community of Baltimore. In a sense, this program has enabled members of both institutions to become less insular. Because of this project, over 2,000 students who would not otherwise have come visited the park. More importantly, through the fife and drum corps, BSA project, and the Junior ROTC program, students are engaging the park in new ways that are not only relevant, but involve a deeper involvement in the park. The park has helped to reinvent itself and now has the infrastructure to implement its key bicentennial initiative, “200 for 200.”



Looking into the Future

PEC has reached its adolescent stage at FOMC. No longer cared for like a neophyte, the project is approaching maturity but has not become fully established. For example, to make the Junior Fife and Drum Corps fully sustainable, the park has written a PMIS project and is combining it with its existing youth initiatives. MHS will continue to compete for grants and has a proven track record of winning grants to sustain the Baltimore School for the Arts project. Other sources are special bicentennial monies and the park has used its PEC partners in an application for \$200,000 for educational initiatives and bus transportation to the fort. As PEC becomes more established and fixed costs become more fully known, a yearly budget will be developed.

Anticipated Challenges

Challenges will be growing the program at a time when budgets are tight and grant opportunities are fewer while visitation at the park is increasing. Greater visitation is generally a good thing but requires greater NPS staff involvement. Working with city students can also be challenging—learning to deal effectively with inner-city youth requires understanding, patience, and willingness to break down cultural barriers.

Anticipated Successes:

- Baltimore School for the Arts will develop a play focusing on the 150th anniversary of the Emancipation Proclamation which will be presented to over 1,000 students.
- Park will develop a junior fife and drum corps involving city youth.
- 200 more school groups (mainly from Baltimore) will receive a curriculum-based education program in 2013 and 2014.
- Maryland Historical Society will reach every county in the state because of their involvement in PEC.
- The fort will be the hub of a long-term relationship with JROTC units in Baltimore.
- A new history/nature on-site program will be implemented, students will attend, and thereby foster a spirit of stewardship.



Take advantage of initiatives and events that are already going on—leverage resources, go for synergy.

Solid, strategic partnerships are very important. Strong personal relationships, as well as good institutional ties, are important.

Make it fun.

Advice to Others

Be flexible and creative. Don't get stuck if one direction doesn't work out. Keep your mind open to possibilities. Where there is a will, there is a way. Some of the partners obviously had a few challenges, but they worked through them, and made changes when needed. Keep in mind it is okay if the final product is vastly different from its initial conception, as long as the objectives of the park and partners are still met. Be prepared for your partners to give you "outside the box" ideas and have the guts to cut an idea or person if they aren't working out.

Take advantage of initiatives and events that are already going on—leverage resources, go for synergy. Some of the best projects piggyback on other programs. It is important to look for opportunities, especially low-hanging fruit, and be nimble enough to make them happen. By working together, partner organizations can achieve more than by working alone.

Solid, strategic partnerships are very important. Strong personal relationships, as well as good institutional ties, are important. As noted in this case, several positions shifted, so the institutionalization of PEC is important. That is, communication and relationships should not just be restricted to one person at each of the partner organizations, but should extend

beyond to others so that they can step in if needed. Documentation is also important.

It helped to have partners who were capable of making decisions. Because each of the main partners had a fair measure control over their own budgets and work, the PEC team was able to make decisions and take action without a lot of holdups. This allowed them (again) to be nimble and take advantage of some good opportunities.

Make partner or staff adjustments if needed. Sometimes a partnership or person just isn't working, or isn't clicking with the group and you have to cut your losses and move on and let others move on.

Make it fun—it was clear during this project that people were working hard, but also enjoying themselves. A positive attitude draws people and projects. A "Can Do" attitude gets things started. This can be complemented by "Will Do" skills.

Partnerships complement one another. The three organizations all brought different resources, skills, perspectives, and networks to the table.

A Park for Every Classroom

CASE STUDY

Gateway National Recreation Area

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A Park for Every Classroom

Gateway National Recreation Area

What is the PEC Program? Gateway's Division of Education and Interpretation has prioritized a goal to expand its menu of quality education services to NYC students and teachers. These services include providing ranger-led student programs, offering regular, content-based professional development for teachers, and developing programs and materials collaboratively among partnerships, educators, and education professionals. Program information and education materials will be available as online resources for guided and self-guided programs, and to enhance classroom learning.

These efforts would not have been successful if not for the influence and expertise of the partners.

Gateway began its development phase of the *Park for Every Classroom* (PEC) initiative with the New York City Schools in the spring/summer of 2012. Based on a desire to strengthen ties between Gateway's sites and local schools and capitalize on the current research underway in Jamaica Bay, park staff and university partners formulated a plan to build educational involvement for elementary and middle school classes. Inherently, this PEC model enabled Gateway, along with its

team of education professionals, to support the NPS and Gateway mission to engage students and teachers in park stewardship through citizen science.

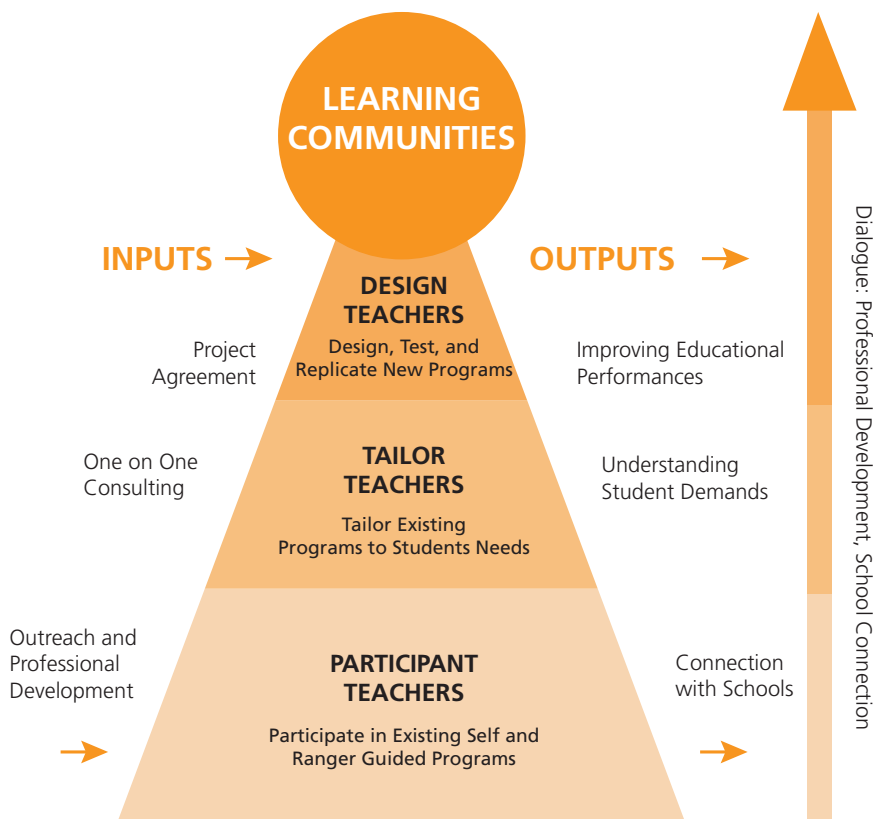
Cool and Exciting!

In 2012 Gateway identified an action plan and a model that facilitated the movement of teachers through a continuum that the park labeled "The Steps of Engagement." The action plan describes how teachers can progress from participating in self- or ranger-guided programs to designing their own activities for park visits, to the PEC model, which involves team commitment in developing lesson plans and activities for their own and other teachers' use. For their time and professional commitment, these PEC teachers receive a stipend.

Partner Organizations

These efforts would not have been successful if not for the influence and expertise of the partners.

The park collaborated with faculty of Brooklyn College's School of Education and the Department of Earth Science, an outside educational consultant, and interns. The Brooklyn College team members included an assistant professor of education and a graduate student in the middle childhood science education program. Their expertise in curriculum design and experience with the successful Urban Advantage professional development program (standards- and inquiry-based learning with science cultural institutions) were combined with the classroom teachers' interests, and the park's



goals to ramp up its school programming and to be more inclusive of sustainability and stewardship practices.

The Intern from Polytechnic of Turin, Italy, has an educational background in EcoDesign and sustainability and is experienced in reaching out to diverse communities. The

outside educational consultant and the Italian intern were especially helpful in synthesizing many disparate ideas among the park staff into a concrete action plan. Creatively merging related grants into the PEC project and designing the Steps of Engagement model are examples of the benefits of having outside partners and interns assist park staff.

The relationship has grown by continually identifying and working on projects that capitalize on the strengths of each partner

Beginnings

Existing Conditions

In 2012, Gateway obtained Parks as Classrooms funding to present a series of professional development workshops—Seminars in Science. That effort was merged with the A Park for Every Classroom project the park had initiated in 2011. A small group of teachers who participated in the Seminars in Science workshops became part of a newly forming learning community of NPS staff, park researchers, and Brooklyn College faculty from the School of Education.

Developing and Maintaining Partnerships

The partnership with Brooklyn College, which began in 2004, is a collaboration that enables the park's education division to provide professional development and learning experiences for students, pre-service and in-service teachers based on current scholarship in science, history, and educational pedagogy. This long-term relationship has resulted in common vision and goals and identified ways to expand the informal learning opportunities at the park. Because of his familiarity with the park and its resources the professor quickly identified an excellent candidate to intern with the park on the project.

The relationship has grown by continually identifying and working on projects that capitalize on the strengths of each partner—the educational and scientific expertise at Brooklyn College, and the resources and educational potential of Gateway and Jamaica Bay.

Partnership Issues: Communication, Leadership, and Visibility

Initial challenges included how to balance Gateway staff time to work with teachers and how to keep the PEC teachers motivated and engaged.

Student Conservation (SCA) Interns from diverse backgrounds and neighborhoods led on-site programs, which aided in balancing program delivery with program development needs. The interns gave twenty-six programs at the park.

Teacher participation was encouraged by setting a realistic schedule, establishing regular communication through a combination of conference calls and face-to-face meetings in locations convenient for the teachers, establishing and maintaining a realistic timeline, and providing monetary compensation via stipends.



Startup Resources

In 2012, the park received a Parks as Classroom grant to fund the Seminars in Science. Seminars in Science connected the teachers who participated in the workshops to the science topics that interested them and spurred several of them to take ownership of their curriculum development within the learning communities that emerged. This NPS grant was the catalyst that reinvigorated the PEC project. By combining this grant money for the seminar with the PEC project, the park was able to provide stipends for a few teachers who attended the seminar and wanted to continue to work with the park in the PEC project.

Evolution of the PEC Project

By working in partnership, the team was able to help to shape “The Steps of Engagement” model. But beyond model development, the concepts imbedded in the model helped to solve some bigger issues related to providing programs and services to teachers and students.

It is critical to leverage resources.

Engaging teachers in content-driven, place-based professional development resonates with students.

Moving from Idea to Implementation

Gateway’s PEC program experienced many changes in its early phases. An initial approach of recruiting teachers from a pool of existing contacts proved to be unsuccessful; stops and starts in the project began to affect the commitment of some of the original team. By recruiting teachers from the Seminars in Science workshops, we gained individuals who were energized, motivated, and ready to fully engage in the project. New PEC members—including faculty, intern, consultant, and teachers—invigorated the program with an infusion of different ideas and fresh approaches. The revitalized PEC team connected the idea of using the Seminars in Science series—and the learning communities of scientists, park staff, faculty, and teachers it forged—to the PEC effort.

The PEC team implemented a working plan in August 2012. The first meeting provided the structure on how to approach the curriculum development through a mini-workshop on Understanding by Design®. The idea of this initial meeting was to provide a framework and develop the relationship of its members to create an atmosphere of trust and collaboration. It was difficult to conduct regular meetings and by necessity a large portion of the communication was done via phone and email. At times this posed a challenge in clarifying ideas, requests, and structure. Through these experiences, the teachers, partners, and NPS staff were able to practice honest and open communication and overcome differences and misunderstandings.

Successes and Surprises

By working in partnership, the team was able to help to shape “The Steps of Engagement” model. But beyond model development, the concepts imbedded in the model helped to solve some bigger issues related to providing programs and services to teachers and students. One example of this was in identifying different ways to engage teachers and thereby reach more students. This process also helped the park make greater inroads into the local communities.

It is critical to leverage resources. The combining of PEC with the Science Seminar created a mechanism to grow the project.

In looking at how to do this in the future, Brooklyn College, in partnership with Gateway has just received a grant from the National Center for Science and Civic Engagement as one of six SENCER-ISE Partnership Support Program awardees. These funds will provide some support to the PEC program through internship support, faculty engagement, professional development, and teacher stipends.

Engaging teachers in content-driven, place-based professional development resonates with students. It is not only the current group of students who benefit, but also many groups of students in the future who will have a connection with a national park and experience in place-based learning.

Problems and Challenges

It was difficult to find the time to meet face-to-face as a PEC team. Travel time within and between the New York City boroughs made it almost impossible to get together. The team had to rely on conference calls and email for ongoing communication.

Some teachers did not maintain consistent communication with park staff. The PEC teachers were working on their projects, but the park staff struggled to keep contact with them to see how they were doing with their



Teachers were at the center of these new programs, not the park themes.

field work and in-class activities and often wondered if they needed help with implementing any aspects of the program. The fact that they needed permits from the state environmental commission and from the National Park Service to do their field work was good because park staff got to work more closely with them by applying for the permits on their behalf, coordinating what species they would be studying and collecting, and scheduling the field work. The permitting system helped teachers stay in contact with the park while engaging their students in resource-based work.

Another issue arose when some park staff realized that teachers were developing lessons

and activities to use both in the park and in the school. This constituted a radical shift in thinking about how new programs are initiated. Teachers were at the center of these new programs, not the park themes.

The greatest challenge faced by this project was dealing with the impacts of Hurricane Sandy. Because of the damage done by the storm, teachers were unable to pilot test their lessons and activities in the fall as planned. They are, however, conducting those pilot tests this spring. This storm also damaged park resources and the park staff was pulled from many projects to do the critical work of getting the park up and running once again.

Patches, Stiches, and Seams

These teachers were highly motivated to develop their own additional activities, which reinforced the idea of the “steps of engagement” continuum.

Staff Roles, Functions, & Supervision

With the progression of the PEC project, each of the team member's roles and responsibilities began to evolve. The PEC interns continued to increase their marketing efforts and learned to engage teachers in Gateway's current menu of education program. They found that they were able to increase the numbers of teachers who could become involved in self- and ranger-led programs and promote the place-based educational programs at Gateway. They also discovered that these teachers were highly motivated to develop their own additional activities, which reinforced the idea of the “steps of engagement” continuum. As PEC team members discovered their roles and responsibilities within the team, the distribution of leadership roles and involvement leveled and understanding improved.

Addressing Key Issues

An opportunity to promote stewardship in the park arose with one teacher's idea to incorporate historic trash into her lesson plan. Although historic artifacts cannot be removed from the park, an intern linked this idea to a specific need in the park. Each year, thousands of religious offerings in the form of food, Indian saris, and clay pots are left on the beaches surrounding Jamaica Bay. Gateway has long struggled with the dilemma of how to respect this religious practice while maintaining clean beaches that can be enjoyed by people and animals alike. Utilizing her knowledge of Eco Design the intern linked the idea of cleaning up the clay pot remains and using them as mini planters to cultivate native plant species that could then be replanted on beach dunes. This specific project shows how Gateway's PEC has been able to incorporate each partner's expertise to meet the needs of the park as well as the goals of the partners.

The Current PEC Program

Unfortunately, Gateway's PEC team encountered a major challenge as a result of Hurricane Storm Sandy, which devastated the parks and parts of New York City on October 30th 2012. Teachers had to put their plans for lessons in the park, future meetings, and goals on hold due to the effects of the storm. Despite the pause, the PEC team has revitalized their vision and is working towards rebuilding the momentum of the project.



Money Matters

Gateway's future collaboration with Brooklyn College intends to seek funding through grants together, to allow for the continued growth and sustainability of the PEC program. Brooklyn College, in partnership with Gateway

NRA, applied for and was awarded a National Science Foundation Grant, which will help to fund stipends and seminars for teachers for 2013-15 school years.

Bridging Cultures

Decision Making

The matter of creating clear channels of communication and a shared vision for the PEC project grew as the relationships and experiences of its members developed. Early on, the core team of NPS staff, interns, and Brooklyn College associates realized the importance of establishing a common language and a unified voice in working with the teachers. The initial introductions and meetings served as a template to define the overarching goals and themes of the project, which included:

- Cross curriculum links
- Meeting Common Core standards: <http://www.corestandards.org/the-standards>
- Understanding by Design© Lessons based on scientific research and local resources
- Making classes trips safe and meaningful experiences

The diversity of Gateway's PEC team members and each person's expertise simplify the decision-making processes by creating an atmosphere of equality and attitude of cooperation.

Evaluation: Learning from Your Program

Students have richer and more hands-on learning experiences.

Other teachers have access to new ideas and lesson plans developed by fellow teachers.

Impact for Students, Teachers, Community Partners, and the Park

Students: Students have richer and more hands-on learning experiences, including citizen science protocols, stewardship, and Call to Action activities.

Teachers: Participating teachers have a deeper understanding of the park's resources, relationships with scientists and park staff, and new lesson plans that fit their teaching needs. Other teachers have access to new ideas and lesson plans developed by fellow teachers.

Community Partners: Creating a learning community comprised of teachers, students, scientists, professors, interns, and park staff opens opportunities to work with other partners on future program development.

Park: The park has a greater ability to reach schools, more effective programming that has been evaluated, new program offerings, additional website content, and greater exposure in the schools and community.

The evaluation and feedback of Gateway's PEC project will be important as the park continues to recover from the effects of Hurricane Sandy. The devastation of schools, park infrastructure, and the natural environment surrounding Jamaica Bay has proved to be a major challenge as well as an opportunity for growth and education. Before the storm occurred, NPS staff was able to conduct informal interviews with children from Trinity School's fourth-grade class from Manhattan. During the course of conversations with the staff, the children revealed that they enjoyed doing science outside, "Because we can actually see the science." Additional feedback revealed that "[I] learned that people have to stop throwing garbage into the ground which will end up into the beach."

The park will gauge the success of implementation and provide valuable feedback for improvement using evaluative tools. They will estimate the number of classes visiting the park and the effects of marketing and outreach efforts, as well as make lesson plans and materials available via the park webpage. We hope



...forging a community of learners with interested teachers, faculty, NPS staff, and researchers... through more deliberate and sustained teacher engagement.

The stepped-up outreach and marketing efforts conducted by the interns, served as an effective method for creating an extensive database of teacher contacts for future collaborations.

that additional feedback given by the teachers after the conclusion of the spring lessons will provide informal insight into the value of the teacher and students' experiences doing placed based education at Jamaica Bay.

Impact

One of the greatest successes of the 2012 PEC initiative at Gateway was identifying and initiating the "steps of engagement" and forging a community of learners with interested teachers, faculty, NPS staff, and researchers. The renewal and expansion of the education programs at Gateway, through more deliberate and sustained teacher engagement, will continue to impact the future of the park by creating stronger support from the community. One of the underlying goals of the NPS is to foster a future generation of stewards to sustain involvement with the park. As stated by a sixth grader:

The trip at Jamaica Bay Sea Plane Ramp was exciting and interesting. Even though it was drizzling and cloudy, I saw a lot of interesting things, such as seashells and water squirting out of the sand. These animals were interesting to me because I've never seen them in person before. I saw seaweed and a lot of shells, and I also saw a lot of debris such as glass bottles, plastic bottles, paper and plastic bags and wrap-

pers. The debris really put a damper on my mood because if the waves are rough or if a hurricane, the debris may get pushed in the ocean and it may harm the animals.

The stepped-up outreach and marketing efforts conducted by the interns, served as an effective method for creating an extensive database of teacher contacts for future collaborations. Whereas before the outreach many schools were not aware of Gateway's free educational programs and teacher development workshops, feedback from teachers confirmed that the efforts were successful in creating awareness about the programs and establishing or reestablishing relationships with the schools.





Looking into the Future

Anticipated Successes

In the immediate future we plan to:

- Reconnect with the PEC teachers and implement the plans that were made before the disruptions caused by the storm.
- Support the teachers on following through with the spring field lessons
- Post the comprehensive lessons on the education section of Gateway's website
- Continue marketing and outreach to new and underserved schools
- Present professional development workshops—capitalize on established PD days
- Involve the 2012/2013 PEC teachers with mentoring incoming teachers and incorporate teacher leadership component
- Use other incentives and seek grants for continued teacher involvement with PEC
- Build a civic engagement “call to action” activity into PEC which will allow participating students with a focus in science and the humanities to present their data and recommendations for improving Jamaica Bay to local stakeholders and officials.

Some of our anticipated successes include:

- New lesson plans, along with minor adaptations of current lessons and activities as teachers learn what works in the field
- Committed interest and support from current PEC teachers as well as involvement by new teachers
- Long-term and deeper relationships with participating schools; including tracking student career paths
- Create a comprehensive marketing and outreach model to promote park programs to new school audiences
- Continue professional development

Advice to Others

Lessons We Learned:

- Meaningful science must also incorporate an opportunity for children to engage in a call to action.
- High quality, content-driven workshops to attract teachers and incorporates them into the steps of engagement is a useful model for our park.

Advice:

- Adapt to the teachers' and schools' needs and interests while incorporating the park's most compelling resources.

Meaningful science must also incorporate an opportunity for children to engage in a call to action.

Adapt to the teachers' and schools' needs and interests while incorporating the park's most compelling resources.

A Park for Every Classroom

CASE STUDY

Marsh - Billings - Rockefeller National Historical Park

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A Park for Every Classroom

Marsh-Billings-Rockefeller National Historical Park

What is the PEC Program? The Marsh-Billings-Rockefeller National Historical Park (MABI) has the honor and responsibility of being the only national park to focus on conservation history and the evolving nature of stewardship in the United States. In addition, the park preserves and interprets a 550-acre forest in beautiful Woodstock, Vermont. At MABI, the strategy for the pilot phase for A Park for Every Classroom (PEC) focused on helping youth build upon the tremendous stewardship legacy bestowed by the Marsh, Billings, and Rockefeller families. It rests on the following three fundamental ideas:

To become effective stewards, students need multiple learning opportunities to practice relevant skills...

Strategic partnerships can significantly expand the capacity and enhance the quality of this work.

A Park for Every Classroom provided a cohesive programmatic umbrella for the park's education endeavors.

First, teachers can play a more active role in engaging youth in the stories of national parks. Investing in professional development opportunities and other supportive resources can help teachers make the park an extension of their classrooms—and classrooms an extension of the park.

Second, to become effective stewards, students need multiple learning opportunities to practice relevant skills, build a deeper understanding of the concepts of sustainability, and make empowering contributions to their community. Through a purposeful scaffolding of these experiences, students can build meaningful connections to their studies and lives.

Third, strategic partnerships can significantly expand the capacity and enhance the quality of this work. We can take advantage of our diverse skills, resources, and areas of expertise by building long-term relationships with individuals and institutions that have common aspirations. Through partnerships, each can do more, better.

Although these ideas are not new, A Park for Every Classroom helped to validate them and encourage greater implementation, resulting in increased work with teachers, a more clearly articulated ladder of engagement for students, and greater collaboration among local partners and other PEC teams. In short, A Park for Every Classroom provided a cohesive programmatic umbrella for the park's education endeavors.

Cool and Exciting!

What follows are some highlights for the pilot year of PEC, illustrating the implementation of the ideas referenced above.

A More Active Role for Teachers:

- Collaboration within the other PEC teams has led to new ideas for the park's professional development programs; in particular, the park, Shelburne Farms, the Conservation Study Institute, Green Mountain National Forest, and Merck Forest and Farmland Center are refining the Forest for Every Classroom year-long course, which was the founding inspiration for PEC.

- The PEC team has been working with Reading Elementary School to develop a whole-school approach to sustainability and serve as a model for other local schools. The school was one of 64 schools in the country awarded the Department of Education Green Ribbon Schools accolade.

- The PEC team has supported second- and sixth-grade teachers from several different schools so that they can share ideas and expertise, working across grade levels in the local school district to develop park-based programs.

- The PEC team is also deepening and expanding its work with middle and high school teachers through the support of a collaborative place-based education position with the local school district.



Scaffolding Learning Opportunities for Students

- At the second-, fourth-, sixth-, seventh-, and ninth-grade levels, the PEC team has been working with other local teachers to establish park-based units that connect to the Vermont Standards, Common Core State Standards, and support a natural progression for learning about and practicing stewardship.

- PEC collaborations also provided greater connections and relevancy for the Conservation Leadership Institute, a semester long credit-bearing high school course that allows students to explore conservation practices through hands-on learning

- The PEC program offered time to reflect on the park's youth programs and share ideas with other PEC teams, helping the student intern program expand and increase coherency, consistency, and diversity.

Strategic Partnerships

- In order to become more in sync with education institutions, members of the PEC team participated in a series of professional development mini-workshops with teacher partners on the Common Core State Standards and Vermont Curriculum Assessment Tools. Together they began to incorporate these new methods into curriculum design practices for park-based units.

- To leverage resources, the park partnered with the Woodstock Recreation Center and increased Junior Ranger summer visits from an average of three visitors per session to twenty-five visitors per session, using camp counselors to help lead the programs.

- To enhance collaboration and cross-sector planning, a PEC team member is serving on a "Think Tank" for curriculum development in local schools and two teachers are serving on the park's Stewardship Framework Steering Committee.

- PEC also reinforced key partnerships, helping the PEC team to sustain programs, encourage innovation, expand professional development offerings for teachers (including a focus on Sustainable Schools), and deepen connections with other organizations and funders working on similar goals.

Partner Organizations

The NPS mission is to "preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations." The park's primary PEC partner, Shelburne Farms, is a National Historic Landmark with a complementary mission to "cultivate a conservation ethic for a sustainable future." Shelburne Farms is a nationally-recognized leader in place-based education, and has been a key partner in the development of park educational programs, contributing to regional and national discussions and advancing the practice of place-based education in the NPS. Among the many benefits of the partnership has been the creation of a shared Park Education Coordinator position.

Windsor Central Supervisory Union (WCSU) serves as the school-based partner for the PEC team. Its mission, also complementary, is based on the four principles of cohesiveness, equity, high academic standards and professional practice to promote "the intellectual, social, emotional and physical development of students within the WCSU schools from kindergarten through high school so that students will be prepared to achieve productive and fulfilling lives." The park and Shelburne Farms work with WCSU to further their mutually supportive missions by developing teacher workshops focused on stewardship, designed to meet staff professional development needs. Exemplifying the common goals of the PEC partners, WCSU and the park also jointly fund a place-based education coordinator position to support middle and high school teachers and facilitate the Conservation Leadership Institute, a service-learning course developed to explore the park and its resources. Serving as a strong bridge between the two institutions, this unique position inherently supports the work of both the park and WCSU.

In addition, the park partners with a number of other local state and national organizations to connect with natural and cultural resource experts working with teachers. PEC has helped the park efforts to be less "park-centric" and more a dynamic partner in the community.

PEC has helped the park efforts to be less "park-centric" and more a dynamic partner in the community.

Beginnings

Existing Conditions

The PEC team was fortunate to have many “readiness” components firmly in place. The first, and perhaps most important component, was that the park had been building partnerships with community organizations and teachers for almost ten years. Thanks to the foresight of the park’s first management team, Shelburne Farms, and the Conservation Study Institute, a long-range vision for the park’s education program was established which planted the seeds for many of the current PEC successes.

A cornerstone of this vision for the education program was the development of *A Forest for Every Classroom* (FFEC), a year-long teacher professional development course and long-term partnership program. This created a cadre of educators in the area who were happy to work with the park and felt confident developing place-based education curriculum. FFEC teachers, in turn, served as role models and encouraged others to tap into the park’s resources, helping to create a healthy network of educators involved with the park.

The strong partnerships with local, state, and national organizations are an integral part of how the park does business. Both the Park Education Coordinator and the Place-based Education Coordinator positions, which comprise the core education staff of the park, are made possible through partnerships.

Although the park had limited staff time to engage in all the wonderful ideas it generated for the PEC program, thanks to a great team of dedicated people, it was “ready” to accomplish a lot. In addition to the partners mentioned above, this program benefitted from seasonal rangers with teaching experience and a supportive Chief of Interpretation. The team also included a Teacher-Ranger-Teacher who worked on the Super Junior Ranger program, a park-based summer camp, the sixth-grade Cosmic Sense of Place initiative at the park, and the sustainable schools program. .

Finally, the park has worked hard to support the development of its education programs

through proactive and successful grant writing, leveraging of resources, and support from community foundations. Thanks to the leadership, partnerships, experienced and engaged teachers, and creative staffing structures, the PEC team had a strong foundation from which to launch *A Park for Every Classroom*.

Developing and Maintaining Partnerships

There were several different mechanisms employed to engage new partners and strengthen long-term relationships with existing partners. First, the team identified mutual goals that could be better accomplished by working together, creating an inherent incentive for collaboration. It was important to create the space and time with partners to better understand one another’s needs, assets and limitations. We also needed to foster open communication, build trust, and make sure expectations were clear and meetings well planned and enjoyable—humor is a must! It has been critical to have strong support from the leaders of the PEC partner organizations to invest time in these types of collaborations and build these important relationships. Cooperative agreements with major partnering organizations allowed the leveraging of resources, time, and expertise in a formal way and demonstrated a long-term commitment to working together.

Partnership Issues: Communication, Leadership, and Visibility

Both email and face-to-face meetings were used to communicate. Nothing fancy, but it took a little time and effort to make it work. Google Groups provided one way to reach out, along with a blog to post articles and photos on park and school websites. Woodstock is a small rural area, where partners often naturally cross paths or wear different hats. This provided casual opportunities to connect outside of the normal work day.

Each partner usually took a leadership role as it pertained to their particular job responsibilities. For example, the Place-Based Education Coordinator planned and

Cooperative agreements with major partnering organizations allowed the leveraging of resources, time, and expertise in a formal way...

Each partner usually took a leadership role as it pertained to their particular job responsibilities.

initiated activities with secondary teachers and developed summer youth career development opportunities; the Teacher-Ranger worked with second-grade teachers on the Super Junior Ranger program, sixth-grade teachers on the Cosmic Sense of Place, and developed park-based curriculum focused on art; the Chief of Interpretation, managed rangers and assigned them to work on specific education activities. The Park Education Coordinator managed professional development efforts and general planning and implementation of the education programs.

Startup Resources

The park's PEC program required a fair amount of investment of staff time. Fortunately the park, school, and partners were supportive and allowed staff to work together to plan for PEC, participate in the workshops, implement programs, create the evaluations, do presentations, and write case studies. The PEC team also wrote proposals for funding from competitive NPS sources and other foundations, to support teacher professional development, stipends for teacher leaders, and other elements of the PEC program.

PEC provided the opportunity for the team to explore these ideas together, refine their application, and be more strategic in their development.

Evolution of the PEC Project

Moving from Idea to Implementation

Although many of the PEC ideas were not new to the park before the first CLIP (Community of Learning, Inquiry and Practice) workshop, PEC provided the opportunity for the team to explore these ideas together, refine their application, and be more strategic in their development. At the workshop and afterward, the team was able to develop an action plan for the year that helped to guide many of the activities, set priorities, and clarify roles and responsibilities.

Success and Surprises

The PEC team's action plan goals are outlined below in italics, with the successes and surprises achieved during the pilot year.

Go on a 'Learning Journey' with park and school staff to research other models—Last December, the PEC team journeyed with thirteen teachers and administrators to two exemplary sustainability schools and Shelburne Farms to explore how we could create more sustainable schools at WCSU. Although the intended target was the high school, the idea also gained traction with the K-6 Reading Community School.

Research theory and examples of inquiry-based projects and create models on a range/scale for teachers—Although our original plan was to focus on service-learning, after much discussion with administrators and educators, the demand was more for how place-based learning and education for sustainability advances the Common Core State Standards (CCSS) and upcoming Next Generation State Standards, resulting in a focus shift.

PEC Teacher Meeting to reflect, plan, celebrate, and look ahead—In March, a facilitated teacher meeting was held to discuss lessons learned and how collaborative programs could be improved. The surprise was the emotional satisfaction the teachers expressed from taking their students outside. In June, approximately 80 K-6 students participated in an end-of-year celebration to showcase their stewardship work. Additionally, individual classes at the upper grade levels hosted public presentations where students shared their learning. The celebration simultaneously recognized the students' achievements and provided valuable insights in to what these students learned throughout the year and their developing desire to become active stewards of their community.

Connect teachers and staff with high-quality trainings on inquiry-based and service-learning—Again, based on input and needs of the teacher-partners, the Common Core State Standards became more of a focus for the PEC Team and was integrated into the new FFEC course.

Familiarize with Common Core initiative, work to support teachers with this transition—Members of the PEC team were invited to serve on a "Think Tank" with other education leaders to do just this. As a result, the park hosted a course on Understanding by Design (UbD), led by the Superintendent of the local schools, where teachers incorporated Common Core into their UbD units.



Professional differences also surfaced.

...a need to find a balance between offering set programs at each grade level in order to have a logical progression of studies that is manageable for staff and providing teachers the flexibility to follow what inspires them.

Apply for funding to support Park for Every Classroom—The park was successful in securing funding from NPS Parks as Classrooms and the Wellborn Ecology Fund to continue its PEC efforts.

Coordinate park web presence on WCSU website—Windsor Central Supervisory Union put the park on their homepage!

Coordinate training and communication with Interpretation—PEC provided a forum to better integrate the interpretation and education activities, although there is more to be done. Currently there is a whole-park initiative to develop a Stewardship Framework for Education to foster greater interdepartmental cooperation to advance the park's educational mission.

Continue to develop second-grade Junior Ranger program—The framework for the “Super Junior Ranger” program developed quite nicely and enjoyed positive support and participation from teachers.

Problems and Challenges

Overall, it was a very productive and relatively smooth year. Some of the challenges faced were a result of institutional differences between schools and parks. For example, timing of events was often problematic. Seasonal interpretive staff are busiest in spring and fall and do not work during the winter months, and of course, teachers are off during the summer, so it is hard to get teachers and rangers together to plan programs. At times, seasonal staff felt left out of the loop since they could not participate fully.

Professional differences also surfaced. Teachers are accustomed to covering a different topic every day with the same audience, while park interpreters are used to covering the same topics but with a variety of audiences. As a result, it seems many teachers did not see the need or have the time to plan far in advance with the park, which made some park interpreters uncomfortable. In addition, some teachers often defer to the expertise of park staff when visiting the park and are reluctant to take the lead in the education of their students when they are outside of the classroom. On the other hand, sometimes park staff also have difficulty in stepping back and letting the teachers take the lead.

Another issue we are working to address is the thoughtful scaffolding of student experiences in the park. There is a need to find a balance between offering set programs at each grade level in order to have a logical progression of studies that is manageable for staff and providing teachers the flexibility to follow what inspires them.

Lessons Learned about Early Transitions

- Be patient! Start small and build on your successes.
- Develop high quality relationships with a few logical partners and teachers, even if it is with only one of each. These partnerships will be more important than any products that come out of the first year.
- Teachers, park staff and partners all have something valuable to offer and need to learn together.



- Try to reduce stress levels and find ways to encourage everyone to stay engaged. Choose quality over quantity; don't overwhelm.

- Recognize everyone's contributions. Foster an atmosphere that says, "Everything is going to be okay as long as we keep trying and supporting one another."

- Maintain a sense of humor. Be open about mistakes and willing to learn from them.

- Build in time for reflection and fun. It is a marathon, not a sprint, so set a pace for the long run.

- Keep coming back to clarification of goals, roles and responsibilities as priorities shift.

- Find different ways to document and share information—google docs, graphic representation, handwritten notes, and white boards—like students who all have different learning styles, adults have different ways of connecting to information. Invest in planning, reflection, and communication time so that your team can be very strategic about how they invest their resources—work smarter, not harder.

Later Strategic Choices, Turning Points, Transitions

Several questions, ranging from specific to more existential, emerged as the park planned and implemented its PEC work. With the help of the Steering Committee for a Stewardship Framework, these questions were prioritized, organized, and summarized to create "juicy" questions to explore with teachers

and community partners through learning circles. These discussions will help to guide the development of the park's Stewardship Framework and its strategic choices for the continued development of PEC. Some of these essential questions include: What is stewardship today? What is the park's role in all of our communities and what are the communities' roles in the park? What are the most promising practices in education and interpretation for sustainability and where should we invest our resources? How do we best embrace an ethic of cultural competency in our work? What is the appropriate and best use of technology to enhance our work?

Procedures for Handling Recurring Issues

As mentioned, many of the "big" topics listed above are being addressed through our Stewardship Framework planning process. Some of the more immediate challenges raised are being addressed in a number of ways. For example, coordination of a team to schedule school visits resulted in a shared calendar with the school and education staff. As a team, it is important to facilitate discussions among teachers so that they can learn from one another and create collaborative programs, which is less time-consuming for the park staff. Teachers are encouraged to take more of a leadership role at the park. Park interpretive staff are being matched with certain grade levels and units so they can get to know specific teachers, topics, and a particular age range of students. This way, they do not need to be prepared to work with a full range of K-12 students on a full range of topics with a teacher they do not know.

Invest in planning, reflection, and communication time so that your team can be very strategic...

Facilitate discussions among teachers so that they can learn from one another and create collaborative programs.

Patches, Stiches, and Seams

...a good model, with a balance between enough flexibility for new programs offset by enough established programs to lend stability to the system.

Staff Roles, Functions, & Supervision

The Assistant Superintendent checks in regularly to make sure the project is on track and in line with park goals. The Director of Professional Development at Shelburne Farms is the liaison for the PEC team. Community Engagement and Partnerships Coordinator for the Conservation Study Institute serves as an advisor to the project. Park Education Coordinator is also a Shelburne Farms employee, but is based at the park and coordinates the park education programs. The Chief of Interpretation and oversees visitor services and supervises all of the park rangers and some of the interns. The Place-based Education Coordinator at the Woodstock Middle and High School helps to support teachers, connect with school initiatives, and develop park internship and youth programs. The Teacher-Ranger is also an art teacher and travels to three small local schools.



Addressing Key Issues

The team does not have a clear hierarchical structure, which at times can lead to some confusion of roles and responsibilities. That said, the team works hard at keeping the lines of communication open, everyone is very hard-working and dedicated, figures out a ways to get things done, and fully tap the diversity of our skills.

The Current PEC Program Model

The project is settling into a good model, with a balance between enough flexibility for new programs offset by enough established programs to lend stability to the system. There are numerous connections between park staff, partners and teachers, creating a strong, healthy and resilient network. There is little turnover in the schools or with park staff, creating the opportunity to continue to explore new avenues to improve our programs together. With the great interest and support from teachers, the focus is now less on getting teachers involved and more on moving both students and teachers up the ladder of engagement.

Resolving Problems

There is not just one way to resolve problems; most important is to work issues out by discussing them and finding a solution that will be acceptable for all parties.

Money Matters

In addition to substantial funding from the park for staff time, teacher-ranger, transportation for students, and resources, the PEC program was also supported by:

- The Wellborn Ecology Fund grant to cover the development of A Forest for Every Classroom this year and Reading Community School's participation in a week-long Education for Sustainability Institute at Shelburne Farms.
- Woodstock Union High School matching funds for the joint Place-Based Education Coordinator position.
- A National Park Foundation's Park Stewards grant for two high schools to do mercury

monitoring in the fall and salamander monitoring in the spring at Marsh-Billings-Rockefeller National Historical Park and Saint-Gaudens National Historic Site.

- Funding from a private foundation to facilitate a one-day workshop with a seventh-grade team of teachers to explore whole school models.
- PEC reimbursement for travel to PEC meetings for our teachers and for expenses associated with a workshop to introduce teachers to park resources.
- In-kind support from all of the partners listed in the partner section above (page 4).



Bridging Cultures

Stay away from using job-specific jargon and acronyms when talking with partners and others.

...shared responsibility where a plan is developed together.

Rules Values, Language, and Terminology.

There is an effort to stay away from using job-specific jargon and acronyms when talking with partners and others; both schools and the park are heavily laden with them. One plan is to introduce Understanding by Design and Common Core terminology and connotations to seasonal interpretive staff in order to facilitate a shared language with teachers. Another is to ensure that the theme of stewardship is understood and highlighted in each school program.

Decision Making

In general, this is a shared responsibility where a plan is developed together. Next, one person takes the lead on synthesizing and editing, then, passes it out to the rest of the group for comments. If it is an important document or one that will be made public, there is supervisor review. Many informal conversations help move initiatives forward—the team is getting better about remembering to share these informal conversations with the rest of the team as needed.

Evaluation: Learning from Your Program

The PEC teams worked together to formulate the following overall questions in italics. The team at MBRNHP then selected the following bulleted sub-questions to better assess and measure their progress.

In what ways does this program create meaningful experiences for students?

- How does a student's participation in the program impact their content knowledge?
- How does involvement in the program foster stewardship in students?
- In what ways have students made emotional and intellectual connections with resource?

What are the strengths and challenges with the structure and processes of this program?

- Which elements are helping teachers deepen their understanding of how to use resources at the park to meet their curriculum goals?
- Which elements are helping students feel an increased level of stewardship towards the park?
- What activities or processes are helping partners to fulfill their organizations mission and goals?

In what ways is the program meeting the desired outcomes of teachers, park, partners, and the community?

- In what ways have teachers been able to effectively integrate the park resources into their lesson plans to help address curriculum needs?
- In what ways is the park being used as a learning resource?
- Are students aware of job opportunities?

To gather data to help answer these questions, the team has collected some journals, reviewed student work, made observations, and debriefed with teachers through informal discussions and meetings. Although this provides constructive feedback on ways to improve the programs, specific student outcomes have been difficult to document in a formal and consistent way due to time limitations with

students and teachers. As a result the evaluation process sometimes lacks statistical rigor, but continues to provide useful assessment material to inform PEC work. As per the evaluation plan, partners will distribute a teacher survey in the spring as a more standardized process of measuring our progress.

Impact for Students, Teachers, Community Partners, and the Park?

Students: The natural setting of the park lends itself well to addressing all learning styles, so students that sometimes do not do well in the traditional classroom often thrive at the park, according to their teachers. Through multiple exposures to the park, students are beginning to become more accustomed to working and learning in real-world situations. The term “stewardship” is now mentioned by more than just the occasional teacher and students are participating in more activities where they can learn about and practice stewardship. Students are also more frequently taking advantage of employment opportunities with the park, the Vermont Youth Conservation Corps, and the Student Conservation Association. The application process has become more competitive.

Teachers: By working on park-based units together, teachers from different schools and different disciplines are becoming connected in new ways and are improving their practice. As the PEC team has worked to clarify goals and better coordinate activities, they are better able to serve teachers and support them in their work with the park. In addition, there have been several new teachers introduced to the park through workshops and other park/school activities, some of whom are now working with park staff and partners to develop new units.

Community Partners: More local people are starting to realize what a gem they have in their community! Currently some are working with PEC team members to figure out how their organizations can benefit from the park's amazing space, powerful story, unique resources and experienced staff. PEC also deepened the collaboration within the local network of organizations – partners connected with each other in new ways through the PEC work – creating spin-off benefits.

...students are beginning to become more accustomed to working and learning in real-world situations.

...teachers from different schools and different disciplines are becoming connected in new ways and are improving their practice.

...expand the capacity and enrich the relevancy of the park programs.

Meet teachers more than half way in the beginning.

Be comfortable with the amorphous nature of this work.

Make it your own, and learn and adapt along the way.



Park: PEC's emphasis on partnerships has helped foster connections with other organizations that expand the capacity and enrich the relevancy of the park programs. Involvement with PEC also helped spur the new Whole Park Framework for Stewardship Education which is designed to reinvigorate and engage all divisions of the park. PEC has improved the interface between Interpreta-

tion and Education by stimulating a discussion that helped articulate strengths, weaknesses, and common goals. Relationships between the park and the NPS' Conservation Study Institute are also deepening as result of collaborative work on PEC. Finally, the park's PEC team now has seven other PEC teams with which to learn and grow, which is an inspiring and empowering feeling!

Looking into the Future

Anticipated Successes

- Demonstration of how the park and community resources can help teachers meet Common Core State Standards by taking advantage of the expertise of content specialists and authentic learning environments. This will help break down the barriers between parks, schools and communities, as non-formal and formal educators strive toward common goals.
- Collaboration with Saint-Gaudens National Historic Site resulting in shared insights and ideas, cross program promotion, and overall increase in resource leveraging.
- Implementation of a Senior Capstone project at the local high school as a culminating stewardship-focused experience for the end of the K-12 spectrum. Utilizing the park's resources, this STEM (science, technology, engineering, and mathematics) initiative will include independent research and a service-learning component, providing a model of student-led, inquiry-based learning that encourages civic engagement.
- An education program with a very intentional scope and sequence, multiple entry points, a menu of content foci and flexible, differentiated learning opportunities. This will create a more effective partnership with teachers and an increased number of students "climbing up" the ladder of engagement toward stewardship-related professions and practices.
- Development of the Sustainable Schools process to support ongoing work with the local (Green Ribbon) school. This school will be used as a model to cultivate new programs throughout the local school district.

Advice to Others

- To get teachers involved, understand their core needs and provide incentives—graduate credits, recognition, stipends.
- Focus on quality over quantity—start smaller, build on a good reputation, get a few teachers who are well versed in your park involved to shape programs, let them help spread the word and serve as teacher-leaders.
- Connect with school administrators, including inviting them to meet on site so they feel comfortable with surroundings and can see the possibilities. Listen to what their needs are and craft approaches that can advance mutual priorities.
- Meet teachers more than half way in the beginning—go to schools and learn about their organization and demands. Make benefits and expectations clear. Follow through on your commitments.
- Utilize existing networks and organizational structures (e.g. staff newsletters, calendars). Above all, recognize the power of "word of mouth" -- identify teacher-leaders and highlight program successes in the community.
- Be comfortable with the amorphous nature of this work, it is ultimately about the students and the unique resources and needs of your park and community. Your model may not look like anyone else's -- make it your own, and learn and adapt along the way.
- Partnerships require investment of time; but if they are the right ones, they will pay off in big dividends. Identify partners with mutual goals and skillsets that complement your organization. Be intentional in setting aside time for partner check-ins and crafting a consistent communication strategy that works for all.

A Park for Every Classroom

CASE STUDY

Morristown National Historical Park

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A Park for Every Classroom

Morristown National Historical Park

The Morristown Parks for Every Classroom (PEC MORR) program is an initiative to employ teacher-led, place-based models to enhance the park's current educational programming, engage the broader academic community, and diversify visitor learning experiences. This program consists of a workshop series and teacher toolkit that drive the initiatives and build upon existing educational initiatives (such as our document-centered Primary Source Seminar, stewardship-focused Archival Ambassadors, ranger-led programming, blog, newsletter, and teacher professional development workshops).

Empower educators to navigate and use park resources to design unique place-based learning (PBL) activities.

The goal of the pilot immersion workshop is twofold: 1) To provide teachers with a whole-park perspective (encompassing cultural, natural, historical, recreational, community, and interpretive resources) that will not only reach a wide swath of groups and capture diverse interests, it will empower educators to navigate and use park resources to design unique place-based learning (PBL) activities; 2) To provide a useful model of PBL-centered teacher training for Morristown staff. Morristown National Historic Park (NHP) can boast a full spectrum of resources at one location, and PEC MORR presents an opportunity for gratifying classroom and staff development experiences.

This project is exciting for several reasons. First, in its eighty-year history, Morristown has yet to attempt a whole-park approach. PEC MORR represents the culmination of several years' effort to quantify and disseminate information about the park and provide access to its many treasures. Secondly, this project focuses on local urban schools (a population that the park has underserved) and revives an important partnership with Newark Public School teachers. And finally, the PEC model promises to help Morristown remain a relevant community resource. It uses the workshop-toolkit format to grab the interest of local teachers and urges them to select Morristown from a variety of educational options.

Partner Organizations

The partnering aspect of PEC MORR has been complicated due to the enormous pressures placed on teachers and those

who work with them. While the talented teachers who partnered with the program were dedicated, many of the PEC tasks were too time consuming to add to the teachers' workloads. To meet these and other challenges, the program hired a veteran teacher and Rutgers University Newark educator and outreach coordinator who acted as a committed liaison. She assisted with communication among Newark area teachers and with the development of many of the plans and presentations for our teacher workshop held in July. Secondary partners (partners not involved in the planning process, but brought in to lead a session during the teacher workshop) included workshop presenters from Drew University, Morristown Public Library, and college interns from our Student Conservation Association (SCA) and Cultural Resources internship programs. Other nominal partners (partners who helped with small administrative tasks) were the Washington Association of New Jersey, and Eastern National.

Mission

PEC is helping support the educational mission of the park and its partners. Collaborating with community experts and master teachers is a necessary step toward identifying and understanding community needs and ambitions. The program and the park mutually benefit from shared expertise and experience (this is also a crucial point of PEC and of its previous programs—education must be a mutual effort): this collaboration strengthens professional networks; introduces new perspectives; and brings awareness

Collaborating with community experts and master teachers is a necessary step toward identifying and understanding community needs and ambitions.

In times of small staffs and smaller budgets, the ability to link missions with allied institutions is more important than ever.

The PEC model allowed Rutgers-Newark to offer teachers in the Newark Public Schools another opportunity to move learning outside of the classroom and expand their students' knowledge of local history and career- and college-readiness skill development.

of each other's resources to the respective audiences. In times of small staffs and smaller budgets, the ability to link missions with allied institutions is more important than ever. On the park front, PEC enables Morristown to improve the level of educational programming on-site while supporting in-house education goals and reaching numerous Call to Action goals.

Morristown NHP Education Goals:

- Enhance the mutually defined educational goals and practices of MNHP whereby teachers and staff develop, maintain, and utilize the most current understanding of park resources for the benefit of a variety of audiences
- Leverage the park's resources to inspire teachers to develop educational programs to relate to a diverse community of learners, help teachers meet curricular requirements, and enhance their skills to promote students' individual discoveries
- Use effective communication tools to deliver messages that can be adapted to reach the broadest audiences
- Create new and embrace existing collaborative partnerships that are mutually beneficial, sustainable, and adaptable

Primary Source Seminar Goals:

- Make primary source materials (archival collections, books, images, artifacts, historical sites, etc.) available to young learners so that they may experience history from the source and be encouraged to develop their own research, analysis, and inquiry skills

- Guide students through activities that promote effective and meaningful primary source investigation and cultivate historical thinking skills

Partners' Goals:

The PEC collaboration also helped Newark public school and university partners reach important benchmarks. The PEC model allowed Rutgers-Newark to offer teachers in the Newark Public Schools another opportunity to move learning outside of the classroom and expand their students' knowledge of local history and career- and college-readiness skill development. For example, teachers who worked alongside college interns in the park (tagging and tracking tree growth, working on deer enclosures) gained and could share with their students real-life examples of work opportunities available to students after high school.

In a high-needs school district with at-risk learners, teachers are always seeking to engage students in meaningful content and experiences. The PEC model allows teachers to do that. In particular, the location of Newark in relation to Morristown, and its accessibility by public transportation, allows for a series of visits should teachers choose to use the PEC model in their teaching. It also allows for another critical component in high-needs schools, that of family engagement, to be incorporated as the students can visit the park on weekends and share their knowledge with their families.





Beginnings

Existing Conditions

Prior to entering the PEC pilot, the cultural resources division at Morristown spent more than three years planning and implementing cultural resource-based educational opportunities for high school age students. The division created and developed the Primary Source Seminar (which includes student seminars, a teacher resource blog, teacher reference materials, a mini-lessons series, traveling museum units, and teacher workshops, among other things), received a grant from the National Park Foundation to create and develop the Archival Ambassadors layered stewardship program, presented at professional conferences [for the Society of American Archivists (SAA) and the Mid-Atlantic Regional Archives Conference (MARAC) on the topic park resource use in the classroom], and wrote articles for SAA publications. These procedures served as the model for teacher engagements and the template for event planning and curriculum development. The cultural resources staff was well acquainted with local teachers and school districts and had experience in connecting learning communities with diverse park resources. The park was eager to introduce a teacher-led structure to make existing programming more effective. Cultural resources took the lead on this project, with the intention of introducing teachers to whole-park, place-based learning opportunities.

Developing and Maintaining Partnerships

In the past, the park sought potential partners in a variety of ways—from cold-calls, to emails, surface mail, and networking sources. For several years, the park made partnering a new and vital part of the operating procedure. The park was thus able to draw on its existing policy to maximize reaching new audiences and emphasize the myriad resources at the park.

For this project, the focus was on filling the core roles that PEC required: teacher, partner, and park representative. The Archival Ambassadors program brought in a Newark Public School teacher for the PEC project. This teacher pointed us to a community partner, from Rutgers University Newark, with whom she and her school district had worked on numerous accounts. A park educator (and PEC applicant), took on the role of park representative because she had experience creating and developing educational programs for the division of cultural resources. During the course of the initial planning of PEC MORR, the teacher colleague introduced PEC concepts to various teachers in her school. While there was an initial flurry of interest in the project, keeping teacher partners involved became a challenge because teacher schedules and responsibilities did not always permit them to fulfill the commitment they hoped to make. This complication could be attributed



to PEC commitments (including travel to CLIP) overlapping with the school year. It was difficult to accommodate teachers other than by excusing them from completing planning tasks. As a result, the park took on a greater workload. Had the program started during the summer months, this would not have been as great a problem, as teachers have more time to volunteer. As the community partner also works in education, all parties had problems with timing.

By January of 2012, our PEC planning team was whittled down to a park educator, her supervisor, and the community partner, who served a dual role as teacher and community partner.

Partnership Issues: Communications, Leadership, and Visibility

The PEC team leaders communicated easily. The teacher, community partner, and park team leader understood their roles well and operated effectively. The planning team addressed key issues like current teacher curriculum needs (such as connecting to the Common Core), resource immersion activities, starter and toolkit lessons, teacher recruitment, teacher access

to park collections, and inviting outside community experts. Although parties completed their tasks, they sometimes had difficulty in coordinating meetings and relaying information. Some of this was due to scheduling conflicts and due to the backlog of email communications the teacher, partner, and park had to attend to. To resolve this early on, the team leader/park educator set up a PEC MORR Wiki site for sharing files and information. Unfortunately, this was rarely used by teachers and partners. There was certainly a desire to communicate effectively, but not always a clear path toward doing so. As a result, much of the initial planning, organization, and early evaluation were completed by the park representative alone.

In-house communications were more complex. While there was a desire on the part of the park to create a whole-park education effort, the infrastructure was not yet in place for that to happen effectively. As a result, the PEC team (residing in cultural resources) did not see a lot of voluntary collaboration from other divisions. Although a good number of divisions participated in the culminating teacher workshop activities, they were not involved in much of the planning, recruiting, or developing processes. Some staff members contributed to specific activities, but did not engage in (or support) the entirety of the project. The PEC MORR program did not receive the support it needed to become a visible and viable whole-park initiative. This will be addressed further in the section, Advice to Others & Lessons Learned.

Startup Resources

PEC MORR required a several basic resources: coordinated staff and partner planning time (outside of regular duties), workshop materials (folders, disks to share electronic files, maps, relevant curriculum materials and text books, paper, sample lessons and activities, etc.), prepared workshop presentations, outside community experts, teacher stipend and presenter honoraria, participant transportation (between sites), staff time away from regular duties during workshop and staff to cover duty stations, use of facilities and other accommodations (use of public spaces, tents for outdoor presentations, etc.), refreshments (especially water, as we were asking teachers to hike a bit in the summer), and a developed

Evolution of the PEC Project

The other critical element of the PEC transition was to expand the resources teachers could access, thus thrusting Morristown forward toward a whole-park approach.

Moving from Idea to Implementation

The evolution from the idea to implementation had already occurred to some extent between the first and second CLIPs. The initial plan was to take a program already in place, The Primary Source Seminar, and transition it from a staff-led program (Parks as Classrooms/PAC) to a teacher-led, staff-facilitated program (PEC). The other critical element of the PEC transition was to expand the resources teachers could access, thus thrusting Morristown forward toward a whole-park approach. This aspect would require Morristown to delve into the history the site had to tell, and expand beyond the very narrow encampment tale. At the Morristown Educational Strategies meeting, in October 2011 (where the Morristown Education Goals were devised, see “Beginnings” section), park staff from various divisions decided that in order to reach the largest audience, they would need to diversify the topics of the programming. The park’s natural resources, recreational resources (trails), architectural and institutional history, and diverse archival materials and artifact collections were among the resources that were to be introduced to incite new and meaningful encounters. The teams’ major concern was park relevancy.

Successes and Surprises

Even though the project faced some challenges, there were many positive outcomes:

- Partnership with Newark Public School teachers
- Partnership with community experts from Rutgers Newark, Drew University, and the Morristown Public Library
- Design of “whole-park” teacher immersion workshop, involving many divisions and highlighting a large number of diverse park resources
- Gain of valuable experience and perspective from the master teacher
- A teacher toolkit, to help guide lesson planning and to model effective PBL
- Self-evaluation of the program, conducted by the education intern
- Integration of concurrent educational initiatives into PEC (e.g., Traveling Museum materials and blog)
- Sharing the collection with a broader community
- Introduction of the teacher-led place-based learning model to the Park, as part of the NER PEC pilot



Problems and Challenges

Aside from teacher turnover and funding hiccups, many of the problems and challenges this park faced resulted from internal issues. So much of a process like this, especially at small parks, involves personalities, perceptions, conflicting directives, or elements of all three. The PEC MORR team's experience is that the program (PEC) gets lost in the process of how business is conducted in many parks such as this. These early lessons made the team aware of the lack of some crucial cross-divisional conversations. The team decided to move forward with the scheduled pilot project and address internal issues after the teachers completed a workshop and once the team was ready to perform a comprehensive program evaluation with the guidance of a CLIP leader. This approach allowed PEC MORR to clearly identify problems and find a way to address these with the appropriate park leaders.

Strategic Choices: Turning Points, Transitions

In order to make PEC work despite in-house issues and teacher turnover, the core PEC team continued working on a whole-park program. The program included the educator's toolkit and the workshop agenda would plug-in/recruit appropriate experts (community experts, park staff, interns) where they were needed. The idea remained that through modeling, other park staff could witness teacher and facilitator interactions firsthand and the staff could eventually take their own initiative to lead teacher sessions using the PEC model.

Procedures for Handling Recurring Issues

Multiple changes occurred during the implementation of the PEC model. One was that the concept of the whole-park collaboration, adopted early on, proved very difficult to achieve. Divisions outside of cultural resources, while verbally committed to the concept, had problems in ensuring that staff members were available to work on a regularly scheduled basis with the PEC team. Since educators would be interested in a variety of park resources (beyond those that the Primary Source Seminar had traditionally offered access to), it was important to find a way to continue to include natural, recreational, and interpretive resources among those offerings introduced to teachers. To address this issue, the PEC team proceeded to create a whole-park program and recruited appropriate experts (community experts, park staff, interns) where needed. Unfortunately, this meant that those experts and the content specialist were not involved in the planning and development of the program, but served as guests, presenting individual (but related) sessions. Though true collaboration wasn't possible at the time, it was still important to the PEC team that whole-park participation took place. This rationale was based on the notion that park participants, though not as involved as collaborators, would still benefit from acclimation to PEC concepts. Had whole-park participation been scrapped, it would have defeated the purpose of the PEC MORR objective and made it difficult to initiate crucial conversations with colleagues during the evaluation process. This choice to concede participants rather than true collaborators was the least disruptive route at the time for the program.

The other major change was that of teacher turnover. The initial master teacher and her colleagues were slowly pulled away by other school commitments as the school year progressed. This was initially devastating because the crux of the PEC project was to reach out to a new school district. Luckily, the community partner, who had much experience with this school district, stepped in and served a combined role of teacher/partner.



Patches, Stiches, and Seams

Staff Roles, Functions, and Supervision

Although PEC MORR was being lead/ designed by a museum educator, the existing organization chart presented some confusion about who was “in charge” of the overall initiative. On one hand, PEC had cultural resources representatives leading the program. The cultural resources division took the lead on PEC because of the suggestion from management that the already existing archival education programs would be a good “fit.” The problem arose quickly because within PEC, communication (early e-mailings, letters, notices) went to the interpretation division, not the cultural resources division—where the program was actually being administered. As a result, many of the directives came to the division late; several grants that could only be submitted by interpretation (although written by cultural resources team leaders) were submitted late; communication with partners suffered too because of pre-conceived notions of what each division was expected to do (i.e., adjustments in “chain of command” weren’t made for the PEC project or to accommodate a cultural resource-based team leader).

Since the park had not discussed how a unique program like PEC would operate, confusion about rank and authority unintentionally hampered the process and crucial communications. The evaluation process helped participants eventually navigate sensitive issues like this.

Program Support and Sustainability

While it is evident that as a body, Morristown NHP embraces the concept of whole-park education, in practice, educational initiatives are still expected to run through traditional channels [i.e., Interpretation and Education (I & E)]. This was evident as no procedures are in place to support education outside of I & E, and whole-park education is unprecedented at Morristown. The current structure is limiting, as it only allows programs to function within “divisional boundaries” and ignores provisions for cross-divisional, whole-park initiatives. Thus, although PEC MORR aims to make use of whole-park resources (this includes staff), it fumbles because the park structure does not adequately support this innovation. Because the PEC team leaders

reside in the cultural resources division (and not I & E), PEC MORR has been treated like a cultural resources project, instead of a whole-park initiative. Even so, all funding-related matters still had to go through I & E, because this is the current procedure for acquiring educational funding at Morristown. As a result, the PEC team was not supported as a whole-park program, but as cultural resources program that would occasionally utilize I & E staff for procedural and administrative tasks. Consequently, participants missed deadlines and even notices of available money because those notices went to interpretation and did not always reach the team leaders in a timely manner. Organizational compartmentalization has created unnecessary hoops and consequent setbacks for PEC MORR. Because there was no precedent for whole-park education collaboration or funding at Morristown, the park was unprepared to handle the situation. This was addressed in the evaluation process.

The Current PEC MORR Program

At this time, the right course of action for the PEC MORR team is to reduce our formal participation in the larger PEC program (i.e., CLIPs, travel, formal reports, etc.) while continuing a scaled-back version of PEC on-site. Morristown will continue to offer a teacher-led version of the Primary Source Seminar on a case-by-case basis, and is already working with one of the summer workshop teachers, who has planned a class trip. As a smaller park with fiscal and staffing limitations, it is in the best interest of PEC MORR to stay small at this juncture. The PEC team is busy developing working relationships with two enthusiastic middle school teachers (a greatly underserved educational population there). The plan is to see where these relationships take us creatively and to build upon the programming that results from these collaborations. Morristown will continue to pursue educational initiatives with interns who can impact the PEC program. Morristown will hold off on large teacher workshops and will work exclusively with individual classroom teachers. The primary in-house tasks at hand are to establish procedures and rules for using resources; sort out expectations, perceptions of authority, and individual competencies; and

The PEC team is busy developing working relationships with two enthusiastic middle school teacher.

The plan is to see where these relationships take us creatively and to build upon the programming that results from these collaborations.

to devise a plan for whole-park collaboration and access to education funding. The park is also moving forward to establish a separate education fund through our legislated partner.

Money Matters

The concurrence of starting a new education initiative and the arrival of deep budget cuts nearly crippled the program before it began. The issue of funding was (and is) a great challenge for PEC MORR. There are currently no renewable financial resources for the PEC program. As a park with neither an education endowment to help support new programming, nor a friends group that specializes in fundraising for education, Morristown does not have a Cooperative Agreement in place or a location into which funds, such as education grant money could be placed. The previous channel for directing grant money, the Washington Association of New Jersey sub-account, is no longer valid. This predicament imposes great limitations as it closes doors on potential funding sources. And as a park where over 90% of the base budget is designated for staffing, there isn't much left in the way of funding for education, travel, or staff professional development. This reality greatly impacts PEC MORR's ability to fund programming and participate in CLIP meetings.

Further complicating the issue was confusion that existed among park staff as to what should be funded. One example was whether partner teachers and presenters should receive stipends or honoraria. As a new initiative trying to fairly compensate partners for their valuable work, debates like the aforementioned issue became an enormous source of in-house frustration. For this project, we were able to provide small stipends (in two installments) for our partner/teacher and small honoraria for teacher workshop guest speakers. These were paid by a non-renewable fund source (a Washington Association sub-account). All other teacher, park staff, and intern contributions were voluntary.

Finding funding from outside sources was also challenging. Sources beyond base funding were the Washington Association of New Jersey and Eastern National—both of these options had their drawbacks. The Washington Association of New Jersey is Morristown's legislated partner. However, as such, they are

These tasks will ultimately require input from all divisions, thereby helping to build a whole-park approach for the future.

not a friends group and do not function as one. Their interest is the advancement of George Washington (hence their name) and his role in American history. Naturally, this rather narrow focus makes attempting to promote other topics difficult. In addition to providing funding on their own, The Washington Association also holds several accounts with money that the park generates. This money, held outside the NPS financial system, is available; however, it is limited, and, shifting directives from regional and national offices make accessing that money difficult, time consuming, and not always as simple as one would think it would be. Eastern National, as a source, is very limited as well. Although the process for acquiring that money is straight forward and does not shift as with the Association, it is still a slow process for reimbursement for staff who fund upfront from their own resources. Morristown attempted to work with Eastern National, in 2010, to house and distribute funds from a National Park Foundation Stewardship grant. This arrangement was complicated for both parties and supplies were purchased in such a delayed fashion that some weren't delivered until after our program had begun. When supplies (such as computers) arrived, they did not comply with NPS IT property and software regulations, and had to be "reprocessed", in-house.

Specific Financial Breakdown for Pilot

The park's base budget covered funding for the PEC partner and staff representatives to attend CLIP meetings (travel, lodging, per diem, and travel pay). Morristown did apply for and receive an NPS Small Impact Transportation grant that was used to rent a shuttle for the teacher workshop sessions. This was helpful, as the park is divided into four separate physical locations. Teacher/partner stipend and workshop participant honorariums were funded by a small (nonrenewable) education account. Our park-legislated partner, the Washington Association of New Jersey, provided assistance with reimbursing staff for expenditures of private funds. The PEC team has also applied for in-house grant money through the PMIS process, to implement education needs.

Bridging Cultures

The park had to learn some new aspects of communication when dealing with teachers.

Rules, Values, Language, and Terminology

The rules, values, language, and terminology have been drawn mostly from the teaching community and the precedent set by other in-house and NPS education initiatives (Primary Source Seminar, Archival Ambassador, Curriculum-Based fourth- and fifth-grade program; likewise PEC, FEC, PAC, etc). In our experience, using the nomenclature of the intended audience is a best practice when reaching out to a particular community.

The target audience, Newark Public School teachers, was part of an underserved school district, and the park had to learn some new aspects of communication when dealing with teachers. Though Morristown has worked with Newark Schools as recently as 2002 (a curriculum-based program was developed at that time), the park was more familiar with local, affluent school districts. A teacher/partner was exceptionally helpful at aiding the PEC MORR team in navigating school culture and

developing this new relationship. As a person who works with Newark Schools in various capacities, she was able to pinpoint and explain leadership and other internal issues (including but not limited to communication and commitment, revolving curriculum goals, and insufficient teacher training) that we would not have otherwise been able to read. Likewise, she became familiar with in-house park culture and red tape, and thus the team quickly learned who best to address certain issues.

Decision Making

Everyone involved in PEC had input into the process, although in actuality the team leaders had the most input and made the decisions on behalf of the park. Other park educators and the Chief of Interpretation made occasional contributions, and the workshop participants made all decisions related to their individual presentations.





Evaluation: Learning from Your Program

The intern served as a “secret shopper” of sorts, both engaging in professional development activities and using observation to evaluate the service and teacher interaction firsthand.

The workshop did not merely affect a shift in teachers’ approach to lesson planning, but also demonstrated the effect learning at the Park would have upon students.

The PEC team employed several evaluation methods during the development stages and throughout the teacher immersion interactions. For the most part, the team used the planning tools and guides provided by the CLIP for basic organizational and structural evaluation. The team also used worksheets, guides, and workshop agendas from other successful pilot programs to gauge the feasibility of its own program. During the teacher immersion workshop, the team invited a Seton Hall education intern to serve as a participant evaluator for the program. The intern served as a “secret shopper” of sorts, both engaging in professional development activities and using observation to evaluate the service and teacher interaction firsthand. She produced a detailed report of her experiences and findings. The team also employed the *Head, Heart, Hands* tool (a format that gauges voluntary reflection rather than imposing directed questionnaires) as a way to strategically, yet legally, attain survey data.

Impact for Students, Teachers, Community Partner, and the Park

For MORR, the primary impact was to show how much could really be accomplished if the internal NPS approach to education could include the natural and cultural resource divisions (a whole-park approach). When discussing the impact of the natural resources on city students, the Rutgers partner commented that, “to Newark kids, Morristown is Sequoia”—referring to the park on the west coast. The cultural and natural resources of Morristown have the potential to attract students and teachers who have never even considered a visit to the park.

Programs like PEC help introduce parks to new approaches to using their resources. PEC has potential to revise the limited and cautious approach to education at Morristown and to expand educational opportunities for the foreseeable future. When discussing impacts and potential impacts after our PEC teacher workshop, our education intern/pre-service teacher from Seton Hall observed: “The workshop did not merely affect a shift in teachers’ approach to lesson planning, but also demonstrated the effect learning at the Park would have upon students. The opportunity to give students, especially from urban settings, a sense of space and place (geography) alongside a sense of change and continuity through time (history), makes the Park an invaluable asset to engaging and educating students about key concepts and themes of social studies.”

Teachers made similar observations during a *Head, Heart, Hands* free writing exercise:

- “Looking at an event or place from the perspective of the ‘ordinary people’ who were there helps students understand that extraordinary things are done by everyone.”
- “How practical all the lesson plans were—they encouraged me to want to use parks in my future classrooms.”
- “Seeing the huts, house, and gardens really enhanced the mental images I had about colonial life.”
- “The natural beauty of the park, which we don’t get to see in our city that often.”

...helping teachers to feel empowered to design instruction that best meets the needs and interests of their students, that most clearly demonstrates the value of PEC...

- “Bringing students to the park to help pass on a passion for the past.”
- “Wondering how my students could get involved in getting sites in our city designated as historic.”
- “How much of our understanding of history is still evolving.”

Teachers clearly benefited from their on-site work at MNHP and indicated that they thought the same would be true for their students. For example, one activity, reading excerpts from the diary of Continental Army soldier Joseph Plumb Martin, is easily done in a classroom. But to read the diary while standing in (or sitting on the dirt floor of) a reconstructed soldiers’ hut creates a new and different—and more powerful—learning experience for the teacher and students who do it. It is that type of experience, along with helping teachers to feel empowered to design instruction that best meets the needs and

interests of their students, that most clearly demonstrates the value of PEC in our work at MORR. PEC partnerships have also made apparent the potential for future collaborations and cross-institution learning opportunities. The partnership of members of the Rutgers-Newark community of scholars and programs for students also allows for easy implementation of PEC learning. Teachers in the Newark Public Schools have multiple ways to access the university’s historians, scholars of literature and other humanities, scientists, geographers, and agriculture program leaders to help build content for their lessons for PEC. For example, a professor in the Federated Department of History of Rutgers-Newark and New Jersey Institute of Technology (NJIT) could be invited to speak on the role of the Civilian Conservation Corp (CCC) in conservation efforts at parks in the 1930s, or an urban historian could be called upon to trace the history of the city’s own efforts at preservation of historic sites.

Looking into the Future

Anticipated Success

Anticipated Successes include making new contacts, networking, and forging new partnerships; finding new teacher-partners; introducing tremendous resources to the community; interacting further with other NPS staff to learn about their individual programs and approach; and broadening our internal understanding of presenting education programs that using the collection.

Anticipated Challenges include funding; buy-in by all relevant park staff; finding new teachers to commit; pulling park staff away from their more traditional duties; and continuing to allow a qualified division (albeit one not traditionally recognized as educators within the NPS) to manage education initiatives. The issue of teacher recruitment remains a challenge for many reasons, including pressures put upon teachers to connect all learning to NJ Core or Common Core learning standards. Many teachers may not readily see the possible connection with PEC work. The goal in the teacher workshop was to make those connections explicit. Teachers walked away with a good understanding of how it could be done. Other factors, including school bus availability,

the principals’ willingness to approve out-of-school time, student absenteeism, time spent on test preparation, and other district- or building-specific issues may create challenges when teachers try to design and create time for PEC learning. Our best suggestions for teachers emphasize a combination of in-class, virtual, and on-site learning to maximize the benefits of PEC teaching and learning.

ADVICE TO OTHERS & LESSONS LEARNED

- If PEC is your first whole-park education attempt, make sure all parties are clear about the project expectations, how programming will operate and be funded cross-divisionally, and establish clear definitions of terms like *collaboration* and *participation* (and what responsibilities those entail).
- Make sure you have unified programming policy (rules about class size, teacher engagement level, chaperones, etc.) and a park-wide protocol for resource use beforehand. This will prevent a lot of headaches.
- A whole-park approach entails being willing to make provisions to accommodate “non-traditional” park educators and community

Our best suggestions for teachers emphasize a combination of in-class, virtual, and on-site learning to maximize the benefits of PEC teaching and learning.

Don't rush the process

Have realistic expectations of teacher/community partnerships.

experts, park-wide education funding access, park-wide collaboration, and deviations from Long Range Interpretive Plan, Cultural Resources Plan, founding legislations, and traditional programming.

- Avoid large-scale commitment until internal limitations are established. For many small parks, “educator” is a tacked-on role, so it is important to acknowledge how time and responsibilities will be divided.
- Don't rush the process. When working under the constraints of a pilot initiative, it is easy to feel pressured to emulate other parks or projects, but it is important to realize that each park is unique and has its own unique limitations.
- Timing is important. Make sure the heavy planning and work for the project doesn't coincide with other obligations for staff, teachers, or partners.
- Have realistic expectations of teacher/community partnerships. Be cognizant of their contributions and respectfully honor their service to the park—acknowledgement, honoraria, and other small tokens of appreciation go a long way.
- Having a “neutral” party, like an education specialist (not supervised by any one division) might resolve a lot of “turf” issues. This person could work between divisions to ensure the full potential of park resources is being met. A neutral party can better unify staff and facilitate whole-park (staff) training.
- Startup PEC programs might get more mileage out of their programs if they collaborated with the Teacher-Ranger-Teacher (TRT) program. I would like to see TRTs being hired to help train teachers in their schools how to use park resources creatively and independently.



A Park for Every Classroom

CASE STUDY

New England National Scenic Trail

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A Park for Every Classroom

New England National Scenic Trail

What is the PEC Program? Newly designated as a national scenic trail in 2009, the New England National Scenic Trail (NET) has the advantage of learning from the outreach and school programs of other long-established national scenic trails, most of which were designated more than twenty-five years ago. One of the opportunities acknowledged by all of the national long-distance trails is the vital need to make authentic connections with the communities that host these trails. There is a growing realization that in the long run these “trail communities” are the real sustainers and stewards of any trail—without their support and interest, the trail will cease to have relevance to a broad audience and will be less able to meet its mission of providing the highest quality visitor experience while sustaining the natural and cultural resources through which it passes.

The NET has incorporated some of TTEC’s trail-specific learnings into its PEC work, as part of the adaptation of these models to serve as the prime catalyst for establishing important community relationships.

The best way to select a collaborative project is to look at the goals of all the partner groups, and to design the project around that from the start.

One of the most promising approaches to nurturing this trail-community relationship is being developed and refined by two related place-based service-learning programs, *A Park for Every Classroom* (PEC) in the northeast region of the National Park Service, and the Appalachian National Scenic Trail’s *Trail to Every Classroom* (TTEC) program. The NET successfully applied to become a PEC site, and has incorporated some of TTEC’s trail-specific learnings into its PEC work, as part of the adaptation of these models to serve as the prime catalyst for establishing important community relationships.

Partner Organizations

The Appalachian Mountain Club (AMC) and Connecticut Forest & Park Association (CFPA) are designated partners to manage the New England Trail in Massachusetts and Connecticut, respectively. As AMC already has experience with these place-based service-learning models in Massachusetts through its work with the Appalachian National Scenic Trail and TTEC, NET decided to focus its initial work with PEC in Farmington Connecticut, a community along the NET, partnering with CFPA and the Farmington Alternative High School (FAHS). FAHS is an alternative high school focused on youth in need of hands-on experiential work and an academic learning environment. It functions

as an administrative unit of Farmington High School, with separate faculty and facilities.

Cool and Exciting

The most exciting outcome of NET’s involvement with PEC has been the clear demonstration that the best way to select a collaborative project is to look at the goals of all the partner groups, and to design the project around that from the start. By doing this, it’s easier to leverage commitment, time, and resources from all the groups because they’re accomplishing something that very much matters to them. It’s all about finding that sweet spot where all missions and goals intersect. For example, CFPA has been developing videos for several years as part of their Interpretation and Education programming. Working with high school students to develop a video was a very positive and natural next step, yielding a product that was of value to them. From FAHS’s perspective, creating videos is a great way to engage youth in focusing on a range of academic objectives. The result is that NET, CFPA, and FAHS all have a stake in making the outcome successful. NET’s thinking about how it approaches partnerships has changed substantively from this experience. Previously, NET assumed that it would have to lower its project goals when working with students, and now it is clear that it does not.



Beginnings

Given that NET is still in start-up mode, with very limited staff, and given the early stage of its partnership with CFPA, partnering with private and/or alternative schools would be the best bet.

Hearing from other parks in the CLIP helped gel the idea of focusing on doing projects vs. teacher trainings.

Existing Conditions

The project began with NPS and CFPA agreeing to attend the initial PEC workshop in Lowell. Then, they agreed to adapt the model through adding some TTEC elements in a pilot project for one community along the NET in Connecticut. NPS saw the initiative as a possible way to strengthen links between the NET and the trail communities and more broadly to raise public awareness of the trail and attract new visitors, especially children and their families. CFPA has an existing environmental education program based on Project Learning Tree and was interested in considering ways it could support the NET through this new approach. From the FAHS perspective, the school wanted to build on the success of its partnership with Winding Trails, the local nature center.

Developing and Maintaining Partnerships

Following the Lowell workshop, CFPA's environmental education coordinator organized a daylong teacher-training workshop, which included a special focus on the NET as part of its ongoing Project Learning Tree program. The goal of the workshop was to introduce the NET as a potential learning context and resource for teachers and recruit teachers for the pilot. Feedback from teachers at the training workshop quickly confirmed what NET

learned in Lowell about the big challenges of working with traditional public schools in Connecticut: transportation, resources, and curriculum make it very difficult. Given that NET is still in start-up mode, with very limited staff, and given the early stage of its partnership with CFPA, partnering with private and/or alternative schools would be the best bet. The FAHS teacher who attended the teacher-training workshop expressed interest and agreed to participate.

Partnership Issues: Communication, Leadership, and Visibility

The second workshop at Fort Wadsworth, attended by NPS and FAHS, helped to define a specific direction and focus for the project. Hearing from other parks in the Community of Learning, Inquiry, and Practice (CLIP) helped gel the idea of focusing on doing projects vs. teacher trainings. It also cemented the importance of face-to-face communication, as compared with relying on phone and email.

Startup Resources

The initial resources were the commitment and interest of NPS and CFPA, as reflected in their ongoing cooperative relationship to manage the NET, and the willingness of FAHS to take the next step by attending the subsequent workshop at Fort Wadsworth.

Evolution of the PEC Project

A turning point came during a frank discussion of each partner's goals.

The meeting helped these partners see new ways to work with schools which they had not previously considered, while meeting their organizational goals.

Moving from Idea to Implementation

After agreeing to work together, the partners hit a barrier when it came time to consider specific directions. A turning point came during a frank discussion of each partner's goals. When it came down to brass tacks, partners kept asking each other "what do you want to get out of it?" All agreed that they were most interested in starting small and really understanding what works for each partner. Rather than organizing additional teacher training sessions, they agreed to explore and implement a series of specific pilot projects: a Tales from the Trail video, interpretive signage with QR codes for birding on the NET, and the NET Poetry Festival.

Success and Surprises

After initial partnership meetings, a remarkable moment for NPS and CFPA staff came when all gathered for a faculty meeting at FAHS. Members were honored by the presence of several school leaders including the principal and vice principal, as well as the full faculty from the alternative high school. They greeted participants with lunch and a nice cake and were very engaged throughout the full meeting, including offering ideas for the video and QR code projects.

The meeting was eye opening for NPS and CFPA. It helped these partners see new ways to work with schools which they had not previously considered, while meeting their organizational goals. CFPA reported that they have long wanted to develop meaningful relationships with schools but hadn't found an effective mechanism before now. Both NPS and CFPA were surprised and pleased to receive such a warm welcome at the high school.

Problems and Challenges

As a relatively new NPS site, with only one half of a full-time dedicated staff position, finding the time required for meaningfully contributing to a partnership has been difficult. NET gained some solid footing from the work this year that will contribute to the evolution of the park in the future, but it is exploring ways to limit the staff commitments in order to ensure the success of those ventures they do embark on.

Lessons Learned about Early Transitions

The right model for the NET is to start small, focus on quality projects and then evaluate next steps with all partners. NPS and CFPA have chosen to work with one school and experiment with a range of carefully considered projects to help learn what works and what is effective.





Patches, Stiches, and Seams

Staff Roles, Functions, and Supervision

NPS is assisting with funding and acting as the operational link between CFPA and FAHS; FAHS is taking the lead in program design, project implementation and evaluation; CFPA is identifying key resources in the community and region to support specific projects, including the expertise and assistance of their volunteer members. As the program evolves, NPS and CFPA will also help market the program successes.

The Current PEC Program Model

NET is currently in the midst of testing the partnership in action on the three projects

they have selected: the Tales from the Trails video, interpretive signage with QR codes for birding on the NET, and the NET Poetry Festival. The video integrates historical and natural resources through a focus on a historical personage (Will Warren) on the trail. CFPA is providing their usual videographer, who is working from a storyboard and script developed by the students, and edited by him. The QR Code project involves trailside signage, with QR codes focused on birds found along the trail, scanning to information about the bird and its call. Based on the students' inspiration, the signs will be shaped like birdhouses.

Money Matters

So far, each partner has offered in-kind staffing and space for meetings to support the program. NPS recently received approval for funding support through the Connect Trails to Parks program, which is a strong show of support for the approach. As the program evolves, NPS and CFPA will evaluate other funding options.



Bridging Cultures

Staff report that they are very happy with the way the project is going; they like that there is an open environment where folks feel okay saying ‘this part isn’t working.’

Participants intentionally build this approach into the work by scheduling time for feedback and ongoing dialogue into our planning meetings.

Rules, Values, Language, Terminology

Recognizing that, as a school, a federal agency, and a state agency, the NET partners each have different missions, cultures, languages, and timetables; all agreed at the outset that they would continually check in with each other: “How’s this working for you? Is it meeting your needs?” From the beginning, everyone immediately benefitted from it, and they have continued with this approach. Both FAHS and CFPA staff report that they are very happy with the way the project is going; they like that there is an open environment where folks feel okay saying ‘this part isn’t working.’

Decision-Making

All partners agreed that “going slow to go fast” was the best approach, recognizing that the partnership itself is the most important aspect of the program. They all have much to learn about the operation, goals, and culture of each organization. All three organizations have input into the program and they evaluate its usefulness and value at each step. Participants intentionally build this approach into the work by scheduling time for feedback and ongoing dialogue into our planning meetings.

Evaluation: Learning from Your Program

Though partners received materials on evaluation relatively early on in the PEC trainings, they waited to develop an evaluation plan until they were more clear about what direction the project work would take. In hindsight, it would have been better to design the evaluation very early on and integrate it into whatever the project turned out to be. This approach is especially important for groups with limited capacity, as an integrated evaluation yields greater insight for less overall effort, as well as offering formative information to shape project design and implementation.

Impacts on Students, Teachers, Community Partners, and the Park

Although the evaluation is not yet completed, the process of developing the evaluation plan has already had a decisive impact on the program design. There were two valuable insights related to evaluation questions gained at Fort Wadsworth which opened the NET's eyes to the idea that the program was about more than simply devising projects that were effective from a student's perspective—rather, that the projects should be of benefit to the public lands and community partners as well. The first is that not only is clarity about each partner's mission and goals critical to developing successful program activities and projects, it also injects vital energy and momentum into the mix. By designing projects that meet the needs of all three partners, CFPA, FAHS and

NPS, the interest and commitment of all three was enhanced. Secondly, as far as possible, evaluation protocols should be part of the critical path of the project, as opposed to anything that is perceived as extra or superfluous.

In advance of having completed the planned evaluation, the NET can report the following:

Students: Two significant pieces of qualitative evidence that our project is having a large impact on the students exist. At one point in doing the research for the script and storyboard for the video, the students felt overwhelmed and came close to giving up. The teacher chose not to intervene and the students rallied, coming to the conclusion on their own, without her input, that though the project was difficult, it was very valuable and worth the effort. At a later point, near the end of the script writing, the teacher tried to wrap things up and move on to the next phase and the students protested, saying “No, we have to do the fact checking.” These were big accomplishments for these alternative high school students, for whom academic focus doesn't always come naturally.

Teacher: The lead FAHS teacher reports that this project has provided an engaging structure for the material she is covering. Though a lot of work, she has found it to be a valuable teaching opportunity.

Community Partner: CFPA staff report that they have tried multiple ways to develop links with specific schools but had not, before this project, moved beyond professional development offerings. They are pleased to have found an alternative way to meet their program needs with a school in their region.

Park: As a relatively new long-distance national scenic trail, the NET has a vital need to make authentic and meaningful connections with communities along the trail. Its involvement with PEC has helped to accomplish this by enhancing the working partnership with its key partner, CFPA, by building what hopefully will be an enduring relationship with a school along the trail, and by ensuring the completion of quality natural and cultural history interpretive products that will be of real value to trail users.

By designing projects that meet the needs of all three partners, CFPA, FAHS and NPS, the interest and commitment of all three was enhanced.



Looking into the Future

Go slow to go fast.

Incorporate evaluation from beginning of the planning stages of the project.

The New England National Scenic Trail has not yet decided what form its community engagement work will take next year and into the future. They are still in the midst of the core projects of developing the videos and QR code. At the completion of this academic year, the intent is to sit down with partners and assess progress, after which NET will determine the next steps. Possibilities include continuing the partnership with CFPA to expand beyond FAHS's alternative program and work with the rest of the high school. In the Massachusetts section of the NET, the NPS Connect Trails to Parks funding is developing a partnership with a regional environmental center, the Hitchcock Center. The approach is to integrate the NET into programs that the Hitchcock Center provides, as the NET runs right through Amherst, where they are located. NET will certainly share its successes in Connecticut with them so they can build on any ideas that fit. In addition, AMC is keeping apprised of progress in Connecticut, with an eye to expanding into Massachusetts NET communities.

Anticipated Successes

NET is enthusiastic about the final products of the video and QR codes, and anticipates that they will be well-received, resulting in a strong, positive educational experience for students; and cementing CFPA's interest in working with schools using this approach in the future. This success will be a strong step forward in visibility and public awareness and use of the trail.

Advice to Others

Go slow to go fast—don't take on too much, especially in the early stages of learning to work together as a partnership.

Focus on strong and positive communication among all partners. Build in time to check in with each other from the beginning and throughout the project to ensure that the needs of each are being met.

Gain clarity about each partner's mission and goals. This is critical to developing successful program activities and projects and helps sustain momentum.

Incorporate evaluation from beginning of the planning stages of the project.

Design projects that meet the needs of all partners to enhance the interest and commitment of all.

A Park for Every Classroom

CASE STUDY

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A Park for Every Classroom Salem Maritime National Historic Site

What is the PEC Program? At the Salem Maritime National Historic Site, A Park for Every Classroom (PEC) is a professional development program for K–12 teachers of all disciplines, based on an approach of teaching and learning called Place-based Education (PBE). Designed to inspire and re-fresh educators' passion for teaching, this program instructs how to use the schoolyard, community, public lands, and other special places as resources to teach concepts and skills across the curriculum. PEC aims to build collaborations among National Park Service staff, local community partners, and teachers to engage students in place-based learning that promotes stewardship.

As a result, only two of the six PBE projects are related to SAMA, the four other projects are grounded in the particular attributes of a place that was meaningful to the teachers and the concepts and skills they need to teach.

This idea represents a real a departure from traditional park professional development but reflects current thinking about advancing the national park idea.

"The findings are clear: place-based education fosters students' connection to place and creates vibrant partnerships between schools and communities. It boosts student achievement and improves environmental, social, and economic vitality."

-From Place-based Education Evaluation Collaborative. 2010. *The Benefits of Place-based Education: A Report from the Place-based Education Evaluation Collaborative* (Second Edition).

Six place-based projects emerged out of the Salem Maritime (SAMA) PEC program and the weeklong professional development and teacher immersion workshop. *A Coast for Every Classroom* (CFEC), was held at SAMA, July 30-August 3, 2012. The workshop offered educators a way to learn about PBE and the value of national parks and other public lands—but in a way that works for them. The workshop was designed so that teachers could envision PBE at the national park but could also transfer the educational approach to their own "place." As a result, only two of the six PBE projects are related to SAMA, the four other projects are grounded in the particular attributes of a place that was meaningful to the teachers and the concepts and skills they need to teach.

This idea represents a real a departure from traditional park professional development but reflects current thinking about advancing the national park idea. The team took inspiration from the following:

"Public lands have tremendous potential to contribute to education and quality of life in our communities. If we can get young people thinking about not only the future of their parks and forest but also the future of their local communities, that's the beginning of lifelong learning, and it's also cultivating stewardship."

-Nora Mitchell, Director, Conservation Study Institute (Retired), MABI website, FFEC "

Partner Organizations

Essex National Heritage Commission (ENHC)
ENHC is the nonprofit management organization for the Essex National Heritage Area. The Commission's mission is to promote and preserve the historic, cultural, and natural resources of the ENHA. As a main partner in the PEC program SAMA staff works in cooperation with ENHC to develop, implement and promote the PEC program throughout the ENHA.

Salem Public Schools (SPS)

SAMA has been building a relationship with SPS over the last few years. SAMA has worked to implement the PEC program and establish connections with the Superintendent, principals, curriculum coordinators, and several teachers. The education community has responded enthusiastically to PEC, although the park would like to see an increase in the amount of Salem teachers participating.

Salem State University (SSU) and Northeast Regional Readiness Center (NRRC)

SAMA has been working with SSU for many

years. SSU and NRRC seek to improve teaching and learning, and identify new approaches for meeting children's needs in and out of school. Recent collaborations with faculty and NRRC staff have led to professional development opportunities for NPS staff, promotion of the education and interpretive programs, and a visit of prospective teachers and School of Education faculty to participate in SAMA's education programs. SSU and the NRRC help to support and promote the PEC program. SSU approved the workshop as a graduate credit course.

KIDS Consortium

KIDS (Kids Involved Doing Service-Learning) Consortium is a nonprofit organization that strengthens service-learning collaborations by preparing and connecting students, educators, and community partners. SAMA partnered with KIDS to assist in planning and facilitation of the workshop as well as instructing participants on the KIDS model of service-learning.

Salem Sound Coastwatch (SSC)

SSC is a non-profit coastal watershed organization that works with government agencies, businesses, other non-profit organizations and citizens from Salem and

area communities to achieve the mission of protecting and improving the environmental quality of Salem Sound and its watershed through municipal partnering, scientific investigation, education, and stewardship. SAMA's partnership with SSC continues to grow as they serve as experts in the area of natural resources.

Schooner Fame

The Captain and crew of Schooner Fame have fostered an initiative with SAMA to offer curriculum-based programs to Salem's grade 5 schoolchildren. They have collaborated to provide sailing programs to teachers as part of professional development workshops and training for National Park Service staff and volunteers.

Northeast Regional Office Division of Interpretation and Education and PEC CLIP

The Program Manager for Partnerships and Program Development is overseeing implementation of the pilot PEC program at each park. The Program Manager and other PEC team members (especially SAMA's mentors at MABI) provide timely check-ins, additional training, and support for the implementation of the PEC program.

Beginnings

One teacher expressed it in this way: "This was an excellent collaboration of a variety of organizations, modeled to teachers. It was great exposure to a variety of resources that I wasn't aware of, or would have considered."

Existing Conditions

SAMA's major partnering organization is the nonprofit Essex National Heritage Commission (ENHC), whose mission is to promote and preserve the historic, cultural and natural resources of the Essex National Heritage Area (ENHA). ENHC has the potential of connecting teachers with cultural, natural, and historic institutions and resources within the region. SAMA's vision for PEC was to go beyond the borders of the site and expand the program so that teachers and students would practice PBE in their own communities using the resources ENHA (which encompasses all of Essex County).

Developing and Maintaining Partnerships

At the time of PEC's beginning in 2011, SAMA's Acting Superintendent helped the team to think big, be more inclusive, and open up to a much wider audience. The team went back and forth about whether they should just

target SAMA resources for the basis of the PBE projects and the Acting Superintendent pushed the envelope for thinking big. Hence the reason SAMA expanded the PEC program into a broader theme, choosing to title the teacher workshop, A Coast for Every Classroom. This allowed for the inclusion of resources that could be used by teachers that were not only in Salem, but within ENHA. Also, the PEC team was under the impression from the Acting Superintendent and the FEEC YouTube video (which the PEC team watched several times to get a sense of direction and validation) that the PEC model could be adapted to different ecosystems (A Desert for Every Classroom, etc.).

An education consultant joined the team as the community partner representing ENHC. However, the partnership was somewhat artificial. The consultant was already working with SAMA and being paid by NPS funds



It was very important to have a teacher involved in the process, helping to set the tone and bring an important perspective both as a teacher in the community already engaged in PBE and as a lifelong resident of Salem.

through a cooperative agreement with ENHC. The consultant knew the park, ENHA, Salem State University faculty, and had worked with some of the community partners thought to make good collaborators. The consultant served as a bridge between SAMA and ENHC as well as between SAMA and Salem State University (SSU). Without someone in that role, the PEC program would not have been able to offer graduate credit through SSU. While all hesitated to expand the consultant's role into representing the interests of ENHC—doing so allowed the program to be more professional and formalized. One teacher expressed it in this way: “This was an excellent collaboration of a variety of organizations, modeled to teachers. It was great exposure to a variety of resources that I wasn’t aware of, or would have considered.”

A Salem teacher joined the PEC team as the Teacher-Partner. The teacher had worked with SAMA previously and was a Science Integration Specialist at one of the elementary schools in Salem. The teacher's love of the park and her expertise in the area of science were highly valued and helped to make the program interdisciplinary. It was very important to have a teacher involved in the process, helping to set the tone and bring an

important perspective both as a teacher in the community already engaged in PBE and as a lifelong resident of Salem. This strong foundation and spirit of collaboration helped to bring other partners on board.

The team went to trainings together, which was beneficial and integral to the design of the workshop. Traveling together allowed for crucial time while the team could discuss ideas. The consultant could then synthesize the team's thoughts and upon returning home, articulate them in a document. This process proved very worthwhile and allowed for the continual refinement of ideas.

Partnership Issues: Communication, Leadership, and Visibility

Ultimately, the park was responsible for implementing PEC and making it a success. But the PEC team worked together to make this possible. The education consultant and the park held planning meetings and communicated by phone and by email. The team capitalized on past and existing relationships, although some were new. The team spoke with a variety of people, community members, Salem State University faculty, teachers, parents, and community organizations. A PEC handout was developed to articulate the program, which was helpful when approaching partners.

The team focused on planning the teacher workshop and looked to partner with organizations that had the content knowledge and skills in areas that they did not. The team relied on partners and looked to harness the expertise of others. This also allowed the teachers to see that they do not have to be experts in all content areas; relationships and partnerships are key to the success of any program. One teacher made note of this on her evaluation, “It was so valuable to have speakers, presenters with such diverse backgrounds. When I had questions after the different presentations—there was an expert to help me out.”

Ideas about the structure and content of the teacher workshop took a long time to develop and flesh out. The team members wondered whether to narrow the workshop by discipline or grade level, but were inspired by the idea that the program wasn't just for

The team relied on partners and looked to harness the expertise of others. This also allowed the teachers to see that they do not have to be experts in all content areas; relationships and partnerships are key to the success of any program.

students at a particular grade level or topic of study. The workshop was intended to inspire, inform, and benefit the teachers—the teachers would be the learners. So if there were, for example, a social studies teacher who didn't think the science portion applied to her, the team helped her to imagine how it could. This approach was helpful as one teacher wrote, "My teaching practices are so much stronger as a result of the workshop. The PBE project we develop will create new curriculum and enthusiasm in so many academic areas."

The PEC team decided that each day of the workshop would have a particular focus, emphasizing a different skill or subject area. The team had more expertise in history than with natural resources. Therefore, the team relied heavily on two partners to plan and execute the natural resource day: the Executive Director of Salem Sound Coastwatch and a biology professor at Salem State University. It was the first time these two particular organizations worked this closely together. Essentially they were given guidance of what the team was looking for, but the two leaders planned the day with support and facilitation from team members. Many teachers initially were a bit wary about this day. But, in the end, they noted those experiences (salt water seining in waders, testing water quality, sampling organisms from a river in waders, walking on a salt marsh) as when they had their "ah-ha" moments. As one teacher noted, "Pushing us outside of our comfort zone has value."

Another topic that park staff did not initially include in the workshop was service-learning, because they had little expertise in it. In the *Learning to Make Choices for the Future* manual, service-learning is described in this way, "While service-learning is an important component of PBL, not all service-learning projects are grounded in local PBL experiences." The PEC team was concerned about overwhelming the teachers (and the team) by introducing them to too many educational approaches at one workshop. However, some team members had the opportunity to take a service-learning workshop with KIDS Consortium and were blown away by the skill and expertise in facilitation and reflective practice of the KIDS staff. The team decided KIDS Consortium should be involved, especially on

the last day to facilitate planning time for the teachers. In turn, KIDS staff were intrigued by how PEC had a unique ability to marry "place" with service-learning practice. They were not part of the initial budget, so SAMA's education specialist made the decision to cut the number of teacher stipends to pay for their services. KIDS Consortium felt the partnership was mutually beneficial and also secured some funds to work with the PEC team during the planning stages. The PEC team wrestled over the decision to reduce teacher stipends, but in the end, it was the right decision. Plenty of interested participants stepped forward, even without stipends. Instead, teachers who wished to implement a PBE project during the 2012–2013 school year were able to compete for either a \$300.00 (individual teacher) or a \$600.00 (a team of two or more teachers) stipend. Teachers had to submit a PBE Project Plan that was graded with a rubric designed in-house.

Startup Resources

Salem Maritime was in a transition with both a new Chief of Interpretation and Education and Superintendent. There was existing funding for the education consultant to continue on through the fiscal year, but in order to fund the professional development at the scope in which it was designed, a grant would be absolutely necessary.



Evolution of the PEC Project

The intentional structure of the teacher workshop—how the PEC team included not just varied content, but varied activities, so that participants could be immersed in and reflective about good place-based practice.

The idea of teachers implementing the program in whatever way would work the best for them was finally embraced—even though it meant that teachers might not choose to implement a project at SAMA.

Moving from Idea to Implementation

It is important to emphasize the intentional structure of the teacher workshop—how the PEC team included not just varied content, but varied activities, so that participants could be immersed in and reflective about good place-based practice. This was a key piece to the program's success. The team modeled activities and practices for teachers to use with their own students and continued to support the teachers as they implemented PBE projects. The PEC team treated the teachers as experts regarding their students and the curriculum outcomes they knew they had to meet. Although the workshop was meant to nurture and inspire the teachers beyond their professional responsibilities, the workshop provided opportunities for teachers to learn from each other and for facilitators to learn from them too.

The PEC team believed that by creating a weeklong experience for teachers, it would have a transformative effect on them, and teachers in turn would want to facilitate a similar experience for their students. As the education consultant stated, “We sought to create a deep enough connection to make the teachers feel that they want to be stewards.” One of the CFEC teachers put it this way:

This course opened my eyes to place-based learning. I realized how important this method of teaching was when I found myself excited to be outside of the classroom digging on the beach. I was learning, exploring, and engaged in my surroundings. Isn't this what my kids would experience if I took them outside the classroom more often? I can't wait to see the excitement and curiosity in my students when I take them out to explore our community's lakes and river this year.

-CFEC Participant, 2012

Successes and Surprises

During the planning of workshop, the team felt it was going well and it was going to be a good workshop, but the week exceeded expectations. Nothing was more surprising than the wrap-up on the final day, when some of the teachers cried! (Yes, shed tears!) A teacher wrote in the evaluation, “This is truly the best

program I have ever taken—it was so well done, pertinent to my interdisciplinary aspirations and so positive.”

Another big surprise and success was the expansion of the program from being park-centered to allowing the teachers to implement a PBE project in their own community. Although there were mixed feelings from SAMA's education specialist, the idea of teachers implementing the program in whatever way would work the best for them was finally embraced—even though it meant that teachers might not choose to implement a project at SAMA.

Problems and Challenges

The initial launch of the PEC program to get the local education community interested, engaged, and onboard with PEC did not really pan out as expected. During the Schooler Festival over Labor Day weekend, 2011, ENHC offered free spots on a fundraiser cruise aboard Friendship of Salem to Salem principals, curriculum coordinators, and some additional lead teachers and members of the Salem Education Foundation. Some did come, but the participants who came did not necessarily end up sending any teachers from their school to the CFEC workshop. This was due in part by the Turnaround process becoming a priority for the district when it was designated Level 4 by the Massachusetts Department of Elementary and Secondary Education.

In the end, SAMA's education specialist promoted the program using multiple resources to get participation—these included direct emails to teachers in existing network, the Salem Public School Superintendent, a local school district website, the Mass DESE website, a Salem Principal who was also the regional MESPA coordinator, Salem State University faculty, and other community organizations. Finally, the best response was from an email that went out to teachers who were on a list maintained by ENHC—these teachers had participated in teacher professional development through them in the past. If the team had given up after the first attempt at outreach, the program would not have had enough participants to warrant running the workshop.

Lessons Learned about Early Transitions

Allow time for planning. Thinking, processing, writing, and evaluating are necessary, and having someone in the role of the education consultant helped to make that possible.

Choose the right partners and help them along the way. The park had some concerns about how some of the instructors would be with the teachers. One of the partners was concerned with the number of teachers who were participating. Park rangers are used to adapting to the size of their audience, but for others working with more than a handful of people might be overwhelming. Recognizing those differences and nuances helped our partners feel comfortable.

Money: Seek out funding to pay for experts and community partners. SAMA's Chief has said the park will support the program out of base funding. The idea is that this becomes a part of the regular educational program offering.

Capacity of park and staff: Right now, PEC is dependent upon the education specialist. Even with support from leaders, the program is not well integrated into the park operations yet. The teachers may need additional assistance that the educational specialist cannot provide, but with limited staffing, he or she may not always have someone to direct them to.

Communication: How best do participants communicate internally and externally—enrolling of the staff and other NPS of the benefits of going beyond the boundaries?

Partnerships: Formalized partnerships are still emerging and not yet solidified, but that is okay. Perhaps formalization/solidification might be legitimate next steps. However, there is a degree of comfort with flexibility and not having everything crystal clear. The project is emerging, and it is important to try things out even if they do not all work. Right now, it is best to keep the doors open to opportunity and for people to feel good about it.

Later Strategic Choices, Turning Points, Transitions

There were starts and stops in building partnerships. The team initially thought they could be tied with the Salem Public Schools School Turnaround initiative, but soon realized they were focused on so many other things related to the Turnaround, that both the Salem Education Foundation and Salem Public School administrators and teachers couldn't pay enough attention. The team had to be strategic in their choices partners. The team had one meeting where there were so many suggestions and possible interested parties that it got a bit overwhelming. Some partnerships were considered, then discarded; the question of scope was key.

Procedures for Handling Recurring Issues

There are no real procedures in place, except for speaking with park management, community partners, teachers, and members of the PEC team. The program and processes continue to evolve.

The team had to be strategic in their choices partners.

The program and processes continue to evolve



Patches, Stiches, and Seams

Staff Roles, Functions, & Supervision

SAMA's education specialist was the NPS staff behind PEC and attended all of the PEC training sessions and workshops and communicated the vision and project details to the rest of the SAMA staff. The education specialist was in frequent communication with the Chief of Interpretation and Education.

Addressing Key Issues

The PEC team did not encounter any real key issues. Regular communication with SAMA supervisors and the Program Manager for Partnerships and Program Development who was overseeing implementation of the pilot PEC program at each park and other PEC team members provide timely check-ins, additional training, and support for the implementation of the PEC program.

The Current PEC Program Model

I didn't know the national parks had great capacity to train teachers. The NPS has provided a great workshop for teachers. They did an outstanding job connecting the teachers to the national parks.

—Teacher and CFEC workshop participant, summer 2012

Resolving Problems

The PEC team did not encounter any serious problems. Keeping an open mind to the emerging process was key as the PEC team did not necessarily know where the project would go.

Keeping an open mind to the emerging process was key as the PEC team did not necessarily know where the project would go.

Money Matters

To support the implementation of PEC through a teacher workshop, SAMA secured a \$10,000 National Park Foundation Impact Grant. In many ways, the grant was a catalyst; writing it helped to articulate what the program was going to do as well as a way to approach partners. Having a grant to implement and compensate content experts for their time and expertise was crucial. The NPF grant was administered through ENHC, so the fact that the relationship already in place was

important. The grant paid for experts, supplies, materials, and some teacher stipends. The PEC team traded services with the Peabody Essex Museum (PEM)—they were having a teacher workshop the same week. On one of the days, the teachers spent half the day together at SAMA and half at PEM. Additional park staff, including the Park Historian, Teacher Ranger Teachers, and National Park Service Volunteers, assisted with the preparation and throughout the week.

Bridging Cultures

It was useful to define what was meant by PBE early on to partners.

It was important to make sure all partners were in the loop and had a good understanding of what PEC team hoped to accomplish. It was useful to define what was meant by PBE early on to partners. The team relied on Learning to Make Choices to articulate the message. There were times when ideas, directions, etc., had to be repeated to partners. It was important not to become impatient with that and to recognize that most of the participants all had their own work and lives, and PEC was bringing them through a process that was new to them. It was important not to be too NPS-centered, but to acknowledge that the PEC program was new to the team, too, that it represented a shift in NPS programming and thinking.

Because the park has worked with many of the partners in the past, there was already some level of understanding and shared values were recognized.

Our community partner and education consultant representing ENHC is now engaged in a Master's Program in Community Engagement at Merrimack College and is exploring how work in higher education could contribute to place-based learning. Possible questions include: How does the community help to educate its youth? How do professors learn PBE so they can teach it to their students? What is the best way to facilitate partnerships between universities and community groups? How can universities prepare teachers for including PBE as a teaching practice? This last idea was even expressed by one of our teacher workshop participants, "More teacher workshops should have Place-based Learning as the foundation of their courses. SAMA's education specialist exemplified the true meaning of Partnership, bringing together educators, businesses and non-profits, for the purpose of improving dialogue and greater cooperation with all stakeholders."

Because of the education consultant's role in working with SSU on PEC, SSU has been very interested in what SAMA is doing and would like their students in the education program to learn more about the place-based approach. There are other results of the partnership with SSU; for instance, the Dean of the School of Education is interested in having CFEC teachers serve as mentors and possibly place some student teachers with them for a semester. SAMA presented the PEC program to a group of graduate students and has been hosting pre-service teachers from SSU at the site. Many of the pre-service teachers had not realized that the NPS is a resource for them. SAMA is helping to advance the idea of parks as places of learning—not just for students, but for teachers, too.

Rules Values, Language, and Terminology Decision Making

Because the park has worked with many of the partners in the past, there was already some level of understanding and shared values were recognized. In talking with partners, SAMA staff was very careful not to use jargon and acronyms. They worked with KIDS Consortium to define its philosophy of place-based learning, as their idea of place-based learning as it relates to service-learning was somewhat different. Together KIDS Consortium and the PEC team created a handout that addressed this issue. The first planning meetings were really for SAMA to lay out its vision and elements of the professional development, including what PEC hoped to accomplish. The partners overwhelmingly supported the direction we were moving in. SAMA also clearly established the program as heading the program and that decision-making would be at the park level.



Evaluation: Learning from Your Program

“When you learn in a fun way it sticks in your mind more.”

During the workshop, reflection activities were incorporated into each day. However, there was only time to do them on the first day and the last day. Pressing questions about workshop logistics used up much of the time at the end of the other three days. Teachers participating in the workshop also filled out an evaluation at the end of the week. The responses from the reflection activities and the evaluation have been compiled into a document where PEC team can pull data and quotes from quite easily. The results from that evaluation will be beneficial in planning the teacher workshop for 2013.

Teachers who chose to take the CFEC workshop for graduate credit are required to implement a PBE project with their students. As part of their PBE projects and graduate credit, teachers must have a community celebration and document their process, which includes check-ins with SAMA’s education specialist, examples of student work, photos and/or videos, and a written narrative. SAMA is providing support and guidance to teachers as they implement their programs. All teachers, not just the ones getting graduate credit, will complete a follow-up survey in the spring. SAMA wants to look at how teachers are using what they learned in the summer workshop.

Impact for Students, Teachers, Community Partners, and the Park

Students: The impact can already be seen on students. Some of the sixth-grade students said:

“It is different learning outside. When you are in the classroom learning, the teacher teaches the information. But, when we’re outside we are teaching it to ourselves.”

“Some people don’t have these resources in their town so knowing that we do have them makes us appreciate it more.”

“We could be the people that change our whole community. This could be the year people find out about the trails.”

“When you learn in a fun way it sticks in your mind more. It was really cool because a lot of the things I found I didn’t even know were around here.”

Teachers: Teachers have a new awareness of PBE and how to use their local community resources. They feel more comfortable approaching resources in their own community because this program showed them how it can work. The CFEC teachers made some of the following comments that reflect this idea:



“[I gained a] rediscovery of ‘the place’ our students live and learn in and how to breathe new life into our study of it!”

“The impact has been huge! The program exceeded expectations!”

“I can now implement a Salem focused AP Environmental Science program that my students can relate to.”

“[I gained a] rediscovery of ‘the place’ our students live and learn in and how to breathe new life into our study of it!”

“I will integrate place-based learning in as many curriculum areas as possible and will look for new and exciting ways to get students out of the classroom.”

“We are very excited to make use of an underutilized area right in our own backyard that hopefully will become an extension of our classroom.”

Community Partners: There is now an overall awareness and sense of importance of PBE to park management, teachers, and community partners. This approach is addressing the larger stewardship question. The Chief of Interpretation and Education wrote, “One of the biggest benefits is that this is such a departure

of philosophy for NPS—a beachhead to the future, a fluid and open platform, and our role as facilitators. That concept in and of itself is huge and a big leap.” The PEC program has taken the park to a new and different “place,” but whether it is felt park-wide remains to be seen.

Park: The impact has been huge! The program exceeded expectations! The progress of the teachers who are implementing PBE projects in their schools and in their communities is encouraging and impressive. One CFEC teacher said, “PBE is not something I was familiar with and it opened my eyes to something—A whole community coming together to educate students is beautiful.”

The PEC team believed that if they were able to create a weeklong experience for teachers that had a transformative effect upon them, then the teachers in turn would want to facilitate a similar experience for their students. The PEC team is so excited to see what the teachers and the students will do and what the results will be!

The PEC trainings and CLIP were keys to the success of the program.

This program is collaboration, not a dictatorship, which makes teachers even more engaged.

Start with what you know, but don't be afraid to take risks.

Looking into the Future

Anticipated Successes

The PEC team anticipates several successes:

- implementation and documentation of teacher designed PBE programs in the school year 2012-2013 and additional future projects
- continued support from SAMA and ENHC for 2013 PEC teacher workshop
- increase in collaboration with program participants (NPS, community partners, teachers)
- closer school-community partnerships
- connection to and stewardship of local places by teachers and students
- improved teacher practice
- increased awareness of national parks as places of learning for both teachers and students
- New Directions: The park would like to combine PEC with lessons learned from ENHC's project: "Making the Caribbean Connection: Engaging Underserved Latino Youth in discovering and Telling the Untold Stories of Salem and the Caribbean." Park staff want to engage local teachers in helping them know more not only about their place, but about the population they teach. The goal is for teachers to be better informed about the historic links between Salem and the Caribbean in order to help underserved and diverse populations to see themselves in Salem's story.

Advice to Others

Increase personal and professional capacity in the areas of place-based education and service-learning. The PEC trainings and CLIP were keys to the success of the program. The PEC team learned a lot and adapted the teacher workshop to include that new learning—the PEC trainings were meaningful and also afforded the opportunity to connect with other parks and learn from each other. It would be very difficult without training.

Be willing to be flexible, adapt and change to move forward. It would not have been beneficial to hold on to some decisions that were made early on.



Garner support from leaders. If not for the support and approval of supervisors, this would not have gone well. They allowed the time and permission to do it. The Chief of Interpretation and education states, states,

The development, time to do it, organizational capacity to develop is large; everything is contingent on quality of delivery. Everything you try to convey, all falls apart if it doesn't flow smoothly—which takes a lot of precision and time. Investment of time and resources is very front loaded. The ratio from development to execution days is 50–1. So it takes an internal dedication and discipline to really do this. This is not an easy thing to execute—if you don't have the staff that has the intrinsic motivation and ability to take this on, be cautious.

Treat teachers as professionals—they have something to add to this program. This program is collaboration, not a dictatorship, which makes teachers even more engaged.

Be intentional about the design of the teacher professional development. Even though the beginning was very broad, the target could be smaller; for example, it could be directed only to Salem teachers. One criticism in the evaluations was that there was too much of an emphasis on Salem Maritime history and Salem resources, and many of the teachers would not be teaching those concepts in their curriculum. So the challenge lies in giving them enough of an example to model but not so much that it becomes difficult for them to adapt to their own needs. Finding that balance is tricky.

Start small. Start with what you know, but don't be afraid to take risks. If it doesn't work, it is okay; at least you tried.

A Park for Every Classroom

CASE STUDY

Valley Forge *National Historical Park*

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A Park for Every Classroom

Valley Forge National Historical Park

What is the PEC Program? The Valley Forge PEC program is a series of professional development opportunities in which teachers can learn firsthand about the significance of the park story, examine cultural and natural resources, master experiential learning activities that they can conduct with their students, develop new learning strategies with connections to the park, and then teach other teachers the best practices of interactive, experiential, place-based learning (PBL).

These local elementary and secondary teachers... spread the wealth of information and inspiration to other educators in new and exciting ways; connecting kids to parks...

The Valley Forge staff began the PEC model by delivering workshops at local schools to introduce science teachers to the significance of the park. They shared with teachers the expertly crafted lesson plans developed by scientists and biologists. Following this, teachers attended an additional workshop and immersion in a volunteer service project. Then, with park staff, teachers co-hosted a similar workshop for their students.

The park staff provided a four-day summer teacher institute at the park for social studies teachers. Teachers participated in park tours, discussions, and demonstrations by content experts, park rangers, and master teachers. Then the park staff identified educators for leadership roles to design and deliver park-based learning activities, including a two week writing camp, an ongoing *Art in the Park* project, cross-curricular field trips including continental army simulations, explorations of our museum collection, interactive video conferences with remote classrooms (“kids to kids, coast to coast”) and interdisciplinary standards-based curriculum units that incorporate researching primary source documents. Finally, these local elementary and secondary teachers have become the first cadre of PEC Teacher Leaders. They are now able to spread the wealth of information and inspiration to other educators in new and exciting ways; connecting kids to parks, contributing to student achievement in the content areas, and instilling values of conservation and stewardship.

In order for teachers to learn how to effectively and comfortably use the park resources VAFO designed a PEC program that includes classroom activities, experiential learning, field studies, practice with instructional strate-

gies, multi-disciplinary techniques, and a vision for professional growth and development which will empower teachers and students as scientists, historians, and literateurs.

Partner Organizations

- Friends of Valley Forge, advocate for the park
- The Encampment Store at Valley Forge
- Pennsylvania Writing and Literature Project (PAWLP) at West Chester University, a site of the National Writing Project (NWP)
- Independence National Historical Park, partner for the Summer Teacher Institute
- The Valley Forge Military Academy and College, participants in place based learning and video conferencing
- Stroud Water Research Center
- Teacher-Ranger-Teacher, curriculum writer for VAFO
- Teacher-Ranger-Teacher, media developer for VAFO
- Teacher, video conference content provider at VAFO, education media developer, and group leader
- Teacher, National Writing Project Fellow
- Para professional educator, Changing Landscape Volunteer (art and writing in the park)
- Retired educator who serves as education volunteer and consultant whom we call our Master Teacher Leader

Beginnings

These ongoing programs are designed in collaboration with NPS staff and local teachers who lead field trips, field studies, and simulations in the park.

When passionate teachers skillfully integrate content and context in a natural setting, their students respond with total commitment.

The students love going to new places, meeting new people, building confidence with new strategies, and they flourish in the outdoor classroom.

VAFO participated in PEC at the invitation of the Valley Forge National Historic Park Deputy Superintendent, who is currently the NER Chief of Interpretation. VAFO absorbed the expenses and provided NPS instructors and mentors through its regular operating budget. The park paid the Teacher-Ranger-Teacher and Master Teacher Leader as a program consultant from the Valley Forge budgets.

At the onset of the program, the park biologist, one interpretive park ranger and one project partner attended the first Communities of Learning, Inquiry, and Practice (CLIP) at Morristown National Historic Park. After that meeting, Valley Forge staff developed and delivered a teacher workshop series, “Weeds, Water, and Wildlife.” Teachers at Norristown Area School District and Tredyffrin/Easttown School District learned how to incorporate the interdisciplinary program about the park’s ecosystems in their classroom curriculum and into their field trips to the park. The workshop content included the park’s deer management program, forest and meadow health, invasive species, and water quality. The park’s natural resource manager went to the schools to teach the wildlife component of the series. Then teachers from the Tredyffrin/Easttown District came to the park to learn about weeds and water and participate in “Crayfish Corps” to remove the non-native invasive rusty crayfish from Valley Creek.

To launch the second year, the Chief of Interpretation and Education and our Master Teacher Leader attended the second CLIP at Gateway National Recreation Area to review the successes and challenges with representatives of the other NER parks who piloting the program. After that meeting, Valley Forge staff began to develop the focus for its second year. They identified social studies themes, enlisted new partners, and incorporated new technology into programs that showcased literacy and history, including *The Pennsylvania Writing and Literacy Project* and our *Art in the Park* program called *The Big Picture of the Valley Forge Changing Landscape*. These ongoing programs are designed in collaboration with NPS staff and local teachers who lead field trips, field studies, and simulations in the park.

The park acquired video conference equipment and trained a local teacher in distance learning techniques. He led one video conference with his students as they connected to remote classrooms and presidential libraries, and he assisted in another video conference facilitated by NPS staff and a guest instructor.

Cool and Exciting!

There have been many exciting developments and discoveries during the blooming of the Valley Forge PEC program. Among these are the escalating energy, enthusiasm, and excitement that permeate “aha” moments, those special times when the concept formulates, the idea sticks, the analysis is successful, and the connection is made. Students, teachers, staff, and partners demonstrate real eagerness as they take on new challenges, design new programs, and realize the success of creative ideas. That success is demonstrated by teachers who are magical in their professional skill and students who are totally absorbed in the learning experience. Activities are fast-paced, the sharing of ideas is noisy, and the kids’ quotes are profound. When passionate teachers skillfully integrate content and context in a natural setting, their students respond with total commitment. We revel in the development of effective teaching-learning communities and the passion that is cultivated about history, science, math, reading, writing, and art.

The fun factor is a driving force for the success of the program. Teachers enjoy learning new concepts, mastering new skills, trying out new methods, and going behind the scenes at their neighborhood national park. The students love going to new places, meeting new people, building confidence with new strategies, and they flourish in the outdoor classroom. They learn to see the world through a different lens as they read and write, explore and research. They are inspired by their teachers, the park staff, and the park story. Kids gasp mid-hike and exclaim, “This is so beautiful!” They peer over another’s shoulder and ask, “What are you writing?” They wade Valley Creek searching for invasive species. Some students stand at attention for inspection as continental soldiers, while others shout orders as Washington’s generals. They present Readers’ Theater

With these programs as a foundation, the PEC program provided us an opportunity to create new training opportunities so teachers could take advantage of existing programs in the park, and so that we could recruit talented educators to work in collaboration with NPS staff and partners in the development of new programs.

...collaborate on a plan for the park, partners, and educators to work toward mutual goals including teacher enrichment, student achievement, and stewardship.

to their parents of original writing. They display artwork in outdoor exhibits. Their poetry and prose are published in literary anthologies. They read excerpts from the county's charter documents during a video conference, and rise to the challenge of a national audience. We see joy in their faces, hear confidence in the voices, and they appear a couple feet taller as they assume their roles in the nation's story. They learn about commitment, civic engagement and responsibility as advocates of their democracy and stewards of their legacy. Teachers say with satisfied reflection one day, "That was harder than I thought," and the next, "Thank you for everything. Today was an amazing education experience."

Existing Conditions

Valley Forge has a long history of offering ranger-led education programs with its Interpretation and Education team and Natural Resources team. Children learn from NPS staff about social studies concepts, as rangers in continental uniform lead children and teachers through explorations of the Log City of Muhlenberg's Brigade and explore the details of military and civilian life of General Washington's 1777-1778 winter encampment during the third year of the Revolutionary War. Students learn to drill like soldiers and practice the motions of loading and firing a musket. They also learn about General Washington's leadership at his command center, known as Washington's Headquarters, which is the stone house where he and Martha lived and where Washington worked with his generals and staff to direct operations and communication. Children learn about science concepts

as participants of volunteer service projects including Crayfish Corps and Weed Warriors. Children join NPS staff in physically removing the non-native invasive crayfish from Valley Creek and removing invasive plant species. Local educators have been onboard in the summer as Teacher Ranger Teachers to create curriculum and education media. With these programs as a foundation, the PEC program provided us an opportunity to create new training opportunities so teachers could take advantage of existing programs in the park, and so that we could recruit talented educators to work in collaboration with NPS staff and partners in the development of new programs.

Developing and Maintaining Partnerships

As the PEC program was formulated, existing and new partners met to discuss the structure for the program and plan learning activities. The park sent an introductory letter to the superintendents of five neighboring school districts suggesting a planning partnership. As a result of that letter, superintendents and curriculum directors met to collaborate on a plan for the park, partners, and educators to work toward mutual goals including teacher enrichment, student achievement, and stewardship. Two local school districts invited NPS staff to deliver teacher-training workshops during district professional development days, and one of those districts supported the teachers' participation in the park for a day of park-based field studies. The annual summer teacher institute helped teachers learn historical content and how to effectively incorporate park resources in their teaching, both in the classroom and in the park.



Evolution of the PEC Project

Moving from Idea to Implementation

The first model presented at the CLIP workshop was to recruit a talented teacher, match that teacher to a partner who is a content expert, and support that team in developing a lesson plan or project to incorporate the park into classroom curriculum. With experience in teacher-training workshops, the vision was to recruit a few good teachers to become PEC participants. The park recruited two teachers from each of five neighboring school districts, looking for a total of ten teachers who would be the first PEC participants, learning how to implement park-based lesson plans, lead field trips to the park, and do experiential field studies in the natural environment. As our PEC representatives met with the district administrators to enlist their support, it became clear that the neighboring districts wanted an even experience for all their teachers, not just a few, and their most pressing need was to enlist guest presenters to lead teacher training workshops for an entire school faculty during a professional development day. In order to meet the requests of two of the neighboring districts, the park staff presented in-depth training for large groups at two schools. The workshops were very successful and well received. One school district supported the field experience component of the training and sent their teachers to the park for a second professional development day. The staff member who led the workshops relocated in the NPS and was no longer available to continue the workshops during the next school year. Other staff members attended the next CLIP to review the previous year, and begin to plan the second year. The summer teacher institute served as a primary teacher-training opportunity for the second year. Park staff also recognized individual teachers and teacher teams who were active in the park, and who could plan and host education programs in the park. These educators became the Teacher Leaders who could help carry the knowledge, skills, and best practices of place-based learning to other educators. At this point, the PEC team became facilitators of learning for teachers, providing park resources and support in ways that empowered teachers to design and deliver effective park-based education programs themselves rather than rely on ranger-led

education experiences for their students. This group of teachers wrote curriculum, led literacy activities, facilitated art projects, designed field trips, planned park-based simulations, and led video conferences in our education center. The PEC Team is delighted to continue meeting other talented teachers by phone, by email, through program registrations, and during school visits to the park, who have agreed to become part of the PEC team, and share knowledge, skills, and methodology with others.

Success and Surprises

Success includes:

- Professional development workshops in the schools during district professional development days
- Science field studies in the park for teachers
- 2012 Summer Teacher Institute, *Develop Your ESP, (Economic, Social and Political history during the American Revolution)* for teachers grades three through twelve, various states.
- Education Media development, education video, for the web by a Teacher-Ranger-Teacher.
- Standards-based lesson plans posted on our website, *Thriving and Surviving the 1777-78 Valley Forge Winter Encampment*, developed by Teacher-Ranger-Teacher Cameron Hopkins.
- A Day of Place-based Learning and Distance Learning for Valley Forge Military Academy cadets including the Prezi program, (Leadership of General Washington) using SMART Board technology, and interactive video conference with local students and remote classrooms.
- *The Big Picture of the Changing Landscape of Valley Forge* (art instruction for kids writing camp, summer youth work crews, and the Girl Scouts, led by a local para- professional. Art to be exhibited in repurposed *Valley Forge Gallery Café*.
- Two week PAWLP writing and literacy camp and published anthology led by a local teacher.

...the PEC team became facilitators of learning for teachers, providing park resources and support in ways that empowered teachers to design and deliver effective park-based education programs themselves rather than rely on ranger-led education experiences for their students.



...help educators learn about park resources, develop curriculum and strategies, access the learning modules and lesson plans, develop more lesson plans to suit their needs, use park resources in their classrooms, and be active instructors in the park for their students.

Surprises include:

The Park aimed for participation of ten teachers from five neighboring school districts, but the first three school districts requested full professional development workshops for their entire faculty, so the park didn't conduct outreach for all five districts because the teaching commitment was larger than anticipated. The park will again contact all five districts to promote the *Rangers in the Classroom* outreach and PEC opportunities. There is now no fee for *Rangers in the Classroom*. Teaching Rangers will visit classrooms to promote teacher interest in learning about the park through programs in education media, teacher development opportunities, and teacher-designed curriculum.

Problems and Challenges

The park staff provided the full-day workshops at two school districts to fulfill the superintendents' requests for professional development workshops for teacher workdays. Those were demanding days; not all participants were science teachers, and some participated at the requirement of their administrators. The park staff seek master teachers who find a way to bring a well-rounded curriculum to their students as they face continued scrutiny on student achievement and test scores. We will look for ways to ensure that participation in PEC teacher development opportunities will contribute to student achievement in order to enlist the support of school administrators.

Lessons Learned about Early Transitions

There are a lot of "moving parts" that to incorporate into *A Park for Every Classroom*, by informing and educating all the participating teachers and partners about the large vision of PEC and the mission of NPS, NERO, and VAFO to effectively prepare teachers to use the park resources in their instruction. The motto for the 2013 Teacher Institute is "Bring history to your students. Bring your students to history." The park continues to help educators learn about park resources, develop curriculum and strategies, access the learning modules and lesson plans, develop more lesson plans to suit their needs, use park resources in their classrooms, and be active instructors in the park for their students.

Later Strategic Choices, Turning Points, Transitions

The science expert, the Natural Resource Manager, relocated at the end of year one to another job at the regional level. The park biologist went on maternity leave, so for the second year, the park changed the focus to social studies and literacy. This capitalized on staff strengths and the park's resources. The biologist has returned and is developing a partnership with St. Gabriel's Hall to discuss learning opportunities for their teachers. St Gabe's students and faculty often participate in park education and service projects.



Patches, Stiches, and Seams

Staff Roles, Functions, & Supervision

The Chief Naturalist was the key program leader during year one. Since she has relocated, our Chief of Interpretation and Education is facilitating the program planning in partnership with our Master Teacher Leader, NPS staff, and our PEC partners. We are continuing to plan during the year two partnerships with West Chester University as local sponsors of the National Writing Project. The National Writing Project Fellow plans with the NPS Chief of Interpretation the activities for Writing Camp and leads daily activities for kids in the park. These team members work together to plan, implement, and evaluate the program. The Education Coordinator for Independence National Historical Park serves on the design team for the summer teacher institute and is a leader on our team. Our Valley Forge interpretive park rangers

serve as instructors for our teacher institute, leaders in the field with visiting teachers and school groups, and they teach in the classroom to share content and model living history strategies for classroom teachers and to promote the web-based learning modules. The park biologist is developing new partnerships to maintain and develop the science component. The Teacher-Ranger-Teachers write curriculum, develop education media, and field test lesson plans. Our Art in the Park volunteer is also a middle school paraprofessional, and she continues to lead drawing and writing sessions with summer work crews and the Girl Scouts in the park. These team members are the sections of our quilt, stitched together to demonstrate the best practices of our PEC team.



Money Matters

Instead of cash money to support the program, the Friends Group and the Encampment store donates lunches, books, and bus transportation for the teacher institute. INDE and VAFO provide financial support and grant applications.

Bridging Cultures

Rules Values, Language, and Terminology Decision Making

The PEC team meets, plans, researches, and discusses. It tries to keep the program fresh with creative ideas, state-of-the-art technology and updated with state and federal demands on teachers and school districts.



Evaluation: Learning from Your Program

The first signal of real learning is when students demonstrate active learning, and the PEC program creates many opportunities for active learning.

Teachers enjoy being on both sides of the learning curve.

The summer institute for teachers includes a seven-page evaluation packet. At the end of each day of our four-day workshop, teachers respond to the day's events. Instructors encourage honesty, and detailed feedback, then use those responses to plan and improve upcoming workshops. We use their personal comments to promote our institute.

Teachers respond in writing about each activity of the day about the content, the speaker and the teaching strategies. We also ask for feedback on education technology, authenticity, authority, bias, pedagogy. We ask if the session matches what they were expecting. We ask for suggestions for future workshops.

Impact for Students, Teachers, Community Partners, and the Park

Students: Students are busy in active learning projects that connect curriculum standards with the resources of the park. Growth in literacy, science, and history skills is evident as students participate in individualized and group activities with their teachers and NPS staff. Students use the park sites to inspire their creative writing and drawing. They read primary source documents to analyze colonial history. They examine pieces from the museum collection to learn about the material culture of the period. They role play continental soldiers and work as scientists to better understand the park story. They write and draw for publication. They take notes on the SMART Board during video conferences. They ask guest instructors high-level questions. The first signal of real learning is when

students demonstrate active learning, and the PEC program creates many opportunities for active learning.

Teachers: Teachers enjoy being on both sides of the learning curve. They enjoy being students as they participate in professional development workshops at their schools and at the park. They participate in the Summer Teacher Institute where they learn from content experts and guest instructors. They learn how to analyze primary source documents so that they can lead their students in authentic historical examinations. They flourish as teachers as they write curriculum, design education media and present lesson in the field. They write curriculum to post on the Internet. They develop field trip objectives. They facilitate student learning in the park.

Community Partners: Our The partners help plan professional development activities, serve as guest instructors, cover some of the expenses of historical re-enactors, provide meals, books, and trolley tours for teachers.

Park: The park provides NPS staff to serve as partners and facilitators. The park provides the education center for group instruction, meetings, and learning activities. The park provides historic sites as outdoor classrooms including the park library, historic houses, and behind-the-scenes areas for group events. The park provides time for staff to attend CLIP meetings, present PEC webinars, and write PEC reports.

Looking into the Future

...improved integration of many moving parts into a well-rounded and highly effective professional development program for teachers who will help to reach a larger and more diverse audience of life-long learners.

Find ways to capitalize on the teachers' strengths. They are the best resource.

Anticipated Successes

Looking forward to continued participation in the PEC program, the park anticipates improved integration of many moving parts into a well-rounded and highly effective professional development program for teachers who will help to reach a larger and more diverse audience of life-long learners. The initial PEC team has changed, evolved, and expanded to include new staff, new teachers, and new students. The new recruits have added dynamic components to the original vision as the park taps their background knowledge and skill sets. The park will continue team building with some fundamental methods and best practices in team building, including recruiting excellent team members, naming the team, identifying the team members, agreeing on a unified goal, collaborating for planning, co-teaching, evaluating results, recognizing accomplishments, documenting proven strategies, training and inspiring others to continue the best practices, and further develop the team. We have recruited the best of the best, as teachers come to the park, register for education programs by phone and email, volunteer, apply to NPS jobs and Valley Forge internships. The park now wants the right hand to know what the left hand is doing. It wants to bring these teachers together, witness the synergy of new collaborations, offer its resources and support, and watch the magic.

Advice to Others

- Be prepared for the PEC project to be challenging, time consuming, and full of surprises.
- “Don’t take on PEC unless you are passionate” about what you want to impart to your teachers and students regarding your park and the impact it can have on education. It will require energy and enthusiasm.
- Look for good people for your team. Strive to unite your team in philosophy, objectives, and continual communication. At Valley Forge, which is known as a favorite place for walkers and runners, there is a saying: “Put on your running shoes, and chase after good people to be part of your program!”
- Help your team be in-sync, invested, creative, and most of all, flexible. The team must have the ability to “get it done.” If you don’t have a lot of partners in the beginning, remember that you will find people who want to come on board as they learn about the project and see what is happening. Energy spreads. Ideas multiply.
- Everything does not have to be defined and fine-tuned at the beginning because it is a work in progress, and often, unexpected plot twists add new and wonderful possibilities. Sometimes the biggest surprises become our best components.
- Find ways to capitalize on the teachers’ strengths. They are the best resource. They have experience and expertise that will blossom into amazing outreach opportunities as partners work side by side.

A Park for Every Classroom

CASE STUDY

Weir Farm *National Historic Site*

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A Park for Every Classroom

Weir Farm National Historic Site

What is the PEC Program? Weir Farm National Historic Site (WEFA) uses the *A Park for Every Classroom* (PEC) model to shift how the park conducts education programs with local schools: from park-developed, curriculum-based materials and ranger-led programs to teacher-developed and -led curriculum that incorporates Place-based Learning (PBL).

WEFA engages and empowers educators to develop curricula and lesson plans that fit into their current teaching methodology, align with standards and goals, use PBL principles, and integrate WEFA's themes.

By working together through the PEC model, fewer resources are needed to achieve park goals, and the desired outcomes of WEFA's education programs.

WEFA utilizes relationships within the community to support PEC teachers on an as-needed basis.

WEFA engages and empowers educators to develop curricula and lesson plans that fit into their current teaching methodology, align with standards and goals, use PBL principles, and integrate WEFA's themes. WEFA offers professional development opportunities and support through workshops and connections with community partners to provide teachers with the resources they need to integrate WEFA in meaningful and engaging ways. These professional development experiences align with state standards and provide teachers with continuing education credits. With the teachers creating and instructing their classes on-site and off-site, the themes, goals, and missions of WEFA and the NPS reach more students on a deeper level through PBL. By working together through the PEC model, fewer resources are needed to achieve park goals, and the desired outcomes of WEFA's education programs.

WEFA's PEC GOALS

- This program will enhance partnerships with area school districts, community organizations, and other NPS sites.
- PEC will advance the park's education mission by expanding WEFA's education programs and reaching out to underserved audiences. Through PEC, WEFA will connect people to parks in a creative, innovative, and immersive way through partnerships with educators and other organizations within the community.
- WEFA will provide educators with professional development, support, and resources to create PBL experiences for their students.
- Students will benefit from PBL experiences. As a result of the program, youth will gain a deep understanding of and connection to WEFA and their communities through PBL, fostering stewardship attitudes, values, and behaviors and promoting an engaged, educated citizenry.

- WEFA staff will become confident in facilitating educator workshops, trainings, and maintaining support and contact with all PEC educators and partners.

- Park visitation will diversify and increase, with more students experiencing PBL at WEFA each year from a growing number of communities. This includes engaging teachers from nearby underserved, diverse communities.

- WEFA's PEC approach will inform the regional PEC pilot program, and enhance the program on a national level.

Cool and Exciting!

In 2013, the park's three most significant historic structures, the Weir House, Weir Studio, and Young Studio, are slated to be open to the public, fully restored, and historically furnished for the first time in the park's history. Participation in the PEC program has allowed WEFA to strategically plan and prepare for the increased interest in school group visits with the imminent opening of these structures, as well as the development of innovative and self-directed curriculum-based programs for teachers to use.

Partner Organizations

One of the main principles of the PEC model is to build a program based on partnerships with community organizations and teachers. WEFA does not have a formal partnership with a large institution or organization like many of the other PEC pilot parks. However, WEFA utilizes relationships within the community to support PEC teachers on an as-needed basis, often by providing training with resource experts or serving as a matchmaker for PEC teachers that are interested in specific park related resources or topics. The main partnership in WEFA's current PEC model is with the teachers themselves.

Beginnings

Existing Conditions

WEFA was in a good position to pilot PEC because the park had recently hired a GS-0025-07 Term Park Ranger who could manage the project. WEFA also realized the potential for the PEC program because there was an existing pool of dedicated local teachers that were passionate about WEFA, many of whom were looking for ways to be further engaged. Ridgefield Academy's lower school principal and six third-grade teachers have been using WEFA as a classroom and engaging their students in PBL at WEFA since August, 2011.

Developing and Maintaining Partnerships

When the application to participate in the regional pilot for PEC came out, WEFA realized that this would be the perfect opportunity to engage teachers and students in new meaningful ways, and to expand the reach of park education programs through partnerships. Once accepted in the pilot, the WEFA PEC team assembled. WEFA's Term Park Ranger was selected to be the lead on this project, a third-grade teacher from Ridgefield Academy (RA) was selected as the Teacher-Partner, and the Community Development Coordinator with Girl Scouts of Connecticut (GSC) was selected as the Community Partner. The WEFA PEC team attended the first regional PEC workshop in August of 2011 with enthusiasm and an open mind. Following the intensive two-day training, the team began to conceptualize and plan how the PEC model could be successfully applied at WEFA. Based on recommendations of the team, WEFA's PEC coordinator developed an action plan for WEFA PEC.

WEFA's PEC model also includes using existing relationships with resource experts and community organizations on an as-needed basis to support PEC teachers. WEFA's main community partner, GSC, also provides the park with contact information for teachers in underserved areas. WEFA plans to continue working with a variety of community partners in this capacity to support PEC.

Partnership Issues: Communication, Leadership, and Visibility

One challenge was engaging the initial community partner in a way that would be equally beneficial. GSC wanted all PEC students to be signed up as members of their organization, but that was not realistic. WEFA could not give GSC what they wanted. It was a challenge to agree on effective roles on both sides of the partnership, even though all parties wanted to be involved and support each other. WEFA and GSC discussed the issues and decided that the park could provide support in other ways such as promoting GSC on the park website and in the visitor center.

Startup Resources

WEFA's vision for PEC is that it would become a self-sustaining program, requiring minimal park resources to implement; however, managing the program and providing teachers with necessary resources does require funding, especially in the early developmental stages. Funding needed to establish PEC included salary for WEFA's Term Park Ranger to act as the park PEC Coordinator, travel costs to attend regional workshops, materials for WEFA's PEC workshops, and transportation costs for schools. Park management identified PEC as a park priority, and provided park base funding for workshop materials and teacher resources. When appropriate, WEFA used Project Management Information System (PMIS) funding from a variety of Youth Partnership Program projects to support PEC. Additionally, WEFA has submitted PMIS project proposals requesting funds to support PEC in future fiscal years. WEFA also applied for and received Northeast Region (NER) transportation funding, which addressed the issue of transportation for PEC schools with underserved, diverse populations. WEFA also applied for and received Teacher-Ranger-Teacher (TRT) funding which was used to support curriculum development efforts of the lead PEC teacher. The WEFA PEC team took ideas and the concept of the PEC model from the first regional PEC workshop and strategically applied this model and practices to WEFA, which made facilitating the program fairly uncomplicated.

WEFA's PEC model also includes using existing relationships with resource experts and community organizations on an as-needed basis to support PEC teachers.



Evolution of the PEC Project

Moving from Idea to Implementation

With support from park management, WEFA took the following steps to successfully implement PEC:

- Conducted outreach to recruit other prospective participants and held two informational meetings, which were attended by a total of nine teachers from five different school districts.
- WEFA's PEC Coordinator began preparing materials and an agenda for an immersive professional development workshop based on the regional PEC training and feedback from local teachers during the informational meetings.
- WEFA offered, and continues to offer, immersion workshops to teachers interested in using the park as a classroom. In fiscal year 2012, WEFA offered a two-day workshop to teachers from any school, and an individual school scheduled a one-day workshop during their professional development day.
- Following the workshops, WEFA continues to provide professional development opportunities and ongoing support for teachers as they build lesson plans and incorporate WEFA into their curriculum.
- Teachers from every school that attended a PEC workshop integrated WEFA into their curriculum and brought their students to the park at least once in the following school year for PEC experiences, which led to a 44 percent increase in education program participation over the previous year.

- WEFA currently works with teachers from six school districts through PEC, all with different levels of involvement in the program. Each PEC teacher begins with participation in an immersive professional development workshop.

Success and Surprises

Although WEFA followed the action plan that had been developed, there were changes that occurred while PEC moved from ideas to implementation. Mostly the changes were in the level of involvement of teachers and students. Through the early stages of PEC, the relationship with the teachers became more involved than with past education programs.

WEFA's lead PEC teacher and Teacher-Ranger-Teacher (TRT), developed lesson plans for the classroom and for four visits to WEFA where students learned about their nation's history, local history, geography, art, nature, observational techniques, and mapping skills as part of the common core standards-based PEC experience. By exploring WEFA, the students used maps as tools to gather information and really got to know their local national park. They then designed and created their own maps back in the classroom, applying the skills and concepts they had learned. Students worked collaboratively and creatively, and gained practice in problem solving, critical thinking, using life skills, and practicing leadership roles.



“The children loved having a relationship with their local park, their local park ranger. It gave them an added sense to the role of their community, and their roles in our community. The children gained a renewed respect for land preservation, a greater understanding of the significance of national parks and their role in American history.”

Because the program offered flexibility, teachers were willing to embrace PEC and integrate WEFA into their curriculum in a variety of ways.

These students also developed a greater understanding of and connection to WEFA and the NPS, which was enhanced through repeated exposure where students experienced their outdoor classroom in all seasons. According to the WEFA lead PEC teacher, “The children loved having a relationship with their local park, their local park ranger. It gave them an added sense to the role of their community, and their roles in our community. The children gained a renewed respect for land preservation, a greater understanding of the significance of national parks and their role in American history.” The teachers, students, and WEFA staff all had extremely positive experiences throughout this year long partnership of learning. It truly is an inspirational example of what PEC can be.

More recent successes include engaging teachers from five additional schools in PEC on a variety of levels. Following teacher immersion workshops, some of the new PEC teachers chose to simply integrate WEFA into standing curriculum and visit the park once per school year with students. Others developed new curriculum units and visited the park several times per school year. One teacher planned out PBL lessons for her fellow teachers, engaging the entire school in PEC at WEFA. Whatever model the teachers chose, how integrated WEFA become into their curriculum, or how many visits they made, these teachers have made PEC a success! Education program participation increased 44 percent in fiscal year 2012 because of these PEC teachers, and thousands of students were provided the opportunity to learn about and build connections to WEFA. It has proven in the early stages to be successful in offering quality ex-

periences and training during workshops, and then empowering the educators to take from it what they want and apply it as simply or complexly as they choose. Because the program offered flexibility, teachers were willing to embrace PEC and integrate WEFA into their curriculum in a variety of ways.

Problems and Challenges

Although PEC at WEFA has had many successes, there have been many challenges the park, teachers, and partners have faced, and will continue to face in the future. Early on, WEFA’s action plan called for recruitment of teachers to participate in immersion workshops. Although WEFA had relationships with dozens of local teachers, it proved a challenge to get teachers to sign up for a two-day workshop.

WEFA mitigates these challenges by engaging existing and new community partners, recruiting new PEC teachers from underserved areas, and scheduling workshops during times when teachers are available from a variety of schools. A challenge that emerged from working with several teacher partners was that although they were empowered to conduct education programs at WEFA with minimal staff time and input, they still wanted a staff member on hand. Even teachers comfortable with subject matter and leading activities on-site continued to request a park ranger to assist in implementing the lessons, even though the idea behind the PEC model is that the teacher, rather than park staff, does the teaching.

WEFA’s PEC teachers also identified challenges to implementing PEC. Many common barriers identified were lack of support from administration, scheduling time away from

Being able to be strategic about the park's new PEC approach based on staffing limitations, skill sets of staff and partners, funding, partnership support, and accessibility of local schools was essential.

school, and acquiring transportation funding to get the students to the park.

Based on discussions with teachers, WEFA anticipates future challenges to be acquiring transportation funding, engaging new teachers and partners to participate, getting teachers to develop service-learning projects, and making the transition to having teachers conduct education programs without park staff involvement. WEFA has attempted to address the recruitment and workshop scheduling challenges by offering a one-day option to schools, which led to one successful single-school workshop at WEFA. WEFA will work with teachers and partners to address challenges and continue successful growth and implementation of PEC.

Lessons Learned About Early Transition

PEC seemed to be an ideal model for a small park with limited staff to engage more students and teachers, was identified as a park priority in WEFA's 2013 Long-Range Interpretive Plan, and WEFA's PEC Coordinator was given the resources necessary to begin developing and implementing professional development workshops for teachers under this new model. The support of park management was one of many factors that made the implementation of PEC possible at WEFA. Without the support of WEFA's Superintendent, Chief of Interpretation and Education, and the rest of the park management team, the project would not have gotten off the ground. Another factor that led to successful beginnings of PEC was having a dedicated teacher to start the ball rolling. PEC got a quick start, as the lead teacher jumped right in and began integrating WEFA into Ridgefield Academy's third-grade curriculum immediately. This early success story and example inspired and encouraged other teachers. WEFA's PEC team also received support through regional training in PBL, which was critical to the development of WEFA's PEC workshops. The resources provided by the regional team were excellent.

Another factor that helped make the program a success was that WEFA was given the flexibility to formulate a plan that realistically took the PEC model and adapted it to the park's situation. Being able to be strategic about the park's new PEC approach based on staffing limitations, skill sets of staff and partners,

funding, partnership support, and accessibility of local schools was essential. By being realistic about the climate of the local school districts, the accessibility of the park, the funding available, the types of existing community partnerships, and how much staff time could be devoted to developing the project, the WEFA PEC team created reasonable goals resulting in successful beginnings.

Later Strategic Choices, Turning Points, Transitions

In the initial planning and implementation phase of adapting the PEC model for WEFA, there was a big focus on developing and hosting professional development workshops for teachers. Once the workshops took place, the focus of the PEC Coordinator shifted to support of the park's PEC teachers. WEFA's PEC coordinator worked with each PEC teacher, offering ideas and support while they developed lesson plans and curriculum. This process seemed to foster full integration of the ideals of the PEC model, as the teachers took the next step towards incorporating WEFA's themes and PBL principles into curriculum. WEFA will support future PEC teachers in the same way, and help them transition from participating in park education programs to leading them.

Procedures for Handling Recurring Issues

WEFA will reflect on lessons learned during the pilot and work towards a successful and sustainable model for PEC. In the future, they will engage teachers with a more formalized outreach and marketing plan. As the program grows, WEFA will work towards engaging whole schools or entire school districts by approaching superintendents and principals, or by attempting to get multiple teachers from one school on board. They will offer a menu of options for professional development, so that teachers and schools can choose what works best for them. The park will strive to provide resources needed to teachers, including funding for student transportation. WEFA will also try to engage a more diverse group of teachers, including a wider variety of subjects, such as science, physical education, theater, music, technology, and others in all grade levels. They will reach out to schools in underserved areas, independent schools, and home-school groups. WEFA hopes to engage more partners in the program as needed.



Patches, Stiches, and Seams

Staff Roles, Functions, & Supervision

The PEC Coordinator at WEFA plans PEC for the park, recruits teachers, develops workshop content and facilitates professional development for teachers, coordinates with teachers and partners, schedules and coordinates PEC visits with schools, and consults on curriculum development.

A third-grade teacher at Ridgefield Academy is the WEFA PEC lead teacher partner. Her role is to provide ideas and feedback on PEC from a teacher's perspective, coordinate PEC for her school, fully integrate WEFA at RA, provide example curriculum and lesson plans to other teachers, and share experiences with new PEC teachers during workshops. She has been instrumental in assisting WEFA in conceptualizing and implementing PEC from the beginning stages, and has created PBL curriculum for all RA third-grade students. Her dedication to the pilot and to engaging students through the PEC model has paved the way for the future of PEC at WEFA, and provides a shining example for future PEC teachers. She was also selected to be the park's TRT for fiscal year 2012, further deepening her understanding of WEFA. She focused on further developing the curriculum for her class in Understanding by Design® format, which is used by her entire school.

The lead community partner for WEFA PEC is with a Community Development Coordinator with Girl Scouts of Connecticut (GSC). During the development of the PEC action plan, she offered support and input from the perspective of an expert working within WEFA's target communities. Her role is to act as an advocate and a matchmaker, connecting WEFA with teachers in these communities for outreach and recruitment purposes.

Addressing Key Issues

Almost every PEC teacher identified lack of funding for transportation as the biggest barrier to bringing students to WEFA. The park will continue to seek funding for student transportation to help break down that barrier, especially for students in underserved communities. Teachers who received transportation stipends in the first year of PEC were able to integrate WEFA more deeply into their curriculum.

The Current PEC Program Model

Reflecting on the first year of piloting PEC at WEFA, a successful model has emerged. By focusing on empowering teachers and offering support and guidance based on their needs, WEFA works with teachers to engage students through PEC. By training teachers in the promising practices of PBL principles, providing resources, identifying needs, addressing barriers, and giving them the flexibility to integrate WEFA into their curriculum in whatever way works best for them, WEFA has been successful in engaging teachers and students on a variety of levels. The flexibility of this model proves to be successful for WEFA and the schools involved in PEC, and they will continue to provide opportunities and support to teachers, and empower them to decide how to incorporate WEFA themes, mission, and resources into their curriculum.

Resolving Problems

WEFA's PEC pilot went very smoothly, and few problems or issues have occurred during planning and implementation. Mostly, the issues related to barriers identified by teachers. WEFA's PEC team brainstormed solutions to issues, and discussed them during teacher workshops. Park management and the PEC team will work together to resolve issues that arise and offer support to teachers.

By focusing on empowering teachers and offering support and guidance based on their needs, WEFA works with teachers to engage students through PEC.

Money Matters

The program...could easily be sustained at the level it is at with WEFA's current financial and staffing situation.

Although WEFA envisions PEC to be a financially self-sustaining program for the most part, WEFA addresses funding needs by applying for grants, PMIS funding, and NER funding to provide materials for teachers, transportation for students, and opportunities for dedicated PEC teachers to work as TRTs.

Even with minimal funding to put into the program, it can be sustained well into the future. The program could easily be sustained at the level it is at with WEFA's current financial and staffing situation. To expand it, implement it to its full potential, and attain the C2A goal of reaching 25 percent of the nation's K-12 population by 2016 will require additional funding.

Bridging Cultures

Rules, Values, Language, and Terminology

Over the course of the pilot the WEFA PEC team, including new partners and teachers, has come to share values and terminology when it comes to implementing PEC and PBL principles by working together. By sharing experiences with each other, learning about PBL practices, and seeing the results when students are inspired and engaged in learning, the WEFA PEC participants have experienced the benefits of PEC, and therefore share values associated with the outcomes of the program. During PEC workshops, teachers are brought into the fold, and given a session on the NPS and the inner workings of WEFA. They learn about all of the ins and outs, the big picture of the NPS and how they fit into it. They even learn the jargon and acronyms!

Decision Making

The project is mainly in the hands of WEFA's PEC coordinator at the park level. Decisions in process and implementation are envisioned by the PEC Coordinator, who discusses action items with the Chief of Interpretation and Education before moving forward. The PEC coordinator will consult with teachers and partners if needed for input as well. At the school level, teachers work with their fellow teachers, principals, and administrators when making decisions on implementing PEC in their schools. For lessons that take place at the park, the teachers sometimes seek permission from WEFA for certain tasks that would require approval. For instance, teachers have asked permission to do water quality testing at Weir Pond or fly an aerial camera during a photography session. Activities that involve interaction with natural and cultural resources or have potential safety concerns require park approval. Once a teacher asks about a task, the PEC Coordinator brings the request to the Chief of Interpretation and Education, who consults with the Superintendent and other park Chiefs for a final decision when appropriate.





Evaluation: Learning from Your Program

WEFA has developed an evaluation plan for PEC to determine successes in student learning, engagement of teachers, and benefits to WEFA and the NPS. The evaluation plan aims to discover ways WEFA can improve the PEC approach, teacher workshops, and student experiences, to track student learning and behavior change, and to gather data for future support of the program.

Through the evaluation, WEFA staff, PEC teachers, and community partners gather data using evaluative tools such as questionnaires, focus groups, open dialog sessions, narrative reflections, observational data, student work, journal entries, and written assessments in an effort to evaluate the program and answer the following questions:

- In what ways does this program create meaningful experiences for students? Does it improve student learning and/or lead to stewardship behavior?
- What are the strengths and challenges with the structure and processes of this program? Does this model effectively give teachers what they need? How can we make PEC appealing to teachers and partners to encourage participation?
- In what ways is the program meeting the desired outcomes of teachers, park, partners,

and the community? Does PEC lead to an increase in park visitation or participation in education programs? Are partnerships mutually beneficial? Are students and teachers benefiting from participation in PEC?

To date, WEFA has evaluated teacher workshops with open dialogue and assessment questionnaires to help inform what sessions are most valuable for future workshops, the quality of professional development, and to assess teacher needs. The questionnaires were also used to solicit new ideas for the PEC approach at WEFA from the experts—the teachers themselves. Feedback has been very positive on workshop content, and new ideas for PEC have come out of these assessments. One teacher suggested offering a one-day format to schools during a professional development day to recruit more educators. WEFA took the suggestion, and booked a second teacher workshop in the new one-day format, thereby engaging five new PEC teachers. WEFA also used the data from the questionnaires to plan workshop sessions in a manner that best suits teachers' needs. WEFA will continue to evaluate workshops, as well as PEC as a whole. WEFA is planning to solicit feedback from teachers through written narratives, open dialog, and focus groups throughout 2013.

WEFA has also begun working with teachers to collect data on student achievement



and behavior change, and will continue to do so as part of the evaluation plan. WEFA's lead PEC teacher has begun collecting data through observation, student journals, written assessments, and student work. This data, along with data from a second year of student work, will be used to evaluate student achievement, student engagement, and success of the program. WEFA will also assess how well the program model meets the desired outcomes of community partners, specifically the lead community partner, GSC, in 2013.

Impact for Students, Teachers, Community Partners, and the Park

Some impacts have been identified in evaluation of PEC during the pilot year.

Students: Not only did more students participate in education programs at WEFA, but many were also engaged on a more meaningful level, with an increased number of visits to the park and an increase in amount of in-class content presented by teachers as part of the curriculum. WEFA's lead PEC teacher was inspired "to see how their surroundings and environment can play an active role in their learning." Through evaluation of student assessments and observation of park staff and teachers, it was determined that many of the RA students engaged in PEC had a greater understanding of WEFA themes and resources, felt more comfortable in the setting of WEFA

as a classroom, and made strong connections to the park.

Teachers: Teachers were also more engaged with the park than in the past, and made more frequent visits and inquiries about park happenings. Some PEC teachers attended optional opportunities for enrichment that were offered and showed great interest in learning more about WEFA resources and themes.

Community Partners: Community partners are excited about being involved in PEC in some way, however little information on the impacts on the community partner has been collected. This may be due to the nature of the roles of community partners in this program and the level of involvement. As the program grows, there will be a need for more interactions and relationships with community partners, which will be assessed in the future.

Park: The PEC model has allowed WEFA to directly respond to current trends in education and interpretation and led to a 44 percent increase in education program participation in fiscal year 2012. PEC has WEFA on its way to reaching the goal of expanding the education mission of the park and the NPS. Through PEC, WEFA will continue to engage an increasing number of local educators and students, thereby helping fulfill Call to Action #16, Live and Learn, by the NPS Centennial in 2016.

Looking into the Future

...PEC teachers will become more confident in using the park as a classroom, students will be more engaged and experience WEFA in more meaningful ways.

Be realistic for your park: set reasonable goals.

Start with low-hanging fruit. Start by engaging teachers that already utilize park resources or attend education programs.

Anticipated Successes

WEFA anticipates continued success of PEC well into the future. Based on past successes, WEFA believes that PEC teachers will become more confident in using the park as a classroom, students will be more engaged and experience WEFA in more meaningful ways, more lesson plan examples will be created by teachers for sharing, and more teachers, students, and community partners will participate and learn. Also, with the opening of the three most significant historic structures—the Weir House, Weir Studio, and Young Studio—for the first time in the history of the park, opportunities and interest are expected to increase. These newly restored and historically furnished buildings will provide even more opportunities to engage students in a variety of subjects, and the excitement of the opening is bound to gain the attention of local teachers and community organizations with a desire to partner with their local national park.

In fiscal year 2014, a PMIS project to support the expansion of PEC has been formulated, and will make the goal of expanding the program a reality. There are also opportunities for WEFA to engage new teachers and partners in this innovative education program. WEFA is located within close proximity to many Connecticut cities and towns, and has connections in nearby underserved communities.

Advice to Others

- Be realistic for your park: set reasonable goals.
- Start small. Managing thirty teachers at a time would be overwhelming. It worked well to have a group of six to ten teachers in each meeting.
- Start with low-hanging fruit. Start by engaging teachers that already utilize park resources or attend education programs.
- Ask teachers what they want!
- Be flexible.
- Don't be bound by requiring teachers to develop certain types of lesson plans. If some teachers don't write full curriculum, but they bring students and integrate park themes in some way, that's fine! Goals of PEC are still being met.
- Get certified by the State Board of Education to offer Continuing Education Credits or Approved Professional Development Credits for your state.
- Try to get a whole school or grade or multiple teachers from one school involved.
- It might be useful to envision your park's PEC program before recruiting partners. At WEFA, we rely on many informal partnerships for PEC, and probably would not have invited a community partner to attend regional workshops if we were not required to as part of the pilot.



