Examining the Staying Power of the Sustainable Schools Project:
A Program Evaluation focused on Champlain Elementary School

Prepared for Shelburne Farms
The Vermont Education for Sustainability Project &
The Place-based Education Evaluation Collaborative

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& Program Evaluation & Educational Research (PEER) Associates

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The Sustainable Schools Project is part of the Place-based Education Evaluation Collaborative (PEEC), a unique partnership of organizations whose aim is to strengthen and deepen the practice and evaluation of place-based education initiatives.

PEEC programs (and organizations) include the CO-SEED Project (Antioch New England Institute); the Sustainable Schools Project (Shelburne Farms, and the Vermont Education for Sustainability Project); and A Forest for Every Classroom Project (Shelburne Farms, The Northeast Natural Resource Center of the National Wildlife Federation, The Marsh Billings Rockefeller National Historical Park, The Conservation Study Institute, and Green Mountain National Forest).

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Champlain Elementary School students created and flew a "peace dove" around the city of Burlington.
INTRODUCTION

Sustainable Schools Project Overview

The Sustainable Schools Project (SSP) is a partnership program of Shelburne Farms and Vermont Education for Sustainability (VT EFS). The project uses sustainability as the integrating context on a school-wide level, seeking to connect science, literacy, ecology, and community. SSP focused its first school year (2002-2003) piloting its program in one urban elementary school in Burlington, Vermont. In its second year, SSP continued its intensive work with the same elementary school while beginning to make inroads into its next elementary school site on the other side of Burlington. During its third year of programming, SSP has been working intensively with its second elementary school while providing occasional follow-up support to its pilot school. This report explores the lasting effects of all three years of programming at SSP’s pilot school, Champlain Elementary.

Sustainable Schools Project Goals

The primary goal of SSP is to use sustainability as an integrating context for strengthening a whole school’s curriculum improvement efforts, teacher leadership, community partnerships, and campus ecology. SSP strives to help a school become more connected and collaborative internally, as well as more connected with the school’s local community and natural environment. SSP staff describe the desired outcome as creating a more connected, coherent learning experience that inspires teachers to collaborate, and inspires students to engage with their school, community, and environment.

The SSP Logic Model (see Appendix A) further describes the program’s short and long term outcomes. The evaluation team worked with key program stakeholders to develop this year’s evaluation plans by using the SSP Logic Model as the anchor.

SSP staff work closely with school personnel and community members to tailor the program to the unique needs and opportunities of the each school site. SSP offers combinations of the following activities to participating schools:

- facilitating 2-5 day summer institutes for teachers
- convening a sequence of after-school teacher meetings on sustainability, community networking, and curriculum planning themes
- attending grade level meetings and assisting teachers with curriculum planning
- attending and facilitating staff meetings that focus on sustainability
- training community partners to work effectively with teachers and students
- assisting teachers in the classroom, including modeling teaching techniques and co-teaching
- providing teachers with curriculum and content resources
- facilitating connections between classrooms and community and parent volunteers
- working with the after school program to infuse the sustainability theme into after school activities
- organizing evening family education events on the focus areas of the school’s sustainability work
- facilitating teacher internships
- meeting with teachers and administrators individually to coordinate SSP efforts.
**SSP & the Place-based Education Evaluation Collaborative**

SSP’s sponsoring organizations are among the founding members of the Place-based Education Evaluation Collaborative (PEEC). PEEC has three main purposes. It serves as a learning organization for program developers, fueling internal growth and program development for the individual organizations. PEEC also aims to identify, develop, and disseminate evaluation techniques, tools, and approaches that can be applied to other place-based education providers, thereby promoting better evaluation practice in the field. Finally, as a long-range goal, the collaborative intends to contribute to the research base underlying the field of place-based education and school change.

The goals of the collaborating projects vary somewhat but common themes are:

- enhanced community-school connections
- increased understanding of and connection to the local place
- increased understanding of ecological concepts
- enhanced stewardship behavior
- improvement of local environmental quality
- improvement of school yard habitat and use as teaching space
- increased civic participation.

The collaborative has drafted and continues to refine a logic model that depicts the common theories underlying all of its member programs.

For more information about PEEC, please visit www.PEECworks.org.

**External Evaluation Team**

All evaluation reports prepared for PEEC were generated by a team of evaluators operating as PEER Associates under the supervision of Principal Investigators Amy Powers and Michael Duffin.

PEER Associates is committed to using a multiple-methods, utilization-focused, participatory evaluation process. It is our intention to help organizations better articulate their vision, align their resources and their rhetoric accordingly, and improve their programs based on evidence of program functioning and outcomes. We also seek to help organizations build their own capacity to reflect on and internally evaluate programs.

For this particular report, Amy Powers acted as the Principal Investigator, guiding the bulk of the evaluation activities and serving as overall editor of the report document. Interview transcripts and a series of analytical notes were prepared by Research Associate Andrew Powers. All core employees of PEER Associates provided editorial input during the reporting phase.
EVALUATION METHODS

Evaluation of SSP began with the program’s inception at Champlain Elementary School in Summer 2002. SSP staff invited systematic program evaluation from the start of its project in order to better understand the successes and challenges of their process of program development and implementation, and in order to measure the degree to which SSP’s short-term projected outcomes were attained. The second year of evaluation continued to monitor progress at Champlain Elementary School in terms of the program’s staying power, the integration of literacy and sustainability, and impacts on faculty and students. The second evaluation cycle also involved gathering baseline survey data for the newer SSP school, Barnes Elementary. This report, one component of the third evaluation cycle, provides an analysis of program staying power at Champlain Elementary School. A separate report completed February 2005 provided an evaluation of the initial status of Barnes Elementary School.

Throughout the evaluation process SSP staff played an active role in structuring and contributing to the evaluation in order to increase the likelihood that evaluation processes and products will be both appropriate and useful for stakeholders. In addition to the evaluators’ interviews and observations, the SSP staff discussed and recorded monthly reflections about their work at both schools. The data collection form used for monthly reflections was refined this year to better meet the needs of both evaluators (data collection and analysis) and program staff (on-going reflection and record-keeping).

Evaluation Questions

The evaluation team consulted the goals and expected outcomes outlined in the SSP Logic Model (Appendix A) and met with program stakeholders in order to develop the evaluation questions listed in the Figure M1. After SSP staff reviewed and approved the questions, evaluators designed research instruments to investigate those questions. See Appendix for Evaluation Overview 2004-2005 and Instrument templates.

Figure M1. Evaluation Questions for Champlain Elementary School, Sustainable Schools Project 2004-2005

<table>
<thead>
<tr>
<th>Area of focus</th>
<th>Evaluation Questions</th>
</tr>
</thead>
</table>
| Champlain School | • In what ways has SSP had a lasting effect on Champlain School? (including inquiry into literacy/ science/ social studies integration)  
• What are the elements of SSP that are contributing to its effectiveness? |

Process and Instruments

Semi-structured interviews and focus groups were conducted with Champlain teachers and an administrator in March 2005. SSP staff participated in an evaluation focus group in December 2004. Classroom, community, and school observations, internal monthly reflection forms, and document review served to triangulate the interview data. See Appendix C for interview guides and the monthly reflections form. All interviews were audio recorded and transcribed.
Figure M2 summarizes the data collection methods and instruments used in this evaluation:

**Figure M2. Sustainable Schools Data Sources for Evaluation 2003-04**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Type and Number Administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews and Focus Groups</td>
<td>10 Classroom Teachers&lt;br&gt;1 Administrator&lt;br&gt;5 SSP staff&lt;br&gt;16 people interviewed</td>
</tr>
<tr>
<td>Staff Reflections Forms</td>
<td>7 (Sept, Oct, Nov, Dec, Jan, Feb, March)</td>
</tr>
<tr>
<td>Observations</td>
<td>Classrooms and school building&lt;br&gt;1 community meeting&lt;br&gt;Several student presentations</td>
</tr>
<tr>
<td>Document Review</td>
<td>Program fliers and brochures, Community Works News, Legacy Project Progress Report&lt;br&gt;Journal article, Sustainable Schools Winter 2005 Newsletter</td>
</tr>
</tbody>
</table>

**Analysis of Interview Data and Documents**

After fieldwork was complete, descriptive observation data, additional documents, and transcribed interviews were coded to illuminate key emergent issues and answer the evaluation questions (Miles & Huberman, 1994). The most prevalent themes emerging from the data were analyzed and are synthesized into this report.

Specifically, evaluators used the following protocol for analyzing the data:

1) Wait until the vast majority of data has been collected.
2) Read through all data (making minimal notes) for the purpose of clarifying the context and getting a holistic impression of the data set.
3) Create an initial list of 5-20 themes that seem to reflect the data.
   (Note: When more than one individual is involved in the data collection, analysis or write up, each person must go through steps 1-3.)
4) Code all data according to the theme list, while remaining open to the emergence of new themes, sub-themes, and meta-themes, including three categories: Irrelevant, Probably Irrelevant, Need to Confer.
5) As the remaining data is collected, code it according to the theme list.
6) Look within the data from each theme, sub-theme and meta-theme and recode as necessary to establish clarity and coherence within each level.
7) Generate an outline of the findings and discussions section of the report based upon the final theme list.
8) Write up the narrative based upon the outline, pulling in data from documents and transcripts to support as appropriate.
9) Each person involved in the above steps agrees that the final analysis is consistent with their experience.
   (Note: If a Research Assistant is involved in the process, then the primary author checks their work at each step.)
FINDINGS AND DISCUSSION

The findings in this report are organized into four main sections: the first two address the two evaluation questions, one process focused, one outcome focused. The third section is a discussion of challenges learned of during the evaluation process and their corresponding recommendations. Finally, conclusions are presented.

Site Context: Champlain Elementary School

Champlain Elementary School, serving 284 students grades K-5, is located in the South End section of Burlington, Vermont. Champlain employs 16 teachers, plus specialists in art, music, library, and physical education. The school property is flanked by businesses and neighborhoods, and there are athletic fields and a playground adjacent to the school building. Champlain teachers and students also have access to several natural areas: there is a large wooded area behind the school, a waterway called Englesby Ravine which flows along the school’s southern boundary, a vernal pool on school grounds, and Red Rocks Quarry within walking distance of the school. For more information about Champlain Elementary School and statistics about student performance on standardized tests, refer to the website of the Center for Rural Studies (see References).

The Staying Power of the Sustainable Schools Project

As with any school change initiative, the hope is that the program’s influence and impacts will persist beyond the necessarily limited tenure of direct program intervention. After two years of intensive involvement at Champlain School, the Sustainable Schools Project transitioned away from offering formalized, ongoing programming with the school. SSP staff have continued to be available to Champlain staff and students on an as-needed basis, but the formal program intervention ended at the beginning of year three, at which point this phase of the evaluation began.¹

The main focus of this evaluation was examining whether, after two years of involvement with SSP, changes to teacher practice, personal knowledge and values, school policies or functions, student engagement in their community and other community connections have persisted at Champlain Elementary School. Since “sustainability” is a key term describing the program’s goals, topical content, and name we chose to use the term “program staying power” instead of “program sustainability” simply to avoid

¹ Note on terminology for this report: we have chosen to use the language “first and second years of SSP” to denote the time period during which SSP staff were most active in the implementation of SSP at Champlain and “third year of SSP” to denote the current school year, during which this evaluation was conducted, at which time SSP staff were no longer “formally” working with Champlain.
confusion. Essentially we sought to discover whether the program had taken root and would continue beyond the first two years of active engagement, and, if so, what factors had influenced that staying power.

**Evaluation Question #1: In what ways has SSP had a lasting effect at the Champlain Elementary School?**

There were many promising signs that SSP’s work with Champlain has been and will continue to have staying power at Champlain School. All of the interviewed teachers reported that they continued to be involved in some form of engagement in sustainability-related teaching during year three, and could name some ways in which either their personal perspective or their way of teaching had been significantly changed. In addition, all interviewees were able to describe at least one way in which sustainability had taken hold in complex ways beyond the individual classrooms. A promising sign, one teacher even reported being “more engaged in sustainability this year than last year” when the program was formally underway.

*Four themes were most prominent in the data set and are explored in this section:*

- Many changes in teacher practice and personal perspective have been sustained
- Sustainability projects are still evident schoolwide
- School community has grown and continued flourishing
- Student involvement in sustainability (both teacher directed, and of their own accord)

**Many Changes in Teacher Practice and Personal Perspective have been Sustained**

“We would certainly hope to still see the changes we’ve made to our curriculum five years from now. It has to do with [the students’] future and the earth’s future. How can you drop it? You can’t.”

-4/5 grade teacher

A primary emphasis of the Sustainable Schools Project is helping teachers augment their curriculum planning skills, community connections, teaching resources, and pedagogical techniques. At the same time, teachers are naturally exposed to the issues of sustainability such as environmental, socioeconomic, and equity issues that are inherent in SSP’s offerings. Evaluations in years one and two showed clearly that Champlain teachers had changed many of the topics and ways in which they teach, and had come to new personal understandings of sustainability issues. At the end of year three, teachers seem to have maintained many of the pedagogical and philosophical changes reported in years one and two.

The four most common ways in which interviewees reported a change in teacher practice and perspective are discussed below. They are:

- Use of essential questions and other SSP planning tools to organize curriculum
- Use of school grounds, local people, and community resources as teaching aids
- Collaboration among teachers continues
- Increased awareness of community and environmental issues is deeply embedded in many teachers
Use of essential questions and other SSP planning tools to organize curriculum

"The unit consisted of a little of this a little of that, but the essential question connected the whole theme back to community and our lives, the neighborhood, personal choices, our lives in our community, and our lives as part of the global world. This helps children move from their own neighborhood, environment, and sense of place to their place in the greater worlds."

-Administrator

The school's administrator reported a general shift across grade levels to more thematic study that grew and strengthened with SSP and still persists. She noted that watersheds, ecosystems, habitats, health, and cycles are some of the overarching themes under which teachers began and continue to organize their teaching, and remarked that having an overarching question for the entire school was new to her.

"I don’t remember having had the school ever as articulately connected and framed down to that essential question in the past. It wasn’t until we went thorough the Sustainable Schools process and looked at the interrelatedness of curriculum and worked very hard to get to essential questions that we made that shift. I find that that was one of the more critical pieces of the vocabulary [SSP introduced]."

Indeed, in talking to teachers from across grade levels, one of the most common and consistent changes to teacher practice would seem to be the concept and practice of organizing their teaching under a big, essential question. One teacher, for instance, who said she was not explicitly teaching sustainability “topics” this year, noted that she has continued to use the curriculum planning tools offered by SSP staff, including the essential question. Another teacher asked SSP staff to come back to the school to assist her in planning a unit on wolves. She had decided to use SSP’s curriculum planning tools, and wanted help finding a community partner to help with the unit. SSP staff were able to assist her in both tasks, assisting her in the use of their graphic organizer, and helping her to link with a local college teacher who researches wolf populations in Montana and Wyoming.

A school administrator offered a clear example of the benefit of having an essential question, and the value of incorporating community and a sense of place into learning. She reported that during the 4/5 team’s unit on China:

They kept going back to that essential question, which was the similarities and differences between us and another culture... The theme allowed them to explore art, music, language, education, medicine, tai chi, acupuncture, history, religion, and to invite community members to
assist with and learn from students as well. It all kept coming back to the question of how we are similar and different.

Further, essential questions have become a key part of how this principal structures her work with teachers. She described, for instance, using essential questions to bring a greater purpose to the staff meetings. “Our questions were such things as ‘what do you as teachers need to do your job?’ and ‘how do we use existing data from the end of the year to move forward?’ I was a bullet person, so shifting to going through the process of addressing the question was really helpful.”

Evidence of the ongoing use of essential questions by teachers at all grade levels and the administration as well suggests that SSP has trained the school in the use of a helpful planning tool that they will continue to utilize.

**Use of school grounds, local people, and community resources as teaching aids**

> “The connections that people make, the value they now place on our neighborhood and our community resources, these are things that have changed [with SSP’s involvement.] The school yard will never be looked at the same, we now use that as a resource for learning.”

-A dministrator

Interviewees presented many examples of ways in which they continue to build upon the exposure SSP offered them to local people and resources, and the newfound intimacy they developed with the school yard during SSP’s tenure. Prior to working with SSP, one teacher had in the past focused her curriculum on places throughout the world. SSP helped her to focus instead on the Champlain Basin, which she continues to do whenever possible. Last fall, for instance, she wanted to capitalize on the local connection to a popular science topic—butterflies. She had her students explore the school yard, and then she invited a butterfly collector to speak with her students. The children eagerly asked questions of this local expert: “Whatever happened to all the milkweed plants in our school yard? What are the effects of mowing down the grasses in the schoolyard?” were among their questions. She stated that by bringing in the local focus, her students seem more aware of the connections between things.

**Figure F1. SSP in Action: Young Students Practicing Skills While Honoring and Learning from Community Members**

In one first grade classroom at Champlain Elementary School, a project that embodies many elements of SSP began in year three. The idea of creating a Community Web in the school was the idea of one of the SSP staff several years ago, but was adopted the year after SSP withdrew because circumstances lined up accordingly. A parent in the first grade class expressed interest in being more involved in the classroom, and the teacher was delighted since she had placed the Community Web idea on the back burner until just such an opportunity arose.

On Fridays, with the companionship of the parent volunteer, groups of 2-4 students visit with various workers throughout the school building. The students prepare interview questions, asking the people such as a custodian, nurse, cafeteria worker, administrative assistant, etc. about their jobs within the school community. The students take photos of each worker, compile their biographical and occupational information. Individually, the students are learning about the individuals who make their school work. Collectively, the students will catalogue all the different roles within the school community. The first grade teacher reported great success, “The kids really love it, it gives the parent a role, and it honors different workers’ contributions to the community.”
Another example of students practicing their oral and written skills while learning more about their school community happened for a class of first graders. The Community Web project they undertook is detailed in the sidebar.

The first grade teachers have continued to do their fall discovery units which were initiated during SSP’s first year, including school yard explorations, and also make use of outdoor journals, and study the school yard’s own vernal pool.

Something I never did before [SSP] was to look at what resources we have on the school property. Now that I have some knowledge about vernal pools I know I can make use of them. Before it was just a big wet spot in the playground and now I know it is teeming with life and I’m educated about it.

At the second grade level, teachers have continued to focus on the wetlands including studying the wetland in their school yard. Both reported using the schoolyard as a teaching resource more than in the past, emphasizing that they are using the woods, brook, trees, wetland, and taking walking trips up to the local quarry. One teacher’s goal was to have an outdoor focus continue into the spring and stated that her increased comfort with the school grounds is a resource that will certainly stay with her. Her increased comfort with the schoolyard suggests that she will continue to use it as a teaching resource in the future.

The 4/5 team continues to explore complex sustainability issues such as wetlands, food systems, and nutrition. During the third year, because one teacher had visited China, the group rose to the challenge of teaching a unit on this distant land and culture while keeping local connections in terms of both content of the unit (i.e. how are we similar and different to China) and process (i.e. bringing in a local tai chi practitioner, and local acupuncturist to make the understanding of these eastern practices more hands-on and real for students.)
Collaboration among teachers continues

"There is nobody in our school now who is working in isolation. [SSP] introduced new kinds of teaming and helped it to grow." - Teacher

A recurrent theme in the interview data was that the Champlain faculty prided themselves on working as a collaborative team long before the involvement of SSP. At the same time, nearly all teachers affirmed that they had been collaborating more and in different ways since SSP’s presence, and that this higher level has persisted.

The principal reported that SSP had inspired the faculty to work hard, and had been successful in helping to strengthen grade level teams. A teacher commented on her grade level team: “The focus of our collaboration is about broader issues now. Our teaming approach has grown and improved.” One particularly successful collaboration between two teachers, unfortunately, was discontinued when one teacher switched grades due to demographic shifts in the student population. The teachers lamented the loss of this collegiality, and noted the added difficulty in continuing the SSP work since it had been planned around their two-class collaboration. While this particular shift was unfortunate and beyond the domain of SSP’s involvement, it points to the importance of SSP’s strategy of developing and encouraging productive collaboration.

Increased awareness of community and environmental issues is deeply embedded in many teachers

“...my consciousness about what sustainability means is huge.”
“...we're talking about our Earth's future... in the world we live in, this is what we have to be teaching.”
“...we all get it on a personal level.” - Three teachers

Perhaps one of the more critical elements to maintaining a change in one’s actions—whether teaching practice or otherwise—is a fundamental shift in one’s personal understanding of surrounding issues. Many Champlain teachers openly offered examples of the ways in which their own understanding of sustainability issues had been affected by SSP’s work in their school. It should be noted that teachers were not explicitly asked about their personal behaviors and awareness; nonetheless, many shared their personal views on changes they and their colleagues had experienced.

The 4/5 team was especially vocal about how important environmental and sustainability issues have become for them personally, having led their students in units on food systems, renewable energy, healthy bodies and neighborhoods, and wetlands. One had recently been driving near a wetland, and began thinking about “how lucky we are to have those wetlands for recharging and cleaning the water.” Another one detailed her exasperation with many local people’s reluctance toward the installation of wind turbines as an alternative energy source. “Why do people not complain about cell towers, but they don’t want wind turbines?” she said, and then explained that the team had recently led a comprehensive unit on energy with the 4/5 students. She said that she “never would have thought about this at all before SSP. I’ve taken many of the lessons to heart.”
Another teacher had similar comments, “This [work with SSP] is lasting within the heart and soul of teachers. It’s personal because I was so intensively involved. We spent so much time at the beginning just talking about what sustainability is.” For this very reason, she wondered whether the staying power would be institutionally persistent, or whether it remains in the hearts of those present once they retire or switch schools. This will be further discussed in the challenges section below.

A school administrator noted that the health theme that had been infused into the curriculum during SSP’s Healthy Neighborhoods Healthy Kids initiative persisted in the consciousness of teachers. Recently, she reported, the school cafeteria served donuts in the breakfast program. This deviation from healthful snacks did not go unnoticed by the school staff. In fact, the physical education teacher, the school nurse, and many of the teachers were “up in arms” about it and proceeded to meet with the district’s director of food services about nutrition. Having many years of experience with this staff, she observed that teachers now have a heightened awareness of healthy food choices and of where food comes from, as well as a desire to take action on it.

Likewise, it was clear throughout the interviews that teachers were fluent in the language of sustainability, offhandedly referring to their students’ “sense of place,” a desire to “buy local” and an interest in including “the three E’s” in their teaching. Two teachers who reported that they had already thought about environmental issues prior to SSP stated that the lens of sustainability gave them a tool to making deeper connections amongst multifaceted social, ecological, and economic issues.
Sustainability Projects are Still Evident Schoolwide

When asked about SSP’s lasting impacts, respondents thought first about changes in their own teaching practice. Many also then discussed elements within the school building and grounds and throughout the school curriculum that have seen changes over the years. As evidence of schoolwide sustainability measures, people cited the solar panels on the building, the composting program in the cafeteria, recycling in the classrooms, school yard initiatives such as the garden, and bird feeding centers in front of the school. The school’s administrator reported that “…the courtyard and planting are on-going projects that different classes are interested in. Our use of the school yard as a resource is far more connected than in the past, when our efforts were mainly limited to a celebration of Arbor Day. I think kids are now more observant about birds and wildlife.”

As evidence of the sustainability theme being woven from grade level to grade level, student work displayed around the school building showed many aspects of sustainability themes, including portrayals of local animals, pictures of local cultural practices such as a maple sugaring display, and nature themed art projects. In the cafeteria, a series of large and artfully illustrated murals on the cafeteria walls offer students and teachers an impressive educational and artistic display. With the assistance of SSP and the Vermont Energy Education Program (VEEP), the 4/5 grade team created these during their Energy unit, with the three panels representing life Before Fossil Fuels, During the Use of Fossil Fuels, and Future Energy Sources. The murals were creative, elaborate, and prominently displayed for other students to see. Teachers noted that students were really excited about this unit of study, putting many hours of independent research and teamwork into the murals.

Interviewees mentioned that a health theme initiated with the SSP project Healthy Neighborhoods Healthy Kids is now peppered throughout the school’s curriculum. Many grades seem to be incorporating studies of the human body, including healthy food choices. Three Champlain teachers and the school nurse participated in a year-long Healthy Snacks course offered by the Food Education Every Day (FEED) program as a follow up to their SSP work. The course covered topics such as childhood nutrition, food media, local agriculture, nutritional biochemistry, diet/behavior connections, and discussion of how these topics link to relevant classroom based experiences and curricular connections.

“Composting is automatic for all grade levels.”

-Teacher
Equally noteworthy in the realm of schoolwide endeavors, the composting system took off during SSP’s tenure in the school and has continued to thrive. School staff spoke of it as a natural part of the school at this point. “We don’t even have signs anymore because we don’t need them. It is so ingrained, and kids help monitor the composting. If the Intervale were to give us a report card I think it would be an A+,” said the principal. One teacher reported that “composting is automatic for all grade levels,” and revealed that she herself had been reprimanded by her kindergarten students for mistakenly putting trash and compost into the wrong bins.

Sustainability themes have persisted in the afterschool program as well, with the afterschool coordinator preferring to align after school activities with the classroom curriculum whenever possible.

The living machine, a self-contained water ecosystem designed and built with the assistance of SSP during year one and housed in the school’s learning center, was the only obvious example of a project designed for schoolwide use that has not had staying power thus far. One teacher, however, does intend to make use of the Living Machine during the next school year by enlisting the help of a student teacher with biology training.

“\[\text{quote}\text{"We are really building a community in this school. In the last couple of years the community in the school has gotten a lot closer and easier. I see a big difference in how parents come in and how kids expect to treat each other and the environment."}\text{quote}\]”

-Teacher

**School Community has Grown and Continued Flourishing**

Though this theme overlaps with others described above, it is worth a separate mention, as many respondents noted a strengthening of relationships within the school community since SSP’s involvement. This has manifested itself in parental activity in the classrooms and school, students’ respectful interactions with one another, opportunities to learn more about sometimes less visible members of the community (as with the first grade Community Web project), and generally emphasizing community within the classroom. A typical teacher comment was: “The school as a community is very strong and sustainable. I try to stress community in my classroom.”

For the 4/5 grade China unit described above, parents flooded the school, some as presenters of occupations or foods, languages, and history related to the China unit, others as observers and supporters. Teachers and administrators alike were proud of the teachers’ and students’ resourcefulness in pulling together this dynamic unit, and community participation was high.
Another aspect of the community that had been successfully built during SSP’s tenure was the fusion of two third grade classrooms. Both teachers were proud of this collaboration and impressed with its effects on students, who exhibited more cooperative rather than competitive behaviors between the two classes. Unfortunately, in year three these two classes were split up, and both teachers and SSP staff considered this alteration of community to be a loss.

**Students Involved in Sustainability of Their Own Accord**

Although students were not targeted in this evaluation cycle, several examples of student engagement in sustainability-related endeavors are worth noting. The 4/5 grade teachers reported that some of their former students, now enrolled at the local middle school, are still engaging in sustainability-related activities extraneous to the curriculum. Some, for instance, are still selecting sustainability themes for independent projects. Several sixth graders built on the health, nutrition, and community service themes that they had participated in the prior year at Champlain, creating natural personal care products and selling them to raise money for their school. And during the annual meeting of the Burlington Legacy Project, one of SSP’s partners, middle school students agreed to present some of the sustainability-related projects they had completed at Champlain. Champlain fifth graders also visited Barnes Elementary School as part of an exchange, bringing the newer SSP site examples of the types of student projects that Champlain students had undertaken. Barnes students asked questions of their peer presenters to gain an understanding of what students can do to improve their neighborhoods.

Other students had the opportunity to build bridges between a broader sustainability initiative and their local community. With the encouragement and financial assistance of SSP, four Champlain students attended the International Children’s Conference on the Environment in the summer of 2004. In fall 2005, as middle school students, the students decided to return to their former elementary school to present their experience at the conference to the elementary level students. The students had parental help in preparing for the presentation, and also worked with parents to create a peace dove that they “flew” like a kite around Burlington on International Peace Day. Many Champlain students, upon hearing the older students’ presentation, asked probing questions such as “What can students do right now to help the environment?” and stated that they too wanted to have the experience of going to the environmental conference.
Interviewees were asked to comment on a series of SSP-related goals. The following is a quantification of the five questions that respondents answered most consistently with clear yes or no responses.

*Interview question: I want to ask you about a few specific areas that SSP emphasizes. Please let me know whether you think SSP has succeeded in establishing more of this at Champlain than existed three years ago.*

Three preparatory notes may help to explain some of the responses below:

1. The evaluator noticed, in hindsight, that some respondents were addressing the question as if it pertained to their classroom specifically, where others answered with respect to the school as a whole.

2. Respondents seemed to have some lack of clarity about whether they were comparing the current (year three) situation to how the school was prior to SSP, or during SSP’s two years of involvement. Some clarification of this is attempted below.

3. These tallies are based on interviews with 11 school personnel. Due to the fluid nature of an open-ended interview process not all interviewees answered all questions in a way that fits this format. In addition, note that one group of respondents was a team of four who teach together.

### Community members assisting in the school
- 7 of 10 responded YES, more of a presence in their classroom or in the school than prior to SSP
- 1 of 10 responded NO, more community members in their classroom than prior to SSP
- 1 of 10 responded NO, more, but only due to scheduling difficulties
- 1 of 10 not sure

### Students learning out in the community or in the schoolyard
- 9 of 10 answered YES, students learning outside the school walls more this year than prior to SSP
- 1 of 10 answered NO, not as much as prior two years during SSP involvement

### Teacher collaboration
(Note: interviewees uniformly noted that Champlain was a highly collaborative teaching staff prior to SSP.)
- 8 of 10 reported that there had been a sustained increase in collaboration since SSP’s involvement
- 2 of 10 reported that teacher collaboration was at the same high level as prior to SSP’s involvement

### Integration of literacy with science and social studies in the classroom
(Note: there was frequent reference to the powerful collaboration between SSP and the district’s literacy coordinator. Evidently, the formation of this duo aided the initiative to encourage greater integration of these multiple disciplines.)
- 6 of 10 responded that there was definitely an increase in their own integration of literacy and science in the classroom
- 4 of 10 reported that their teaching team (all four together) could see the need for this integration to grow in coming months and years

### Parent involvement related to sustainability projects (i.e. parent info nights, etc)
- 6 of 7 responded that more parents were involved in the school
- 1 of 7 reported no increase this year
Evaluation Question #2: Which elements of the Sustainable Schools Project are contributing to its effectiveness?

“The sustainability staff inundated us with workshops, one-on-one help, classroom team-teaching. You couldn’t get away from it. There was so much [SSP activity] happening in so many different ways it was safe for everybody to sneak in. Some of us jumped in, some walked in the back door more quietly. The bottom line is: everybody came in.”

-Teacher

Interviewees were asked to discuss the aspects of the SSP program that they felt could be credited with creating lasting change in teacher practice and school change. The following section focuses on a discussion of these process findings.

**Four themes were most prominent in the data set and are explored in this section:**

- **Multifaceted Approach Invites Various Styles to Engage in the Process**
- **Particular Process Elements Were Highlighted**
- **Staff Qualities Were Key to Building SSP at Champlain**
- **A Legacy of Partnerships and Alliances Remains**

**Multifaceted Approach Invites Various Styles to Engage in the Process**

Most notably, numerous respondents indicated that the success of SSP was creditable to the suite of offerings they provide. Rather than simply offering a curriculum guide, a kit full of teaching props, or a day-long workshop, the SSP program infuses a school with many different options available both simultaneously and sequentially. With this system, different teachers felt free to access SSP offerings in ways that felt most comfortable, and in a timeframe that worked best for them. It is this type of flexibility that encouraged such a wide variety of teachers to join the action and stick with it. As detailed in the section below, teachers latched onto the part of SSP that most appealed to them, and that served as a gateway into other aspects of the model.

The fact that SSP is a complex package rather than a single kit, for instance, is what allowed one particular teacher to really begin to shift her teaching style. She remarked that since they never attempted to simply “impose a new system” on her, but instead were available in many different
ways over time, SSP staff had been very successful at helping her change her core teaching practice, and keep it evolving:

I used to just pull out the box for theme-related stuff and just go right through the lessons. But every year [the sustainability-related curricula] just keeps blossoming. [SSP staff] have shared so many ideas with me and really had my wheels spinning. I think this is just the beginning of the process.

The fact that this teacher refers to her own change as still being in process would suggest that SSP’s idea of offering skills and tools to inspire lifelong growth has much promise. Several other teachers indicated that they are continuing to evolve in their understanding of teaching sustainability themes and using SSP’s curriculum planning methods. Furthermore, SSP’s “non-packaged” model helped catch and sustain teachers’ attention. One teacher affirmed that when she heard SSP staff say, “You do this anyway, you are just going to look at it through a new lens” she decided to get involved. She said, “That was absolutely key; it hooked a lot of people.”

**Particular Process Elements Were Highlighted**

<table>
<thead>
<tr>
<th>“I never would have embraced this the way I have if I hadn’t had a week or two of pretty intense understanding of sustainability.”</th>
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<tbody>
<tr>
<td>-Teacher, reflecting on the value of on-going professional development, especially the opportunity to explore sustainability concepts in an iterative way with other teachers and SSP staff</td>
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Though almost all respondents talked about the importance of SSP being multifaceted and widely available, respondents did highlight different elements of the SSP process that were particularly successful or appealing to them. The most acclaimed strategies discussed by interviewees were:

1. Choosing the SSP site carefully;
2. Modeling activities for teachers by leading or co-teaching students during the school day;
3. Providing intensive summer workshops;
4. Offering a framework for thinking about bigger visions and ways of organizing curriculum around a central concept.

Several teachers alluded to SSP’s wise site selection as a partial reason for its success. Since there had been prior momentum for sustainability-related work even before the SSP-staff began working in the school, SSP complemented the school’s existing interests and capacities. Teachers mentioned science courses that had been offered in-house, existing community collaborations, and the participation of a small number of teachers in sustainability-related professional development. SSP selected this school in order to provide continuity within and support for the school’s budding interests.

Many teachers referenced the way that SSP model activities as very important to promoting lasting change in practice. Some even referred to it as a chance to be a student teacher again. One teacher added that the summer institute activities inspired her to do new activities with her classroom, including using the school yard habitat. She noted that she still has all her notes from the activities and uses them each year. Because teachers could participate as if they were students, she said, “they really stuck.” Teachers commented on how important it was to be able to observe their own students while SSP staff were leading activities. “I was taking notes furiously!” remarked one, and several teachers
clearly articulated how much confidence these observations gave them when considering which activities to incorporate into their teaching during year three.

The school’s principal reported that the summer institute was especially valuable for a different reason:

Taking time to pull people together for summer work is particularly critical as a way of effecting change... We were looking at the connections, the local environment, the school yard environment. We framed things schoolwide and explored essential questions which got us really thinking about what our goals are.

Having experienced SSP’s successful summer inservice days, she now feels more confident organizing summer days to look at “big picture” issues. “I liked the August work. Since [SSP], I’ve tried to reserve more August days because one piece I want to sustain is looking at the big picture to get our mindset toward working together throughout the school. Since I saw it succeed with Sustainable Schools, it helped us get in that habit.” This element of SSP’s modeling is likely to continue at Champlain.

**Staff Qualities Were Key to Building SSP at Champlain**

“...I’d like to say those girls were all phenomenal. Every single one of them was such a strong believer in what they were doing. They came in and they really were leaders in that, and they made us believers.”

-Teacher

Resonating through three years of comprehensive evaluation of SSP’s work with Champlain was the high praise for the individual talents of the SSP staff who worked there. Interviewees praised the SSP staff members’ content knowledge, teaching skills, courtesy, resourcefulness, responsiveness, and flexibility. The school’s administrator reported that the SSP staff were “such exceptional people, there was never any question that we were blessed to work with such high caliber co-educators.”

Teachers were inspired by the dedication that the SSP staff modeled, saying “You can tell this is their life, that they love and eat and sleep this and they are so dedicated and so intelligent.” Another added that their accessibility improved the likelihood that teachers got “on board” with the program rather than resisting it, claiming that “They also made it so easy for us to work with them. They would do anything for us, and they didn’t come in with any judgment.”

The SSP staff’s ability to create a rapport within the school allowed classroom teachers to feel comfortable with them, as though they were indeed “insiders” rather than “outsiders”: “As far I was concerned they were part of our team,” said one teacher. This aspect of SSP’s offerings seems key, both to getting the program off the ground, and to giving it staying power. While one teacher wanted a clearer message from SSP that contacting them would not be bothersome, most interviewees stated that they still consider SSP staff to be available as a “wonderful resource” beyond the two year core of the program. Teachers mentioned email contact, borrowing teaching materials, and holding curriculum brainstorming sessions as some of the ways in which they continued to engage with SSP during year three.
A Legacy of Partnerships Remains

SSP’s strategy of building partnerships at the district level seems to have contributed to the staying power of SSP at Champlain. SSP staff fostered good relationships with administrators at the district level and, most notably, with the district literacy coordinator. The literacy coordinator granted legitimacy to the work SSP was doing with literacy, and built teachers’ confidence that SSP’s approaches were well-integrated with other district expectations (rather than an “add-on”). And, one could argue that, in the future, the literacy coordinator’s support will improve the likelihood that SSP’s perspective on the integration of literacy and sustainability will carry forward beyond their tenure with the school or district.

Since sustainability is a naturally complex issue, it has also helped that SSP has fostered alliances and partnerships at the community level. When teachers contact community organizations or the mayor of Burlington to ask for their participation in a lesson or event, they have the weight of SSP’s reputation and partnerships behind them. As a partner of the Burlington-wide Legacy Project, SSP is a pivotal part of a city-wide sustainability initiative. During a well-attended public annual meeting for the Legacy Project, the mayor of Burlington, who is very supportive of SSP’s role in the schools, addressed the audience with kudos for the teachers, students, and project staff involved with SSP at Champlain: “Here in Burlington we’re working on sustainability. For some of us, our eyes glaze over when we hear that word. But if you want to know what sustainability is about, talk to a second grader at Champlain.”
CHALLENGES AND RECOMMENDATIONS

Challenge: Institutional versus personal change

"Yes, [sustainability] has lasted within the heart and soul of the teachers. But when [we teachers] retire or move on, what will keep it going?"

- Second grade teacher

The most consistent evidence of SSP’s staying power at Champlain was found at the personal level rather than the institutional level. Respondents wondered whether the changes would be sustained if and when teachers change schools or retire. While teachers were positive that SSP had created impressive change in their school, several conversations about the difference between personal change and institutional change emerged during the interview process. One teacher recalled how much time they had needed to spend talking about sustainability before planning any units. “You’ve gotta feel it first, you have to know what this means. Then you can incorporate it into your teaching. That is the piece that new teachers coming in won’t have. You can’t make it happen if the people don’t feel it.” And, she noted that a school policy can’t impose a feeling of a sense of place on people.

Recommendation:

"Changes in the beliefs of personnel is everything, but if it can become the culture, the culture has the way of continuing beyond the individual."

- Administrator

Teachers and the administrator at Champlain noted a well-known concept in the field of educational reform: to sustain change in a school, a culture shift is critical. The administrator recognizes the importance of raising new staff members’ awareness of implicit school norms and expectations, even if firm policies are not in place. Asked whether she had a hiring process “litmus test” for teachers’ orientation toward sustainability, she responded that because sustaining SSP’s impacts are important to her, she does consider it in the hiring process. She offered several examples, noting that she had chosen staff who “…knew this was of value, and would be thoughtful and deliberate in making these connections. To have that strength is an anchor.” Then, she added, if there is a shift in administration, the hiring committee would naturally contain teachers who were part of the culture of sustainability, thereby completing the loop in perpetuating the culture.

In addition to the principal’s commitment, it may be beneficial to the ongoing maintenance of school culture for SSP to develop and offer an SSP primer for all new teachers joining the staff at past SSP sites. This could include a series of informational workshops about the program and philosophy, outings in the community, discussions of sustainability, exposure to the program’s staff, goals, and resources, and a chance to connect with others on the topic. It may be wise to require new staff members to attend the primer series with a veteran teacher partner from their school. This veteran could help the new teacher bridge the gap between what the whole school experienced during years one and two, and what they see currently in the school.
**Challenge: Curricular mandates**

“W e have to be accountable for these [new science] topics. W e have to do what is expected.”
“T he school’s focus has changed. W e don’t have the school’s support as much [for doing SSP-related work.]”
- Two teachers discussing their apprehensions about the new science curriculum

While several teachers close to the development of the new science curriculum were confident that it contained links to sustainability for each grade level, a number of teachers independently cited the imposition of the new science curriculum as the largest barrier to the staying power of SSP at Champlain. Apprehension about these new guidelines was fairly widespread. Some worried that with the changing science curriculum all the SSP-related units they had created would no longer “fit” into the school year.

**Recommendations:**

To remedy the present discomfort and inconsistent understanding of the connections between the new science curriculum and SSP, it may be warranted for SSP staff to offer to facilitate a meeting to encourage teachers to learn more about the science curriculum, and brainstorm ways to connect it to sustainability across grade levels. For the longer term, when beginning its work with a school, SSP could investigate (to the extent possible) the kinds of curricular mandates that may crop up in the next four to six years, whether they be state, district, or school level changes. This could help SSP staff shepherd a transition that incorporates SSP work into any new standards to which teachers may be held following their SSP work.

**Challenge: Cross-grade level coordination**

“W ithout SSP the grade levels can more easily diverge. W e no longer have time set aside to chart our curriculum.”
- Teacher

While collaboration is still a strength at Champlain, a number of respondents lamented that communication about SSP across grade levels has diminished since years one and two. In particular, there is less time allocated to do long term planning, and to truly understand how to make long term connections for students, such as those between literacy and science. Teachers felt that SSP’s facilitation of a school wide curriculum map had enhanced this form of communication in the past.

**Recommendation:**

Though it is clearly desirable for SSP to continue on its own at past schools, it may be wise to continue to check in with past schools formally at least once a year. Suggestions included offering an “SSP Refresher” option during a school inservice day, hosting a one-day workshop, and facilitating a beginning-of-the-year curriculum mapping session at a staff meeting so that teachers throughout the school are aware of one another. Another related suggestion (but perhaps exhibiting a tendency toward dependency) was to have SSP staff schedule a day at the school once every month or two for which teachers could sign up in advance for assistance ranging from teaching to planning, to fundraising strategizing, liaising with community members, etc.)
Challenge: **Field trip transportation**

Access to transportation to get students out into the community is a barrier for a number of teachers. Since Champlain does not have school buses available, it means coordinating six to eight parents in order to leave school. Several teachers did not feel that field trips were readily supported by the school or district.

**Recommendation:**
Particularly in schools where public transportation is not an option, SSP should continue to model and emphasize the value of walking field trips, use of the school yard, and inviting guests to the school rather than leaving the school with students. When and if SSP takes teachers to places out of walking distance during teacher inservice days, it could help simply to note that the purpose is to expose teachers to this resource, but that with students they might be more apt to invite someone from the more distant location to travel to the school.

Challenge: **Balancing local and global investigations**

Although the 4/5 grade team, with their China unit, effectively modeled a way to bridge the gap between place-based curricula and topics that are not obviously local, other teachers expressed concern that they did not know how to address students’ interests “in topics such as the ocean or rainforests” while still utilizing the local context.

**Recommendation:**
Providing examples of how to teach units such as the Hindu Religion, outer space, or whales while still linking to the local community and maintaining relevancy to students’ lives would help teachers see that they do not necessarily need to abandon favorite topics of their own and their students—or conversely, to abandon what they have learned about place-based, sustainability education. These examples may be part of the summer institute, on-going professional development, or even a simple handout offering some concrete examples of how to make non-local topics relevant to the Lake Champlain Basin or supportive of sustainability concepts.

Challenge: **Maintenance of living machine**

"We’re having a hard time keeping the living machine going. It is becoming a chore more than an asset.”

- Teacher

Compared to the thriving ecosystem it was in years one and two, the Living Machine appeared unkempt and disarrayed, and consequently is underutilized as a teaching resource. Particularly for newer teachers, the ecosystem seemed to be at once appealing and daunting.

**Recommendation:**
Establish a clear process for how the living machine will be maintained (or disassembled, as appropriate) prior to year three. It may be motivating if, during year one and two, a team of teachers and SSP staff prepared grade-level appropriate curricular materials for at least encouraging teachers to get started in using the living machine.
**Evaluation Recommendations:**

- Focus evaluation activities on exploring students' knowledge, attitudes, and perceptions of sustainability. The first grade teachers pointed out that their students from three years ago are still in the school and might be an appropriate next step to understanding SSP’s impacts. A sample of middle school students who participated in three years of SSP at Champlain might also be an appropriate focus for subsequent evaluation work.

- Several respondents pointed out that the true test of staying power will be to re-visit the school in a few years. Because of their natural teaching cycles, teachers indicated that they frequently drop something for a year and then it “resurfaces” again a year or two later. Aside from these dormant SSP-related practices, such an evaluation could identify which elements have the longest term staying power, and identify patterns in the evolution of sustainability themes and practices.

![Handwritten notes on sustainability practices](image-url)
CONCLUSIONS

“There is a general culture of sustainability at Champlain. Definitely.”

-A dministrator

Three years into the process, Champlain staff were resoundingly positive about the lasting effects of the Sustainable Schools Project on their own teaching practice, within certain elements of the school’s culture, and in the way their students understand and care for their communities. At the level of teacher change, the use of essential questions and SSP’s organizational tools continues to thrive, and teachers continue to use the school grounds and local resources in their teaching more than they did prior to SSP. Collaboration, already a strength at Champlain, has improved and maintained its high level, and teachers have internalized the messages SSP offered on a personal level as well. On another level, there are still several sustainability measures evident throughout the school: curricular connections throughout the grade levels; links to sustainability in the afterschool and art programs; and a thriving and embedded food composting system. The school community has continued to grow, including parent participation in school affairs, and students have assumed commendable roles as spokespersons for sustainability within the school community and beyond.

Many factors influenced these changes. First, SSP chose its pilot school wisely. Champlain Elementary had a strong leadership, confident, successful staff, teacher leaders in the school community, prior sustainability-related courses offered to teachers, a school-wide emphasis on literacy professional development, and a penchant for collaboration. SSP was thus able to “fine-tune” and focus the teachers’ interests, offering them the skills, philosophy, language, and resources to integrate their curriculum with the community.

Second, by design SSP staff has linked the school’s sustainability work to efforts underway in the community at large, such as the Legacy Project. The connections that have been established between the school and community organizations and leaders, including the Mayor, will very likely help to assure the ongoing implementation of SSP activities at the school and prevent the school from working in isolation. Given the complexity of sustainability issues, the building of a network to nurture such a project seems to be a key strategy for its continued flourishing.

Figure C1. Success Factors: SSP at Champlain Elementary

- Capitalizing on existing strengths within the school (e.g. collaborative staff, literacy initiative, teacher leaders, supportive principal, etc.)
- Linking to and networking with the local community (e.g. Legacy Project, relationship with the Mayor, etc.)
- Offering diverse program elements (e.g. workshops, classroom modeling, one-on-one planning, tangible resources, etc.)
- Offering flexible, skilled, personable, and accessible staff assistance throughout the project years and beyond.
Moreover, SSP’s multi-faceted approach was the key to its success. SSP’s strategy of offering diverse program elements including workshops, classroom help, one-on-one curriculum planning, philosophical discussions, tangible resources, and flexible availability, is what made SSP successful at Champlain. SSP staff feel strongly that it was this wealth of support, ideas, and motivation that gave SSP’s work staying power. All the teachers came on board as they found elements of SSP’s offerings that they were comfortable with and could integrate into their own practice.

A final indicator of SSP’s lasting impact bears mention. Several teachers and an administrator noted that because of SSP’s success, other new programs such as the responsive classroom and an initiative to blend literacy and science, fiction and expository texts, have been more readily welcomed in the school than they would have in the past. This was attributed to the confidence SSP had instilled in the Champlain community. School staff felt that SSP set the stage for both the content and format of the new initiatives by promoting related practices and techniques as well as generally instilling the confidence that a schoolwide initiative can be successful, rewarding, and lasting.

The most significant challenges to SSP’s staying power at Champlain are related to the difficulty of transitioning from being fully supported to being self-sustaining. Building the year three transition into the development of the program, identifying creative ways to bridge the year three gap, and offering assistance with schoolwide communication on the topic will be the most important ways to address this challenge at Champlain and future SSP schools.

By offering Champlain two solid years of reliable, skilled, and personable assistance in implementing a multi-faceted program, SSP staff planted strong roots for the program’s ideas and practices. And, by remaining flexible and site-specific, the school community felt free to personalize and take ownership of the changes being undertaken, allowing it to branch out on its own. It is both of these characteristics—sturdy roots and flexible branches—that thus far seemed to have contributed to the staying power of SSP at Champlain.
REFERENCES

Center for Rural Studies website:
http://crs.uvm.edu/schlrt/cfusion/schlrt04/complete.cfm?psid=PS159&city=7015


Place-based Education Evaluation Collaborative (PEEC) website:
http://www.peecworks.org

APPENDIX

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## Appendix A: SSP Logic Model

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<th>Hypothesis</th>
<th>Resources/ Inputs</th>
<th>Activities/ Strategies</th>
<th>Short Term Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
</table>
| Using Sustainability as an Integrating Context will improve student learning & community engagement, teacher leadership & parent/community involvement. | Shelburne Farms: science, agriculture & environmental education resources; project direction; & partnerships  
VT EFS: project coordination; curriculum design; place-based & embedded proof; development models; network of EFS/place teachers & organizations  
School District: Administrators', specialists' & teachers' planning & inservice time  
Local community's sustainability initiatives/network: information & coordination of community partners  
Research: best practices for professional development; service learning; & place-based education  
Funding: private; local & national government; in-kind  
Evaluation: Shared learning of PEEC | Teachers' collaborative planning of curriculum, stewardship projects & community partnerships  
Concept-based curriculum units/courses related to sustainability for all students.  
Workshops on sustainability issues related to campus & community.  
Community partners' ongoing collaboration with teachers, supporting place-based & sustainability education  
School/Community Stewardship projects as opportunities for school-wide interaction, improved sustainability practices, & service-learning.  
Integration of SSP strategies & other professional development/student learning priorities  
Teacher study groups on developing curricula/projects, expectations/assessment of student learning | Teachers coordinate & collaborate more on curriculum planning & instruction.  
Teachers & students demonstrate increased understanding of sustainability.  
Teachers include more community-based &schoolyard learning opportunities in curriculum.  
More teachers engaged in more extended community partnerships.  
Increased student engagement in community  
Teachers & students demonstrate more enthusiasm for teaching & learning.  
More parents involved in school & community projects  
Increased attention to sustainability practices in school building & grounds. | More decision-making & actions that lead to sustainable communities  
More integration of place-based EFS in curriculum  
Ongoing school-community engagement  
More schools engaged in EFS  
Systemic school improvement |
**Appendix B: SSP Evaluation Overview 2004-2005**

**September 1, 2004**  
**PEER Associates, Inc.**

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**Program evaluation will:**
- Evaluate effectiveness of the SSP model in terms of process (implementation) and outcomes (results)
- Provide useful information for project coordinators & funders to assist with program development, justification & refinement
- Integrate SSP evaluation process & findings with larger PEEC cross-program efforts

**Evaluators’ Philosophy**
- PEER Associates is committed to using a multiple-methods, utilization-focused, participatory evaluation process. It is our intention to help organizations better understand their programs & to help them to improve their programs based on evidence of program functioning & outcomes. We also intend to help organizations build their own capacity to reflect on & internally evaluate programs & to help to improve the evaluability of programs.

**Evaluators’ Roles**
- Meet with project staff to develop evaluation plan, & make modifications as needed
- Data collection including site visits to schools, interviews, photo documentation
- Data analysis and Report writing
- Provide planning and/ or recommendations for following year’s evaluation (as appropriate)
- Evaluation Contact person: Amy
- Est. # of days to complete SSP evaluation products: 25 SSP + 44 PEEC cross-program

**SSP Staff Roles in evaluation process**
- Develop evaluation plan with evaluators
- Provide input throughout the year via meetings, phone and/ or email on evaluation direction, appropriateness of instruments, & format of final report
- Liaison between evaluators & school (e.g. setting up interview schedule)
- Collect & share observation notes, project documentation, photos with evaluators as designated, including being accountable for the timely & consistent submission of monthly forms
- Assist in administration of surveys
- Provide access to data such as test scores as designated
- Provide incentives for participant participation in evaluation process
- Meet with evaluators to consider needs assessment for following year

**Deliverable Products:**
- Written report on status, needs assessment and baseline at Barnes: Due January 15, 2005
- Written report on staying power at Champlain: Due April 15, 2005
- Data gathered this year will be reported in a larger report as part of the 2005-06 cycle (see below)

**Delivery of Evaluation Data**
- Since much evaluation work depends heavily on the active and timely participation of program staff, PEER will not be responsible for reporting on data that has not been delivered within a pre-determined time period. This also applies to site visit planning that does not happen in a timely fashion or events that evaluators might benefit from attending but of which PEER is not notified. To avoid this loss of data, PEER will provide program staff with a rough timeline in advance of data collection deadlines (or in the case of events, clarify the type of events necessary for observation), then provide a reminder of the deadline at
least one week prior to the deadline. Finally, if data or notification has not been provided, PEER will notify program staff that data will not be included in the analysis or report because of delays, lack of provision, or lack of notification.

**Data included in analysis for January 15, 2005 SSP report:**
- Interview transcripts and observation records from Barnes visits in Fall 2004
- Monthly forms from staff for September, October, November, December

**Data included in analysis for April 15, 2005 SSP report:**
- Interview and observation data for Champlain visit(s) in January or February 2005
- Monthly forms (if they report on Champlain activities) for September-March 2004-05

**Data included in analysis for Spring/Summer 2006 SSP report:**
- Educator and Student Surveys for Barnes and Champlain
- A comparison and amalgamation of all Barnes and Champlain data from all three preceding evaluation cycles (02-05) including surveys, process watching forms, interview transcripts and observation records
- Any new data collected in 2005-06 cycle
### SSP Evaluation Overview, 2004-2005

<table>
<thead>
<tr>
<th>Category</th>
<th>Evaluation Strategy/Activity</th>
<th>Personnel Accountable</th>
<th>Eval'r days</th>
<th>When</th>
<th>Evaluation Questions and/or Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 SSP Surveys</strong></td>
<td>a) Administer Educator surveys at Champlain &amp; Barnes</td>
<td>PEER initiates, SSP staff administers</td>
<td>1</td>
<td>Spr 05</td>
<td><em>Does “dosage” of SSP correlate with changes in teacher practice (e.g. use of local resources, teaching craft, other SSP-specific indices), and/or student performance (e.g. civic/academic engagement, attachment to place)?</em>&lt;br&gt;Note: surveys not reported on until ’05-06 cycle</td>
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<tr>
<td></td>
<td>b) Administer Student (4/5) surveys at Champlain &amp; Barnes</td>
<td>&quot;</td>
<td>1</td>
<td>Spr 05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Data management--quant. &amp; qual. data/ findings from surveys</td>
<td>MD, GT</td>
<td>1</td>
<td>Spr 06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Barnes: Interviews with key participants</td>
<td>AP</td>
<td>2</td>
<td>Oct 04 Spr 05</td>
<td><em>Process: What are the strengths &amp; challenges of SSP at this site?</em>&lt;br&gt;<em>Teacher Outcomes: In what ways is teacher practice changing as a result of involvement with SSP?</em>&lt;br&gt;<em>School Outcomes: In what ways has the school/site been impacted through involvement with SSP?</em>&lt;br&gt;<em>Student Outcomes: What effects does SSP have on students’ awareness of places &amp; people in their community? (based on evaluator, teacher &amp; staff observations)</em></td>
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<td></td>
<td>e) Barnes: Site visits to observe key program elements (e.g. student class, staff meeting, coaching meeting, institute, culminating event)</td>
<td>AP</td>
<td>2</td>
<td>Fall 04 Win Spr 05</td>
<td></td>
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<tr>
<td></td>
<td>f) Plan, travel, transcribe, analyze, report on Barnes interviews &amp; site visits</td>
<td>AP</td>
<td>8</td>
<td>Dec 04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>g) Champlain: conduct one or two focus groups with Champlain participants</td>
<td>AP</td>
<td>1</td>
<td>Jan or Feb 05</td>
<td><em>In what ways has SSP had a lasting effect on Champlain School? (including inquiry into literacy/science/social studies integration)</em>&lt;br&gt;<em>What are the elements of SSP that are contributing to its effectiveness?</em></td>
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<td></td>
<td>h) Plan, travel, transcribe, analyze, report on Champlain interviews &amp; site visits</td>
<td>AP</td>
<td>3</td>
<td>April 05</td>
<td></td>
</tr>
<tr>
<td><strong>2 SSP Site Visits &amp; Interviews</strong></td>
<td>i) Internal Monitoring Form</td>
<td>SSP staff provide to AP</td>
<td>0</td>
<td>Fall 04</td>
<td><em>How can staff and evaluators work together to blend eval and prog protocols to encourage maximin utilization &amp; effectiveness for both purposes?</em>&lt;br&gt;<em>See evaluation questions above.</em></td>
</tr>
<tr>
<td></td>
<td>j) Review forms, monitor process, analyze, report</td>
<td>AP</td>
<td>2</td>
<td>On going</td>
<td></td>
</tr>
<tr>
<td><strong>3 SSP Other</strong></td>
<td>k) Revision &amp; development of current &amp; future evaluation overviews</td>
<td>AP</td>
<td>2</td>
<td>On going</td>
<td><em>What are realistic expectations &amp; plans for generating useful evaluation results within existing resource constraints?</em></td>
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<td>l) Support for utilization of evaluation results &amp; program development, (possibly consulting on transformation of existing data into user-friendly presentation or pamphlet)</td>
<td>AP</td>
<td>2</td>
<td>Fall 04 Spring 05</td>
<td><em>How can evaluation mindset and activities provide added value to program development and refinement? (e.g. logic model dev, PowerPoint presentation, helping establish prog benchmarks, stakeholder prioritization, etc.)</em></td>
</tr>
<tr>
<td>Category</td>
<td>Evaluation Strategy/ Activity</td>
<td>Personnel Accountable</td>
<td>Est. # PEER days</td>
<td>When</td>
<td>Evaluation Questions and/ or Descriptions</td>
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<tr>
<td>5. PEEC Cross Program</td>
<td>5a) PEEC mtg. preparation, attendance, presentation, follow up</td>
<td>PEER</td>
<td>9</td>
<td>Ongoing</td>
<td>* How can evaluation mindset and activities provide added value to program development and refinement of PEEC documentation and practices?</td>
</tr>
</tbody>
</table>
|          | 5b) Literature review, helping PEEC utilize existing lit review, & connecting lit, findings to theory | AP                    | 4                | Ongoing | * What evidence do we have or can we find that supports or refutes the school-level dose hypothesis?  
* How might we begin to more accurately measure school-level dose quantitatively?  
* How might we begin to use qualitative data to understand the conditions under which school-level dose becomes a factor or not?  
* What (if anything) dose school-level dose mean for PEEC programs with a professional development model?  
A dditional big picture questions to help frame & guide the study, even though definitive results are not likely this year:  
* How might the school-level dose hypothesis inform a cost-benefit analysis in terms of a school’s and/or community’s readiness for, implementation of, and/or sustainable maintenance of place-based education program effects?  
* What might a community-level dose hypothesis look like?  |
|          | 5c) On-going refinement of cross prog surveys/ infrastructure, including developing "one-pager" laying out broad scope and cost of ideal research agenda | MD lead               | 4                | TBD     | * TBD, based on highest leverage assessment of student capacity and program need  
* one stop shopping for PEEC/PBE eval resources  |
|          | 5d) Process, analyze, & report on cross program survey data.                                     | MD lead; GT support   | 5                | Spr 05  | * TBD, based on highest leverage assessment of student capacity and program need  
* one stop shopping for PEEC/PBE eval resources  |
|          | 5e) Process, analyze, & report on cross program qualitative data.                                | AP lead               | 9                | Spr 05  | * TBD, based on highest leverage assessment of student capacity and program need  
* one stop shopping for PEEC/PBE eval resources  |
|          | 5f) Student projects                                                                           | GT, students          | 5                | TBD     | * TBD, based on highest leverage assessment of student capacity and program need  
* one stop shopping for PEEC/PBE eval resources  |
|          | 5g) Managing PEEC website                                                                       | MD                    | 3                | TBD     | * one stop shopping for PEEC/PBE eval resources  |
|          | 5h) Writing one article for publication                                                          | MD                    | 4                | Ongoing | * content: dose-response measurement strategy  
* venue: peer-reviewed journal, relatively high status if poss.  |
Appendix C: Interview Guides
Sustainable Schools Project Evaluation
Questions for interviews at Champlain
March 22, 2005

Interviewee: Confidentiality explained:
Interviewer: Taped / Transcribed
Setting: Notes / Comments:

Focus: Staying Power at Champlain Elementary School
The purpose of these focus groups is to gather staff, teacher, administrator, parent, and/or student input into the extent to which the approaches, goals or projects of SSP are being sustained at Champlain this year.

As you know, SSP staff were present in your school for two years. This year, the program is officially withdrawn from the school, but the hope is that SSP approaches, goals and projects have lived on without the presence of SSP staff.

1. Is sustainability (or the concepts: diversity, interdependence, cycles, etc) still a presence in the school and in the curriculum?
   
   a. If so, in what ways do you see it having taken hold? (particular projects, curricular elements, school building initiatives, student interests, teacher practices, policies, etc.)

2. Are there things that you in particular are doing that are sustainability-related?
   
   a. Compared to how much emphasis you personally (as a teacher) placed on sustainability in your classroom teaching in the past, is your work on sustainability this year as prevalent, less prevalent or the same as it was last year and/or the year before?

3. I want to ask you about a few specific areas that SSP emphasizes. Please let me know whether you think SSP has succeeded in establishing more of this at Champlain than existed three years ago.
   
   a. Community members assisting in the school
   b. Students learning out in the community or in the schoolyard
   c. Teacher collaboration
   d. Integration of literacy with science and social studies in the classroom
   e. Presence of sustainability themes in many aspects of the school— afterschool programs, classroom, building, cafeteria, grounds, etc.
   f. Campus ecology practices (i.e. composting, solar panels, etc.)
   g. Parent involvement related to sustainability projects (i.e. parent info nights, etc)
   h. Student civic engagement (especially related to 4/ 5th grade)
   i. Professional development opportunities like literacy-sustainability study circles, or other PD related to sustainability - schoolyard ecology, watersheds, mapping, etc.
4. Overall, which **aspects of the SSP program** (such as summer training, curriculum planning and resources, team teaching, etc.) do you think are the most critical to influencing teacher practice in a lasting way?

5. What kind of **barriers** have you seen to having SSP’s approaches, goals and projects live on at Champlain?

6. What could be done—both now and while SSP was active in your school—to encourage more staying power for the approaches, goals and projects that SSP helped foster?

7. Given that the goal of any “school improvement” initiative is to make **lasting** change, do you think that, overall, SSP is a viable or successful “school improvement” initiative?

8. Any other comments to share?

**Additional question(s) for SSP STAFF:**

9. Now that you have a school to “look back on”, do you have any new opinions about which elements of SSP are MOST critical to encouraging staying power at a site?
Appendix D: SSP Monthly Process Watcher Form

Sustainable Schools Project Evaluation 2004-05
Monthly Process Watching
Month of Record: _________________________________

Please return this to the Evaluator by the 5th of each month. Thanks!

1. Your initials:
2. Date:
3. Identify the Class/Teacher/Event/School:
4. Activity - please give a few details (brief):
5. **Highlight - one great story, notable quotes, impact on the class/teacher, etc.:
6. Type of Impact (see checklist in box below for reference):

THIS BOX IS JUST A REFERENCE FOR ANSWERING THE QUESTIONS ABOVE.

What impacts have you observed on...?

Students
☐ Student learning/academic achievement
☐ Stewardship behavior (for school or community): decision-making, ideas, actions
☐ Student understanding of sustainability, ah-ha's, struggles, ideas
☐ Community engagement
☐ Community engagement (involvement/participation)
☐ Other

Teacher Practice
☐ Integration/coordination of school improvement initiatives (EFS & literacy, etc.)
☐ Curriculum planning (integration, coordination, use of EQs, concepts)
☐ Teacher collaboration or coordination with colleagues/staff
☐ Teacher collaboration with community resources, partnerships, co-teaching, planning, staying power
☐ Teacher enthusiasm, interest; understanding of sustainability, interest in SSP
☐ Other

Campus Sustainability Practices
☐ Ideas, planning, decision-making
☐ School policies, campus practices and procedures
☐ School building or schoolyard
☐ Other

Community Partnership Vitality
☐ Changes in community interaction with school
☐ Local orgs, business, govt; partnerships with schools, attitudes toward youth, interest in sustainability
☐ Community partners' ability to work with school/teachers
☐ Parent involvement with school, teachers, community partners
☐ Other

Other notes/SSP process
☐ Barriers to progress
☐ Facilitators of progress
☐ Lessons learned
☐ Observations related to program “staying power”
☐ Other