An Evaluation of the Community-based School Environmental Education Project (CO-SEED) 2002-2003

Presented to:
Antioch New England Institute
and
the Place-based Education Evaluation Collaborative

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The CO-SEED 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 Community Mapping Program (the Orton Family Foundation, Vermont Institute of Natural Science); the Sustainable Schools Project (Shelburne Farms and the Vermont Education for Sustainability Project); and A Forest for Every Classroom Project (Shelburne Farms, National Wildlife Federation, National Park Service, and US Forest Service). In addition, the Upper Valley Community Foundation provides funding and support for several of these programs through its Wellborn Ecology Fund, as well as financial, administrative and staff support for collaborative evaluation and research efforts.

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EXECUTIVE SUMMARY

In 2003, the Community-based School Environmental Education Project (CO-SEED) completed its sixth year as a project of Antioch New England Institute (ANEI), a practitioner oriented consulting branch of Antioch New England Graduate School in Keene, New Hampshire. CO-SEED’s primary purpose is to help schools and communities work together to develop community- and place-based approaches to education while simultaneously increasing social capital and preserving the environment. More specifically, CO-SEED seeks to create positive impacts in the realms of student academic achievement, environmental stewardship behavior, community vitality and environmental quality. ANEI works with a CO-SEED site for approximately three years, building partnerships among and providing training to the school, its local community and a local Environmental Learning Center (ELC).

This report reflects the evaluation of five CO-SEED sites: Antrim, NH, alumni site, concluded 2001; Malden, MA , year 3 site, began September 2000; Gilford, NH, year 2+ site, began January 2001; Littleton, NH, year 2+ site, began January 2001; Bradford, VT, new site, began January 2003. Two alumni sites (Gorham, NH and Rivendell, NH/ VT) were not evaluated this year and are not covered in this report, consistent with plans exist to systematically evaluate alumni sites two years after the formal conclusion of CO-SEED at that site.

Evaluation Methods
This was a mixed-methods evaluation, relying on both qualitative and quantitative data. The evaluation process was participatory and utilization-focused, with a goal of providing stakeholders with a tool for program documentation, development and refinement. Qualitative data were analyzed using Miles and Huberman’s (1994) approach to sorting descriptive observation data and transcribed interviews to illuminate key emergent issues. Basic descriptive statistics were used to analyze quantitative data from Likert scale survey instruments and numeric responses to a prioritization activity in which respondents were asked to make decisions about how to budget CO-SEED’s process activities. Data collection was not uniform across all five sites, but multiple methods were used at each site.

During the sixteen total days of site visits across the five CO-SEED sites, fifty-four adults (school teachers/ staff, community members, school administrators, and CO-SEED staff) and seventeen students (grades 4-8) were interviewed, mostly individually, but some in small focus groups. Other sources of data collected include: photos; curriculum planning tools; staff observation record; school-wide in-service agenda; student writing samples; in-service day evaluation worksheets; standardized test scores; school district annual report; town annual report; attendance data; kindergarten registration data; school newspaper; project-based unit summary; and evaluator observations of classroom and school events.
Conclusions and Selected Illustrative Examples
The CO-SEED project has lofty goals for simultaneous improvement of schools, communities and the environment. While not without its challenges, there is clear evidence that the project is making great strides toward these goals on many levels across sites. Each of the following sections is detailed in the full report.

Community-school relationships
The evidence presented in the body of this report shows positive results in developing mutually beneficial community-school relationships. This finding was consistent across all CO-SEED sites. The central place that the local Environmental Learning Centers (ELCs) hold in the CO-SEED model was the most prominent aspect of connecting the school to its community, and was resoundingly valued by almost every respondent. However, the effort goes far beyond ELCs to include town governments, parents, community businesses, local organizations and volunteers. It could well be that this unique feature of the CO-SEED model offers the program’s greatest opportunity for creating long term change in schools and communities, simply because it broadens and deepens the base of stakeholder support.

Selected examples include:
• All sites which hosted Community Vision to Action Forums reported initial and continuing benefits of these functions.
• A “Historical Quest Day” in Gilford involved the entire third and sixth grades plus over 40 adult volunteers from the community, including a strong connection with the Historical Society.
• The Littleton town and school district annual reports highlighted CO-SEED projects as examples of educational successes.
• The city public works manager helped eighth graders at Malden implement a school recycling effort. The custodian reported collecting half as much trash per floor. The city may now replicate this at other schools.
• Littleton respondents suggested that CO-SEED’s presence contributed to passing the school budget.
• Sixth grade students and their parents played a key role in preserving an historic building in the town of Gilford.
• Malden’s ELC representative reported increased zoo membership for Malden families since CO-SEED started.

Changes in teacher practice
Strong evidence of changes in teacher practice was apparent at each of the CO-SEED sites that were evaluated this year. Respondents consistently and clearly reported increased collaboration among teachers and increased integration of curriculum.

“I’ve been around for thirteen years, but have never been involved with student projects before this program.”
(Malden custodian)
Another interesting pattern emerging from the data is the lack of one clear, primary mechanism reportedly causing the observed changes in teacher practice. This leaves the evaluation team with the impression that it is not so much one particular aspect of CO-SEED that changes teachers, but rather it is the continued presence of the wide range of diverse CO-SEED activities that creates an atmosphere conducive to change, and then provides diverse tools to support that change. This relatively comprehensive and multi-dimensional approach could also help to explain another strong pattern in the data. CO-SEED demonstrated an ability to reach varied audiences. Literature on the diffusion of innovations provides terminology and concepts that appear to apply to CO-SEED (Rechtman, 1997; Rogers, 1995; Gladwell, 1996). Teachers perceived by fellow teachers, CO-SEED staff, and/or the evaluators as being the “Innovators” and “Early Adopters” readily used CO-SEED resources of time, training and access to curricular and financial support. Yet there were also several instances of the “Late Majority” and even the “Laggards/ Resisters” eventually changing their teaching practice to incorporate the CO-SEED approach as well. It could be that CO-SEED’s ability to support a range of responses to whole school change is due to its persistent, multi-dimensional approach.

Selected examples include:

- Principals at each site spoke proudly and supportively of their teachers’ “interweaving of the curriculum.”
- Malden now expects all teachers to integrate their environmental theme across the curriculum, and trains teachers at each grade-level to facilitate shared planning time that is built into the schedule.
- A Gilford teacher who was a model CO-SEED teacher received both national (Project Learning Tree) and state (NH DOE) awards for excellence in teaching.
- Shared professional development days, increased communication, inter-grade-level projects, and integrated staff meetings in Littleton greatly enhanced collaboration between the elementary, middle and high schools.
- Gilford teachers created large interdisciplinary living history projects (local Native Americans in 3rd grade, the Lewis and Clark Expedition in 6th grade).
- High school students in Littleton assisted local businesses in translating their signs into French for visiting Quebecois tourists.
- The 7th grade team at Malden taught an extensive interdisciplinary unit on bread that involved local bakeries, soup kitchens, and local access TV.
- Various sites implemented stream studies, community history projects, solar system exposition on Main Street, making meals for families with members in military service in Iraq, wetlands assessment projects, GIS mapping for local businesses, and many others.

“It has made a huge impact on my teaching. I will never teach the same way again.” (Gilford teacher)

“I’ve seen one teacher go leaps and bounds from being afraid to taking risks.” (ELC representative)
Student outcomes

In this evaluation, CO-SEED impacts on students fell into three overlapping categories: engagement in “out-of-class” activities, evidence of increased maturity/responsibility, and improved performance in traditional classroom activities. Some of the clearest examples of student behavior, attitude and engagement changes were reported for CO-SEED related extra-curricular programs. Of additional interest is a pattern of responses suggesting that CO-SEED may be particularly beneficial for students who have difficulty learning in traditional classroom situations.

Selected examples include:

- High school students in Littleton worked with the Massachusetts Institute of Technology to invent a piping system to heat the downtown sidewalks.
- A Gilford student started a Junior Naturalist Club. Fifty students (and 12 adult volunteers) participated regularly.
- The Student Leadership Group in Malden collected 750 ink jet cartridges to raise approximately $300 which they intend to use for community projects.
- A school garden was built by students from the building trades program and elementary school students in Littleton.
- A pilot study correlating exposure to CO-SEED with student writing scores on standardized test showed that scores were good and improving, but could not be directly correlated to CO-SEED.
- Several Malden eighth graders reported wanting to enter “helping” careers as a result of participation in recycling and mentoring projects.
- When fourth grade students in Gilford were upset to find that recycling bins were emptied into the trash, a new plan was instituted, including purchasing new scales for weighing the recycled materials.
- Teachers reported increased writing skills for ESL students in Malden.

Sustainability or “staying power” of the program model

Nearly every respondent expressed confidence that CO-SEED has initiated and sustained changes that will continue to have a positive influence after ANEI’s direct involvement has ended. However, it is interesting to note that the sites that are still immersed in their official three-year period were more explicitly positive about CO-SEED’s sustainability prospects than the alumni site. While fundamental changes in culture and practice certainly did occur at all sites, it appears that the program as currently designed may not be sufficient to create a comprehensive transformation of a whole school to a fully integrated place-based education/sustainability model that can carry forward into the indefinite future. It is worth asking whether this level of change is a feasible goal with just three years of intensive involvement in the program sites by ANEI. It is possible that a longer, more tapered, more site-specific disengagement plan is warranted.

“We are role models”
(Malden 8th grader)
Selected examples include:

- The desire to do community- and environment-based projects is still very strong at Antrim, the alumni site, despite the weariness and frustration resulting from stringent curricular mandates recently implemented by the school district office.
- The ELC at the Littleton site has developed a multi-year grant to hire a person to help them continue the work begun with their participation in CO-SEED.
- Several Malden participants noted “school wide shifts in thinking” or “culture” that could sustain CO-SEED’s work despite difficult economic times.
- Two years after the initial Vision To Action Forum in Gilford, and without ANEI’s prompting or intervention, a sub-committee formed spontaneously to carry on work toward the priorities and plans made at the original event.
- Relationships with town officials in Littleton have become “incredibly supportive” as a result of working together on CO-SEED projects.
- The Beebe School in Malden has implemented a full K-8 curriculum map that brings the environmental theme to the fore.
- Access to the nature trail in Gilford (from a collaboration with local Boy Scouts and CO-SEED) has created and sustained momentum for teachers to use it.
- Teachers in Gilford report that the new butterfly garden is “entrenched” in the curriculum, and Project Feederwatch is “institutionalized.”
- Several respondents clearly stated that both Lakeway Woods and TROLL (new natural area learning labs in Littleton) are now integral to the school system and “part of everyday life of the schools”.
- Federal Comprehensive School Reform funds in Malden have supported the training of grade-level facilitators, and on-going CO-SEED style professional development activities.
- The Depot School, a glowing CO-SEED success in Antrim, has created a year-round, off-site classroom for community-based learning for the past two years. However, lack of support from the district is ending the program.
- Gilford is exploring options for continued funding of an ELC representative type person after ANEI departs.

**Prioritization of the multiple components of CO-SEED**

Interviews with teachers, administrators and community members showed a strong level of support for the current allocation of financial resources amongst the various components of the CO-SEED model. An interesting pattern was that the respondents who most strongly advocated for items related to teacher training tended to be from Antrim, the alumni site.
Process strengths and challenges

The CO-SEED model demonstrates a strong ability to identify and cultivate support from a very broad array of constituents. CO-SEED’s inclusiveness and comprehensiveness are perhaps its greatest strengths. In general, CO-SEED’s biggest challenge may be to simply do a better job of building on, nurturing and measuring its existing strengths.

CO-SEED faces the same organizational barriers inherent in any effort aimed at substantive school reform. Most of the barriers noted by respondents in this evaluation fall into this category of issues that the CO-SEED program, by itself, has relatively little leverage to change: low student-teacher ratios are essential but expensive; even in the best case scenario, CO-SEED style education is a lot of work for everyone involved; narrowly focused and frequently shifting curricular mandates from “on high” can stymie a place-based education approach.

The more interesting process challenges that surfaced in this evaluation were the ones that CO-SEED may actually be able to impact. CO-SEED demonstrated a strong ability to stimulate systematic integration of the school curriculum, but respondents called for more and earlier curricular integration. CO-SEED generated many projects with appealing stories and measurable results, yet several participants suggested that even more PR would be better. The ELCs contribution to the program was deeply appreciated across the board, but there were many detailed suggestions for ways in which this component of the program could be improved.

Recommendations

Below are bulleted versions of seven “Tier 1” recommendations. Expanded versions of these and an additional twenty-three “Tier 2” recommendations can be found in the body of the full report.

- Consider extending the scope of the program beyond a three year model.
- Choose sites carefully in order to increase the chances of program sustainability.
- Provide ELC representatives with consistent training and networking opportunities.
- Intentionally identify and support teacher leaders both within and amongst CO-SEED sites in order to encourage faster and stronger diffusion of new practices.
- Encourage stronger and more consistent promotion of project successes in local media and school or community networks, especially early on.
- Continue to model leadership and facilitation skills that deliberately wean participants from relying on paid staff to convene and motivate the group.
- Communicate clearly with site staff about the evaluation process and expectations, building in clear and rewarding incentives whenever possible.
- Continue to include test score analysis as one component (among many) of the effort to document improved student academic achievement.
INTRODUCTION

CO-SEED PROGRAM OVERVIEW

The Community-based School Environmental Education Project (CO-SEED) is completing its sixth year as a project of Antioch New England Institute (ANEI), a consulting branch of Antioch New England Graduate School in Keene, New Hampshire. CO-SEED’s primary purpose is to help schools and communities work together to develop community- and place-based approaches to education while simultaneously increasing social capital and preserving the environment. The CO-SEED working Logic Model describes the program’s hypothesis as follows:

If we implement comprehensive place-based education in schools, we will have a positive impact on:

- Academic achievement
- Environmental stewardship behavior
- Community vitality
- Environmental quality

ANEI works with a CO-SEED site for approximately three years. There are currently three “alumni” sites that have completed their intensive involvement with ANEI, three ongoing sites that are in their third year of involvement with ANEI, and one new site that was started in January 2003, part way through the evaluation period covered in this report. CO-SEED sites are found in New Hampshire, Massachusetts, and Vermont.

While the program model intentionally adapts itself appropriately to the variety of sites with which it works, core components of the program at each site include:

1. **SEED Teams** consisting of administrators, community members, teachers, environmental learning center staff, students (at times) and a facilitator from ANEI. The SEED team acts as the steering committee for the program.

2. **Community Vision to Action Forums** bring together stakeholders that represent as diverse as possible of a cross-section of a community, to help them articulate long range goals for collaboration between schools and their communities, to enhance communication between town committees, community activists and curriculum design at the schools, and to prioritize action steps.
3. Environmental Learning Center (ELC) Staff from a local environmental learning center spend roughly two days a week in the schools. ELC representatives assist teachers with place-based and project-based curriculum development and lesson implementation, and facilitate connections between community entities and the schools.

4. Professional development is provided to teachers to help them discover means of incorporating place-based and project based learning into their curricula. Summer institutes, professional development in-service days and individual and team meetings are professional development strategies used by CO-SEED.

5. Antioch New England Graduate School Staff work with the schools to facilitate the process of CO-SEED implementation, professional development, curriculum integration and evaluation.

6. Sites are provided with access to Resources housed in the Center for Environmental Education located at Antioch New England.

For reference, the following chart provides a snapshot of the CO-SEED sites that were included in the 2002-03 evaluation, and are referenced in this report.

<table>
<thead>
<tr>
<th>Town</th>
<th>State</th>
<th>School(s)</th>
<th>CO-SEED began</th>
<th>ELC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
<td>New Hampshire</td>
<td>Great Brook Middle School</td>
<td>November 1997</td>
<td>Harris Center</td>
</tr>
<tr>
<td>Bradford</td>
<td>Vermont</td>
<td>Bradford Elementary School</td>
<td>January 2003</td>
<td>Hulbert Outdoor Center</td>
</tr>
<tr>
<td>Gilford</td>
<td>New Hampshire</td>
<td>Gilford Elementary School</td>
<td>January 2001</td>
<td>Prescott Farm Audubon Center</td>
</tr>
<tr>
<td>Littleton</td>
<td>New Hampshire</td>
<td>Lakeway Elementary; Littleton Middle and High</td>
<td>January 2001</td>
<td>Appalachian Mountain Club</td>
</tr>
<tr>
<td>Malden</td>
<td>Massachusetts</td>
<td>Beebe Environmental and Health Science School</td>
<td>September 2000</td>
<td>Stone Zoo</td>
</tr>
</tbody>
</table>
CO-SEED IN THE EDUCATIONAL CONTEXT

Theories of Change in Place-based Education

The terms ‘place-based education’ and ‘community-based learning’ are often used interchangeably or in concert with a number of other, similar terms including education for sustainability, service-learning, and project-based learning. All of these approaches create or nurture an explicit connection between the school and the community in which the school resides. A broader hope is to “tear down school walls” such that the community becomes integral to all facets of student learning—the school is open and inviting to the community and the community welcomes student learning to occur in many dimensions. Place-based education roots learning about abstract systems in the concrete experiences of the schoolyard and community.

The Rural Challenge and Evaluation Program of the Harvard Graduate School of Education’s recent report, Living and Learning in Rural Schools and Communities, describes place-based education as follows:

In its most simple form, pedagogy/curriculum of place is an expression of the growing recognition of context and locale and their unique contributions to the educational project. Using what is local and immediate, as a source of curriculum tends to deepen knowledge through the larger understandings of the familiar and accessible. It clearly increases student understanding and often gives a stronger impetus to apply problem-solving skills. (p. 11)

The theoretical underpinnings of CO-SEED are reflected in the Place-based Education Evaluation Collaborative’s “Working model: Change theory for place-based education” (see Figure). In broad terms, connection to a particular place (and the skills to act on that attachment) lead an individual to become a more active participant in his or her community. This is sometimes referred to as civic engagement. When levels of civic engagement and participation increase in a community, social capital—the invisible web of relationship—is said to broaden and deepen. An intensification of social capital then leads, in the long run, to healthier, more sustainable communities, both natural and social.
In CO-SEED’s logic model (see Appendix) school educators serve as the first level of change. Additional audiences include community members, school administrators and students.

CO-SEED works with a wide range of grade levels, K-12. Thus, strategies for training teachers and engaging communities in the schools vary considerably. In model place-based education programs, students at the K-2 level, for instance, might study green plants and begin a small schoolyard garden with the help of a local farmer or school groundskeeper, while high school students might work with municipal government to design and install energy efficient heating infrastructure. Both of
these actual examples embody the essences of place-based education: they are clearly academic by design, and they are naturally grounded in the local setting.

While some place-based education models choose to work primarily with teachers in a professional development setting, CO-SEED seeks to meet its goals via a “whole school” model, working simultaneously with teachers, administrators, students and community members.

**Place-based education in the research context**

Though research into the effectiveness of place-based education in particular has been slim, existing documentation and evaluation of place-based programming show strong promise, and closely related research has demonstrated that students who are engaged in real-world learning are more likely to succeed than those who learn the same type of material from more abstract textbooks.

A program evaluation conducted by the Harvard Graduate School of Education for the Rural Trust (1999) provides case studies of schools and communities throughout rural America that have been transformed by grounding students’ education in the local community and intentionally moving away from didactic approaches to standardized schooling. The evaluation concludes that as schools and communities work together to design curricular goals and strategies, students’ academic achievement improves, their interest in their community increases, teachers’ are more satisfied with their profession, and community members are more connected to the schools and to students.

Another study suggests several positive effects of place-based curricula in over 40 schools nationwide. This study by the State Environmental Education Roundtable demonstrated that when the environment is used as an integrating context (EIC), student achievement and in-school behaviors improve (Lieberman and Hoody, 2002).

Many studies of the effectiveness of service-learning have been conducted, in large part by the Corporation for National Service. They suggest powerful linkages between grounding the learning experience in the local context, enhanced student participation in community matters and increased student engagement in their academic studies. In particular, service-learning experiences have been shown to promote a “pro-social, active conception of citizenship” in students (Chi, p. vi) when they: 1) are implemented consistently and intensively; 2) include opportunities for analysis of and reflection on the service experience; and 3) provide regular opportunities for teachers and students to engage in dialogue.

Another service-learning focused study found that “rural students develop significantly more favorable relations with adult civic leaders and community
organizations when their service-learning experiences pertain to high priority community issues.” (Henness, p. v-vi) This study emphasizes the significance of engaging students in real projects that are truly valued by the community, thus resulting in improved perceptions of youth and adults toward each other, closer relationships between schools and government, lowered project costs, and increased community demand for student involvement. (See Appendix for an overview of best practices in service-learning.)

Equally integral to place-based education is a deepening of the sense of place people feel and their level of attachment to that place. Mueller and Abrams (2001) suggest that a sense of place is comprised of four primary components: 1) Knowledge, 2) Awareness, 3) Skills and 4) Disposition to care. These four variables become the task of the program developer to thoroughly include in the program design.

For an overview of best practices for professional development in place-based education, see Appendix.

**Educational strategies: schools and communities**

Hungerford and Volk (1990) suggest that a conservation ethic and responsible behavior must begin with early, sustained exposure coupled with action strategies and behavioral practice. Recent Federal legislation in the form of the No Child Left Behind act is one influential response to a nationally growing awareness of the need for higher levels of quality and accountability in public education. Place-based education hopes to meet both of these challenges. It seeks to enhance community health through increased social participation, and it seeks to strengthen the school system with more effective academic strategies and enhanced support from the community.

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Excerpt from: The Generally Accepted Principles of Teaching and Learning and their Implications for Local Education Support Systems

- All children do not learn in the same ways or at the same pace. (Good instruction provides students instructional choices and multiple ways to engage with content to help them take ownership of their learning and demonstrate competence.)

- Learning is active. It requires effort and resiliency on the part of the student as well as interaction (Good instruction promotes this interaction by maximizing opportunities for students to engage in their learning, rather than passively absorb information with teachers, texts, materials, and/or other learners.)

- Learning depends on a foundation of factual knowledge, the understanding of concepts in context, and the organization of facts and concepts so that they can be retrieved and applied.

- Learning is not limited to school. It can happen anywhere. (Good instruction incorporates children’s out-of-school experiences in school with lessons that have value beyond school and is connected as much as possible to settings in the community that enhance learning for children and adults both inside and outside of school.)

*Created by School Communities that Work: A National Task Force on the Future of Urban Districts (June 2002)*
CO-SEED IN AN EVALUATION CONTEXT

In October 2001, several New England foundations and educational organizations came together to explore how they might collectively strengthen the evaluation of their place-based environmental education programs. They each sensed that their organizations could be doing more and better evaluation of their programs by working together than by working independently. The group decided to form an evaluation collaborative to evaluate their individual programs and also to lay the groundwork for broader research into the effectiveness of place-based education. Antioch New England Institute, CO-SEED’s sponsoring organization, is one of the founding members of this newly formed Place-based Education Evaluation Collaborative.

The Place-based Education Evaluation Collaborative

The Place-based Education Evaluation Collaborative (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 four 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 the local environment
- improvement of school yard habitat and use as teaching space
- increased civic participation

All four programs focus on linking the school curriculum to the local community. Two programs, including CO-SEED, work with whole schools and their local communities (e.g. in-service days, staff meeting integration, community-school forums etc.), and two work primarily with individual teachers through institutes, curriculum development, follow-up support, etc. All four programs work with teachers and communities over the course of at least 12 months, and in some cases for over three years.

"And it may be that it will take a concerted, cooperative effort among educational institutions to meet the challenge of changing learner behavior. Certainly, an articulated implementation across grade levels and the cooperation of non-formal educational agencies as well as local and regional educational resources would maximize the opportunity for success."

(Hungerford & Volk, 1990)
Collaborating organizations

- Antioch New England Institute, Keene, NH
- The Orton Family Foundation, Rutland, VT
- The Upper Valley Community Foundation, Hanover, NH
- Shelburne Farms, Shelburne, VT
- Vermont Education for Sustainability Project, Shelburne, VT
- Marsh-Billings-Rockefeller National Historical Park and Conservation Study Institute, Woodstock, VT

Positioning of the evaluators

Both of the authors of this report are former employees of collaborating organizations of PEEC who have shifted their careers from program delivery to program evaluation. One remains an employee of a PEEC organization, but working under a different Center for that organization. Neither evaluator has ever worked primarily with the particular programs that are evaluated in this report. Their level of previous familiarity with the evaluated programs and their staff was generally agreed to be an asset to the more participatory approach that was desired by PEEC.

The following measures were taken to mitigate the potential for researcher bias:

- Four nationally respected researchers were retained as advisors for the evaluation, all of whom provided interim consultation on research design and three of whom reviewed the final report.
- All interviews were recorded and transcribed either fully or partially, generally within twenty-four hours of the interview.
- The faculty of one of the evaluators’ Ph.D. program were regularly consulted.
- The issue of potential researcher bias was publicly and explicitly discussed periodically to the satisfaction of all members of PEEC.
- Interview guides were developed and followed, and generally accepted methods for coding interview data were employed.
- Every effort was made to maintain high standards for methodological rigor.
EVALUATION METHODS

Now in its sixth year of implementation, CO-SEED has had three years of comprehensive evaluation prior to this year. The first two years of evaluation focused on a qualitative methodology to document stories of the successes and challenges at individual CO-SEED sites. The third year of evaluation continued in this vein and added two quantitative elements: an analysis of test score data from students at several CO-SEED sites, and the administration and score reports of a survey instrument.

This year’s evaluation built upon this foundation by focusing on several key process and outcome findings highlighted by prior evaluation. Both quantitative and qualitative methodologies were utilized. Previously designed surveys were administered at appropriate sites, and the data were interpreted as completing a “pre-post” set with prior data. Additionally, surveys were revised and administered as a “pre” survey at the one new CO-SEED site.

The interview and focus group methods from previous years were also continued this year, though the areas of focus were refined to include the following:

- Explore perceptions and indicators of the project's long-term sustainability, or 'staying power.'
- Inquiry about CO-SEED’s impact on teacher and school practice
- Development, piloting and reporting on a measure of CO-SEED's impact on student writing abilities
- Beginning to identify key indicators of increased community-school engagement, both site-based and general indicators.

The interviews included varying degrees of focus on the project’s four key goal areas: student academic achievement, stewardship behavior, community vitality and environmental quality.

Finally, an attempt was made this year to begin establishing systematic, ongoing site and program staff-based evaluation processes. Several tools were developed and used this year for that purpose, including the SEED Team Tracking process and the ELC Monthly reflections. (See Appendix for these forms)
Evaluation Questions

Evaluation questions were designed by looking at the goals and expected outcomes outlined by CO-SEED program managers in their logic model (see Appendix) and by meeting with program staff from ANEI. Specifically, evaluation questions addressed in this evaluation are cited in the table below.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Evaluation questions</th>
</tr>
</thead>
</table>
| Process Effectiveness   | • Which aspects of the CO-SEED model are most effective? What elements are non-essential?  
                        | • How does the work of CO-SEED spread within a school/community?  
                        | • What happens in CO-SEED sites after Year Three? In what ways is CO-SEED successful at creating lasting change in a school/community?  
                        | • What factors contribute to the sustainability of the CO-SEED model beyond Year Three?                                                                                                                                  |
| Teacher outcomes        | • How does participation in CO-SEED change teachers' teaching practices?                                                                                                                                               |
| Student Outcomes        | • How does participation in one of these place-based education programs affect students' level of civic engagement?                                                                                                      |  
                        | • What are some of CO-SEED's measurable impacts on students' stewardship behavior?                                                                                                                                       |  
                        | • What are some of CO-SEED's measurable impacts on students' writing abilities?                                                                                                                                            |  
| Community Outcomes      | • What indicators can we identify and use to measure CO-SEED's impacts on the development of enhanced community-school relationships?                                                                                |

CO-SEED program staff reviewed the questions and evaluation structure and, upon approval, appropriate research instruments were designed. Throughout the evaluation process CO-SEED staff and site participants were invited to be active participants in structuring and contributing to the evaluation process. Participatory evaluation increases the likelihood that evaluation processes and products will be both appropriate and useful for all stakeholders.

Process and Instruments

The evaluation utilized multiple methods. Semi-structured interviews and focus groups were conducted with teachers, community members, ELC representatives, students and CO-SEED staff members. Classroom and school observations, internal reflection instruments, student academic achievement data and pre-and post-surveys served to triangulate the interview data.
Open interviews are particularly useful in program evaluation because they are engaging interactions that help us understand both the process and the outcomes of a program, including what participants know and like about the program, how they have been affected by the program, and what they think should be different (Monroe, 2002). An interview guide was developed that was specific enough to adequately encompass the evaluation questions but flexible enough to meet the stakeholders’ level of participation in CO-SEED activities. See Appendix for interview guides. Most interviews were audio recorded and transcribed and a few were recorded by hand.

Other data collection instruments for this evaluation consisted of written surveys, on-site observation reports and informal interviews with teachers, students, project staff and community members.

The following tables summarize the data collection methods and instruments that were used to collect data used in the analysis:

**CO-SEED Data Sources for Evaluation 2002-03**

<table>
<thead>
<tr>
<th>CO-SEED Site</th>
<th>Site visits (# days including classroom, field and meeting observations)</th>
<th>INTERVIEWS/FOCUS GROUPS (# of individuals)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Administrator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antrim</td>
<td>2 Spring</td>
<td>1</td>
</tr>
<tr>
<td>Bradford</td>
<td>1 Winter, 1 Spring</td>
<td>1</td>
</tr>
<tr>
<td>Gilford</td>
<td>1 Winter, 2 Spring</td>
<td>2</td>
</tr>
<tr>
<td>Littleton</td>
<td>2 Fall, 1 Winter</td>
<td>1</td>
</tr>
<tr>
<td>Malden</td>
<td>1 Fall, 2 Spring</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>13</strong></td>
<td><strong>7</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>CO-SEED Site</th>
<th>ELC Monthly Record^1</th>
<th>SEED Team Record^2</th>
<th>Teacher/Student Surveys</th>
<th>Other data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bradford</td>
<td>5</td>
<td>2</td>
<td>Yes: Year 1</td>
<td>Photos; data collection initiated</td>
</tr>
<tr>
<td>Gilford</td>
<td>4</td>
<td>4</td>
<td>No</td>
<td>Photos; Curriculum planning tools; Staff observation record; School-wide in-service agenda; Student writing samples; In-service day evaluation worksheets; NHEIAP^2 writing scores for 80 3rd graders</td>
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</tbody>
</table>

^1 Number provided to evaluator
^2 New Hampshire Education and Improvement Assessment Program
<table>
<thead>
<tr>
<th>CO-SEED Site</th>
<th>ELC Monthly Record&lt;sup&gt;1&lt;/sup&gt;</th>
<th>SEED Team Record&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Teacher/Student Surveys</th>
<th>Other data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Littleton</td>
<td>3</td>
<td>0</td>
<td>No</td>
<td>Photos; School-wide in-service agenda; Littleton CO-SEED Project List; School district annual report; Town annual report</td>
</tr>
<tr>
<td>Malden</td>
<td>3</td>
<td>6</td>
<td>Yes: Year 3</td>
<td>Photos; Zoo attendance data; Kindergarten registration data; Attendance data; The Beebe Buzz newspaper; Project-based Unit Summary for K-8; MCAS&lt;sup&gt;3&lt;/sup&gt; writing scores for current and previous three years for 4th grade</td>
</tr>
<tr>
<td>Antrim</td>
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<td>0</td>
<td>Yes: Year 5</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Data Sources</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELC Staff Interviews</td>
<td>8</td>
</tr>
<tr>
<td>Interviews with various school staff for writing inquiry</td>
<td>3</td>
</tr>
<tr>
<td>CO-SEED Staff Interviews</td>
<td>3</td>
</tr>
<tr>
<td>ELC Meeting Observation and list serv review</td>
<td>1 and on-going</td>
</tr>
<tr>
<td>Prioritization Activity (as part of interviews or focus groups)</td>
<td>31</td>
</tr>
</tbody>
</table>

As indicated in the above tables, data collection varied across sites. This variation depended on several factors: availability of participants for and timeliness of scheduling interviews; frequency with which site coordinator or ELC representatives provided monthly data; degree of inquiry into community/school indicator data; and number of years of involvement as a CO-SEED site.

Interview and observation data at Antrim, the only alumni site evaluated this year, was more limited than the other sites. This was due in part to the fact that Antrim is no longer officially involved with CO-SEED and in part because of delayed interview scheduling. The focus of data collection at Antrim was limited to interviews of selected school staff and collection of survey data. The focus of interviews was largely on their perceptions about the sustainability of the CO-SEED process, and reports of sustained outcomes.

Data collection at the three ongoing sites (Littleton, Gilford, Malden) was fairly consistent. Data gathered in Bradford, the newest site, is presented in this report but is intended as baseline data for later comparison as the program progresses.

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<sup>3</sup> Massachusetts Comprehensive Assessment System

<sup>5</sup> Apart from this story’s significance as evidence of community-school relationships, it is a concrete example of the power of student civic engagement.
Survey administration process, Malden

In June of 2003, Beebe School students were post surveyed as a follow up for the surveys that were originally administered in the fall of 2000. The CO-SEED site coordinator for Beebe worked with the school secretary to identify the students who were surveyed during the 2000-01 school year and who were also currently enrolled in the school. Of the 93 students who were originally surveyed it was determined that about 60 were still in the school. Homeroom teachers for those students were requested to administer the post survey to those students. Of the 60 surveys sent out 47 were returned.

In April of 2003, the Beebe Parents group direct mailed a post survey to all six of the parents who had filled out the survey in the fall of 2000. They were asked to fill out the survey and respond using the self addressed and stamped envelope. Follow up reminder post cards were sent out two weeks after the original survey was mailed out. Only one of these surveys was returned. It is not included in the data set.

In June of 2003, a survey was passed out to 11 of the 13 teachers who had filled surveys out during the 2000-01 school year. The remaining two no longer work at the school. Of the 11 surveys passed out 7 were returned directly to the CO-SEED site coordinator for Beebe.

Survey administration process, Bradford

In March of 2003, a pre-survey was administered to all 4th and 5th grade students from Bradford (4 classrooms). The classroom teachers were asked to have their students fill out the surveys, and then hand in a separate class list which names the students who filled the surveys out. 63 surveys were returned (including, both 4th and 5th grade students) and these are included in the data set.

In March of 2003, a pre-survey was mailed to 103 parents of Bradford Elementary School, representing a randomly selected 50% of the families from the school’s database. Respondent names were tracked by asking them to fill out the return address on the self addressed and stamped envelope provided for returning the completed surveys. Two weeks after the surveys were mailed a reminder post card was sent out. 38 surveys were returned with names and address tracked separately from the survey.

In March of 2003, a pre-surveys were distributed to all faculty through the school’s internal mailbox system with a request to return completed surveys to the school secretary. When teachers returned the survey, teacher names were recorded separately. 19 out of 20 were returned, but analysis has been deferred until the 03-04 evaluation report in order to include responses from 18 additional non-faculty school staff as part of the data set.
Survey administration process, Antrim

In April of 2003, post surveys were direct mailed to the 14 parents who had filled out surveys in the fall of 1999. A self addressed stamped envelope was provided and follow up reminder post cards were sent out two weeks after the original survey was mailed out. 5 surveys were returned.

In June of 2003, Antrim School students were post surveyed as a follow up for the surveys that were originally administered in the fall of 2000. The former CO-SEED site coordinator for Antrim worked with the school secretary to identify the students who were surveyed during the 1998-99 school year and who were also currently enrolled in the school. Homeroom teachers for those students were requested to administer the post survey to those students. 11 surveys were returned.

In June of 2003, Antrim teachers were post surveyed as a follow up to the surveys they filled out during the 1998-99 school year. The former CO-SEED site coordinator passed out surveys to all the teachers still in the school who filled out the original surveys. Seven of these surveys were returned directly to the former CO-SEED site coordinator.

Investigation of student writing test scores

A participatory approach was used for designing the pilot writing investigation component of this evaluation. First, CO-SEED program staff were consulted as to which sites would provide the most fruitful and efficient context for exploring a possible correlation between standardized test scores of writing and student exposure to CO-SEED. Based on these discussions, initial interviews were then conducted with school administrators at Antrim, Littleton, Malden and Gilford to gather participant input on the feasibility, utility, and other benefits and challenges of various research design approaches. Literature on current issues and challenges in the field of writing assessment was reviewed (Wolcott, 1998). This process resulted in adopting a general protocol with two primary features:

1) Use existing standardized writing assessments rather than designing and implementing CO-SEED specific writing assessments; and

2) Work with school administrators to choose convenient sample groups of students with varying levels of exposure to CO-SEED.

The primary rationale for using existing writing assessments was to minimize disruption to regular class activities and make frugal and efficient use of program evaluation resources. A CO-SEED administered writing assessment would have little incremental validity if a more comprehensive state, district or building level test or direct writing assessment is already in place. Further, since CO-SEED is not explicitly
a writing improvement program, neither standardized writing assessments nor custom designed writing assessments would test the exact activities that CO-SEED engages in. Thus, any writing assessment instrument would have some validity questions in this situation. Given the limited amount of staff and dollar resources available for this portion of the CO-SEED program evaluation, using a holistic scoring rubric to assess students’ direct writing samples in response to CO-SEED-specific prompts would be subject to questions of inter-rater reliability and instrument validity. Therefore, this study acknowledges these instrumentation validity questions and focuses on identifying good sample groups based on exposure to CO-SEED. Lastly, it is logistically more realistic to have a consistent protocol across CO-SEED sites for assigning sample groups than it is to have a consistent CO-SEED specific assessment instrument, and one of the goals of this pilot sub-investigation was to create a protocol that is as widely replicable across CO-SEED sites as possible.

The primary reason for determining comparison groups through conversations with school administrators is to accommodate the variability of CO-SEED implementation across sites. At some sites, CO-SEED is very explicitly and formally intended to be implemented equally throughout the whole school, and so it becomes challenging to assess variability among comparison groups in a given year. The Beebe School in Malden fits this description and so it was decided to compare the writing scores from the Massachusetts Comprehensive Assessment System (MCAS) of successive cohorts of 4th graders. The assumption was that each year’s 4th graders had more cumulative exposure to CO-SEED since the program had existed in the school for longer. At other sites, however, variability among CO-SEED implementation within a given grade level is a more acceptable or appropriate conceptual framework. The Gilford site fits this description and so it was decided to compare the writing sub-test scores from the New Hampshire Educational Improvement and Assessment Program (NHEIAP) of each of the 3rd grade classes. Two of these classrooms were determined by administrators to be less involved in CO-SEED type projects, one was determined to have a medium/ high involvement in CO-SEED, and one was determined to be very fully engaged in CO-SEED type activities. At Antrim there was little philosophical support for the utility of test score analysis in general, and at Littleton the busy schedules of the evaluator, school administrator and school holidays became incompatible, and so this pilot writing investigation was not conducted at Antrim or Littleton.

It was determined that school administrators would be best positioned to advise the evaluators on identifying suitable comparison groups because of their familiarity with and accountability for curricular efforts across the school as a whole. The option of administering surveys or structured interviews directly to teachers to measure exposure to CO-SEED in a more explicit and replicable way was considered, but determined to not be the most efficient use of teacher effort at this point in the evolution of this pilot protocol. This realization has spurred the search for more
consistent and quantitative measures of the level of program exposure for future evaluations.

The minimum size for a comparison group was set at approximately twenty students, and this condition was met in all cases.

**Data Analysis**

After fieldwork was complete, transcribed interviews, monthly reflections forms, descriptive observation data, and other documents and were coded to illuminate key emergent issues and were analyzed qualitatively using inductive methods. Pattern-matching was employed to better understand trends in the data and address the evaluation questions. (Miles & Huberman, 1994). The most prevalent themes were then synthesized into this report.

Written surveys administered to students, teachers, administrators and community members consisted of both open-ended questions and five-point Likert scale items. Likert-scale-type survey data were entered into a spreadsheet and analyzed using t-tests. This report presents findings from both the quantitative and qualitative data sets.
DISCUSSION OF FINDINGS

The findings (description of data and evidence) and discussion (analysis and interpretation of the data) are merged into one section of this report. This enhances the readability and better illuminates themes that emerge from multiple data sources. Five distinct areas are discussed in this section:

- The nature of community-school relationships at various CO-SEED sites
- A presentation of evidence of changing teacher practice resulting from CO-SEED
- Discussion of student achievement (including a report on the development and implementation of a literacy assessment, and a qualitative analysis of teacher, student and staff interviews regarding student outcomes)
- A report on a developing process prioritization activity
- The prospect of CO-SEED’s sustainability at four of its more advanced sites
- Process findings regarding CO-SEED’s most salient strengths and challenges

Wherever possible, an effort to analyze the CO-SEED project as a whole was made, while still acknowledging and reporting on the variable nature of its implementation from site to site.

“Last week I had 13 parents vying to chaperone a field trip, and even had to turn away a few.”
(Gilford teacher)
COMMUNITY-SCHOOL RELATIONSHIPS

“The attitudes of non-teachers toward teachers has totally improved. One of the biggest things CO-SEED has done for me is given me an increased respect and appreciation for what teachers do. My wife always complains about teachers, how they have the summer off and how our tax money goes there. Now I tell her, ‘you try it, you’d need the summer off too.’ Plus they’re hard at work throughout the summer taking classes, planning for next year....”
(Town recycling coordinator and SEED team member)

The development of an enhanced school-community relationship is a key factor in the theory of change behind the CO-SEED project. In this section, qualitative findings for the sites are discussed individually and then survey data are presented for each site.

Qualitative Findings on Community-School Relationships: Gilford, New Hampshire

Evidence of a growing relationship

“Because of the GALA there has been more dialogue about common interests and topics in both the school’s plan and the town’s master plan.” (Gilford principal)

One historical society staff member reported unequivocally that, in the past two years there has been more connection between the schools and the historical society. The Historical Quest Day involving all sixth and third grade classes and over 40 adult volunteers from the community is a prime example of utilizing this town resource for learning purposes. Historical society members also report that students come on field trips to the historical society more frequently now than in the past.

Although the historical society is always eager to support things, without CO-SEED happening, there wouldn’t have been the teacher interest or the justification to come. One day I saw [one of the teachers] and her students and they were all on bikes. They were going out to check out some of the [historical] sites. It’s something that goes beyond the classroom, and it’s wonderful.

A third grade teacher reported that she sees a “significant increase in parent involvement in my classroom since developing the thematic, year-long unit about community.” The parents, she claims, see the enthusiasm their kids have for school and learning and want to be part of it. “They see how the kids are so exited about nature journaling, Feederwatch, etc. and they’re pulled in. Last week I had 13 parents vying to chaperone a field trip, and even had to turn away a few.”
With these changes, parents’ roles are becoming more meaningful in the school. “There are projects that I come in for that I otherwise wouldn’t have. I’ve been doing additional projects, and projects outside the classroom, rather than just making copies or reading with students,” said a parent volunteer. (She also noted, however, that a lot of parent volunteers don’t necessarily know what CO-SEED is. She suggested doing more clear write-ups in the school newspaper or newsletters to keep parents informed.)

Several members of the historical society independently reported that an historic building in the town of Gilford was preserved because of the concern of sixth grade students and their parents. These students had visited the historical site as a field trip, and soon found out that the town had designs to utilize the space in non-historical ways. The students and their parents felt very strongly about this and, according to an historical society member, the students approached the society and said, “This is the wrong use of the building.” She continued, “The students were enthusiastic and mothers and dads would bring that up at the school board meetings.” When the issue came to a vote on town meeting day, the result was 300 to 38 in favor of preserving the building for historic purposes. What makes this story particularly poignant is that the building in question is located right at the entrance of the elementary school, between the elementary and middle-high schools, and the proposal was to use it as the school Superintendent’s office. Despite the obvious efficiencies this would create for school operations, it was the building’s value as a historical site that the students and parents so strongly advocated for, and the town voted to preserve.5

A further sign of progress in community-school relationships is that the Parks and Recreation department requested and utilized the school’s newly purchased and well-used set of snowshoes (funded by a CO-SEED mini-grant), an indication of the town sharing in and recognizing the resources of the school.

Several respondents reported that public relations between the school and community could be stronger in order to better highlight the work of students and CO-SEED projects in general. An older gentleman who has been involved with the

“It gives kids more community spirit to learn about the town.” (Gilford parent, Heritage Quest participant)
SEED Team reported that many older people who do not have children associated with the school are not familiar with CO-SEED. Successful CO-SEED projects present a very strong opportunity for forging increasingly positive community-school relationships, but this opportunity may not be fully capitalized upon.

**Qualitative Findings on Community-School Relationships: Littleton, New Hampshire**

**Evidence of a growing relationship**

“I’ve taken that catalyst role to heart. I hear [about a town-level project] and say ‘what a great CO-SEED idea.’” Littleton town manager

In the 2002 Annual Report of the Union School District of Littleton, the reports of the principals from both the High School/ Middle School Principal and the Elementary school, as well as the Vocational Technology Director’s report, highlight CO-SEED-funded projects as examples of educational success in those schools and programs.

Similarly, in the 2002 Town of Littleton Annual Report, several mentions are made of CO-SEED endeavors under sections titled “Town and School Projects” and “Conservation Commission Report”. The conservation commission reports that their “most ambitious project” for the year was working with a high school physics class to design and implement an upgraded trail system. Furthermore, the town manager reported that the town’s annual report was, for the first time, put out by a student.

While the figures were not investigated systematically, the proposed budget for field trips in the school district’s 2002 Annual Report doubles that of the prior year and the line item for text books is halved. Why this occurred was not explored thoroughly, but may be a valuable area of inquiry in subsequent evaluation endeavors. An increasing emphasis on using local community resources rather than textbooks is consistent with the place-based and project-based pedagogy that CO-SEED promotes. Other positive signs of community-school relationship enhancement include the passage of a six million dollar school renovation at a 2001 town meeting, which the
town manager cites as the largest project Littleton has ever approved. He affirmed that, since CO-SEED, there is “a greater affinity for the school and its needs.”

Further describing the importance of the relationships being built as a result of CO-SEED, he stated the following:

All of these new relationships are coming out of this. It has been the involvement of students in problem-solving. We’re genuinely enhancing stewardship of the community, helping people see students as an asset to solving community problems, not a community problem unto themselves.

Several indications of townspeople perceiving the school in new ways were noted. For instance, the recycling coordinator for the town of Littleton reported that, in his role at the transfer station, he talks to a cross-section of people from Littleton all day. He stated that people mention the kinds of projects kids are working on more now than they had in the past. He notices a marked decline in critical remarks about students, and is impressed when he hears “unconnected adults” talking about a project they admire in the community that is the fruit of students’ efforts. He attributes these changing perceptions to greater visibility of school matters in the community.
Qualitative Findings on Community-School Relationships: Malden, Massachusetts

Evidence of a growing relationship

“Our idea of our theme has broadened from just environment to a focus on the local place and community.” (Beebe teacher)

On select Fridays throughout the school year, students are offered the opportunity to engage with a cast of community members for several hours in the morning. On these designated Club Days, teachers meet by grade level to plan curriculum while students are engaged in projects such as papermaking, nature walks, art club and chess club. In one instance there were 45 community volunteers on hand to facilitate activities for 500 participating students.

The student leadership group at the middle school level is also venturing out into the community. They led park clean-ups, a butterfly garden clean-up and engage in volunteer work at the zoo. A good deal of student exposure was seen on local access television, including: a video produced by seventh graders about their interdisciplinary bread making project; first grade All About Me videos; and coverage of the eighth grade science fair.

Because the zoo is the partner organization at this CO-SEED site there is a natural link between it and the school. However, other organizations and community resources are being called upon and utilized with greater frequency by the school. For instance, seventh grade students engaged in several water quality monitoring activities with local agencies, testing water in the local Fellsmere Pond and on a boat trip in the Boston Harbor. Students worked with the Massachusetts Water Resource Authority to do water testing and animal sampling. When the eighth grade team was planning its recycling endeavor, the city public works manager attended the planning session to help figure out how to implement a school wide recycling effort.

Relationships between Beebe and the Zoo appear to have grown considerably on a number of fronts. The ELC representative reports that the school is using the zoo more frequently and in different ways than before. “They’re using the zoo as a way to support the curriculum.... It’s not just a field trip but more purposeful with data sheets and assignments. Their use is connected to the curriculum.” She also reported that there is a clear increase in the number of programs that she has been requested to offer to classes throughout the school in the past three years, as summarized in the following chart.
Number of programs conducted by ELC representative at Beebe School, by grade level, club or meeting

<table>
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<tr>
<th></th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>SLG</th>
<th>Zoo club</th>
<th>Tchr. mtgs.</th>
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</tbody>
</table>

From this table it is evident that contact with students during class time, extra curricular time and teacher meetings all rose substantially during the three year CO-SEED period. The class program total rose from 7 to 30 programs over the three years; the number of club sessions rose from 26 to 51; and the number of teacher meetings from 1 in the first year to 17 in the third. This clearly indicates that teachers are more interested in the zoo resources, are requesting participation more frequently, and are integrating this community service into their curricula. The increase in extra curricular contact time indicates that students, of their own interest, are spending more time focused on community-based activities.

According to incomplete data provided, attendance by Beebe and Salemwood Schools at the zoo’s Family Math and Science Day rose considerably as CO-SEED became more present in the school. However, CO-SEED staff were careful to note the Family Math and Science Day was funded by a grant from the MA Parent Involvement Program, and so that initiative deserves ample credit as well.

The ELC representative also reported that zoo membership for Malden families had risen during the three year period during which CO-SEED operated at the Beebe School. Exact numbers were not provided and it is not conclusive whether these were Beebe School families. Furthermore, the ELC representative reported that, “The zoo has a greater presence in the Malden community now, and zoo attendance has increased because of the classes we have taken to the zoo.” She elaborated that the zoo has had an increase in student contact time because of the Beebe School out-of-class-time programs including the Zoo Club, Student Leadership Group and summer junior Zoo Keeping Program.
Plan to Evaluate Community-School Relationships: Bradford, Vermont

Interviews and observations conducted in Bradford at the beginning of its term as a CO-SEED site were primarily intended to provide baseline data to be used for subsequent evaluation work. It is worth reporting here, however, some of the measures that are either being implemented or under consideration for monitoring school-community relationships. These were developed with the input of the school’s principal but have not been monitored yet. They include:

1. Capitalizing on the newly formed Parent Coordinator's role in terms of tracking information about school/community relations

2. Gathering old school board records of attendance at budget meetings/votes

3. Investigating and tracking the use of the Low Saint John Forest trust funds to see if there is evidence of increased use of this community/school resource after the presence of CO-SEED (rate of use in past compared to future)

4. Initiating a system for teachers to track their use of the outside of the building/trails, etc. and how it ties to curriculum. This might include recording in their plan books, or creating a system monitored by Parent Coordinator or school secretary.

5. Investigating the school secretary’s existing records of non-school groups using the building, noting whether and how building use changes comparing the past few years before CO-SEED to the next few.

6. Creating a Low-St. John Forest registry for community members and teachers to see if rate of use goes up in next few years.

7. Investigating whether the school’s existing climate survey contains items that may be indicators of CO-SEED's impact.

Of note regarding initial indicators of community/school connections in Bradford is that, this Spring, the Bradford School unanimously approved CO-SEED’s request for $1,500 from their Low-St. John Forest Fund to support the CO-SEED summer intensive institute for 3rd and 5th grade teachers. The money will be used to pay teachers a stipend and to cover some material costs, and, in the words of the ELC representative, is “a great affirmation of their support for our approach and also nice recognition of these teachers who are giving a bunch of time to this.”
All Bradford interview and observation data will be used in subsequent evaluation reports when analyzed in comparison with the next layer of data. In addition, the table below documents initial evidence of a growth in community-school relationships, teacher practice change, and impacts on students in Bradford.

**Evidence of successful CO-SEED beginnings in Bradford**

- 30% of Bradford’s town wide Spring Green-up Day was comprised of students. (stewardship behavior)

- ANEI, Hulbert Outdoor Center (the ELC) and the Bradford Elementary School principal jointly created a four-part professional development series, including inservice days, workshops on forest use and collaborative planning time. (encouraging teacher practice change)

- Every 6th grader participated in a teacher-initiated, CO-SEED-funded Healthy Hobbies Program in which 17 community members lead students into their homes or businesses for mentoring activities. (growing community-school connections)

- The school district invited Hulbert Outdoor Center to be part of district-wide work at restructuring the science curriculum. (growing collaboration between ELC and schools)

- Three Kindergarten classes joined the town Beautification Committed to learn about and enhance the downtown area. Students planed flowers at the post office and library, ate lunch downtown and toured the library and bakery. (students developing a connection to their town)

- Teachers spent a half-day inservice day in the school-managed but as yet underutilized Low-St. John Forest. (encouraging teacher practice change)

- Collaboration between CO-SEED, Bradford Area Boys and Girls Club, Bradford Youth Sports, child care providers and Bradford Elementary School together identified the need for and created a summer camp program at the school and forest for Bradford youth. (growing collaboration to support local youth)

- 5th grade class promoted use of the local forest by clearing forest trails, erecting an entrance sign, removing garbage and bringing in port-a-lets. 5th grade also visited the hydro-electric dam for the first time as part of their electricity and forces unit. (students promoting place-based education; students developing a connection to their town)

- Strong SEED team attendance in CO-SEED’s first semester of implementation. (community-school engagement)

- 3rd grade class used school yard to create an igloo as part of their unit on Inuit dwellings. Six parents and two younger siblings assisted the class to build the ice dwellings. (place-based education; opportunities for parent involvement)
Quantitative Findings: Community-School Relationships in Antrim, Gilford, Malden and Bradford

The survey data sets for Antrim and Malden were unmatched and had different pre- and post-sample sizes, so a statistical power analysis method was employed (Cohen, 1992). Using this method, a treatment can be said to have a small, medium, or large effect size based on the ratio between the difference in the sample means and the group standard deviation.

Using the conventional $\alpha = .05$ and power .80, a sample size of 26 would be required to detect an impact with a large effect size, and a sample of 64 would be required to detect an impact with a medium effect size. Although the data sets did not reach these sizes, results are shown as if they did for the purpose of suggesting trends, and to encourage more thorough data gathering in the future. The small number of subjects in many of the follow-up samples also brings with it the possibility of response bias. For all of these reasons the patterns in the data—none of which are statistically significant—can best be viewed as possible trends at best.

See Appendix for Survey Templates.

Analysis of Pre-Post Survey data for Antrim

It is important to note when reviewing the Antrim data that two major factors apart from the influence of the program on participants are at play. First, the pre- and post-data sets are actually post-program and then two-years-later sets. The surveys were first administered at the end of Antrim’s three years of intensive participation in CO-SEED, then administered two years after when the site had been “on its own” for two years. Hence, the comparison set is quite different than a standard pre-intervention, post-intervention comparison. Second, the sample size, particularly on the post-survey data was notably low. This is in part due to minimal collection efforts and perhaps in part due to the fact that the school is currently less directly involved in the program and thus feels less commitment to participating in the program evaluation.

Teachers and School Staff
Antrim teachers returned 37 Year Three Surveys and only 7 Year Five Surveys. Even assuming a sample size of 26, there were no notable changes to report.

Students
Antrim students returned 59 Year Three Surveys and 11 Year Five Surveys. Analyzing as if there were at least 26 year 5 surveys, the only question showing a large effect size is question #1: “In our community, parents are regularly invited to view exhibitions and to participate in the classroom and the school.” A 37% decrease in agreement with this statement was reported.
Community Members
Antrim community members returned 12 Year Three Surveys and 5 Year Five Surveys. While this is far fewer than the 26 required to justify large effects, the analysis was performed anyway to see if it might suggest anything. With this caveat, the following table is presented:

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>In our school(s) there is an emphasis on the local environment, cultural heritage, history and people.</td>
<td>+24%</td>
</tr>
<tr>
<td>10c</td>
<td>Our school(s) has a reputation for having a strong program in the Arts.</td>
<td>+37%</td>
</tr>
<tr>
<td>18a</td>
<td>I think that further consolidation of the schools is an economic necessity.</td>
<td>-35%</td>
</tr>
<tr>
<td>18b</td>
<td>I think that further consolidation of the schools weakens the community by taking away the local school(s).</td>
<td>-37%</td>
</tr>
</tbody>
</table>

Analysis of Pre-Post Survey data for Malden
Since Malden is currently completing its third year as a CO-SEED site, the data presented here represent pre-surveys collected during Malden’s first year as a CO-SEED site and post-surveys collected during the current year, Malden’s third, as a CO-SEED site. Thus, the data represent a more true pre-post set than that of Antrim. It is intended that Malden will be surveyed again in Year 5, to mark whether any noted changes have been sustained and/ or diminished in any way. It should be noted that, again, the number data sets was quite low, particularly for Year 3 data. The fact that many items show an increase by Year 3 is based on a very small sample and so is very vulnerable to response bias. The respondents who were surveyed in Year 1 but did NOT respond in Year 3 are likely to be the dissatisfied ones, so it is not surprising that those who remain were positive about the program.

Teachers and School Staff
Malden teachers returned 15 Year One Surveys and 7 Year Three Surveys. If 26 surveys had been returned, notable positive changes could be confidently reported. The analysis has been included anyway to suggest trends. The following chart indicates percent changes for questions that showed a large effect size, that is, increases that would be considered statistically large (if the data set were of adequate size). Of the survey’s 31 questions, 14 questions showed increases and no questions showed decreases.
## Malden Teacher Survey, Questions That May Indicate Possible Trends

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>People from the community, other than parents, are invited into the classroom and the school to work with students.</td>
<td>+25%</td>
</tr>
<tr>
<td>4</td>
<td>Students regularly leave the classroom for learning activities in the community.</td>
<td>+47%</td>
</tr>
<tr>
<td>7</td>
<td>I often relate my classroom assignments and homework to the local community</td>
<td>+36%</td>
</tr>
<tr>
<td>8</td>
<td>Much of the work we do at school has an emphasis on nature and the environment</td>
<td>+18%</td>
</tr>
<tr>
<td>12d</td>
<td>Our school(s) has strong program(s) in: local community studies</td>
<td>+35%</td>
</tr>
<tr>
<td>12e</td>
<td>Our school(s) has strong program(s) in: education about the environment</td>
<td>+16%</td>
</tr>
<tr>
<td>14a</td>
<td>I am satisfied that: local community members are engaged in teaching students.</td>
<td>+45%</td>
</tr>
<tr>
<td>14c</td>
<td>I am satisfied that: as a result of their schoolwork, students have an ability to make the community a better place.</td>
<td>+15%</td>
</tr>
<tr>
<td>14d</td>
<td>I am satisfied with: students' performance on state assessment tests</td>
<td>+27%</td>
</tr>
<tr>
<td>14e</td>
<td>I am satisfied with: students' enthusiasm for learning</td>
<td>+35%</td>
</tr>
<tr>
<td>15</td>
<td>Community-based work helps prepare students to be able to attend a post-secondary school or find employment in this or other places in the country.</td>
<td>+20%</td>
</tr>
<tr>
<td>17</td>
<td>Students are involved in projects that instill responsibility for improving the school and the local community.</td>
<td>+17%</td>
</tr>
<tr>
<td>23</td>
<td>Youth in our community regularly engage in volunteer community work and activities.</td>
<td>+36%</td>
</tr>
</tbody>
</table>
The most notable changes were seen in responses to the questions 4 (+47%, “Students regularly leave the classroom for learning activities in the community”) and 14a (+45%, “I am satisfied that: local community members are engaged in teaching students”) Also notable is that questions 12d and 12e, part of a sequence of questions regarding the perceived strength of school programs, both increased. While respondents did not sense that the strength of school programs in “the arts”, “sports” or “academics” had risen, they did sense that local community studies and education about the environment had increased in strength. It is possible to attribute this to a thorough sense of pride that teachers expressed over their school’s success at really “doing” its theme. This success was frequently noted as attributable to the guidance of CO-SEED.

Since CO-SEED work is primarily and most directly targeted at teachers, it is logical that the teachers would show greater changes than the students, below.

**Students**

Malden students returned 81 Year One Surveys and 47 Year Three Surveys. The data suggested no meaningful change with the exception of question 29c: “Students in my school are expected to participate in extracurricular activities in my school and in my community”, reporting a 13% decrease. This finding could be interpreted as a medium effect given a sample of 63 Year Three Surveys.

**Community Members**

Malden community members returned 6 Year One Surveys and 2 Year Five Surveys. This is not enough data to even speculate about trends.

**Presentation of Pre-Survey Data for Bradford**

Baseline data regarding community-school relationships for the newest CO-SEED site in Bradford, Vermont was collected during the first months of CO-SEED’s presence in the community. The survey that had been developed and administered at four existing CO-SEED sites (those discussed above, plus Littleton and Gilford) was modified to reflect learnings from the first rounds of survey administration. This new survey (see Appendix) is to be used in years 1, 3 and 5 of Bradford CO-SEED, as well as for new CO-SEED sites in subsequent years.

Preliminary analysis of the baseline survey and interview data collected suggests that the site is well-positioned to succeed as a CO-SEED site. With a supportive administrator, school board and SEED team, an experienced ELC representative and a school staff whose enthusiasm for the project is growing, multiple school-community projects are emerging. Pre-survey data collected from a sample of teachers, community members and students at the start of CO-SEED’s presence will allow for monitoring change over time at this site.
Teachers and School Staff
Due to logistical contingencies, teacher and school staff surveys were not able to be collected in time to be analyzed and presented in this report. The survey set will be completed in September 2003 and included in the 03-04 evaluation report.

Students
Surveys were administered to all fourth and fifth grade students at Bradford Elementary School. Surveys were returned by 63 students from the two grade levels. The fifth grade cohort will be surveyed one year later as exiting sixth graders and the fourth grade cohort will be surveyed two years later, again, as exiting sixth graders. It was determined that at this site it was not feasible to survey the group after sixth grade, when they will have merged into a regional middle school.

The following table shows baseline data for Bradford students. This data will be more meaningful when students are surveyed again and comparisons can be drawn.

Bradford Student Pre-Survey Results

<table>
<thead>
<tr>
<th>Do you agree? (4-point Likert scale)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In our school, we learn a lot about nature and the local environment.</td>
<td>2.6</td>
<td>0.9</td>
</tr>
<tr>
<td>2. In our school, we learn a lot about local people and culture.</td>
<td>2.3</td>
<td>1.1</td>
</tr>
<tr>
<td>3. Our classroom assignments and homework are often about the place where we live.</td>
<td>1.6</td>
<td>0.8</td>
</tr>
<tr>
<td>4. I think my school is really good at academics (reading, math, science, social studies, etc.)</td>
<td>3.3</td>
<td>0.9</td>
</tr>
<tr>
<td>5. I think my school has a really good sports program (physical education, after-school sports, etc.)</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>6. I think my school has a really good arts program (music, art, dance, etc.)</td>
<td>2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>7. I think my school is really good at local community studies.</td>
<td>2.1</td>
<td>0.8</td>
</tr>
<tr>
<td>8. I think my school is really good at education about the environment.</td>
<td>2.8</td>
<td>1.0</td>
</tr>
<tr>
<td>9. It is clear to me how the things I learn in school apply to the real world.</td>
<td>3.2</td>
<td>0.9</td>
</tr>
<tr>
<td>10. I feel like I am part of a community.</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>11. I pay attention to news events that affect the community.</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>12. I feel like I can make a difference in the community.</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>13. My class can do something good for the community.</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>14. I know a lot of people in the community.</td>
<td>2.8</td>
<td>1.1</td>
</tr>
<tr>
<td>15. I try to think of ways to help other people.</td>
<td>2.9</td>
<td>0.9</td>
</tr>
<tr>
<td>16. I think that helping other people is something everyone should do, including myself.</td>
<td>3.4</td>
<td>0.9</td>
</tr>
<tr>
<td>17. I know what I can do to help make the community a better place.</td>
<td>2.8</td>
<td>1.1</td>
</tr>
<tr>
<td>18. I know what I can do to help protect the local environment (nature).</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>19. I have learned skills for helping the environment or the community by doing school projects.</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>20. I have learned skills for helping the environment or the community from my parents.</td>
<td>3.2</td>
<td>0.9</td>
</tr>
<tr>
<td>21. I have learned skills for helping the environment or the community by reading.</td>
<td>2.8</td>
<td>1.0</td>
</tr>
<tr>
<td>22. When I grow up I would like to live in this community.</td>
<td>2.2</td>
<td>1.2</td>
</tr>
<tr>
<td>23. If I live in this town when I grow up, I will be able to find a job I like.</td>
<td>2.7</td>
<td>1.3</td>
</tr>
</tbody>
</table>
How often? (5-point Likert scale)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24. Parents (mine or other kids’ parents) spend time helping out in my classroom and in my school.</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>25. Parents are invited to see presentations or exhibits (like posters or artwork) of students’ schoolwork.</td>
<td>2.8</td>
<td>1.0</td>
</tr>
<tr>
<td>26. People from the community, other than parents, spend time in the school working with students.</td>
<td>3.1</td>
<td>1.5</td>
</tr>
<tr>
<td>27. Classes in my school go on field trips in the local community.</td>
<td>2.1</td>
<td>0.9</td>
</tr>
<tr>
<td>28. Classes in my school learn about nature by going out into the schoolyard.</td>
<td>2.4</td>
<td>1.0</td>
</tr>
<tr>
<td>29. Kids in our community do volunteer work and community activities.</td>
<td>2.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Community Members

A sample of community members was constructed by sending surveys to 100% of the SEED team and a random sample of 50% of all elementary school parents, drawn from a mailing list generated by the school secretary. Surveys were returned by 38 community members, representing a 34% return rate.

The following table shows baseline data for Bradford community members. This data will be more meaningful when community members are surveyed two years later and comparisons can be drawn.

Bradford Community Member Pre-Survey Results

<table>
<thead>
<tr>
<th>Do you agree? (4-point Likert Scale)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In our school, students learn a lot about the local environment and nature.</td>
<td>2.5</td>
<td>0.6</td>
</tr>
<tr>
<td>2. In our school curriculum, students learn a lot about local cultural heritage, history and people.</td>
<td>2.5</td>
<td>0.6</td>
</tr>
<tr>
<td>3. In our school(s) there is adequate preparation for post secondary education or work after high school.</td>
<td>2.7</td>
<td>0.7</td>
</tr>
<tr>
<td>4. Young people who choose to stay in this local area after high school will be able to find jobs they like.</td>
<td>2.1</td>
<td>0.6</td>
</tr>
<tr>
<td>5. My community is more cohesive as a result of the Community Profile Meeting and the projects that resulted because of it.</td>
<td>2.2</td>
<td>0.8</td>
</tr>
<tr>
<td>6. Meetings in our town are well attended.</td>
<td>1.6</td>
<td>0.5</td>
</tr>
<tr>
<td>7. Meetings in our town run smoothly and efficiently.</td>
<td>2.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Our schools have strong programs in...</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8. ...academics</td>
<td>2.9</td>
<td>0.6</td>
</tr>
<tr>
<td>9. ...sports</td>
<td>2.8</td>
<td>0.8</td>
</tr>
<tr>
<td>10. ...the arts</td>
<td>2.4</td>
<td>0.7</td>
</tr>
<tr>
<td>11. ...local community studies</td>
<td>2.2</td>
<td>0.6</td>
</tr>
<tr>
<td>12. ...education about the environment</td>
<td>2.4</td>
<td>0.6</td>
</tr>
<tr>
<td>13. I am satisfied with the quality of education in our school(s).</td>
<td>2.6</td>
<td>0.7</td>
</tr>
<tr>
<td>14. I am satisfied with the level of community member engagement in teaching students.</td>
<td>2.1</td>
<td>0.7</td>
</tr>
<tr>
<td>15. I am satisfied with our students' performance on state assessment tests.</td>
<td>2.3</td>
<td>0.6</td>
</tr>
<tr>
<td>16. I am satisfied with our students' enthusiasm for learning.</td>
<td>2.7</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Do you agree? (4-point Likert Scale)</td>
<td>Mean</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>17</td>
<td>Our schools regularly engage students in community-based schoolwork.</td>
<td>1.9</td>
</tr>
<tr>
<td>18</td>
<td>Community-based schoolwork helps students succeed at their academic work.</td>
<td>3.1</td>
</tr>
<tr>
<td>19</td>
<td>Community-based schoolwork helps prepare students to attend college.</td>
<td>3.0</td>
</tr>
<tr>
<td>20</td>
<td>Community-based schoolwork helps prepare students to find employment after high school.</td>
<td>3.2</td>
</tr>
<tr>
<td>21</td>
<td>Community-based schoolwork is an effective way of teaching basic academic skills.</td>
<td>3.3</td>
</tr>
<tr>
<td>22</td>
<td>I am aware of the important needs in the community.</td>
<td>2.8</td>
</tr>
<tr>
<td>23</td>
<td>I am aware of what can be done to meet the important needs in the community.</td>
<td>2.5</td>
</tr>
<tr>
<td>24</td>
<td>I feel a personal obligation to contribute in some way to the community.</td>
<td>3.3</td>
</tr>
<tr>
<td>25</td>
<td>I am or plan to become actively involved in issues that positively affect the community.</td>
<td>3.1</td>
</tr>
<tr>
<td>26</td>
<td>I can use my professional skills and talents to positively influence community issues.</td>
<td>3.0</td>
</tr>
<tr>
<td>27</td>
<td>I believe that I can personally make a difference in the community.</td>
<td>3.1</td>
</tr>
<tr>
<td>28</td>
<td>Youth in my community are actively involved in making the town a better place.</td>
<td>2.0</td>
</tr>
<tr>
<td>29</td>
<td>Youth in my community regularly participate in community affairs such as town meeting day or town commissions.</td>
<td>1.7</td>
</tr>
<tr>
<td>30</td>
<td>Youth in my community regularly participate in volunteer activities.</td>
<td>2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>How often? (5-point Likert scale)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Parents are invited into the school to work with students.</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td>32</td>
<td>Parents are invited to view presentations or exhibitions of our students’ schoolwork.</td>
<td>3.6</td>
<td>0.8</td>
</tr>
<tr>
<td>33</td>
<td>People from the community, other than parents, are invited into the classroom and the school to work with students.</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>34</td>
<td>The school grounds are regularly used as an educational resource to learn about the environment.</td>
<td>2.4</td>
<td>0.6</td>
</tr>
<tr>
<td>35</td>
<td>Students leave the classroom for learning activities in the community.</td>
<td>2.3</td>
<td>0.5</td>
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TEACHER OUTCOMES: CHANGES IN TEACHING PRACTICE

“It has made a huge impact on my teaching. And because I’m in the position of teaching other teachers, it will trickle down. I’ve had three people ask if they can go out with my classes. That’s new to me. I will never teach the same way again.” (Gilford teacher)

One evaluation question specifically addressed the issue of whether teaching practice changes in teachers at CO-SEED sites. Overall, qualitative interview and observation data demonstrates that at each site there is a core group of teachers whose practice changes considerably to incorporate more hands-on, project-based and community-based learning. The core group of teachers at sites tends to be a group who is predisposed to this type of work and their latent interest was consummated by the availability of professional development training, personnel support, newly forming relationships, administrative backing and funds that CO-SEED provides.

Another factor that facilitates the conversion of predisposed teachers into full-fledged CO-SEED teachers is the legitimacy this work assumes in their school once CO-SEED has been officially instituted as a program. Having these barriers removed, and instead having fresh ideas, an extra set of hands, money for projects, a supportive administration, and colleagues who understand their practice (regardless of whether they engage in it themselves), enables these teachers to change their teaching practice and excel as providers of community-based education.

“For all the latest and greatest science, the model for how change takes place in complex organizations is quite old. Called Diffusion Theory, studies as far back as the 1920’s point out the stages in adoption of change.” (Rechtman 1997, adapted from Gladwell, 1996, and Rogers, 1995). In this Diffusion Theory, members of an organization are often grouped into the following categories according to how quickly and vigorously they respond to an organizational change initiative: Innovators, Early Adopters, Early and Late Majority, and Laggards/Resisters. Interviews and observations for this CO-SEED evaluation seem to be consistent with this model. The core group described above could be seen as the “Innovators” and “Early Adopters.”
This core group is not the only beneficiary of CO-SEED’s work, however. Whole school professional development events plant new ideas in the minds of teachers who are not predisposed to this type of teaching, and in a few cases caused big shifts in their practice as well. More commonly, however, these “Early/ Late Majority” or even “Laggards/ Resisters” are brought in over the course of several years by the slowly evolving process of teacher leadership development, the creation of successful examples within a school, and the growing sense of skeptical teachers that CO-SEED is not just the latest program passing through the revolving door of school change efforts. As one ELC representative reported, these teachers are starting to “emerge from the woodwork” in year three of CO-SEED’s involvement.

Regardless of their status as “Innovators” or “Laggards” as characterized by Diffusion Theory, some teachers experience greater collaboration with other teachers across grade levels, and with other adults in the community. One exception to this finding is that the Beebe School in Malden falls into a slightly different category, since there is a school-wide expectation for teachers to address the school’s environmental theme, and CO-SEED is seen as a vehicle to accomplish that mandate. Consequently, and perhaps also because of the ANEI facilitation there, a more integrated, whole-school approach to collaborative curriculum planning has been mapped out. While this does not indicate that every teacher has radically changed their teaching practice, mapping out a coordinated curriculum makes it more likely that the “Majority” and “Resisters” are brought into the category of having changed their practice on some level.

**Spreading beyond a core group of teachers**

“‘Antioch has given me so many skills. I have so much. I learned how to listen to my team members, to hear them yell and say bad things, and just write down what they say. I’ve given up worrying about who gets credit for what.’ (Beebe school teacher, describing her growing facilitation and cooperation skills)"

Some teachers are naturally inclined toward CO-SEED type teaching, while for others it takes longer to pull them in. One teacher who claimed to have had little involvement with CO-SEED later reported that as a result of conversations with the ELC representative, she got the idea to focus her Native Americans of North America curriculum on a more local pre-colonial history of Gilford. As a result, she did research, contacted the historical society, pulled together information and designed a more integrated curriculum with local history as the focus. The unit blossomed into a living history of the local Native American tribes, in which students created a
A miniature village complete with replicated artifacts made by the students. When the public visited the village they were given tours and a brochure the students created. She intends to continue this project in future years, regardless of the level of formal CO-SEED presence, saying, “This project has so much value. CO-SEED has opened up a way of thinking, an attitude about science and nature.”

“[CO-SEED] helped me with my teaching a lot. You don’t have to be in your classroom all the time to teach language arts or science. (Gilford teacher)

At the Beebe School, a teacher who self-identified as not having an initial interest in CO-SEED type projects has since been trained as a facilitator through the CO-SEED program and admitted to being “won over” by the process. Having been initially skeptical about the likelihood of school change, she reported that she saw one of the biggest barriers to success at Beebe—staff attitude—being overcome by CO-SEED.

When you work for the system for so long you think that things will never change. But if you’re part of the process maybe you’ll have a better attitude, that’s what happened to me. The only ones I used to plan with directly are the ones that are in my room, but now we plan together. We thought: this is a start, we’re learning how to work together.

Another “Late Majority” teacher at Antrim who got pulled into CO-SEED over time stated:

I didn’t feel as involved when CO-SEED was here, I don’t know why that happened….at first it sounded farther out there than I wanted to be, then I realized that yes, this made sense and I didn’t have to do everything on my own.

Evidently gaining confidence in the process through exposure and personal involvement helps to boost involvement of outlying teachers.

A solid example of changing teacher practice in Littleton is found in the high school foreign language department. The French teacher, inspired by a staff meeting activity led by ANEL and ELC staff, decided to take students to the local convent to practice their French language skills with native French Canadians. Excited by the success of this foray into the community, she then arranged for students to assist local businesses in translating their signs into French for visiting Quebecois tourists. She reported that the students were excited about the projects, and she enjoyed revamping her teaching practices.

“I’ve always been afraid to talk to adults, but this has gotten me more involved with all kinds of people on the Seed team, in the community, parents and fellow teachers. I myself have gained a lot of confidence!” (Littleton teacher)
At the Elementary School in Littleton, the art teacher uses the school garden (constructed by elementary schoolers with help from older vocational technology students) to link art to literature. An example is a focus on Van Gogh which includes planting and painting sunflowers.

In Antrim, a teacher reflected on a shift in her perception that occurred after CO-SEED had already been working with the school for some time:

I finally realized that it’s not just the environmentalist thing, it’s reaching out into the community. I do more than I realized. It doesn’t matter so much if I can go out and identify every tree, I can go out there and develop a project. I just have to have an interest. I don’t ever have to become the expert.

The Gilford ELC representative told of a teacher who shifted a particular unit’s focus from kit-based teaching to place-based teaching with a little bit of coaching. She was struggling with a kit to teach students about solids and liquids, and “hated it.” The ELC representative told her he had a program through the Audubon Society that would help her to integrate those ideas. He shared with her a way to...

...build off of the kit learning, make it a little more fun and less of a headache. It also incorporates the history. So I told her about maple sugaring, basically turning sap into a solid—sugar. It helped her curriculum and her way of thinking. I think she doesn’t use the kit anymore, or at least not the whole thing. She comes to Audubon every sugaring season...she goes out to use a community resource to do solids and liquids which she hadn’t thought of before CO-SEED.

“Amongst our staff we have a lot more collegiality than ever before. There’s an increase in participation in grade level meetings, more grade level projects being developed and teachers have greater confidence that goals will be met because they’re getting the support they need.”

(Beebe school administrator)
The Gilford art teacher, after an in-service day session learning about techniques on how to do mapmaking with students, reconsidered an upcoming project. She had been planning to take students out on the school’s nature trail on snowshoes where they would create an artistic rendition of a winter blizzard scene particular to a place on the trail. Her new idea was to have students then take all their spots and “fuse them together to make one big spatial process that links the spaces kids choose into more of a map.”

The Gilford principals expressed satisfaction with the growth and “confidence” teachers experienced as a result of CO-SEED.

People are seeing connections with communities and with the environment doing more to involve their classrooms….We can take advantage of what we’ve learned from CO-SEED and we can integrate it into math, language arts, or science….it’s a philosophical approach that you’re adapting or accepting.

**Growing collaboration**

“They don’t think of ‘my classroom’ anymore, they are thinking grade wide.”
(Malden principal)

Another change in teacher practice noted by respondents was a growth in their practice of collaboration with other teachers, both in and beyond their own grade levels. Several teachers reported increased collaboration amongst teachers in their school, and a Littleton community member reported that, from his vantage point, collaboration between the district’s three schools—elementary, middle and high school has never been so prominent. This collaboration has taken the form of shared professional development days, increased communication, inter-grade-level projects, and integrated staff meetings.

Teachers at the Beebe School reported a shift from CO-SEED’s second year to the third. “Last year it was the theme team doing stuff and dictating it to us by email. Nobody was really interconnected, but this year the whole school has been involved.” Furthermore, CO-SEED assisted the school in acquiring Federal...
Comprehensive School Reform funds to continue the program and pay for a facilitator training series during the 2002-2003 school year. This series engaged teachers from each grade level in a comprehensive training so that they might facilitate more effective planning sessions amongst their team members.

Beebe’s new Club Day program—Friday morning sessions in which teachers are given time to plan while students engage in community activities—also contributes to a growing degree of collaboration in the Malden school. Facilitator trainees felt that other teachers must be apprised of the role of their newly trained co-teachers for the role to be most effective in promoting collaboration. In some cases, trainees felt cautious that they were expected to take on too much of the burden of planning and doing “grunt work” rather than simply providing leadership and meeting facilitation. An ELC representative commented on the strides she has seen in certain teachers who have gone through the facilitator training:

> I’ve seen one teacher go leaps and bounds from being afraid to taking risks. In the past when we had meetings she would be apprehensive and overwhelmed and now she is usually the first one to get me the notes from their meeting, and... plans their meetings ahead of time.

Resulting from this attention to facilitator training and dedicated planning time has been the development of a solid, school wide curriculum plan based around Beebe’s environmental theme.

The principal at Beebe captured another important element of collaboration, noting that parent perception of the school had become more in line with the vision and understanding of the school administration. As evidence, she explained how parents now seem to believe that their children will get a good experience, regardless of which teacher’s home room their child is assigned to. She said: “I used to work at a school where half the students were requesting specific teachers, now I only get just a couple.”

“I think [my co-teacher] and I will never stop doing this kind of thing even though CO-SEED is going to be leaving. We’ll always get kids out of the classroom, into the community and stuff.” (Littleton elementary school teacher)
The Littleton High School principal reported that “CO-SEED has really brought disciplines together through the project work. We see a lot more interweaving of the curriculum. When we talk about our school, we now have examples to give.” One concrete example provided by the ELC representative is that the middle and high school science departments have been brought together to share resources and ideas. A sixth grade teacher also noted that she now collaborates more with a co-teacher, which began with a CO-SEED project and now “these two rooms, the door is opened up...kids go in and out, we do projects together. We’re incorporating language, social studies, science….our collaboration absolutely increased with CO-SEED.”

Curricular integration

At the Beebe School, students were impressively reflective about the level of curricular integration they saw in their classes. Said one seventh grader described this interdisciplinarity she observed in the bread-making unit she participated in:

We were learning more about bread and yeast, and it pretty much went with every one of our subjects: English, math—like fractions, proportions, volume of an oven—social studies (the origin of bread.) And in science we learned about yeast and chemistry, in home ec[onomics] we made bread and in art we made ornaments out of bread.

Teachers also commented on the benefit of thematic links throughout the grade levels, noting that students came to their class at the beginning of the year with prior knowledge about their community and the natural world that she “couldn’t believe” and on which she was able to build her own curriculum.
Select examples of curricular integration at the Beebe School by Grade Level:

K: Writing and illustrating a class Malden Book to be donated to the Beebe and Public libraries.

1: Classes took walking tours of Malden to see the Post Office, Police and Fire Stations, Stop and Shop, a bank and City Hall (including meeting the mayor).

2: Designed and constructed a student generated Butterfly Garden graphic illustrating the butterflies that are indigenous to Malden. Plants were donated and each class had an opportunity to plant in the garden.

3: Classes went to local pond and students looked for plant and animal signs, students took the pledge to be Fellsmere park keepers.

4: Students will learn about the need for having respect for all that surrounds them by using the Huichol Indian culture as a model.

5: Pairs of students chose a topic focusing on environmental concerns and researched it. They offered ways to help correct or reduce the problem.

6: Field trips to Freedom Museum, Malden Cemetery, and bus tour around the neighborhoods in Malden; invited speakers from the Malden community and the Malden Historical Society. Also a field trip to the Stone Zoo gave students opportunities to observe and record animal behavior.

7: Interdisciplinary unit about bread-making. Students visited local bakery and learned about all aspects of the company, made and served bread at a community kitchen, and produced their own documentary for MATV to highlight the unit.

8: Students informed younger grades about recycling and how to recycle in the school, learned all about paper and made paper with 1st grade students, wrote articles for the Beebe Buzz about recycling and making paper. Successfully accomplished a student led initiative to get have recycling bins in their classrooms. 7th grade students were trained by the 8th grade students so they will take over next year.

One Littleton elementary school teacher reported using the outdoors and local community far more as a result of CO-SEED. She stated, “I never would have gone into the woods if it weren’t for [the ELC representative] and we did a lot with the woods last year.” Since then she and her students have also conducted stream
studies, community history studies, a solar system exposition on Main Street and other community-focused projects.

Also in Littleton, half of the sixth grade went on a fall trip to the AMC’s Mitzvah Hut last Fall and this coming Fall, the entire sixth grade will participate in the two-day, one-night adventure which had exceptionally positive outcomes for students this past year. The overnight hiking trip was clearly interdisciplinary with history components, reading and writing, science and nature skills, and an emphasis on healthy bodies and minds. The physical education teacher who collaborated with the sixth grade team for the trip was so enthusiastic about the results of last Fall’s trip that she is expanding it to a fifth and sixth grade cycle in which fifth graders go to the White Mountains for a day of hiking to prepare them for the sixth grade overnight. This exemplifies not only significant change in teaching practice, collaboration and integrated curriculum development, but the power of one teacher to inspire other teachers, sometimes called a “spread of effect.”

These wildlife renditions were placed on the trail during the public exhibition as part of the interdisciplinary Lewis and Clark Expedition project completed by the sixth grade at Gilford Elementary School.
STUDENT OUTCOMES

CO-SEED seeks to have a positive impact on students in the realms of academic achievement and stewardship behavior. In this evaluation, CO-SEED impacts on students fell into three overlapping categories: engagement in “out-of-class” activities, evidence of increased maturity/ responsibility, and improved performance in more traditional classroom activities.

Part of this year’s evaluation built directly upon qualitative findings from last year’s evaluation work in which respondents across sites stated that students’ writing abilities were stronger as a result of CO-SEED’s work. This year’s evaluation also sought to further understand through interview data what other types of student outcomes were apparent in these two areas: in the realm of behavior change and its precursors such as expanding knowledge areas, attitudes, and experience with various skills; and in the realm of academic achievement in terms of student engagement in learning.

Respondents were asked to reflect on open-ended questions about the impact of CO-SEED type work on students’ academic achievement, citizenship skills, sense of self-efficacy and engagement in learning. A handful of students from three sites were interviewed as well. Trends in the interview data are discussed in the following text.

While it is difficult to decipher which of the many influences in a student’s life contributes which impact, it is worth attempting to isolate the inputs that a program like CO-SEED has on students’ academic performance, attitudes and behaviors in order to measure program success.

“We are role models”
(Malden 8th grader)
“Out-of-class” activities

Student engagement in extra-curricular CO-SEED activities

Some of the most oft-cited examples of program success came in the form of after-school activities for students. These activities were frequently seen as ways to encourage students’ academic interests during the non-class-time hours while contributing to building school-community relationships.

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<thead>
<tr>
<th>Student engagement in successful CO-SEED “out of class time” endeavors</th>
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<tr>
<td>• A Gilford student initiated a Junior Naturalist Club which met with great reception by other students. Fifty students (and 12 adult volunteers) attended each of the first two afterschool meetings and continued to participate thereafter.</td>
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<td>• Littleton high school students participate in an after-school physics club specifically geared toward working on their sidewalk heating invention project, funded by a grant from MIT.</td>
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<td>• Beebe School’s Zoo Club for elementary level students and Student Leadership Group for middle school students were spawned by CO-SEED and facilitated by the ELC representative. Both groups have solid attendance and enthusiasm and students have completed.</td>
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<td>• Begun in Fall 2002, Beebe School’s “Club Day” offers students the opportunity to participate in community-focused clubs with community mentors. At the same time, teachers are given the opportunity to work with other teachers to plan project-based work.</td>
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A sixth grade teacher at Gilford Elementary described a transformation in one of her students, claiming that participation in the after-school Junior Naturalists Club...

...made a big change in her. She is one of the shyest kids ever. I’ve never seen this kid talk to anyone much, but [at the club] she was so chatty. She was showing me drawings, sharing ideas...It’s the most remarkable change I’ve seen in a student in five years.

In some cases, students simply need exposure to a variety of learning modalities to spark their strengths. One Gilford fourth grader described the impact the Junior Naturalists Club has had on him personally:
I don't really like outside, I like to be inside and watch T.V. but I saw the sign-up sheet. My grandpa said he would come and bring snacks, and so now every Wednesday I look forward to it and he comes. We learn about the leaves and how they change colors and stuff. We go on the trail that's in the woods out back, we go to the pond and be very quiet and look at the beaver. We found a toad there and...they have these things on their hand that help them to mate. We have to put them back in their habitat.

See Appendix for a poem written by this Gilford student.

The two Beebe School afterschool clubs spawned by CO-SEED and maintained by the ELC representative offer students the opportunity for out-of-school-time engagement in learning and civic projects. The Student Leadership Group, comprised of middle school students, embarked on an ink jet cartridge recycling project that has earned them $300.00 which they are using to fund on-going community service projects. Also at Beebe, Fridays are Club Days in which community volunteers have been organized to facilitate clubs and community activities for students to participate in. Since planning time had been identified by Beebe teachers as a hindrance to completing project-based work—particularly in collaboration with other teachers—the Club Days serve the dual purpose of providing them with collaboration time.
Stewardship behavior

“The best thing that could possibly happen is that kids become involved outside of school with the environment.” (seventh grade student at Beebe School)

While it is impossible to measure the long-term effects of a project on students within its first few years, there were many positive indicators of student behavior being affected by their exposure to and participation in community and environment focused projects.

At the Beebe School, where eighth graders initiated and have worked through all the steps of building a schoolwide recycling initiative, the impact of this project on their stewardship behavior was quite clear. Students expressed a good deal of pride and satisfaction over the project’s success. Said one student, “A lot of adults didn’t think we could handle it, even my mom, but the whole school is recycling now. We proved them wrong.” The fact that students themselves had done much of the work to initiate and manage the project seemed to instill satisfaction and commitment in them. An eighth grader said, “We can’t rely on the teachers to make the plans,” conveying a strong degree of project ownership and responsibility. Another added:

“... We learned how to take an idea and get it started and get it working in the school.” (Beebe eighth grader involved with the schoolwide recycling project)

We can’t fix the damage we’ve already caused, but we can keep [society] from making more damage. If the recycling bin is near the trash barrel, they recycle more easily. One teacher didn’t have the bin there so we moved it.

Consequent to the students’ recycling efforts, the custodian reported that he has less work collecting trash. Whereas he used to have four 45-gallon barrels of trash to collect per floor, now he estimates he collects closer to two barrels per floor: “the trash is down to half because of recycling,” he reported. Not only were the students responsible for initiating and setting up the recycling system, they became recycling teachers for younger students adding another layer of responsibility to their task which one eighth grader described this way:
One day they let us give our whole day to teach the younger kids paper recycling on Club Day. There was not even an adult. We had a good time, they had a good time, and we had to run all around the school to find and fix things. The younger kids were really good about it.

And in several cases it was clear that the responsibilities students had assumed during school time were translating into their at-home lives. An eighth grade student reported, “I took the recycle bin home from the first dance. I’m like, ‘mom, pull up the mini-van, we’re taking the recycling barrel to Shaw’s.’” There were two examples of students building on the success of paper recycling at the Beebe School. Bottle recycling was beginning at the end of the school year because of the success of paper recycling, in addition to the Student Leadership Group’s ink jet cartridge recycling success.

Seventh graders at the same school described the ability of community-based projects to motivate engagement in learning: “We actually get to do something that people other than our parents will see. It doesn’t just go to our parents and on the fridge, it makes a difference.” The seventh grade students at Beebe were also involved in working with younger students and expressed satisfaction that “we are role models.” Another added that the “little kid I read to comes up to me now in the halls and says hi”.

A fourth grader reported on activities of the Junior Naturalists club at Gilford:

…we try to save our habitat and we’ll pick up trash. I pick up more trash…because one person can make a difference. [The ELC representative] said we can all make a difference if we clean up our neighborhoods. More birds will come and your neighborhood will be better than it used to be.

“[The CO-SEED program] has been great for the school and everything, it gets [students] to appreciate the environment and even just appreciating the school itself..” (Malden custodian)
In Littleton, students on a hike on school grounds reportedly demonstrated a change in their behavior, at least during the course of the outing. At the beginning of the activity, students dropped their trash on the ground and, after a discussion with the ELC representative and teacher who were accompanying them, they not only picked up their own trash but voluntarily made an effort throughout the rest of their hike to pick up the trash that others had left on the trail.

"I'm going to make a little nature trail in my back yard, put bird feeders, and it'll be like a little national park." (Gilford third grader)

Students are taking on more responsibility. In Gilford, the fourth grade classes assumed the role of recycling coordinators for the school. On a weekly basis they gather recycling bins from all areas of the school, and then measure and weigh contents by class. This project not only instills in students a sense of responsibility and ownership for a project, it gives them an applied use and weekly practice of estimating, predicting, measuring and record-keeping skills. The students are learning the scientific method first hand, while assisting the school with a waste reduction goal. There was evidence that these students were internalizing the purpose of the recycling program when they began to become concerned about the amount of recycling generated when much of the paper, for instance, could be reused.6

Students consequently decided that recycling paper is not a solitary goal and they created a system to provide two bins in every classroom, one for reusable scrap paper and another for recycling.

In addition, students became very upset when they learned that a custodian had emptied the recycling into the trash. As result of student discontent, scales were purchased for the school to weigh recycling and a new plan was instituted in which the custodian takes recycling to the recycling center.

In the same school, the opportunity to tackle another service-learning endeavor and experience taking greater responsibility came when fifth grade students took on the responsibility of teaching third grade students throughout a Living history quest.

6 It is noteworthy that as of May 2003 the school had collected and weighed nearly a ton of paper for recycling.
Demonstrating increased responsibility and maturity

One Gilford teacher commented that, at the elementary school level, active citizenship skills include being able to walk up to an elder and comfortably say, “Hi my name is Joey” and carry on a conversation with diverse members of their community. Students had a chance to practice this type of engagement during a Heritage Quest day during which each third grader in the school was partnered with a sixth grade “buddy” to participate in an all-day treasure hunt for local historical information that was built around quest poems that the sixth graders had written. The ELC representative and other observers reported that many of the students’ poems demonstrated both understanding and fascination with their local history.

Furthermore, three members of the town historical society were interviewed in conjunction with their participation in the “quest” day. All three were explicit about how impressed they were by the students’ behavior and knowledge during the event and had clearly developed a newfound respect for elementary school students. A parent reported, similarly, that students “had to review how to behave, especially around elderly people. Sometimes kids these days don’t have the opportunity to learn it, and they’re getting a chance to learn those things.”

Other evidence of developing maturity—as well as an example of students’ investment in their own learning—was their reported ability to wait quietly for animal life to appear in the trail section of their schoolyard. In Gilford, both teachers and community members reported being impressed by the level of focus and patience that had developed amongst third graders who regularly use this “outdoor classroom”. After multiple visits, students realized first hand that by waiting quietly they would be rewarded with a visit from birds or a beaver. They do “sit-sees” on the nature trail. A parent volunteer describes it this way:

Their ability to go out and sit is surprising. In a classroom they’ll be fidgeting and talking to somebody, not necessarily what they’re supposed to do, but if you go outside and say ‘do your sit-see’, they’ll come up with incredible things and they’ll write incredible things.
This parent’s perception, much like that of teachers and administrators, was that students writing and academic skills were very impressive. The research projects third grade students completed, she felt, were very detailed for their age and encouraged students to read books that they would not have otherwise. “The writing of my third grader is just excellent, and her enjoyment of writing is much different…. Usually there’s groans with writing time, but this class is just itching to write. There’s no hesitation about it.” She also noted that her sixth grader’s ability to talk with younger children has progressed tremendously after her involvement with Junior Naturalists. “The opportunity to do projects changes them quite a bit,” the parent stated.

The Gilford art teacher has the advantage of being able to compare students from various classes and exposures. She reported noticing that the students who regularly go outside with their home classrooms were more focused and well-behaved when she took them outdoors to do drawings. They knew how to handle themselves outside and as a result were better equipped to “observe, appreciate…they had made an acquaintance and a connection. They didn’t go out to have recess.” She also reported that, because of their exposure they seemed to have more confidence and “have a better understanding and belief of how and why our environment is important. You can see the difference.”

The Littleton sixth graders who spent a night up in the White Mountains last Fall were lauded by specials teachers who compared this cohort’s behaviors and cooperation skills with that of a similar cohort who had not participated in the teambuilding mountain retreat. Both the physical education and art teachers reported that the cohort of students was better behaved during specials time and got along better than any of the other groups. They suspected it was because the team had two days to connect to one another and strengthen their classroom community at the beginning of the school year.
The types of skills students are developing through exposure to hands-on projects and community resources is, in some cases, spurring their thinking about future occupations. In Malden, a number of eight graders were vocal about the impact that their work teaching younger students and leading the school’s recycling project had on their future thinking.

Student 1: Now I think I might want to do something like the Green Corps or Peace Corps, something geared to helping people and the environment.

Student 2: I want to do something that involves little kids.

Student 3: I’ve always wanted to be a teacher, I like working with little kids. This projects has shown me that even the smallest little thing getting recycled can change their lives.

Student 4: Before I used to want to be a lawyer, but now I want to be something that helps people or animals.

Student 5: I definitely want to do something that will help people and the environment.

Teachers felt that students often put more effort into their work when they are using skills that contribute to a real-world project. An Antrim teacher offered the following, “[a student thinks] if I need to build a raised bed, I need to make sure to do it accurately, so that it will stay and won’t fall apart so people can use it next year.” The understanding that someone will put their work to use motivates greater attention to project completion and quality of work.

At the high school level in Littleton, students who received a grant from MIT to design an invention that would benefit the town have been both highly engaged in their learning process and eager to assume the responsibilities associated with creating a project of value to the community. Another teacher in the school commented similarly:

I know a couple of [those physics students] and you hear them excited about what they are doing and the amount of responsibility they have. I think that really helps them to see that school can be real. And that they can make a difference and that adults can respect them for their ideas.
Performance in more traditional classroom activities

Writing Assessment: presentation of pilot process and findings

Without being specifically prompted, teachers at all four CO-SEED sites evaluated in 2002 reported that they thought their student’s writing ability had improved as a result of participation in project CO-SEED (RMC, 2002, p. v). To test these teacher perceptions more systematically, this pilot study used a participatory approach to design an investigation to explore a possible correlation between student scores on standardized writing assessments and their level of exposure to the CO-SEED project.

While differences among the standardized writing test scores of the comparison groups were found in both Malden and Gilford, a case for positive correlation with CO-SEED cannot be made from the quantitative data gathered for this pilot investigation. Yet, in interviews participants continued to report perceived improvement in student writing and attribute that at least partially to CO-SEED. The discrepancies between the quantitative and qualitative data are discussed below.

At Malden the 4th grade ELA writing subtest scores for the statewide MCAS tests were found to show a steady, year to year, rise between the year 2000 (before CO-SEED entered the school) and the year 2003 (after CO-SEED had existed at Beebe School for three years). However, the aggregate of the other four schools in the Malden school district (which did not participate in CO-SEED) showed an almost exactly parallel increase over the same time period.

A similar pattern was found when comparing the year 2000 4th grade writing scores to the year 2003 7th grade writing scores in Malden. Seventy-six of the 100 7th graders from Beebe (and 225 of the 334 7th graders from other schools in Malden) who took the MCAS in 2003 were the same individuals who had
taken the MCAS as 4th graders in 2000. These were the students who were enrolled in Malden during the entire three years of CO-SEED’s presence there. Both the Beebe and the non-Beebe cohorts showed higher test scores as 7th graders than they did as 4th graders.

At Gilford, this evaluation examined the 3rd grade writing sub-test raw scores and the Total Language Arts scaled scores for the statewide 2003 NHEIAP tests. For each 3rd grade classroom at Gilford the means were higher than the state averages for both scores. And the two classes determined to have the highest level of involvement in CO-SEED had comparable or slightly higher means than the two classrooms determined to have less involvement in CO-SEED. However, these differences were not large enough to make any statistical claims about CO-SEED as a causal factor. The means for each classroom fall within the 95% confidence interval of the means of each of the other classrooms. Further, the reading specialist at Gilford noted that: “These scores are only one indication of many contributions from a variety of initiatives at GES. Of these, the Literacy Collaborative has the highest impact on literacy (writing) scores. The other two initiatives are the Integrated Instructional Model and CO-SEED.”

At the same time that test scores are not showing the dramatic changes participants might hope for, administrators and teachers at several sites reported perceived
improvements in student writing. During preliminary interviews to design this writing test score investigation, the principal at Malden stated plainly: “We believe writing has really improved here at Beebe School”, to which the theme coordinator added: “I think the kids have more to write about because of this program.” An administrator at Gilford expressed a similar sentiment in one of the initial interviews to design the writing investigation:

Students become inspired by place-based education and are able to express it in their writing. We see more detail in their writing, more descriptive adjectives to describe what they are seeing, feeling or observing. It’s the real life experience, having something tangible, it’s the track in the snow, who put it there, what’s it eating? I would be very surprised to see results of low test scores for kids involved with CO-SEED.

When asked what could be concluded if, hypothetically, standardized writing scores showed a negative correlation with involvement in CO-SEED, this administrator replied: “We would have to examine our instructional techniques to figure out even better ways of helping students make the connection to real life experience.”

A Gilford teacher offered a detailed (and notably exuberant) reflection on a writing exercise her 6th grade students did during the CO-SEED sponsored Historical Quest day:

In the middle of a field day, they took that...cut and dried...writing program and made it work. I’m seeing transition words here, conclusions, and it flows. It is absolutely amazing. Even the kids with IEPs have transition words. The handwriting is horrible...but the information is almost all right, and the structure is all here. I’m totally floored.

This pilot investigation seems to show that standardized state wide tests may not be fully sensitive to at least some of the aspects of improved student writing that are
valued and reported by local teachers and administrators. It needs to be reiterated, however, that CO-SEED is not designed explicitly as a writing instruction program. In fact, each of the CO-SEED sites examined also had existing non-CO-SEED initiatives that were specifically designed to improve student writing (e.g. the Collins Method at Malden and Littleton, and the Literacy Collaborative and Integrated Instructional Model at Gilford). In the qualitative data gathered for this and previous CO-SEED evaluations, it appears that the main way in which CO-SEED is reported to impact student writing is by providing real life, sensory experiences that inspire and enrich student writing. Thus, CO-SEED could very well be a valuable component of a more comprehensive writing improvement initiative or set of initiatives, but it is probably less likely to succeed as the primary vehicle for improved student writing without redesigning the program to include more focus on teaching writing skills.

A major finding of this pilot investigation into student writing is that analysis of test scores as part of the evaluation process took far longer than anyone expected or wanted, and yielded results that were, perhaps, not as directly useful as anyone might have hoped. One challenge was simply identifying which test scores to examine, and then finding the right people within the school community to authorize and provide the technical know-how (and time) to transfer the test scores to the evaluators. Though passive consent was generally conceded as sufficient for this evaluation because individual test scores were never publicly reported (and were, in fact, not even provided to evaluators in the case of Gilford), issues of privacy and confidentiality still had to be clearly addressed. These issues could become insurmountable in some cases in the future. Another major challenge for this pilot was that scores for tests taken in the Spring did not become available until well into the following September or even October. This creates a challenging overlap between the analysis, write up and reporting phase of one year’s evaluation and the design and start up phase of the next year’s evaluation.

Despite the challenges associated with test score evaluation, further effort in this direction appears to be warranted. Administrators at several CO-SEED sites underscored the importance of being able to meet the growing demand for test-based accountability. Said one: “My superintendent is very numbers driven. It is no longer good enough for me to just go in and tell stories about the great things that [the CO-SEED staff person] is doing.” Further, now that the evaluation team has invested significant energy in obtaining and analyzing standardized test score data (including building rapport with appropriate administrators at CO-SEED sites), that process should be more streamlined in future evaluations. Test score analysis could be used as an exploratory tool to engage participants at new and existing CO-SEED sites in conversations aimed at finding appropriate measures of program success. The main recommendation in this regard is to use test score analysis as one source among many of a mixed methodology effort to triangulate data about student academic achievement. It does not appear to be a good idea to put all the evaluation eggs in the standardized test score basket.


Aademic success through engagement in learning

"I used to be like 'whooptydoo, a feather'. Now I'd pretty much go into the river for those." (Gilford third grader)

Apart from the writing investigation described above, correlations between standardized test scores and exposure to CO-SEED were not measured this year. However, at several sites respondents offered their perspectives on the connection between student academic achievement and CO-SEED. One Gilford administrator commented, “I would be very surprised to see low test scores for kids involved with CO-SEED.”

Moreover, the idea that students are more engaged in the learning process as a result of CO-SEED type work was resounding. Students at Littleton high school talked easily about the difference between the community-based project they were working on and other classes they participate in. The following are excerpts from informal interviews with 10th-12th grade students:

Student 1: Sometimes academic stuff is really boring but when you get involved you learn more.

Student 2: The atmosphere is group work, learning by doing, not by memorization. When you work like that then you have something to remember it by. Like the formulas we are learning now, we know how we're applying them and I know that I have to know them two weeks from now to continue this project. You can really remember the formula and know what it's for if you recall it periodically rather than just cramming it in and never using it again.

Student 3: There's a thought I've been having. I am concerned that if we put the wires down in the ground they might be dug up. When I ask [my teacher] about it he'll send me to figure it out with one of the town workers, one of our mentors.
Student 4: Kids would be more interested if more classes were like this. Kids like to be involved in stuff. This could work for us all day.

Student 5: I’ve never done that well in science, and the way he teaches, well he has a way of finding it, and now I’m succeeding at science. He applies learning to everything, he breaks down the physics into simple concepts that relate to something that you do every day.7

Both the Littleton high school physics teacher and the principal shared a story of a student who, they both hold, would not have passed his grade level or graduated from high school without the step-building project that was born of a CO-SEED relationship and fueled by CO-SEED funds. The student had severe behavioral problems, but once he was paired with a community member as a mentor and pulled out of the larger classroom setting he began to succeed:

He had the same time spent on the subject, but was doing almost an internship with this community member. His ideas were valued by [the mentor]. All of a sudden somebody outside of this school setting valued his ideas...and that made the difference for him to pass my class and graduate.

The principal, while describing this same success story, reported, “It is important for teachers to understand that there are other ways to engage students.”

The same physics teacher also conveyed his experience with using a hands-on approach:

“I think the people who have done these types of projects have seen a tremendous impact on the kids... how happy they are, how they want to learn, their writing. I really do think their writing is place-based writing. Because you have done this experience with them you come back in to the room and you have that shared experience to talk about. Their writing is so much richer. They can do poetry about it. They’ve done poetry, reports, friendly letters. We did it with the hike, and then when we went down to the river and collected macro invertebrates and river samples. Now we went downtown and we used the GPS units, and we’re trying to write a brochure for kids, by kids. We’re still calling it a CO-SEED thing.” (Lakeway Elementary School teacher)

7 Student 5 signed up for a second semester of involvement in the project despite “not being a science person” and not needing any more science classes to graduate.
My hope is that...solve the hardest mathematical problems in physics, but they can do it with a hands-on approach. The equations are just as ugly as any other physics course, but they understand them better because it’s applied and it’s hands-on. In the end they can still do that same level of problem.

A sampling of third grade comments about what they learn by studying nature outside their classroom:

- “When I look out the window I see two mourning doves, not just two brown birds.”
- “I have more confidence with animals. I used to be afraid of a lot of things like snakes, but now I’m not afraid to touch them.”
- “You can’t just squish a bug because you want to, bugs have a life, too.”
- “Nature is like a big circle, so don’t take away part of it.”

Teachers at multiple CO-SEED sites reported that students with special learning needs—in this case students who have difficulty with reading and writing tasks that are not perceived as directly relevant to them—benefit even more visibly than others.
In Gilford, a fifth grade classroom aide who works with a boy with ADHD reported that “he is not well-integrated with the class, but he thrives when they go outdoors to learn. He can do the math piece when it’s applied but not as part of the regular class learning.” She further noted that the boy, like the above Littleton high school student, does well when he is connected with adult mentors: “He is also connected with the janitor and does very well learning mechanical things, measurement, etc. when he’s working directly with him. Hands-on work really makes a difference for this kind of kid.”

**Developing skills**

“Just that they can do things adds to their confidence. And trying to figure things out on their own adds to their confidence.” (Gilford parent-volunteer sharing her observations of third graders)

During a SEED team meeting in Littleton, the vocational technology teacher who was applying to CO-SEED for further funding for his students’ Geographic Information Systems (GIS) projects, spoke of his enthusiasm for engaging his students in their local community:

> I had seen a disconnect between what kids were learning in school and the jobs available in the community. So we reached out to businesses in the North Country to actually do the GIS work, and my students can see that, yes, this is a technology that is used. That was my goal: to link the school and community.

A high school physics teacher responded, “I’ve seen that your students have skills to share. When I wrote the MIT grant [to obtain funding for his students’ sidewalk heating invention project] your students helped me make the maps I needed.”

A Gilford grandfather and SEED team member talked about the importance of real-world, skills-based learning for students: “So many kids say I don’t know what I’m going to do [after they graduate] and activities like CO-SEED and scouting give them suggestions. These things give them a taste of what they might to in the future.”

A Gilford historical society member reflected that students are learning cooperation and teamwork skills by working in small groups to complete projects such as preparations for the Heritage Quest day. Students are routinely overheard saying to one another things like, “You have to get this done. We have a time schedule.” The community member, also a retired teacher, stated:
These are skills that teachers are hoping students will learn but it’s much more meaningful for students to hear it from their peers. That is a maturity the students have taken on that they would not have had the opportunity to develop had it not been for this particular CO-SEED activity.

A similar phenomenon was reported in Malden. Seventh grade students discussing their engagement in an integrated unit on bread making reported that working together was one of the biggest influences of the project on them. “[I learned about] cooperation and teamwork, like if you need to get the project done by a certain time, you need to listen to everyone’s opinions,” said one student. Another added, “[I learned about] leadership. I was elected team captain. It’s not easy, when you’re a leader you have to be like a facilitator.”

Gilford sixth graders were involved in a tracking project throughout the winter, going out on snowshoes to learn tracking skills. The ELC representative who accompanied the class and their teacher reported that many students exhibited significant improvement in their understanding of tracking and its associated skills such as measurement, observation and inquiry-based problem solving. He also noted that:

By learning about the different wildlife that travel and use areas within the study, students began to make connections to human behaviors and wildlife needs. For example, the impact people may have on a fox den, and a need to act by educating others about the fox den.

Students in Gilford decided that they needed an outlet for their new learning and decided to generate a school news article to inform the community about human behaviors that impact wildlife.

Though it is not directly related to student performance, per se, it is interesting to note that a couple of Beebe seventh graders said that they felt there should be more about the environment on the school walls.

9 While the alumni CO-SEED site in Gorham, New Hampshire is not in the purview of this year’s evaluation, this finding would seem to be illustrated by the Gorham site, as well, where it would appear that strong support at the school level is necessary but not sufficient to override interference at the district level.
**PRIORITIZATION ACTIVITY**

In addition to analyzing responses to inquiries about CO-SEED’s greatest strengths and challenges, this evaluation included an activity in which respondents were asked to make decisions about how to budget CO-SEED’s process activities.

An evaluation tool was developed that asked interviewees to consider the relative priorities of thirteen aspects of the CO-SEED model. Participants were asked to allocate a hypothetical $1.00 budget amongst the following components. The current proportional allocation for each component was listed on the activity sheet as well.

- Antioch New England Graduate School staff consultation and SEED Team facilitation.
- Antioch New England Graduate School program fundraising, codification, dissemination and administration.
- Facilitation and implementation of the community Vision to Action Forum.
- Antioch New England Graduate School interns working with your school and teachers.
- Environmental Learning Center staff working with teachers and students to implement classroom based education.
- Evaluation for program improvement & funding; providing information to administrators, teachers, and community members.
- On-site professional development provided to teachers and administrators (e.g. in-service days).
- Teacher honoraria provided to take professional development or to do presentations outside of normal work-day.
- Teacher release time for project planning or professional development.
- Training teachers to be facilitators of curriculum planning and the planning process.
- Developing a web site of your site’s CO-SEED work to use as a resource to communicate the progress of this work in your school.
- Teachers, students, parents and community member participation in the summer institute.
- Money for mini-grants. Site based SEED Teams make decisions about how to spend this money.

Participants were also given the opportunity to add other categories that they felt would make the CO-SEED model more complete. Once participants had made decisions about how to allocate the budget for one year, they were then asked to perform the more traditional evaluative exercise of rank-ordering. Results of this activity are only tentative, since the instrument was newly evolving during this evaluation cycle and was modified as it was being piloted. Nonetheless, the
discussion, table and chart below provide a preliminary analysis of the results of conducting this prioritization and ranking exercise with 31 participants from four sites plus ANEI’s CO-SEED staff. In addition to spurring process evaluation dialogue, data from on-going use of this evaluation activity can be used over time to track participant perceptions about the CO-SEED process.

See Appendix for complete activity worksheet.

It should be noted that the implementation of this activity varied widely among participants in terms of the amount of time spent on it, their previous level of familiarity with many of the components and thus the time necessary to assimilate so much information in an interview format, and the participant’s affinity for detailed budget-type analysis of complex programs.

Despite these potential threats to instrument validity, there does appear to be a clear trend in the data as revealed by simple calculations of averages of the numerical responses. Most of the respondents affirmed the current allocation priorities most of the time. The data from this activity suggests that the current allocation of resources does not warrant major revision.

In addition to being the most expensive component of the CO-SEED program, funding for people in the form of ELC and Antioch staff is also the most important component of the CO-SEED model as reported by participants. This is very consistent with qualitative interview data which repeatedly revealed statements such as “I can’t even tell you how valuable [the ELC representative] has been” and “facilitators from Antioch are phenomenal, they help you find out what it is you want”.

**Prioritization activity summary table**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>Current Allocation</th>
<th>Designated Allocation</th>
<th>Change relative to total budget</th>
<th>Designated divided by Current Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ELC Staff</td>
<td>27.0%</td>
<td>25.4%</td>
<td>-1.6%</td>
<td>94%</td>
</tr>
<tr>
<td>2</td>
<td>Antioch Staff</td>
<td>14.0%</td>
<td>13.3%</td>
<td>-0.7%</td>
<td>95%</td>
</tr>
<tr>
<td>3</td>
<td>On Site Prof. Devel.</td>
<td>7.0%</td>
<td>8.6%</td>
<td>+1.6%</td>
<td>123%</td>
</tr>
<tr>
<td>4</td>
<td>Mini-Grants</td>
<td>5.0%</td>
<td>5.2%</td>
<td>+0.2%</td>
<td>104%</td>
</tr>
<tr>
<td>5</td>
<td>Teacher Release Time</td>
<td>2.0%</td>
<td>5.3%</td>
<td>+3.3%</td>
<td>265%</td>
</tr>
<tr>
<td>6</td>
<td>Evaluation</td>
<td>11.0%</td>
<td>7.9%</td>
<td>-3.1%</td>
<td>71.8%</td>
</tr>
<tr>
<td>7</td>
<td>Summer Institute</td>
<td>9.0%</td>
<td>5.6%</td>
<td>-3.4%</td>
<td>62.1%</td>
</tr>
<tr>
<td>8</td>
<td>Vision to Action Forum</td>
<td>6.0%</td>
<td>3.4%</td>
<td>-2.6%</td>
<td>51.7%</td>
</tr>
<tr>
<td>9</td>
<td>Facilitator Training</td>
<td>1.0%</td>
<td>2.9%</td>
<td>+1.9%</td>
<td>290%</td>
</tr>
<tr>
<td>10</td>
<td>Antioch Interns</td>
<td>1.0%</td>
<td>4.0%</td>
<td>+3.0%</td>
<td>400%</td>
</tr>
<tr>
<td>11</td>
<td>Honoraria</td>
<td>2.0%</td>
<td>2.9%</td>
<td>+0.9%</td>
<td>145%</td>
</tr>
<tr>
<td>12</td>
<td>Web Site</td>
<td>1.0%</td>
<td>1.2%</td>
<td>+0.2%</td>
<td>120%</td>
</tr>
</tbody>
</table>
This table was created by first calculating the average Rank for each service, and then listing them in the order from most to least important as designated by the respondents. The Current Allocation represents CO-SEED’s current (actual) allocation of funds, as a percentage of the total budget. The Designated Allocation represents the average of all participants’ suggestions for allocation of each service. The fifth column shows the arithmetic difference between actual allocation and the averaged recommendations for allocations. The final column shows the Designated Allocation as a percentage of the Current Allocation.

Some of the findings might appear contradictory, at first look. For example, the ELC staff and ANE staff are ranked as the highest priority, which is quite consistent with the current allocation. However, they have been designated less funding by the participants. One explanation for this is that it is feasible to imagine that a participant wishing to increase the percentages of some of the smaller budget items would naturally choose to take from the most heavily funded part of the program, in spite of heavily prioritizing it. Also, decreasing the ELC staff by 1.6% of the total CO-SEED budget would still mean spending nearly as much total dollars (94%) on ELC staff.

One way to interpret these data for utilization is to assume that those services that are ranked high and also given a greater allocation are the most important, while those that are ranked low and also have allocation cut are less important in the minds of respondents. This would suggest giving greater programmatic emphasis to On-site Professional Development and Teacher Release time, while decreasing the emphasis on the summer institute and Vision to Action Forum.

Before drawing secondary interpretations of the data from this prioritization activity, it should be pointed out that with this kind of descriptive (rather than inferential) statistical analysis, two main areas of interest for decision making are: 1) the extent to which responses cluster versus are dispersed (variability); and 2) the value(s) around which responses cluster (central tendency). An analysis of the distribution of these scores suggests that averages or means of both the allocation and the rank order seem to be fairly accurate measures of central tendency. But the wide range of variability of responses to the On-site Professional

Other priorities noted by respondents during the prioritization activity:

- Professional development and networking opportunities for ELC representatives
- Facilitated meetings with ELC directors, and other efforts to build capacity of ELCs
- Money set aside for fundraising efforts for sites to achieve stability after ANEI’s involvement
- Inter-site communication
Development, Teacher Release time, summer institute and Vision to Action Forum items reveals some potentially interesting information.

The increases of designated allocation to On-site Professional Development and Teacher Release time are due to a handful of respondents who strongly emphasized this item. Most other responses tended to cluster around the current allocation. Similarly with the Summer Institute item, there was a cluster of designated allocations that were much less than the current allocation and a cluster of designated allocations that were slightly more than the current allocation.

An interesting pattern here is that the respondents who most strongly advocated for teacher training related items tended to be from Antrim, the alumni site. This is consistent with analysis that is discussed further in the “staying power/ sustainability” section of this report.

In terms of rank ordering of the four items being more closely considered for utilization, the distribution of designated ranking tended to vary quite a lot. In other words, it would be more accurate to say that opinions about the relative rank were mixed and inconsistent, as opposed to focusing just on the arithmetic average of the designated ranks.

"I like to lean heavy on the professional development. If you want us to do it, we need some training. The more training we get, the better product we'll put out at the end." (Beebe school teacher)

It should be noted that the discussion of the CO-SEED process that ensued while conducting this activity with each interviewee also provided ample qualitative data for this evaluation. Furthermore, in multiple cases, participants suggested that this type of budget information be provided to the SEED team from the start of their involvement in CO-SEED. The Team could be charged with making some budgetary decisions at the start, and gradually assume more responsibility for its administration, including gradually assuming responsibility for providing some—and then all—sources of funding. Participants felt that it is an “added hurdle” to the sustainability of CO-SEED work at a site if the budget information is essentially hidden until ANEI’s time is over. A few people—
community members, teachers and ELC representatives--commented that, although they had been involved with CO-SEED since the start, the breakdown provided by this activity was new information for them, and would have been helpful to have earlier in order to more fully grasp the program concept.

In summary, there were three main findings from this activity: 1) participants basically agreed with current prioritization of CO-SEED activities; 2) more emphasis and/or resources could be placed on professional development and direct training of teachers as a strategy to improve long term sustainability of the change initiative; 3) the prioritization process was generally well received as useful and/or interesting to participants and has potential to be integrated more explicitly into the program implementation (as well as refined for ongoing evaluation, perhaps even as a kind of pre-post type instrument).
SUSTAINABILITY OR “STAYING POWER”

“We are very committed to continuing the practices and philosophy of CO-SEED.” (Gilford school administrator)

One measure of a program’s effectiveness is the degree to which the desired outcomes are realized during the weeks, months or years of direct intervention. On another level, a program that purports to create change of any sort—whether in teachers, students, whole schools or communities—also looks to measure its effectiveness in terms of its ability to create sustained or lasting change after its period of direct intervention. For CO-SEED, one site evaluated this year fits into the category of “alumni”—a site that had three or more years of CO-SEED direct service and has been on its own since then. Three other evaluated sites are nearing the end of their tenure as active CO-SEED sites.

Interviews and observations at these four sites were utilized to measure the degree to which CO-SEED work is being sustained, or is perceived to have established the means for long-term sustainability, beyond ANEI’s direct intervention. Factors contributing to CO-SEED’s staying power, as well as challenges to sustainability at these sites and as a whole are discussed in this section.

In general, a more enthusiastic response to the notion of sustainability was given by the three active sites where support mechanisms are still clearly in place, while interviews at the alumni site tended to convey a somewhat nostalgic longing for the support that CO-SEED no longer provides.

Sustainability in Antrim

As the oldest official CO-SEED site, Antrim provides the most fruitful opportunity to understand the extent to which CO-SEED’s impacts are lasting. However, changes in upper level school district administrative positions and district policies within the Antrim school district, and responses to changing national educational mandates, make some of the answers to the question of CO-SEED’s sustainability more difficult to decipher. There was a subtle underlying tone of weariness or resignation amongst respondents as to the lasting effects of CO-SEED, but respondents attributed much of their impression about the barriers to CO-SEED’s sustainability not to the program itself but to internal barriers that had presented themselves subsequent to the completion of three years with ANEI’s support. It should also be noted that all Antrim interviews took place within a week of the final day of school for the year.

“It’s been really hard with the change of curricula - at the district level].... CO-SEED lives in peoples’ hearts but less in their everyday teaching.” (Antrim teacher)
Community- and project-based teaching continues

There are numerous positive indications that elements of CO-SEED’s work persist at Great Brook Middle School in Antrim, most notably in the school culture and teaching philosophy. The desire to do community- and environment-based projects is still very strong among the teachers interviewed for this report. One teacher noted firmly that “there definitely is a group of teachers who feel able and competent carrying out curriculum outside the classroom.” Another teacher demonstrated this when she described several projects from the current school year involving working personnel from the state Department of Environmental Services, a senior biologist from the NH Fish & Game Department, a wetlands assessor, local paper mills and others and summed it up by saying “We have made our own CO-SEED”. In addition, several respondents referred to a recycling program that began during CO-SEED’s involvement and remains intact.

Several teachers and the school principal commented that they have had to fight against curriculum requirements by the school district, but have managed to continue some of their CO-SEED style teaching techniques. The school’s home economics teacher cited several examples of ways in which CO-SEED-inspired work still flavors her curriculum. She noted:

> CO-SEED really helped me with the environmental education piece and I mean the whole environment, not just plants and science. I have students get involved in projects that are related to the environment which was their community. The environment is the people and the physical environment.

One example of how she sustains CO-SEED projects in her current teaching was a recent project in which 8th graders cooked meals for community families who have service men abroad and a family whose father was killed in an auto accident.

Administrative support and curricular adaptations

The Great Brook School has a strong administrator with a great deal of affinity for and philosophical alignment with CO-SEED work. He has been an asset in encouraging teachers to continue their work. The Antrim principal was often mentioned as a key factor contributing to the successes experienced at Antrim.
because he was highly supportive of that type of work in spite of changing district requirements. One teacher stated that “this was a school that was always an environmental school, but CO-SEED made that easier.”

Furthermore, several teachers reported a potential resurgence of CO-SEED now that the new district curriculum has had two years to settle in. “Having worked with the new curriculum for a couple of years, I’m starting to see what I can leave out and what I can integrate, now perhaps next year I can get more out into the community again.” This comment reflects the importance of maintaining contact with a site over time, beyond the three year period, as educational tides ebb and flow and teachers are forced to adapt their practices accordingly.

**Town-level efforts**  
There are CO-SEED efforts that persist at the town level as well. During its CO-SEED years, there was an emphasis on revitalizing the town’s Memorial Park. One respondent noted that the park is now frequently used, and attributes it in part to CO-SEED: “I see Memorial Park as having become more of a focal point for Antrim, and CO-SEED has a lot to do with that.” In addition, she noted that the school continues to use the wetland area that was brought into focus during CO-SEED’s involvement as a sustained place for classrooms to go for academic endeavors.

**The Depot School**  
One of the site’s glowing successes is the establishment of The Depot School, a direct outcrop of CO-SEED’s work. This is a renovated train depot in town that was turned, literally, into a community-based classroom (i.e. a classroom in continuous use by the school but physically located several miles from the school building). All learning at the Depot School took the form of integrated, community-based projects, and it was assigned its own teacher.
Regular classroom teachers cycled their students through the Depot School as part of their curriculum.

The Depot School is also evidence of the magnitude of the lack of support for place-based education emanating from the new school district administration. The principal described it like this:

Money has very little to do with the whole project, it’s about attitude and changing people’s thinking. Our biggest expense for the depot program is the rent of the building and that was two thousand dollars, which is nothing. But it was enough for [the district] to cut it. I think that is because of their thinking, they don’t see it as valuable, they see it as fluffy and distracting.

Challenges to sustainability

Although there has been some contact between ANEI and the Antrim site since CO-SEED’s term ended, the largest barrier to sustained CO-SEED work other than curricular changes was the withdrawal of support that teachers relied upon. One respondent reflected that when ANEI’s term was over there was a “double whammy” effect because “the Harris Center then pulled out too.” It was unclear as to whether this teacher was referring to the ELC services being unavailable to just her grade level, or whether she was implying that there was no longer any ELC support for the whole school. In any case, there was repeated lament over having less support from the Harris Center.

The Antrim principal explained a major barrier to continuing CO-SEED work in the face of mandated curricular changes:

CO-SEED is not the unifying force it used to be. It would be harder for our district to push against a CO-SEED team. What we have instead is individuals rather than a team. Having a team in place would help…and that went away when CO-SEED left. The outside support was essential for keeping that going.

Reflecting on their experiences, several Antrim respondents had thoughts on how CO-SEED work could be made more sustainable. One teacher suggested that, “Allowing teachers from past CO-SEED schools to go to the summer institute would help keep you involved. Once the money and support goes away, you go back to doing the things you used to.” Another teacher suggested having “one CO-SEED meeting a year to get people together to rally the forces, brainstorming ‘how can we make CO-SEED fit with the canned curriculum?’” Three of teachers interviewed made clear suggestions to focus on professional development of teaching staff as a way to encourage long term sustainability of CO-SEED. As one teacher put it:
What I see right away is I would definitely support way more teacher training, because that is the real root of it all, sometimes we just need to give them skills... teacher training is probably even more important than support from the administrator.

It is interesting to note that this last sentiment is consistent with the findings of the prioritization activity in terms of suggesting greater emphasis on direct training of teachers.

The principal also agreed with the focus on training teachers, noting that:

This is about changing people’s minds and ideas, it’s about getting them into a different place. If the goal is to do that through professional development, then CO-SEED will be sustainable.

He framed his final feedback in terms of the importance of defining the CO-SEED term of engagement:

My best advice is that CO-SEED should go to a school that has a clear mission in mind to change and redirect that school. It should be a conscious school reform effort. Rethink it being a three year thing, stay until the job is done and the school is reformed.

Sustainability in Gilford

You have people who are willing to put forth the effort. To me, the idea of using the quest, of using the community, is a jumping ground. Now the idea is very much ingrained. We know how to pull together people from the community.” (Gilford teacher)

With one semester of direct ANEI support remaining, Gilford and Littleton sites were also asked to comment on the ways in which they see the potential for lasting change. Nearly every Gilford respondent had an overwhelmingly positive attitude about the potential for sustained CO-SEED work at their site. The section below discusses the following themes as evidence of sustainability in Gilford: administrative support; development and use of natural areas; growing school-community relationships; and several other indicators. Some cautions were also shared, and are discussed below as well.
Administrative support

Administrative support for the program, both philosophically and in practice, as well as the fact that CO-SEED work dovetails neatly with several other initiatives at the Gilford Elementary School are the most positive indicators of CO-SEED’s sustainability at the elementary school.

Both the principal and vice principal of the elementary school were very positive about the staying power of CO-SEED in coming years. Their enthusiasm and commitment alone are strong indicators of success. The principal said, “This has been so valuable for our teachers in helping them engage in the community.” Furthermore, they expressed satisfaction with how CO-SEED has unfolded in their town and an intention to continue the work:

We are very committed to continuing the practices and philosophy of CO-SEED…we have gained integration of environmental education, and more importantly it has dovetailed nicely with a lot of the programs we have going on here. It ties in nicely with the Integrated Instructional Model and with our literacy collaborative tied in with Lesley University. Our teachers are more confident about going out on the nature trail, and doing things they hadn’t done before.

Development of and use of natural areas

Another key sustainability feature is the level of access to the school’s nature trail that has been developed. As both students and teacher become more familiar with the trail system, and as materials are developed to maximize its use, there is great promise for ongoing use of this natural resource as an outdoor learning lab beyond CO-SEED’s involvement. The trail has been improved and snowshoes purchased to facilitate winter use. Third grade students created maps of the nature trail behind the school, contributing to the trail’s usability. One student commented, “Most teachers don’t go out there because they think they will get lost, so our trail map will help them go out there.” These systems—along with increased skills and confidence on the part of teachers—bode well for continued use over time.
Growing community-school connections

There are also some positive indicators on the town front. In Gilford, the Vision to Action Forum that preceded CO-SEED’s official involvement in the school, was termed the GALA. Two years later a sub-committee of the GALA formed spontaneously without ANEI’s prompting or intervention. It was reported that roughly twenty people decided to take the initiative on seeing that priorities established during the GALA became realized. They also stepped up town-focused communication efforts by publishing a quarterly town newsletter to keep the spirit of the GALA alive.

As a demonstration of growing connections between the school and the community which show positive signs of continuation, this year’s school-initiated Heritage Quest was attended by the town librarian and historical society volunteers (in addition to around 40 other adult volunteers from the community and school). Following the event, the questing materials were distributed to the library and historical society for ongoing use. They were very enthusiastic participants and look forward to sharing the quest with other community members. The signs were promising that, having seen the success of this school-community event, teachers will continue to use questing as a teaching tool. Said one middle school teacher, “…with questing, I think we’re only beginning to see what can possibly happen with that.”

There were numerous other positive signs of CO-SEED’s staying power within the elementary school at Gilford, including:

- Administrators (at the school and district level) have expressed interest in and intentions to have an environmental educator to replace or continue the ELC representative’s position, possibly as an in-house environmental educator.

- Administrators and teachers noted that the birding project, Project Feederwatch, is now an ongoing, institutionalized school function. Every morning students collect data about local birds. Aside from data collection skills and the assumption of responsibility, students are “learning the whole bird. They know Black-throated Green Warbler calls,” said an elementary school teacher.
The positive response to the Junior Naturalists Club by students, parents and teachers is a positive sign of a site-initiated endeavor that has potential staying power. Fifty-five students and twelve adults attended the first few meetings of this afterschool club at the elementary school, and enthusiasm continued throughout the school year.

A third grade teacher and the ELC representative have planned a bird and butterfly garden for the elementary school. The administration supports the project, saying “I think that’s one of those programs that becomes entrenched in our curriculum offerings.”

This Spring, the elementary school’s Professional Development committee put together a proposal to have two separate in-service days in the next school year focused on environmental and project-based work. This proposal came not from ANEI or the ELC but from a teacher within the school.

The administrators at the elementary school have convened professional development sessions to explicitly name and map out the ways CO-SEED and the other main curricular intervention (an arts-focused program called Integrated Instruction Model) overlap and complement each other. Thus it becomes harder to lose either initiative because they are at least partially fused conceptually in the minds of the teachers.

**Challenges to sustainability**

The biggest apparent barrier to sustainability in Gilford is the fact that the program is largely an elementary school endeavor. While there are several individual teachers at the middle school who have utilized the services of the ELC representative and/or other CO-SEED resources, the middle school is not more broadly involved with CO-SEED. Without administrative buy-in and curricular integration it is unlikely that CO-SEED efforts will continue in a significant way above the fifth grade level. The ELC representative reported, “It hasn’t stuck [at the middle school] as a philosophical concept. Part of it is the middle school schedule rhythm, and I don’t have a space there so it’s hard to make inroads.” Later he suggested that “It is absolutely necessary to get the commitment from the schools. If we don’t get teachers, if we don’t make it a requirement from the administration, then it’s harder to turn them on... I think it should be four seasonal focused workshops.”
Sustainability in Littleton

Evidence of CO-SEED’s potential staying power in Littleton are divided into six areas: ELC role, Town-level receptivity, Administrative support, Use of natural areas, SEED team sustainability and Building relationships.

ELC role may expand

While a goal of the CO-SEED partnership is to inspire ELCs to broaden their educational programming—and to stay involved with CO-SEED sites on an on-going basis—the reality of this goal has not yet been measured. However, a notable program-wide breakthrough in this arena occurred this year at the Littleton site. Faced with next year’s withdrawal of ANEI as a coordinating entity in Littleton, and with the inspiration of three years as a CO-SEED site partner, the Education Director for the Appalachian Mountain Club (Littleton’s ELC), developed a multi-year grant to hire a person to help them continue work on local community issues and continue to improve community relations. The project would fall within their existing “A Mountain Classroom Program”, and would focus on working with four communities close to their new outpost near Littleton, known as the Highland Center.

Said the Education Director of her conversation with the AMC leadership:

I explained this would be based on the CO-SEED model and allow us to continue to work in communities we have already reached out to, as well as give us the opportunity to better reach other neighbors.”

In response, one ANEI staff member stated:

This would set them on course for a whole new role in place-based education in the north country, and would be a significant shift for them as an organization....It has the potential to go a really long way toward systemic change within the AMC and its neighboring towns and a long way toward institutionalization of place-based education up in the north country.

The project is still in developmental phases, being shaped conceptually and seeking funding, but is a powerful tribute to the potential of CO-SEED in three areas:

• to sustain their work within sites after ANEI involvement;
• to influence the ELCs with which they partner;
• and to extend their reach to CO-SEED sites’ neighboring communities.
Town-level receptivity
At the community level, another positive sign of sustainability in Littleton is the presence of a town manager who is dedicated to forging connections between the school and the town. Having an influential person at the town level may be as important to CO-SEED’s success as having a supportive and engaged school administrator.

Commitment to professional development
The level of receptivity to CO-SEED philosophies and practices at the school administrator level is a positive sign. The high school principal, in particular, demonstrated affinity for the program and was frequently referred to by other respondents as a strong factor in the program’s sustainability. Demonstrating his support for ongoing professional development efforts, such as the district-wide, CO-SEED facilitated professional development day in November 2002, the principal stated, “Today’s in-service is very important. We would definitely see this kind of event as ongoing, designated each year as a professional development day.”

Establishment of outdoor learning labs
Concrete projects like the development of Lakeway Woods behind the Lakeway Elementary School and the Town Reservoir Outdoor Learning Lab (TROLL) associated with the middle and high school demonstrate great promise for ongoing outdoor exploration. Both natural areas have been institutionalized in that first aid kits and sign-up protocols have been established, and many teachers beyond those with initial enthusiasm for the project have begun taking advantage of these educational resources. Several respondents clearly stated that both Lakeway Woods and TROLL are now integral to the school system and “part of everyday life of the schools”.

A new high school math teacher had her students not only spend time studying the TROLL area, but required her students to write curricula that other teachers and students could use to study math on that land. This curriculum could facilitate other
teachers’ use of the land in future years, as well as being an excellent example of students engaging in useful learning experiences.

The idea for TROLL came from a high school student who initiated the concept during a CO-SEED summer institute and has stayed involved in its development ever since. The Littleton High School principal reported that “TROLL would have been a lot of talk but with the help of CO-SEED it actually happened.” Recently, two Conservation Commission members joined the TROLL advisory committee, a show of support from the town for the schools’ use of this town-owned land.

**Seed team is sustainability-minded**

There is also evidence that the SEED team has an eye toward sustainability, discussing formulation of its own mission statement and how to ensure that the program doesn’t crumble when ANEI is not present. In addition, the co-chairs seem to be capable of taking over meeting facilitation. During an observation of the SEED team, both the ANEI and ELC representatives left the meeting temporarily and the meeting proceeded flawlessly without them. Similarly, when the ANEI staff person recently told a co-chair that she was unable to attend the scheduled meeting, he responded that they would be fine handling it on their own. Participants reported that excellent modeling of facilitation skills has helped the team to develop this strength. Since the coordination and direction of CO-SEED activities stems (at least at the site level) from the SEED team, this evidence of growing autonomy is a sign of progress toward stable independence from ANEI (and potentially an ELC representative) in the future.

**Building relationships**

Perhaps most significant is the concept that, during CO-SEED’s tenure in Littleton, important relationships have been established that will not depart with Antioch. A high school teacher describes this relationship-building process:

> The town has been incredibly supportive. I could call them at 6:30 in the morning and they’d be here at seven with the backhoe...and because we established that relationship on the other project, the same thing occurs on this year’s project. So you have people working together, and so the CO-SEED badge, or at least Antioch may move on but, you know, we're still here. We've worked together and we like working together.

This teacher has also developed relationships with a wide variety of student mentors in the community and intends to continue utilizing them. The town manager confirmed the teacher’s emphasis on the importance of establishing relationships, “CO-SEED has given us the resources to bring people to the table and broker new relationships. I look at memberships that include members of the conservation committee, teachers, students...relationships that I’d never seen happen before.”
Challenges to sustainability

The most evident challenge to sustainability at the Littleton site is that, while the numbers are growing, there is still only a select group of teachers who identify with the CO-SEED project and actively participate in developing place- and project-based curricula. This poses the vulnerability of being too hinged to individuals who may or may not continue working in the district or teaching in the ways they are currently teaching.

Another challenge that caused much consternation on the part of those involved in its proposition was the budget vote that denied the renovation of the town’s Opera House, part of which was to be used for place-based education work.

Some concern was expressed about how projects that “CO-SEED had started” would continue to be funded. Annual events such as the successful sixth grade overnight trip to the White Mountains become an expectation, but require continued funding and support. At one SEED team meeting, there was a brief discussion of whether the town would be able to contribute money for the trip to replace CO-SEED’s funds. This discussion was, in a sense, a plea for sustainability of things started with CO-SEED funds. It is a positive sign that people are thinking ahead and recognizing the need to think early on about alternative support sources.

On the whole, Littleton seems well-positioned for sustaining CO-SEED work beyond ANEI’s tenure. The town manager attributes this to the climate that has existed and has been further developed by CO-SEED’s intervention:

We have people who think that way now. So if we weren’t to have a [CO-SEED] staff person, while we may not be as effective, the climate is such that that’s the way we do business now. CO-SEED was key to defining what that meant...it shift[ed] the responsibility away from a small group of school administrators and government officials to a larger group of people that now owns that idea.

Sustainability in Malden

“[W]e have become the environmental school, it would take a long time to lose that feeling.”

(Beebe School principal)

Four main themes emerged as evidence of sustainability at the Malden CO-SEED site: Working with an environmental theme school; signs of a shifting culture; a growing focus on curriculum development; and preliminary signs of town level systems emerging in response to CO-SEED work.
Working with an environmental theme school

Like Gilford’s integration of CO-SEED into its literacy collaborative and IIM, a pre-existing element within the Malden site positions it for sustained change. In the Beebe School’s case, it’s orientation as an Environmental Theme school means that there is an underlying desire and need to utilize CO-SEED type work to meet its own goals. An eighth grade teacher noted that:

What has actually happened is that our theme has come to mean ‘whatever is going on in CO-SEED.’ We don’t talk about CO-SEED, we talk about the theme.

Several people emphasized that the theme at Beebe was defined by CO-SEED’s work. Since it is an Environmental Health and Sciences magnet school, the community focus was not taken for granted. Several respondents, both teachers and administrators, reported that they would not be doing community-based work if it were not for CO-SEED. They described their theme as more “user-friendly” because of CO-SEED, saying things like “because of CO-SEED we are integrated between arts and sciences.” The person who was originally hired by the school to coordinate theme work described herself as a science specialist, but conveyed that because of CO-SEED she moved to a more interdisciplinary focus and reached out to have parents and community more involved. Furthermore, respondents expressed pride that, as a school, they are truly implementing their theme, as opposed to other schools in the magnet system that are still struggling to create a genuine thread throughout the school. One administrator reported that parents want to send their kids to Beebe “because we actually do our theme.”

A shifting culture

Several teachers and administrators from the Beebe School commented on “school wide shifts in thinking” or “culture” and mentioned that, despite difficult economic times,
these factors would contribute to sustaining the changes made during CO-SEED’s time with the school. The school social worker reports having “watched [teachers] get more serious about the potential positive impact of CO-SEED” and reported that, though he is not always directly involved, he sees “how CO-SEED has expanded how we operate as a school.”

Another teacher emphasized the shift in culture in terms of teachers’ level of acceptance and understanding of CO-SEED concepts:

Thinking about where we were three years ago I look at how far we have come. During our last whole school planning day no one said ‘the theme doesn’t apply to me’, not one person asked what a project-based unit is, and no one complained about how to do this. They were all thinking positively about how we do this as a school.”

There were also numerous references to a growing level of integration across grade levels by way of older students teaching younger students everything from recycling to reading to papermaking to the energy pyramid. Respondents referred to this phenomenon as helping to integrate the elementary and middle schools within the Beebe School and cause a greater feeling of school unity.

**Curriculum development focus**

Amongst CO-SEED sites, the strongest emphasis on CO-SEED-assisted integrated curriculum development is seen at the Malden site. In this sense, the site demonstrates the strongest showing of school-wide integration, which holds promise for staying power since the continuation of curricular innovations is not hinged to individual teachers, but rather to a more systemic plan. See Appendix for an outline of Beebe School’s curricular themes. One teacher reported that interdisciplinary projects have become an expectation, handed down from the principals, and that CO-SEED has provided teachers with the skills and confidence to carry out those projects.

Two key strategies have supported this schoolwide curriculum focus: training teachers as grade-level facilitators and providing grade level teams with project-planning time on the newly instituted Friday Club Days. Said one Beebe teacher who is confident that the work of CO-SEED will live on, “Before, teachers tended to work in isolation, but now working on grade level projects will continue.” Teachers commented that grade level meetings have become far more productive because of the facilitator training. The
facilitator training process is funded by another element that, in itself, bodes well for the sustainability of CO-SEED at Beebe. It is funded largely by the Federal Comprehensive School Reform grant that CO-SEED staff assisted Beebe School in receiving. This three-year grant essentially extends the working life of CO-SEED.

**Signs of town systems developing**

The Antioch site coordinator reported that, while he was inspecting the school’s recycling bins, a worker from the City of Malden drove up and told him that the city is considering replicating the Malden schools’ recycling project. The worker confided that people in solid decision-making positions were considering this replication project.

One teacher noted explicitly two factors that are critical in sustaining the work of CO-SEED beyond next year, as well as being strong indicators of potential sustainability: the theme team staying intact and continued support of the administration. One hurdle to overcome for the Beebe theme team is to develop strategies for recruiting and maintaining community members on its very active and well-attended (by teachers) theme team.

**Cross-site factors contributing to and inhibiting the sustainability of CO-SEED**

Nearly every respondent expressed confidence that CO-SEED has initiated and sustained changes that will continue to have a positive influence after ANEI’s direct involvement has ended. However, it is interesting to note that the sites that are still immersed in their official three-year period were more explicitly positive about CO-SEED’s sustainability prospects than the alumni site. While fundamental changes in culture and practice certainly did occur at all sites, it appears that the program as currently designed may not be sufficient to create a comprehensive transformation of a whole school to a fully integrated place-based education/sustainability model that can carry forward into the indefinite future.

There are some key factors, however, that are most promising for the success of the model beyond its direct reach. Pre-existing factors at sites—such as a supportive administration, a town manager who is engaged in the school, dovetailing curricular programs or the existence of a school theme would seem to be the strongest predictors of sustainability within CO-SEED sites. Examples of dovetailing curricular programs or foci include Beebe’s Environmental Theme, Antrim’s self-identification as an “environmental school” and Gilford’s emphasis on integrated curriculum planning.

"We were primed to do something like this, we just needed the unifying force to do it and CO-SEED helped with that."
Antrim teacher
Solid administrative support from the outset of CO-SEED involvement is important for changes to be promoted and sustained after the initial momentum is gone. This support is most solid when engaged at both the school and district levels. One ELC representative stated it this way:9

The school district needs to be into the philosophical change. The grant [Antioch funding] distracts from that at the beginning. Now that they know it’s going away, they have the motivation to get moving on it. For sustainability long term the school has to be really interested.

An observed barrier is a lack of consistent attention to structured integration of curriculum planning techniques and schoolwide curriculum mapping to the extent that it could be happening. While periodic structured inservice days and summer institutes do emphasize the concept of curriculum development, development of such skills is a complex undertaking and ongoing support in this area is highly dependent on the orientation of the ELC representative stationed at a particular site or the aggressive agenda of school administrators. Consequently, excellent projects or curricular themes that are developed seem to be highly tied to individual teachers or teacher teams, who are more volatile than school- or district-wide plans. The exception to this finding was at the Beebe School, where K-8 curriculum mapping was a more explicit goal of the administration and was actively supported by CO-SEED staff.

One teacher whose district-level curricular expectations have changed since CO-SEED’s involvement explained how an unsupportive curricular structure or administrative expectations can override even a high level of personal commitment to doing CO-SEED work:

What I’m losing now with the [district-mandated] FOSS kits is the incredible excitement that I have for teaching. It’s hard to let go of that old excitement that I had teaching the more community-based projects. The energy and enthusiasm comes through to the kids which makes the experience much more involved for them too. (Antrim teacher)

This sentiment captures the essence of why teacher training and individual commitment alone do not pave the way for sustained site level change.
One key part of cultivating administrative support at both the school and town levels is promoting solid public relations and media coverage of student-school-community projects at sites. This encourages community and teacher enthusiasm and the recognition adds motivation for teachers to continue implementing and developing project-based learning activities. A school social worker who identified himself as not intimately involved in CO-SEED itself, noted that seeing things around the building helps expand the work out into the community and makes people both informed and proud.

On one level, CO-SEED concepts can be made to “stick” as practice change for a handful of teachers at any given site. At a deeper level in the system, for there to be a schoolwide shift, there needs to be a philosophical shift. This demands buy-in from the administration, policy changes at the school building and district levels (and possibly the town as well) and the expectations for integration that come with a culture change. Salient features toward attaining the schoolwide shift emerged as: commitment to whole school in-service days beginning early on; and the need to work on curricular integration as a whole school, not just with individual teachers, and not just a focus on content. To truly shift the culture of a school would seem to require more than a three year support period. Several key respondents who had in depth familiarity with the program mentioned the value of extending the period of involvement from three to at least five years, depending on a site’s needs. In one case, the ELC representative commented:

This third year everyone has it together. Every grade level is doing something and they and I have a good understanding of the whole process. So year three is critical, but we’re all wondering what about the fourth year? If we knew there was going to be money available it would be a great way to continue the

“Three years is not long enough, you’re just getting changes at three years. It needs to be a six year grant, until teachers are ready, with [the Antioch person] as the central idea and resource and [the ELC representative] as the actual doer.” (Beebe School teacher)
work and ensure it would happen for another year which would give them confidence to continue it beyond there.

Though ANEI makes efforts to transition smoothly out of a site after year three, the idea of whole school improvement is a complex concept and may warrant more than a three year period in order to truly see sustained, institutionalized change.
CO-SEED’S PROCESS STRENGTHS

When I think of CO-SEED I think of the emphasis that has been placed on environmental studies... integration in curriculum, and the systemic, ongoing staff development which has been present through [the ELC representative] and others. These have been powerful parts of CO-SEED. If we sent a bunch of teachers to Antioch for a weekend and then expected them to assimilate and bring things back, I think the carryover would be very low. Ongoing and systemic professional development is critical.” (Gilford Elementary School principal)

The following is a discussion of the elements of the CO-SEED model that seem to most notably contribute to the model’s success, as observed at or reported by one or more CO-SEED sites. These elements were distilled as themes from all interview and observation data, as well as more directly from discussions generated by the prioritization activity described above. They fall into the following five categories:

- Support from decision-makers
- Communication and relationship building
- Visible examples of success
- Support from outside the school building
- Professional development

Support from decision-makers

“If the administration weren’t on board to help nurture it, it wouldn’t work. I have seen this be the case for years on other projects.” (town recycling coordinator and SEED team member)

School and district administrative support was cited as being key to both the initial start-up at a site and the on-going success of CO-SEED type work within that site. In cases where there was strong administrative buy-in for CO-SEED the principal(s) were frequently referred to as reasons for the program’s success and continuation. Conversely, where district-wide requirements did not coincide with CO-SEED work, the long-term sustainability of CO-SEED became highly unlikely. In some cases projects happened “in spite of road blocks”, but fewer successes were noted in those cases for obvious reasons.

Nearly as important is having a measure of ownership and buy-in from the town level. The most notable example is the enthusiasm and involvement of the Littleton Town Manager. This has led to opportunities for students to complete real
town-wide projects (such as trail building projects and sidewalk-heating invention) and greater opportunities for students to be welcomed into town committees and other facets of local government. While curricular improvement can happen without town buy-in, perhaps it is town buy-in that holds the greatest promise for making long term systemic change a possibility because it creates a larger, more resilient group of stakeholders to perpetuate the change.

**Communication and relationship building**

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<th>“You have the administrative support, you have the town support. I think what CO-SEED has done for me is build that foundation quicker and wider than I could on my own.” (Littleton high school teacher)</th>
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While there are concrete examples of process features that contribute to a successful CO-SEED site, perhaps the most essential element is less tangible—that of facilitating connections and relationships between people within a school, and between a school and its community. Examples relationships include: the recycling coordinator and school principal; a student and her community mentor; school districts and higher education institution; teachers with other teachers, perhaps at a different grade level; students and the school maintenance staff; a town and its local environmental learning center.

A Littleton high school teacher stated that:

> The main thing CO-SEED did was to put me in situations to meet people faster, so that when [a larger, community-based] project surfaced, I knew who to talk to to establish the network. The biggest advantage for me was meeting people.

He elaborated on this idea, noting that in addition to community members on whom he knew he could rely, the fact that the principal was already “on board immediately because he understands the [CO-SEED] model” facilitated his project even further. He did not need to explain or justify it to his supervisor since that supervisor was already part of the established network.

A town employee who is also a SEED team member confirmed the value of these relationships, describing the impact of the growing relationships on his role and ability to perform effectively.

> Most school systems don’t recycle and Littleton didn’t either. Once I got involved in CO-SEED recycling took off in the schools. Teachers got to know me and I got to know them through CO-SEED meetings and then it took off. If it wasn’t for CO-SEED [the elementary school assistant principal] wouldn’t have known who I was, so she never would have asked me to bring recycling bins to the elementary school. Without CO-SEED these contacts wouldn't have been made.
He also reported that ink cartridge recycling was a project he had attempted to do for many years but was not received the schools until it was brought up at a CO-SEED meeting, “because the teachers were right there.”

The town manager talked about how these types of relationships were causing a “climate shift” in Littleton, and how he is taking advantage of the relationships forged between school and town:

> Our staff has embraced this as well. That's grown to a whole other network of relationships—engineers, all the mentors who hadn’t really been connected in community problem solving before. And not only that project but having the SEED team able to tackle some of these things is terrific. I have no shortage of wacky ideas.

As another example of the effectiveness of CO-SEED’s relationship-building structure, in Malden a parent and community volunteer noted that she had been interested in volunteering in the school before CO-SEED, but she had not been reached out to and therefore only began offering her skills and time once the CO-SEED structure was in place. A teacher at the same school noted that they are seeing more parents coming in to visit because of greater numbers of projects that interest them, which allows for greater rapport to develop between parents and teachers. She said, “It makes the parents see that there is more to being a teacher, and the professionalism just goes right up in the school climate.”

**Visible examples of success**

Working with a site in which there is already an established teacher or team of teachers who exhibit interest or leadership in the area of place-based or project-based education seems to provide several key bolsters for the program:

- it serves as an internal example for other teachers to understand more clearly the concepts of CO-SEED;
- early successes contribute to administrative and school board enthusiasm for emerging projects;
- key teachers emerge as respected, which can add to the likelihood of sustainability within a site;
- publicity is generated, creating an incentive for other teachers to be involved in this work and creating support from administrators and community.

At many of the sites there were certain teachers who were frequently referred to by other teachers, community members, ELC representatives and administrators as “exemplars”. If such a teacher or team is not pre-existing, working to have several
concrete projects emerge early on in the intervention is beneficial. One ELC representative suggested focusing initially on “low hanging fruit” teachers—those who are already interested in this type of work but looking for support—as a good starting place to generate such examples. At the three current, established sites there were clear examples of these early successes which were referred to frequently and admiringly.

One project idea that immediately suggests itself as an opportunity for early, visible successes is recycling. While recycling may seem somewhat passé' to proponents of systemic school and community change, successful student led recycling initiatives did emerge at nearly all of the CO-SEED sites. It could be that recycling projects are both doable within the parameters of the school structure and have a significant enough environmental impact to qualify as “low hanging fruit” projects.

Completion of a high-profile project--such as the Main Street Solar System in Littleton or the Butterfly Garden in Malden--during the first year of involvement at a site brings community interest, teacher confidence and program name recognition that are essential to on-going success.

**Support from outside the school building**

Almost all participants completing the prioritization activity cited the ELC representative’s presence as the most important factor in getting the program going and sustaining it. Teachers, in particular, felt that having a person who was supportive, knowledgeable, flexible and willing to do some of the extra legwork involved in setting up project-based learning activities was indispensable. Several were explicit that they did not think they would tackle these projects without the extra set of hands, the added expertise.

Other interviewees noted that the ELC representative was also a potential anchor of the SEED team, in the sense of having some continuity from year to year in the face of changing membership. It should be noted that while the ELC representative was most highly cited as an important role, many interviewees noted that just having someone reliable—an intern from Antioch, an ANEI staff person, a consistent volunteer or a classroom aide—available to do legwork such as making calls or managing small groups of children was the critical factor to instilling their confidence in tackling project-based work. This finding is key for understanding the necessary elements of a sustainable project beyond ANEI’s involvement.
A part from providing reliable support within the school, other important and successful roles of the ELC that were cited:

- providing on-going professional development for teachers in between more structured events such as school-wide professional development days or summer institutes. ELC representatives were cited as modeling activities and teaching methods, providing accurate content information and background research, and assisting teachers in mapping their curriculum plans. In Malden, for instance, the ELC representative was frequently cited by teachers as an invaluable resource for bringing the curriculum to life in ways that they could not do on their own. A third grade teacher spoke of her in this way:

  We have more content as a result of what [the ELC representative] brings in. It's more than just books, it's more rich. She brings in the hands on, the real world. I tried to teach them about herbivores, omnivores and carnivores but [she] brought in the skulls with the teeth, and the beaver-chewed tree.

- acting as a liaison between the school and the community. An ELC representative in Littleton reported spending a fair amount of his designated time forging connections between community businesses, town committees and the school. Littleton, at least partially as a result of these efforts, has developed a substantial connection between the town and the school.

- When the ELC is actively engaged with students as well as teachers, parents may become more aware of CO-SEED work because of their students’ enthusiastic reports. In Gilford, a highly energetic ELC representative who spent a fair amount of his time working directly with students was frequently acknowledged as a valued school resource by parents and community members.

- There was agreement that maintaining the ELC representative at a part-time level, and with attachments to another organization, is a strength in itself. Teachers and community members regarded the ELC representative’s outsider status as symbolic of the expertise they brought to the site.

Building on these successful roles, several respondents offered insight into several process factors that permit heightened success for ELC representatives:

- When the ELC representative attends staff meetings and/or grade level meetings early on it establishes this resource person’s presence in the school and begins the process of trust- and relationship-building.
• A designated office space and fixed availability times allow teachers a measure of predictability for where and when to contact the ELC person. It was noted frequently that balancing this with the ELC’s flexibility and somewhat amorphous presence at other times allows for them to be available to teachers with different styles. In many cases, teachers expressed appreciation for quick meetings between classes or in the hallways, but also reflected that knowing where to find the ELC representative would be helpful.

• Conducting a survey of school and community resources at the start of the program allowed for teachers to think creatively about what was available to them—whether they had utilized it before or not—and allowed the ELC and ANEI staff to get to know the community more quickly. One example of this practice was found in Gilford, where the ELC representative conducted this inventory.

Finally, while the school maintenance staff do not come from “outside the building” in the same way ELC staff do, they have emerged as another stakeholder group that CO-SEED helps bring into the effort toward change. For instance, the custodian at Malden commented “I’ve been around for thirteen years, but have never been involved with student projects before this program.” This is indicative of the inclusive process that underlies the CO-SEED model and contributes to the overall success of the program.

Professional Development

Whole-school professional development days and teacher training programs were cited as essential components of the model by almost all respondents. These days were described as providing participants with an understanding of program concepts, a connection to resource people from ANEI, the ELC and the community, project ideas, inspiration, and the understanding that the school as a whole was encouraging this work. One barrier cited was incorporating these days too late into the program rather than right at the start. In essence, this element of the program—several times called “the root” of the program—brought cohesiveness to the CO-SEED experience. Interestingly, it is precisely this element that the alumni site noted most strongly as also being essential for the post-ANEI sustainability of CO-SEED.

“Professionally [CO-SEED] keeps me connected to this idea that maybe I should be reaching out more to the community and also I think that it encourages us to continue to strive for different opportunities for our students. There’s that kind of push. It pushes you professionally.”

(Littleton high school teacher)
Another factor to consider is the experience level of teachers. Respondents pointed out that for experienced teachers who are already interested in and skilled at the concepts of place-based education, personnel support and financial resources are key process features. On the other hand, for inexperienced teachers, those resources mean very little without the fundamental professional development interventions. The ability to address this kind of disparity is the strength of a responsive, flexible program like CO-SEED.
CO-SEED’S PROCESS CHALLENGES

Developing programs often encounter a number of typical barriers to success. Some barriers are inevitable products of the context within which a program works, while others can be adjusted from within the workings of the program. In this section three relatively external factors and three internal factors that emerged as areas from improvement are discussed.

While the first three items are not necessarily factors over which the CO-SEED intervention has much control, they are nonetheless inherent barriers to this kind of work. Essentially, they define a critical fuzzy boundary between the CO-SEED program and the larger context in which it operates and need to be taken into consideration when planning and implementing CO-SEED work at sites.

Curricular mandates
Changing curricular requirements within a school, district or state such as new mandates for increased attention to high-stakes testing or specific curriculum packages can be a hindrance to this work even in the most well-meaning district. The mandates can also come from within a district, in which case it is advisable for CO-SEED to work hard to understand and assess the compatibility of this climate before agreeing to work with the site.

Workload
Another challenge is the perception—and sometimes reality—that involvement in CO-SEED is, indeed, an “add-on” layer of work rather than simply replacing what teachers already do. This particularly holds true for those teachers involved in the SEED team. While some were very articulate about benefits of participating, noting that the SEED team provides many benefits (e.g. a forum for good conversation about education; the chance to network with other adults; access to CO-SEED support; recognition by their principals; a belief in the program’s mission), others were explicit that it requires a fairly hefty (and uncompensated) commitment on top of other responsibilities. Several respondents used words like being “in over their heads” and feeling “overcommitted.” However, one teacher explained that she remained actively involved in CO-SEED because she felt that having the ELC representative and an Antioch intern to help with other things somewhat displaced the additional commitment she was making to the SEED team. This kind of attitude raises questions about whether overloaded teachers are likely to stay involved with a SEED team type structure once most of the support mechanisms have been removed.

One possible way to mitigate this is through building in incentives. As one example, a Beebe teacher who has participated in the facilitator training course was explicit
that the stipend provided for participation is what encouraged her to become the grade level facilitator.

**Student-Teacher ratios**

High student to teacher ratios creates a barrier for many teachers. Said one ELC representative:

> You can’t really do the in-depth community-based curriculum with 15 or 22 kids at a time. It needs to be more like six to eight to get the most out of it. CO-SEED really helps with that by providing another person, and one with expertise, too.

Since project-based work is often skill-intensive and/or requiring of added supervision for safety (as with taking younger students outdoors), teachers often cited high student to teacher ratios as a barrier to continued involvement in CO-SEED particularly when an ELC representative, intern, classroom aid or other chaperones were no longer readily available. An Antrim teacher reported, “It’s really important to get other people in the classroom. CO-SEED projects need extra people, whether it be interns, parents, community members, or aides.”

**ELC Representative Roles**

Since the ELC representative’s role was highly valued within sites, a fair amount of discussion was devoted to ways in which their role might be improved. A number of concerns were raised regarding the vital role of ELC representatives.

The orientation, training and support for ELC representatives was seen by the representatives as a challenge to optimal program success. While each site necessarily evolves differently and ELC representatives have the support of their own organization, the disparity between types of skills that ELC representatives bring to a site could be seen as an unnecessarily large influence on how the site develops. For instance, if the ELC representative has considerable natural history skills, the site may lean away from a focus on cultural components, and an ELC representative with limited curriculum development experience may be less likely to help teachers institutionalize the types of projects or activities they are developing. Several suggestions were made to address this issue:

- A more formal orientation period, including the opportunity to shadow or otherwise learn from other ELC representatives and the workings of other sites, was suggested. While CO-SEED’s broader goals and vision were made fairly clear, more specific ideas about strategies for working with teachers, connecting to community resources and generating a sustainable program was desired.
• In addition, ELC representatives prioritized better on-going support, professional development and networking opportunities for themselves from ANEI, since many of their organizations have a different focus than the CO-SEED work.

• As a longer-term measure, ELC representatives suggested that ANEI place greater attention to cultivating the understanding and support of the larger ELC organizations. In some cases, the ELC representative perceived a far stronger leaning toward benefiting the school than the ELC, and a “weaker link between Antioch and [the ELC] than I had hoped for.” With growing consistency and affinity between the ELC and ANEI, ELC representatives may get more CO-SEED-appropriate support and professional development from within their organizations.

Another aspect of ELC relationships that was reported was that, while the program touts itself as a partnership between the ELC, school, community and ANEI, the ELC (organization) itself often has a limited role in helping to define the program at the outset. This was mentioned by one ELC representative as a threat to sustainability:

If there is not a discussion about long term possibilities and the nature of the relationship is not mutually defined at the start of the relationship, it is likely that the relationship will just fold after ANEI involvement. Especially if the program is based on an Antioch/ CO-SEED definition of the ELC’s role in the town rather than a mutually designed one.

A suggestion was made that ELCs might be more invested and creative about their role in the partnership if they were not only brought into the initial program design more consciously, but were also expected to fund part or all of the ELC representative’s position for part or all of the three-year CO-SEED period.

Finally, the fact that ELC representatives frequently do not having a home-base while in a school building was seen by both ELC personnel and teachers as a hindrance to building relationships.

Public Relations
Another area in which CO-SEED was challenged to improve is the attention given to public relations and press coverage. In several sites, limited PR or name recognition for CO-SEED was cited as a challenge to making the program as successful as possible. In addition to powerful press to make an initial “splash” as CO-SEED projects first unfold, the power of regular, on-going public relations efforts should not be underestimated. It was suggested that this could be more thoroughly built into the role of the SEED team or ELC representative, several of whom suggested that more training in that area would benefit the program. Suggestions were made to
place greater emphasis on getting local media coverage of events, projects and CO-SEED business from the start of involvement in a site.

**Curriculum development emphasis**

Finally, several sites stated that more attention could be given earlier in the process to helping teachers learn skills for integrated curriculum planning since this is such a critical element of schoolwide change rather than just creating change for individual teachers. One administrator said, “I’m looking at curriculum planning, and it’s minimal. We would put greater emphasis on that. It might be worth investing more time and money in trying to train a coordinator type person who facilitates for others.” At the Beebe School, facilitation training has been an ongoing part of their third year with CO-SEED. This, combined with the school’s existing environmental theme and the provision of planning time for grade-level teams, seems to be having a strong effect on enhancing collaborative curriculum development. The presence of at least one teacher at each grade level meeting who has the skills to facilitate the team meetings builds capacity within the school for more productive, collaborative curriculum planning meetings.
CONCLUSIONS

The CO-SEED project has lofty goals. In public meetings as well as in the CO-SEED logic model, ANEI staff clearly describe the benefits they hope to provide communities: increased public support for schools, building social capital by bringing people together with different ideas, and making concrete community improvements. To meet these goals, CO-SEED facilitates a process of helping teachers meet curricular requirements, helping students meet learning goals and helping communities solve real problems. While not without its challenges, there is clear evidence that the model is meeting these goals on many levels across sites.

One of the most critical elements of the CO-SEED project is the development of enhanced community-school relationships. The evidence presented in the body of this report shows extremely positive results in developing mutually beneficial community-school relationships. This finding was consistent across all CO-SEED sites.

The clear focus on nurturing community-school relationships is also one of the things that sets CO-SEED apart from more traditional environmental education programs. The central place that the local Environmental Learning Centers hold in the CO-SEED model is the most obvious aspect of connecting the school to its community, and was resoundingly valued by almost every respondent. However, the effort goes far beyond ELCs to include town governments, parents, community businesses, local organizations and volunteers. It could well be that this unique feature of the CO-SEED model offers the program’s greatest opportunity for creating long term change in schools and communities, simply because it broadens and deepens the base of stakeholder support.

It is implicit in the CO-SEED model that changes in teacher practice would likely be a necessary precursor to the more important long term impacts of improved student achievement, community vitality and environmental quality. Strong evidence of changes in teacher practice was apparent at each of the CO-SEED sites that were
evaluated this year. A notable pattern in respondent data was consistent and clear evidence of increased collaboration among teaching professionals and increased integration of curriculum. This observed pattern suggests that CO-SEED embodies many of the “best practices” of service-learning and place-based education summarized in the Appendix of this report.

Another interesting pattern emerging from the data is the lack of one clear, primary mechanism causing the observed increase in collaboration, curricular integration, and teaching in a “CO-SEED style” in general. Some teachers attributed their change to professional development activities such as the summer institute or in-service days, some to influences from Antioch staff or ELC staff, some to administrative support or encouragement, and some to the resources of time, money or training provided through CO-SEED. This suggests that it is not so much one particular aspect of CO-SEED that changes teachers, but rather it is the continued presence of the wide range of diverse CO-SEED activities that creates an atmosphere conducive to change, and then provides diverse tools to support that change.

This relatively comprehensive and multi-dimensional approach could also help to explain the other strong pattern that emerged with respect to changes in teaching practice. CO-SEED demonstrated an ability to reach varied audiences. The “Innovators” and “Early Adopters” in a school readily use CO-SEED resources of time, training and access to curricular and financial support. Yet there were also several instances of the “Late Majority” and even the “Laggards/ Resisters” eventually changing their teaching practice to incorporate the CO-SEED approach. It could be that CO-SEED’s ability to support a range of responses to whole school change is due to its persistent, multi-dimensional approach.

Most of the evaluation effort seeking evidence of student outcomes resulting from CO-SEED was in the form of adult reports of student behavior. These data were, however, generally consistent with student self reports and evaluator observations of student activities. Although the data could be grouped into three overlapping categories (out-of-class activities, responsibility/ maturity, and traditional classroom activities), the overall picture of “student outcomes” remains somewhat unclear. There is, however, a general sense student outcomes are aligning with the goals of the CO-SEED model.

The most generalizable measure of student academic achievement pursued in this evaluation was the pilot investigation of the correlation between exposure to CO-

“It needs to be a whole school change model. CO-SEED isn’t just a good idea, they’re teaching us a way that kids really learn and invest themselves in learning through place based education and community-based projects. It’s what we should be doing in public schools.”

(Littleton high school principal)
SEED and student writing scores. The results of this investigation showed that qualitative interview data from participants that indicated improved student writing was not further substantiated by the analysis of standardized test scores with respect to writing. Student writing scores were above state averages and/or improving from year to year, but that improvement could not be correlated directly to the influence of CO-SEED. The pilot investigation into student writing did stimulate efforts to develop more refined measures of participant exposure to CO-SEED which may yield useful information in future evaluations. Continued inclusion of test score analysis as one part of a multi-faceted inquiry into student academic achievement does appear to be warranted.

The qualitative evidence of student outcomes demonstrated the clearest examples of student behavior, attitude and engagement changes in CO-SEED related “out of class time” programs such as the Junior Naturalist Club in Gilford, the sidewalk heating design project in Littleton, and the Zoo Club in Malden. Respondents also noted many examples of increased student engagement in learning, students confidently taking on more responsibility and demonstrating higher levels of maturity, and some in school and out of school changes in environmental stewardship behavior.

Of additional interest is a pattern of responses suggesting that CO-SEED may be particularly beneficial for students who have difficulty learning in traditional classroom situations.

Preliminary analysis of the baseline survey and interview data collected in the newest CO-SEED site in Bradford, Vermont suggests that the site is well-positioned to succeed as a CO-SEED site. With a supportive administrator, school board and SEED team, an experienced ELC representative and a school staff whose enthusiasm for the project is growing, multiple school-community projects are emerging.

As part of the interviews with teachers, administrators and community members, an activity designed to solicit opinions about the relative priority of the many components of CO-SEED was administered. Analysis of the results of this activity showed a very strong level of support for the current allocation of financial resources amongst the various components of the CO-SEED model. The activity tended to be well-received by respondents and so could be more systematically refined and
integrated into the program delivery as one way to generate increased understanding and input from participants.

One of the main goals of this evaluation was to inquire into the sustainability or “staying power” of CO-SEED. Nearly every respondent believed that CO-SEED will (or does) live on beyond Antioch’s direct involvement in some significant way, but the sites who are still immersed in their official three-year period were more explicitly positive about CO-SEED’s sustainability prospects than the “alumni” site.

While fundamental changes in culture and practice certainly did occur at all sites, it appears that the program as currently designed may not be sufficient to create a comprehensive transformation of a whole school to a fully integrated place-based education/sustainability model that can carry forward into the indefinite future. It is worth asking whether this level of change is a feasible goal with just three years of intensive involvement, or whether a longer, more tapered and necessarily site-specific disengagement plan is warranted. The strongest call for ongoing human and/or financial resources, most notably in the form of direct training of teachers, came from the alumni site. In any case, to truly decipher whether CO-SEED has staying power, an ongoing investigation must ensue as a greater number of sites join the ranks of alumni. It should also be noted that the alumni site evaluated in this report was the very first CO-SEED ever, and the program model and delivery continue to evolve and mature. As it does, the program should become more effective at establishing a stronger sense of sustainability.

Further inquiry into CO-SEED’s sustainability should focus on both measuring and nurturing decision maker support at the building, district and town levels, and the extent to which systematic curriculum integration and visible, successful projects can galvanize the support of those three groups of decision makers. These themes that emerged from the analysis of CO-SEED’s staying power correspond exactly to the observed process strengths of the program. Underlying these themes is a philosophy and process of inclusiveness. The CO-SEED model demonstrates a strong ability to identify and cultivate support from a very broad array of constituents. While this
may not, in and of itself, be sufficient to sustain total school transformation, it
certainly appears to be a necessary component. CO-SEED’s inclusiveness and
comprehensiveness is perhaps its greatest strength.

Several challenges or barriers to success emerged from this evaluation which are
driven by factors that are inherent to school change efforts, and which the CO-SEED
program by itself has relatively little leverage to change. Low student-teacher ratios
are essential but expensive. Even in the best case scenario, CO-SEED style education
is a lot of work for everyone involved. Narrowly focused and frequently shifting
curricular mandates from “on high” often tend to favor the standardization that in
many ways runs counter to the localness of a place-based education approach.
Respondents in this evaluation noted these barriers loudly and clearly.

The more interesting process challenges that surfaced in this evaluation were the
ones that CO-SEED does have an ability to mitigate in the future. In fact, they mirror
many of the strengths of the program, and could probably be more aptly described
as missed opportunities than shortcomings. Respondents called for more and earlier
curricular integration. Several participants also noted the clear benefits of regular
publicity and PR, suggesting that even more of it would be better. The ELCs’
contribution to the program was deeply appreciated, but it also appears to hold the
most promise for improvement as noted by the list of detailed suggestions from
respondents in this regard.

The evaluation process itself appears to be a strength of the program, though it, too,
is well suited for continued refinement. The fact that it is difficult to isolate CO-SEED
specific impacts on a site is inherent in the integrated nature of the program. The
existing high level of buy in to the evaluation process on the part of the CO-SEED
program staff (and many of the participants as well) bodes well for continued
progress, particularly if incentives for participation in evaluation are built into the
program design.

In conclusion, the evidence gathered in this evaluation report shows remarkable
progress toward meeting CO-SEED’s four main goals of:

- Student achievement
- Stewardship behavior
- Community vitality
- Environmental quality
RECOMMENDATIONS

The Tier 1 Recommendations follow from respondent themes that were more prevalent and/or directed at more fundamental changes in the program. The Tier 2 Recommendations reflect important themes or observations of participants and/or the evaluation team that appear useful but not at the Tier 1 level. They are presented in sub-categories for easier reference.

TIER 1 RECOMMENDATIONS

- Consider extending the time frame or scope of the program model beyond three years. The length of involvement could be determined on a site by site basis, but a general rule that withdrawal from the site was gradual at or after the three year mark could improve staying power.

- Choose schools carefully at the outset to promote greater likelihood of program sustainability. Ask whether there are any changes at the town or district level that could sabotage staying power in the next few years, such as foreseen changes in curricular requirements or turn-over amongst high-level district personnel who might renege on the commitment. Choose sites where the administration is willing to formally commit to specific levels of CO-SEED participation. Look for sites with one or more existing, though isolated, examples of place-based and project-based work happening, and those where one or more teachers are predisposed to the concepts of community- and project-based education.

- Train ELC staff consistently and provide networking and professional development opportunities. Since ELC representatives have demonstrated their role as critical pieces of the CO-SEED equation, more investment in their training and networking capacity is warranted. This investment can help to offset the cost of a high learning curve created by isolated work and build on successes rather than relying on ELC representatives to “reinvent the wheel” at their site. Create a more comprehensive orientation packet for new ELC representatives. Consider holding ELC networking meetings more frequently, or having smaller regional gatherings. Encourage site visits between one ELC representative and another to encourage sharing of ideas and skills. Decide on which basic strengths are most essential for ELC representatives to possess or develop and seek these candidates or provide the training (e.g. naturalist skills; curriculum development skills; residence within the community; meeting facilitation; teaching children directly, etc.)

- In a 2002 PEEC design charette, one advisor recommended that programs “plan for the diffusion they want to see.” While natural diffusion of ideas may naturally occur between those teachers or community members who are initially engaged
and those who are not, it can also be planned for more strategically. Make efforts to create and support teacher leaders both within sites and amongst CO-SEED sites, both current and alumni. Inviting “past” teachers to summer institutes to present their work or hosting facilitator training programs like that at the Beebe School are internal examples to build upon.

- Get the word out strongly, quickly, and regularly. Early on in the process, encourage the SEED Team or ELC representative to take an active responsibility for promoting the program via local media. For additional PR, help to establish a place in town where student work can be displayed on a regular basis. This, for instance, could be as simple as a bulletin board in a post office, or a showroom in the town hall.

- As one ELC representative stated, being “deliberate about capacity building in the SEED Team is essential.” Continue to model leadership and facilitation skills and be deliberate about gradually weaning the group from relying on paid staff to convene and motivate the group.

- Communicate clearly with site staff about the evaluation process and expectations for participation, building in clear and rewarding incentives whenever possible. Engage sites early on in defining the best means of acquiring valuable evaluation data at their site, including tapping into existing measures that are tracked for other purposes and gathering baseline data as appropriate.

- Continue to include test score analysis as one component (among many) of the effort to document improved student academic achievement, but do not use test scores as a single “gold standard” indicator. Standardized tests do not appear to be particularly sensitive to the types of positive student performance reported by teachers, at least for writing, and perhaps for other subjects as well. Also remember that obtaining, manipulating and analyzing test score data proved to take significantly more time than anyone on the evaluation team or program staff planned or wanted.

**TIER 2 RECOMMENDATIONS**

**Sustainability**

- Consider articulating a series of benchmarks to track evidence of sustainability. Make explicit the expectations for the level a given school should reach during the three (or more) year period. These benchmarks could be developed in a generic form for the program as a whole and then be tailored appropriately to each site, accompanied by a vision mapping out the foreseen appropriate length of involvement by ANEI. This would allow CO-SEED to maintain its inspiring
long term goals, while simultaneously setting interim goals that can be realistically achieved within given resource constraints.

- Experiment with ways of providing budget information to the SEED team earlier in their involvement in CO-SEED. The Team could be charged with making some budgetary decisions at the start, and gradually assume more responsibility for its administration, including gradually assuming responsibility for providing some—and then all—of sources of funding. This information will allow participants to more fully grasp the whole scope of the program, to define it most appropriately for their site, and ease the transition from being ANEI administered to being site administered.

- Define “graceful exit strategies” for CO-SEED leaving a site. Transition leadership in SEED team during year two. Facilitator training and conscientious modeling for both the SEED team and teacher groups is an excellent way to promote leadership skills remaining in place at a site.

- The presence of a support person appears to be the most highly valued aspect of the model. Emphasize helping sites (or ELCs) to build capacity for funding such a position, such as a continued relationship with the ELC representative. In cases where this transition does not seem to happen, try to provide the site with Antioch interns for at least a few years following ANEI involvement so that the transition away from having support is not so abrupt.

- Keep alumni sites “in the loop”. Provide recognition each year for alumni sites who are continuing project-based work. Continue to offer pieces of support such as Antioch graduate interns, ideas and links to resources for grant funding, participation in summer institutes or in-service days as mentors, and other means of supporting alumni sites in less intensive ways.

- Having the external, institutional support of Antioch was cited as an important morale feature at some sites. Visitations (for instance, two times per year) to alumni sites by ANEI staff contacts for a staff meeting update, professional development activity or project presentation observation could help boost morale and connectedness. As a piece of advice for new CO-SEED schools, an alumni
principal noted, “Get the outside staff [from Antioch and the ELC] in the building because that is what is going to really make the change. Facilitating that professional development for teachers.”

- Since teacher practice change is a slow process that largely reaches beyond predisposed teachers only after a period of example-setting by those with a stronger inclination, it seems to make sense to consider extending the duration of CO-SEED’s official involvement in a site so that these teachers, as they gradually come on board, have at least some of the same supports—particularly the “people resources”, as one teacher put it—in place as the core group of teachers had when CO-SEED was in full swing.

Start up

- Document and highlight successful examples. Provide incentives and criteria to encourage teacher documentation. Perhaps consider instigating more explicit mechanisms for spreading the word about success stories between sites.

- Complete a whole-school professional development day early on in the process of working with a town. Consider making this a requirement for selection as a participating site, since there was evidence in some sites that teachers did not really know about CO-SEED until year 2 or 3 when the whole-school (or district-wide, as in the case of Littleton) professional development day was hosted.

- Be clear about the message that CO-SEED is not just environment and nature-focused, but includes all aspects of community, including culture, society, economy. In some sites participants reported not understanding this until late in the process, and having assumed that it was more appropriate for science teachers and science-oriented community members.

- While the theoretical model of CO-SEED is a partnership between school, community, ELC and Antioch, Antioch carries the financial responsibility for almost all of the three year period of engagement. For greater program stability as well as consistency between theory and practice, it may be worth considering requiring financial buy-in from all four partners from the very start of ANEI involvement at a site. This may be minimal in the first year, and gradually increase as the several-year commitment progresses. The transition to being financially independent of ANEI will be less abrupt with such a progression.

Professional Development Strategies

- Encourage networking and sharing of ideas and examples between past (and present) CO-SEED sites, and between ELC representatives across sites. Summer institutes and the website are current forums for this exchange, and their use
could be streamlined. Include alumni sites in this networking effort. Invite participants from alumni sites to attend summer institutes.

- Provide more real life examples of place-based and project-based work (either from CO-SEED or other programs) as a way to help school staff envision what is possible for them to do at their own school. Similarly, find venues for sharing the intricate workings of a successful project with other teachers at that same school.

- In sites where this is feasible, the ELC representative could provide a five-minute CO-SEED update at regular faculty meetings and/or other appropriate school and community venues to keep CO-SEED ideas fresh.

- When offering teachers new strategies for educating students, it is important that they be similarly trained in how to effectively assess such learning so that they have evidence of their own and their students’ successes and challenges. Train teachers how to assess this type of work using institute and professional development time. Assure that ELC representatives are versed in assisting teachers with this challenge on an ongoing basis.

- While this was only suggested by one teacher, it bears mention. Since community-based projects often necessitate community volunteers or student mentors, offering teacher training—or at least printed resources—about how to best find and work with adult volunteers and mentors to maximize successful integration into the classroom.

**SEED Teams**

- Create a “lessons learned” resource for how different SEED teams function productively and creatively.

- Having students on the SEED team creates a more diverse representation of a site, and apparently causes high morale amongst teachers and community members on the team. Encourage this configuration more explicitly. Experiment to find out how young of a student can be useful in this role.
At several sites it was suggested that providing a stipend, graduate credit or some other form of incentive for SEED Team co-chairs would encourage a longer-term, more focused commitment and honor the added effort that SEED Team participation demands of individuals. Participants—including non-teachers—noted that this feature is especially important for teachers who are invariably participating outside of their normal work days.

**Evaluation**

- As a growing number of sites become alumni, continue the line of inquiry into how sustainable alumni sites are and what factors contribute to and inhibit staying power.

- In order to make the on-going collection of survey data worthwhile, it is necessary to make a commitment to obtaining an adequate sample size each time the surveys are administered. This may involve delegating more staff, ELC, intern or evaluator time for that purpose, as well as offering specific evaluation-related incentives to program participants.

- Identify and assess ELC impacts, including whether and how the institutions feel they benefit from partnership with ANEI, and whether and how their other educational programs grow to reflect co-seed values.

- Continue to refine and utilize the developing writing assessment process as a measure of student learning. Also, carefully consider how and whether this focus on writing actually shapes the professional development focus of the program as a whole. Be intentional and explicit about the connection between this process element and the evaluation element.

- Particularly for mid-stream sites (e.g. in the second year) emphasize evaluation techniques that involve internal process-watching and record-keeping to avoid evaluation burn-out for participants and encourage internal reflection. Examples of this include having the SEED team and ELC staff reflect monthly on indicators of or barriers to progress. It is important to establish these types of systems during the first year of intervention and make them an ongoing expectation.
LITERATURE CITED


Place-based Education Evaluation Collaborative (PEEC) website: http://cee.schoolsgogreen.org/PEEC/


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APPENDIX A: SERVICE-LEARNING “BEST PRACTICES”

Service-learning “best practices”
The following list is a summary of methods that have been effective in incorporating service learning into schools. The list is distilled from numerous sources, including relevant research, publications by Vermont Community Works, and the National Youth Leadership Council.10

♦ Participation: Students, community members and teachers must be involved in the design, implementation and evaluation of the service-project (VCW, 2002). This includes developing a timeline, a detailed list of expectations and responsibilities of those involved with the project, and clear service and learning goals (Wade, 1997).

♦ Service Goals: The project needs to meet a clearly stated community need with accomplishable goals. Goals should be pertinent to the well-being of all invested individuals and organizations, including the agency and the learners (Athman & Monroe, 2002). Projects should be small and discreet with a definitive start and end. This will help ensure the project is completed.

♦ Curricular Goals: Learning goals are clearly defined (VCW, 2002). The curriculum incorporates sound educational practices and is multi-disciplinary. Learners therefore gather the knowledge and skills necessary to adequately resolve issues of local concern, and gain a sense of civic responsibility. Projects approach environmental issues from a variety of perspectives (Athman & Monroe, 2002).

♦ Diversity The project provides opportunities to discuss differing opinions and values (VCW, 2002). and serves diverse populations (Bouillion & Gomez, 2001).

♦ Assessment: Assessment should be authentic and pertain directly to the activities and learning objectives of the project (A R C , 1999b).

♦ Community Connections: Efforts should be made to ensure that students develop positive relationships with a variety of community members, gaining increased and diverse knowledge about local resources in their community (VCW, 2002).

10 This compilation was excerpted from the unpublished 2003 master’s thesis of Sharon Plumb, University of Vermont.
♦ **Challenges:** The service-learning project is challenging to students, both academically and personally. (VCW, 2002).

♦ **Parental Involvement:** Parents should be brought into the learning process, bridging the gap between school and home while engaging the parents in the community (Bouillion & Gomez, 2001).

♦ **Reflection:** The curriculum should include meaningful activities that help students to reflect upon their participation in the service-learning activities (Wade, 1996).

♦ **Celebration:** Opportunities should be made to provide teachers, students and the community to celebrate their achievements (VCW, 2002).

♦ **Communication:** Ongoing and effective communication between teachers and community partners is essential (Robertson, 2001). Without it, interested parties may lose faith in the process and become reluctant to participate in the future.
APPENDIX B: PLACE-BASED EDUCATION PROFESSIONAL DEVELOPMENT “BEST-PRACTICES”

Place-based education professional development “best practices”
The following list is a summary of practices that have been found to be effective methods to assist teachers in incorporating place-based education, and environmental education, into their classroom.11

♦ **Provide extensive training and follow-up support:** Providing support after workshops is critical; this maintains trust between the teacher and the professional development provider, and helps teachers to implement successful programs. (Paul & Volk, 2002; Winther, Volk, & Shrock, 2002).

♦ **Collegial support:** Give teachers the chance to come together throughout the school year. This provides opportunities for self and group reflection, and a place for teachers to share ideas (Dresner, 2002; Winther et al., 2002).

♦ **In-school collaboration:** Formalize the partnership between teachers and the people they will be working with. If teachers will be conducting field science (or any kind of research) with their students, have the people they will be working with train them to use appropriate protocols (Dresner, 2002).

♦ **Team teaching:** Build teams of teachers who are committed to the theory and practice of place-based education (Liebermann & Hoody, 2002).

♦ **Provide access to funding:** Most schools have limited budgets. By providing adequate funding, teachers will be able to procure the resources they need to venture into the community (buses, materials, substitutes, passes to museums). The school should eventually provide necessary funding (VCW, 2002), but until then provide outside funding or grant support.

♦ **Establish community-wide support:** Involve parents, local businesses, community and technical resources, elders, resource management agencies and town leaders early in the process (Liebermann & Hoody, 2002).

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11 This compilation was excerpted from the unpublished 2003 master’s thesis of Sharon Plumb, University of Vermont.
♦ **Start small and build gradually** A few well-planned, well-executed will help to build momentum and support (Liebermann & Hoody, 2002).

♦ **Rigorous, standards-based education**: Demonstrate how place-based education can meet state and federal standards (Gibbs & Howley, 2000).

♦ **Authentic assessment**: Provide teachers training as needed to design authentic assessment tools that match the goals and the processes of the learning projects (ARC, 1999a; ARC, 1999b; VCW, 2002).

♦ **Include evaluation in the process**: Evaluate programs internally and externally (Liebermann & Hoody, 2002). This should include both the school and any programs that are assisting the school in change.

♦ **Be patient and have faith**: Change is slow, and progress is not always immediately recognizable (Liebermann & Hoody, 2002; ARC, 1999a; ARC, 1999b). Keep track of successes and challenges, and engage participants in efforts for program improvement.
### CO-SEED Logic Model

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Resources/Inputs</th>
<th>Activities/Strategies</th>
<th>Short Term Outcomes</th>
<th>Intermediate Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>If we implement comprehensive place-based education in schools, we will</td>
<td>Funding</td>
<td>Teacher release time &amp; consultation</td>
<td>Increase in test scores</td>
<td>Student Performance</td>
<td>Motivated, ecologically literate students who are engaged in their communities</td>
</tr>
<tr>
<td>have a positive impact.</td>
<td></td>
<td>Small Grants to SEED teams</td>
<td>Students apply learning for the betterment of town</td>
<td>Academic achievement</td>
<td>Increase in social capital that manifests as active local engagement in community issues &amp; opportunities</td>
</tr>
<tr>
<td>--Academic achievement</td>
<td></td>
<td>Site specific for project development training</td>
<td>Students initiate independent community-based projects</td>
<td>Environmental stewardship behavior</td>
<td></td>
</tr>
<tr>
<td>--Environmental stewardship behavior</td>
<td></td>
<td></td>
<td>Students express a willingness &amp; ability to learn on their own</td>
<td>Students value the assets of their community</td>
<td></td>
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<tr>
<td>--Community vitality</td>
<td></td>
<td></td>
<td>Increased teacher understanding for how place-based education addresses standards</td>
<td></td>
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<tr>
<td>--Environmental quality</td>
<td></td>
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<td>Increased frequency of community/environment learning initiatives in schools</td>
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<td>Students demonstrate an understanding of how actions affect the environment</td>
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<td>Student &amp; community reflection through evaluation</td>
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<tr>
<td>Higher Education Institution Relationship</td>
<td></td>
<td>Internals support teachers</td>
<td>Community improvement initiatives emerge from profile &amp; follow-up activities that include roles for students</td>
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<td>Professional Development</td>
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<td>* Summer Institute</td>
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<td>* Standards-based curriculum planning</td>
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<td>* In-service days</td>
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<td></td>
<td>ELC Capacity Building</td>
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<td>Higher Education Connection with Higher Education</td>
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<td>ELC Connection with Higher Education</td>
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<td>graduate students, network website &amp; Chase collection, professional</td>
<td></td>
<td>ELC Interns support teachers</td>
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<td>development relationships with ELC's</td>
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<td>* Qualitative evaluation reports, quantitative evaluation</td>
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<td>* Documentation of exemplar work</td>
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<td></td>
<td>* Developing assessment instruments</td>
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<tr>
<td>Place-based Education Model Creation</td>
<td></td>
<td>Monograph, funder seminars, conference presentations, Grapevine, Notes from the</td>
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<td>Field Green Schools Grants</td>
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<td>Community Development Services</td>
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<td>ELC Capacity Building</td>
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<td>ELC Connection with Higher Education</td>
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<td>* Qualitative evaluation reports, quantitative evaluation</td>
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<td>* Developing assessment instruments</td>
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<td>Monograph, funder seminars, conference presentations, Grapevine, Notes from the</td>
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<tr>
<td></td>
<td></td>
<td>Field Green Schools Grants</td>
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<tr>
<td>Environmental Learning Center Services</td>
<td></td>
<td>ELC Teacher Consultation</td>
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<td></td>
<td></td>
<td>Project planning</td>
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<td></td>
<td></td>
<td>ELC Model Teaching</td>
<td></td>
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</tr>
</tbody>
</table>

- **Student Performance**
  - Academic achievement
  - Environmental stewardship behavior
  - Students value the assets of their community

- **Intermediate Outcomes**
  - Motivated, ecologically literate students who are engaged in their communities
  - Increase in social capital that manifests as active local engagement in community issues & opportunities

- **Long Term Outcomes**
  - Sustainable balance between environmental quality & economic vitality
  - Community Vitality
    - Schools & towns work together to solve local environmental, economic, & social issues
    - ELC integrated into the long-term life of the community & is used as a resource for solving community problems
  - Environmental Quality
    - Environmental considerations are given increased serious attention by local elected officials
APPENDIX D: SEED TEAM REFLECTIONS FORM

SEED Team Meeting Questions for Reflection
To be used at each SEED team meeting in current CO-SEED towns.

To ask the team during the meeting:

- Anybody have CO-SEED related success stories (yours or observed) from the past month to share?

- These are some indicators of increased community vitality or examples of stewardship behavior. For which of these indicators can you cite examples? If possible, quantify the impact (e.g. “work of 12 students displayed in town library”; “3 classes invited guest speakers from community”).

  a. Student entrepreneurism
  b. Local human resources invited to school
  c. Teachers lead place-based learning projects
  d. Students initiate place-based learning projects
  e. Student work displayed in town or used in real-world affairs
  f. Student newspaper publishes community events, projects, stories
  g. Community uses school facility
  h. Students in town newspaper: student writing, letters to editor, articles about student projects, etc.
  i. Student exposure in local access TV
  j. Other indicators:

- Any CO-SEED related barriers or frustrations or obstacles (yours or observed) to report?

For Antioch CO-SEED leader to answer during or after the meeting:

- Salient quotes or anecdotes (positive or negative):
Think about the group’s composition and effectiveness during this meeting and then circle a number to correspond with each category.

<table>
<thead>
<tr>
<th></th>
<th>This is a big problem</th>
<th>Needs improvement</th>
<th>Satisfactory</th>
<th>Very good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of conversation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Effectiveness of decision making</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Ability to move co-seed project goals forward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Level of attendance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Diversity of attendance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments on any of these items:

Are there any action steps you would recommend this group (or someone else) take to improve the group’s functioning?

Please send meeting minutes and this reflection sheet to evaluator monthly.
APPENDIX E: ELC REPRESENTATIVE MONTHLY REFLECTIONS FORM

ELC Staff Name:  
Community/School Name:  
Month of Record:  
Date Submitted (by 5th of month):

Goals
- To encourage reflective practice on the part of those involved with CO-SEED.  
- To utilize the ELC staff’s insider’s view to monitor CO-SEED’s impacts at individual sites.  
- To build up a pattern of information that we can use to improve the implementation and outcomes of CO-SEED at all sites and that ELCs can use to improve their work.

Directions
- Submit this form monthly to Amy Powers, by the 5th of the month. You might prefer to fill it out as you observe things during the month, or to do it at one sitting at the end of the month. It may be sent by email, fax or post.  
- Consider each area each month and fill in those where you have something to say, leaving the others blank.  
- Clarification of terms:
  - **Who**: The role and name (optional) of the individual or group on whom the impact was observed, for example, “Nick Brown, Conservation Commission Chair” or “Jane Emerson’s 5th grade class”  
  - **Impact**: The trend you have observed, for example “increased student participation in local government” or “higher engagement in written work”.  
  - **Evidence**: The specific thing you observed, for example, “implementation of weekly team planning meetings” or “the outdoor learning lab is now a regular item on the conservation commission’s agenda” or quotes such as “he said to me: “I’m never going back. When I see the way kids’ eyes light up at this stuff, I’m convinced it’s worth the effort.” Whenever possible, please attempt to *quantify* the trend. For instance: “Five miles of trails cleared by students.” or “Three new teachers approached me for ideas about community projects this month.”

Key Question: This month, how has CO-SEED affected the students, teachers, school, environment and community?
## What impacts have you observed on...?

<table>
<thead>
<tr>
<th>Students</th>
<th>Who</th>
<th>Impact</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic achievement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stewardship behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community engagement</td>
<td>Three 7th grade students</td>
<td>Student involvement in local government</td>
<td>These students joined the Conservation Commission and are regularly attending meetings</td>
</tr>
</tbody>
</table>

Other:

### School Improvement

| Changes in instructional practice | | |
| Changes in school policies and procedures | | |
| Changes to school or schoolyard | | |

Other:

### Community Vitality

| Changes in local government | | |
| Changes in local civic and social organizations | | |
| Changes in social capital, i.e. the breadth and density of the webs of social interaction | | |

Other:

### Environmental Quality

| Student collected data | | |
| Data from partnerships w/ local environmental organizations | | |

Other:

### Other notes

| Barriers to progress | | |
| Facilitators of progress | | |
| Lessons learned | | |
| Observations related to program sustainability | | |

Other:

Attach another sheet if more space is needed.
APPENDIX F: 2002-2003 INTERVIEW GUIDES

CO-SEED Evaluation 2002-2003

Interview Guide
To be used for Antrim, Littleton, Malden and Gilford, Spring 2003
Potential interviewees at each site, modified slightly for each: Teachers, SEED team, administrators, community members
Tell participant: Interview takes about 45 minutes to an hour. (Need to watch the clock.) In general, the evaluation process is aimed at understanding how CO-SEED works with a school and community, what aspects of the process are most and least successful, and what kinds of outcomes are generated.

Interviewee:
Location:
Date of interview:
Taped?
Transcribed?
Conditions/Notes:

Process Effectiveness and Sustainability
1. I’m interested in learning about what gets the ball rolling in a CO-SEED school…and what keeps the ball rolling.
   a. In your view, how did this work begin in your school?

   b. What allowed it to “take hold”?

   c. How did it spread? (e.g. teacher to teacher, in-service training, parent enthusiasm, etc.)

   d. what barriers to success exist/ed?

2. (Next year) CO-SEED (will no longer be/is no longer) “officially” working with your town/ school. In your opinion was CO-SEED effective in establishing a program that lives on beyond Antioch’s direct involvement?
   a. Yes or No
b. If yes: Which aspects of CO-SEED (will be/ are) still active and “alive”—in one way or another—in the school/community? Prompt: in what ways are you still connected to ANEI/ the CO-SEED project?

c. If no: What do you think prevented CO-SEED from becoming more “institutionalized”?

d. What other kinds of on-going connections with ANE would help you continue the CO-SEED type work? Prompts: their presence at meetings, resources provided, newsletter, connection to other sites, ELC person....

(Prioritization Worksheet)

3. If you were given the task of spending $1.00 on one-year of CO-SEED services or inputs, how would you choose to allocate the money? If you care to think aloud, I’d be interested to hear how you make your choices. After you do this I’ll ask you to rank the items you chose in order of their importance to you (1 = most important).

**Observed Outcomes: Students and Community**

4. We could break down student learning and growth into four broad categories:
   - Knowledge or understanding
   - Skills or abilities
   - Attitudes, beliefs or feelings
   - Behaviors or actions

What evidence do you have that CO-SEED projects are affecting students in any of those four areas? (see attached sheet— show to participant for reference)

5. We often use the term “civic engagement” to describe students who are involved in their towns and empowered to act as productive citizens in a community.
   a. Do you think that there is a high or low level of civic engagement amongst students in your school?
   
   b. Do you feel students gain citizenship skills because of CO-SEED type projects? What skills are they? What do those skills look like?

6. The best ideas about how to mark progress in a town come from people in that community. What indicators or measures do you know of that exist in _______________ that would help us identify ways in which CO-SEED involvement has enhanced or changed community–school relationships? For example: passage of the school budget
annually since CO-SEED, kindergarten matriculation earlier, attendance at town functions, community group usage of school space, etc.

Observation Outcomes: Teachers or Administrators only
7. I’d like to ask you to compare your own teaching before your involvement with CO-SEED and since your involvement with CO-SEED. Consider these aspects of teaching:
- Content/ Subject
- Use of outdoors
- Collaboration with other teachers
- Inquiry-based learning
- Use of community places/ spaces
- Use of community people
- Teaching philosophy
- Other:

Guiding questions:
- What aspects of your teaching have changed, if any?
- What do you do differently?
- Do you collaborate with other teachers more, less or the same as before?
- Are you using project-based learning/ service-learning?
- Where have you visited or with whom have you worked?

Wrapping Up
8. Anything else to share?
CO-SEED Evaluation 2002-2003
Interview Guide for BRADFORD site

Interviewee:
Position:
Grades taught:
Subject:
Conditions/Notes:
Interview Location:
Date of interview:
Taped?

Interview Questions

1. Because CO-SEED adapts to meet the particular needs of a community, it means different things to different people. If you had to describe CO-SEED—the project itself and its purposes—to a parent or community member who was new to Bradford, what would you tell them? What are you hoping Bradford will gain from involvement with CO-SEED?

2. Were you aware of any resistance in your town/school to having CO-SEED involvement? Do you have concerns or reservations about the program?

General status of community-school connections

3. What examples of community participation or presence in the school can you think of (prior to CO-SEED)? (exs: volunteering in the classrooms, community meetings in the school building, town and school budgets intertwined, etc.)

4. Sometimes people talk about the walls of a school building dissolving. Other times the walls can create a fortress that is off-limits to the community. Would you say there is ample give and take between the school and the community in Bradford, or that the two function very separately?

Teaching practices

5. To what extent do (you/ the teachers in this school) use local themes and subjects in your/their teaching? How would you define place-based learning?

6. To what extent are (you/ the teachers in this school) using project-based learning or service-learning in your/their teaching? How would you describe project-based learning?
7. **Teachers/Principal only:** Are there local places you’ve visited or utilized outside of the school walls?

8. **Teachers/Principal only:** Are there any local people with whom you’ve made contact with to assist with teaching or preparing to teach?

**Potential indicators**

9. We would like to identify some measures that will help us identify change or impact in the school and community with the integration of Co-SEED. Three years from now, what would tell you that this project had been successful?

10. Do you have ideas about ways we could measure change here in Bradford? In other words concrete evidence that is feasible for us to look for, measure or monitor over time that would show that success was achieved?

11. For any of these ideas, does a new system need to be established to monitor this indicator, or are there existing records that we can rely upon?

A few examples of what I mean:

- sign-in sheet that records an overwhelming increase in community members visiting the school
- kindergarten matriculation happens earlier each year since Cp-SEED (for a district where families choose schools)
- more families as members of local nature center (does nature center keep track of these figures, or would they be willing to do so?)
- increased attendance at certain town functions (is this being recorded and is the data available?)
- passage of a school budget three years in a row after never passing before (who has this information in your town?)

**Note:** all of these examples would require additional investigation to understand other factors that contributed to the change.

**Needs Assessment**

12. How would you like to see the Co-SEED staff, the SEED team, ELC representative or your administration support you in doing Co-SEED work over the next three years?

13. Any other thoughts to share with me?
APPENDIX G: CO-SEED SURVEYS

(OLD) Used for Antrim, Malden

- Teacher
- Community
- Student

(REVISED) Used for Bradford

- Teacher
- Community
- Student
CO-SEED Teacher Questionnaire (OLD)

Please answer each question to the best of your ability. Circle one answer for each question. Use the scale provided at the beginning of each section to answer.

Section 1: (Sharing Resources)
Please use the scale on the right to answer questions 1-2 and questions 4-5.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
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<tr>
<td>Disagree</td>
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<tr>
<td>Neither Agree nor Disagree</td>
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<tr>
<td>Agree</td>
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<tr>
<td>Strongly Agree</td>
<td></td>
<td></td>
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</tbody>
</table>

1) In our community, parents are regularly invited to view exhibitions and to participate in the classroom and in the school.

2) People from the community, other than parents, are invited into the classroom and the school to work with students.

3) What other community members are involved in your local school(s)?

___________________________________________________________________________________________________________
___________________________________________________________________________________________________________

Name (optional)_____________________  Town__________________State____________  School___________________________________________
Section 1: (Sharing Resources) Please use the scale on the right to answer questions 4 & 5.

4) Students regularly leave the classroom for learning activities in the community.

5) Celebrations and traditions play a large role in the work and life of the school.

Section 2: (Curriculum) Please use the scale on the right to answer questions 6-10.

6) In our school(s), there is an emphasis on the local environment, cultural heritage, history and people.

7) I often relate my classroom assignments and homework to the local community.

8) Much of the work we do at school has an emphasis on nature and the environment.

9) I am more able to align my teaching with State Frameworks as a result of project-based activities.

10) I know of people who have relocated to this area in order to send their children to a local school.
Section 2: (Curriculum) Please use the scale on the right to answer questions 11-14.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree nor Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11) I have gained new content understanding and/or new skills as a result of community-based educational activities/CO-SEED involvement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12) Our school(s) has strong program(s) in:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. academics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. sports</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. the arts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. local community studies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e. education about the environment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13) I am satisfied with the quality of education in our school(s):</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14) I am satisfied that/with:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) local community members are engaged in teaching students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) there is adequate preparation for post-secondary education or work after high school</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) as a result of their schoolwork, students have an ability to make the community a better place</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) students' performance on state assessment tests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) students' enthusiasm for learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Section 3: (The Place) Please use the scale on the right to answer questions 15-19.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</tr>
</thead>
<tbody>
<tr>
<td>15) Community-based work helps prepare students to be able to attend a post-secondary school or find employment in this or other places in the country.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16) Young people who choose to stay in this local area after high school will be able to make a living.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17) Students are involved in projects that instill responsibility for improving the school and the local community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18) Project-based learning is an effective way of teaching basic academic skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19) Community-based work helps develop environmental attitudes and values that will shape students' lives.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Section 3: (The Place) Please answer the following questions.

20) What do you most value about using the place or the community in which you teach as an instructional resource?

_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________

21) What do you least value about using the place or the community in which you teach as an instructional resource?

_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
Section 4: (Policy) Please use the scale on the right to answer question 22.

22) Important school-wide requirements should include:

   a. doing volunteer work in the community
   b. passing state performance-based tests
   c. participating in internships/service learning in the community

   |   1 |   2 |   3 |   4 |   5 |
   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |

   1  2  3  4  5

Section 5: (Other Learning Environments) Please use the scale to the right to answer questions 23-24.

23) Youth in our community regularly engage in volunteer community work and activities.

   1  2  3  4  5

24) My community is more vital as a result of the Community Profile Meeting and the projects that resulted because of it.

   1  2  3  4  5

25) List examples of student involvement in roles that lead to the improvement of the social, environmental and/or economic health of the community.

_____________________________________________________________________________________________________________

_____________________________________________________________________________________________________________
Section 6: (Demographics) Please circle one answer for questions 26-27.

26) How long have you lived in this community?
   a. 1-4 years   b. 5-10 years   c. 10-20 years   d. all my life

27) How long have you taught in this community?
   a. 1-4 years   b. 5-10 years   c. 10-20 years   d. all my life

28) I teach grade(s) ______________

29) Circle the one that most closely applies. I am a/an:  
   a) specialist  b) student aide  c) administrator
   d) classroom teacher

THE END
Thank you for taking the time to fill out our survey!
Community Member Questionnaire (OLD)

*Please answer each question to the best of your ability. Circle one answer for each question. Use the scale provided at the beginning of each section to answer.*

**Section One: (Sharing Resources)**
Please use the scale on the right to answer questions 1 & 2 and questions 4 & 5.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) In our community, parents are regularly invited to participate in the classroom and in the school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2) People from the community, <em>other than parents</em>, are invited into the classroom and the school to work with students.</td>
<td>1</td>
<td>2</td>
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</table>

3) What other community members are involved in your local school(s)?

________________________________________________________________________

________________________________________________________________________

__________________________________________________________  ___________________________________________________

Name (optional)_____________________  Town__________________State____________  School______________________________

(If applicable) I have children in grade(s)
**Section 1: (Sharing Resources) Please use the scale on the right to answer questions 4 & 5.**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

4) Students regularly leave the classroom for learning activities in the community.  

5) Local community celebrations and traditions play a large role in the work and life of the school.

---

**Section 2: (Curriculum) Please use the scale on the right to answer questions 6-8.**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

6) In our school(s), there is an emphasis on the local environment, cultural heritage, history and people.  

7) There is a great deal of connection between what students are learning in school and their local community.

8) There are people who have relocated to this area in order to send their children to a local school.
Section 2: (Curriculum) Please use the scale on the right to answer questions 9 & 10.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<tbody>
<tr>
<td>9) In this community, student learning also occurs outside of school in the</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a. home and family</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. religious institutions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. local businesses or industry</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. local clubs or teams</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e. local farms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

10) Our school(s) has a reputation for having a strong program in:

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<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>a. academics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. sports</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. the arts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. school-to-work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e. environmental education</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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</table>
**Section 2: (The Curriculum) Please use the scale on the right to answer questions 11 & 12.**

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree nor Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11) I am satisfied with the quality of education in our school(s):</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12) I am satisfied that/with:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) local community members are engaged in teaching students,</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) there is adequate preparation for post-secondary education or work after high school,</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) as a result of their schoolwork, students have the skills to make the community a better place,</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) students' performance on state assessment tests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) student's enthusiasm for learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</table>

**Section 3: (The Place) Please use the scale on the right to answer questions 13 & 14.**

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree nor Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>13) I feel that when the young people in this local area finish high school, they will have the skills and ability to work or attend a post-secondary school anywhere in the country.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14) Young people who choose to stay in this local area after high school will be able to make a living.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Section 3: (The Place) Please use the scale on the right to answer question 15.

15) Students are involved in curricular projects that improve our school and the local community.

1 Strongly Disagree 2 Disagree 3 Neither Agree nor Disagree 4 Agree 5 Strongly Agree

Section 3: (The Place) Please answer the following questions.

16) What do you most value about the place or the community in which you live?

_____________________________________________________________________________________________________________

_____________________________________________________________________________________________________________

17) What do you least value about the place or the community in which you live?

_____________________________________________________________________________________________________________

_____________________________________________________________________________________________________________

Section 4: (Policy) Please use the scale on the right to answer question 18.

18) I think that further consolidation of schools:
   a. is an economic necessity
      1 Strongly Disagree 2 Disagree 3 Neither Agree nor Disagree 4 Agree 5 Strongly Agree
   b. is the best way for students to get a good education
      1 Strongly Disagree 2 Disagree 3 Neither Agree nor Disagree 4 Agree 5 Strongly Agree
   c. weakens the community by taking away the local school(s)
      1 Strongly Disagree 2 Disagree 3 Neither Agree nor Disagree 4 Agree 5 Strongly Agree
Section 4: (Policy) Please use the scale on the right to answer question 19.

19) Important school-wide requirements include:
   a. doing volunteer work in the community
   b. passing state performance-based tests
   c. participating in internships in the local community

Section 5: (Other Learning Environments) Please use the scale to the right to answer questions 20-21.

20) Young people in this community participate in:
   a. politics
   b. church or religious groups
   c. clubs

21) My community is more vital as a result of the Community Profile Meeting and the projects that resulted because of it.
22) List examples of leadership positions held by young people in the organizations mentioned in question 20.

___________________________________________________________________________________________

___________________________________________________________________________________________

Section 6: (Demographics) Please circle one answer for question 23.

23) How long have you lived in this community?

a. 1-4 years   b. 5-10 years   c. 10-20 years   d. all my life   e. not applicable

24) Circle all that apply: I have kids in:

a. kindergarten   b. 1st grade   c. 2nd grade   d. 3rd grade   e. 4th grade   f. 5th grade   g. 6th grade   h. 7th grade

i. 8th grade   j. 9th grade   k. 10th grade   l. 11th grade   m. 12th grade

THE END
Thank you for taking the time to fill out our survey!
### Middle and High School Student Questionnaire (OLD)

**Please answer each question to the best of your ability. Circle one answer for each question.**  
*Use the scale provided at the beginning of each section to answer.*

---

#### Section One: (Sharing Resources)

Please use the scale on the right to answer questions 1-4.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1) Parents often spend time in my classroom and in my school.

2) People from the community, other than my parents, are invited into my classroom and our school to work with us.

3) We regularly leave the classroom to do school assignments in the community.

4) Local community celebrations and traditions play a large role in our school.

a) List the kinds of volunteers from the community who help out in your school.

---
Section 2: (Curriculum) Please use the scale on the right to answer questions 6-12.

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>6) In my school, we learn a lot about our local environment, cultural heritage, history and people.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7) I see a lot of connection between my classroom assignments, homework, and the place where I live.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8) Much of the work we do at school has an emphasis on nature and the environment.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9) The projects related to the environment that I work on help prepare me to do well on standardized tests.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10) I moved to this area because it was important that I go to a good school.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11) The work I do in the community helps me gain new skills and learn new knowledge.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12) Throughout the year, too much of our schoolwork time is used preparing for standardized tests.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
Section 2: (Curriculum)

Please use the scale on the right to answer questions 13-15.

13) My school is really good at:

   a. academics                     1  2  3  4  5
   b. sports                        1  2  3  4  5
   c. the arts                      1  2  3  4  5
   d. local community studies       1  2  3  4  5
   e. educating about the environment 1  2  3  4  5

14) I am satisfied with the quality of education in our school.  1  2  3  4  5

15) I am satisfied:

   a) that local people help teach students in my school  1  2  3  4  5
   b) that my classes prepare me to go to college and/or to find work  1  2  3  4  5
   c) that my schoolwork helps me make the community a better place  1  2  3  4  5
   d) that I do well on standardized tests  1  2  3  4  5
   e) that my schoolwork makes me enthusiastic toward learning  1  2  3  4  5
Section 2: (Curriculum)

Please use the scale on the right to answer questions 16-19.

<table>
<thead>
<tr>
<th>Question</th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree nor Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>16) If I choose to stay in this area after high school, I will be able to make a living.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17) Because of the work I do in the community, I feel a responsibility to improve the school and the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18) My community work helps me value my local area and environment more.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19) I learn many things in school that I can use outside of school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

20) The subject(s) and/or experiences in school that make me think the most are:

21) What do you like most about learning outside of the classroom and in your local community?

________________________________________________________________________________________

22) What do you like least about learning outside of the classroom and in your local community?

________________________________________________________________________________________

23) Can you give an example of something you've learned in school that could be used in another situation?

________________________________________________________________________________________
Section 3: (The Place) Please use the scale on the right to answer questions 24-26.

24) I feel that I am learning skills in school that will allow me to make my community and my local environment a better place.

25) If I choose to stay in this local area after high school, I believe I will be able to make a living.

26) I have brought a friend or a parent to visit a site of one of my school projects.

27) What do you most value about the place or the community in which you live?

_____________________________________________________________________________________________________________

28) What do you least value about the place or the community in which you live?

_____________________________________________________________________________________________________________

Section 4: (Policy) Please use the scale on the right to answer question 29.

29) Students in my school are expected:

   a. to do community service work
   b. to work hard to pass standardized tests
   c. to participate in extracurricular activities in my school and in my community.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree nor Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>a</td>
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<td>b</td>
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<tr>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 5: (Other Learning Environments) Please use the scale to the right to answer question 30.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

30) Outside of school, I participate in:

a. politics
   1  2  3  4  5

b. church or religious groups
   1  2  3  4  5

c. clubs
   1  2  3  4  5

31) List examples of responsibilities you hold in the organizations mentioned in question 30.

_____________________________________________________________________________________________________________

Section 6: (Demographics) Please circle one answer for question 32.

32) How long have you lived in this community?

   a. 1-4 years    b. 5-10 years    c. all my life

THE END
Thank you for taking the time to fill out our survey!
CO-SEED Teacher, Administrator, School Staff Survey (REVISED)

We recognize how many demands teachers have on their time and appreciate your completing this survey. Your thoughtful input allows us to maximize our efforts to provide effective and appropriate services to your school and others. Your answers will be kept confidential.

Please do not leave blanks. Thank you.

Section 1: School and Community. Please use the four-point agreement scale on the right to answer questions 1-21.

<table>
<thead>
<tr>
<th>Do you agree?</th>
<th>Not at all</th>
<th>A little</th>
<th>Mostly</th>
<th>This is very</th>
<th>I’m not</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.  In our school, students learn a lot about the local environment and nature.</td>
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<td>2</td>
<td>3</td>
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<td>0</td>
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<tr>
<td>3.  In our school(s) there is adequate preparation for post secondary education or work after high school.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
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<td>4.  Young people who choose to stay in this local area after high school will be able to find jobs they like.</td>
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<td>2</td>
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<td>5.  My community is more cohesive as a result of the Community Profile Meeting and the projects that resulted because of it.</td>
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<td>6.  Meetings in our town are well attended.</td>
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<td>7.  Meetings in our town run smoothly and efficiently.</td>
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</table>

Our schools have strong programs in…

<table>
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<th>Mostly</th>
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<tr>
<td>8.  …academics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>9.  …sports</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
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<tr>
<td>10. …the arts</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>11. …local community studies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>12. …education about the environment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>13. I am satisfied with the quality of education in our school(s).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>14. I am satisfied with the level of community member engagement in teaching students.</td>
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<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>15. I am satisfied with our students' performance on state assessment tests.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>16. I am satisfied with our students' enthusiasm for learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>17. Our schools regularly engage students in community-based schoolwork*.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
## Do you agree?

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
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<th>Mostly</th>
<th>This is very</th>
<th>I'm not</th>
</tr>
</thead>
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<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>19. Community-based schoolwork helps prepare students to attend college.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>20. Community-based schoolwork helps prepare students to find employment after high school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>21. Community-based schoolwork is an effective way of teaching basic academic skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

*Community-based schoolwork is sometimes called project-based learning, service-learning or place-based education. Students, with their teachers and other community members, get involved in solving real-world problems in their communities (including the school building and school yard) using math, science, writing, reading and communication skills.*

### Section 2: Your Teaching and Participation

Please circle one answer from the four-point agreement scale on the right to answer questions 22-29.

## Do you agree?

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>Mostly</th>
<th>This is very</th>
<th>I’m not</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. I often relate my classroom assignments and homework to the local environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>23. I often relate my classroom assignments and homework to the local community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>24. I have gained new content understanding and/or new skills as a result of CO-SEED involvement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>25. As a result of CO-SEED involvement, I am more able to align my teaching with State Frameworks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>26. There are many things my students can do to protect the local environment, including the school grounds.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>27. My students have a strong connection to the community where my school is located.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>28. Through their schoolwork, students gain skills to make the community a better place</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>29. Through their schoolwork, students gain a sense of responsibility for improving the local community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
Section 3: For each question, circle one number that best matches your answer. Use the five-point frequency scale on the right to answer questions 30-34.

<table>
<thead>
<tr>
<th>How often?</th>
<th>Never</th>
<th>Not very</th>
<th>A moderate amount</th>
<th>Very Regularly</th>
<th>Constantly/often than</th>
<th>I'm not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. Parents are invited into the school to work with students.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>31. Parents are invited to view presentations or exhibitions of our students’ schoolwork.</td>
<td></td>
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</tr>
<tr>
<td>32. People from the community, other than parents, are invited into the classroom and the school to work with students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>33. The school grounds are regularly used as an educational resource to learn about the environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>0</td>
</tr>
<tr>
<td>34. Students leave the classroom for learning activities in the community.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Section 4: Please write an answer to the following questions in the spaces provided.

35. Please describe any school improvement, service-learning or community projects you have worked on with your students in the past year. Then put a check mark (√) in any of the columns to the right that apply to that project. These are just a few examples: setting up school recycling; presenting info. at a town meeting; visiting a nursing home; working in a school garden; monitoring a river’s water quality; improving a trail.

<table>
<thead>
<tr>
<th>Service-learning or community projects</th>
<th>Students chose the project? √</th>
<th>Students identified a solution? √</th>
<th>Project had an academic component? √</th>
<th>Project included written or verbal reflection by students? √</th>
<th>Other community adults involved? √</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Section 5: Please circle one answer for questions 36-40.

36. Circle the answer that most closely applies. I am a/an:
   - specialist
   - student aid or paraprofessional
   - administrator
   - maintenance staff
   - classroom teacher: elementary
   - classroom teacher: middle school
   - classroom teacher: high school
   - other: ______________________

37. What do you teach:
   - a. Not a teacher/ doesn’t apply to me
   - b. elementary classroom, integrated
   - c. math
   - d. science
   - e. social studies/ history
   - f. English
   - g. foreign language
   - h. physical education or health
   - i. art or music
   - j. technology
   - k. Other: ______________________

38. Do you live in the same community where you teach?
   - a. Yes
   - b. No

39. For how many school years have you been working in this school? (count this as one year)
   - a. First year here
   - b. 2-3 years
   - c. 4-5 years
   - d. 6 or more years

40. How often do you contact or interact with the CO-SEED representative in your school (i.e. from Audubon, the Zoo, Hulbert, Appalachian Mountain Club, etc.)?
   - a. Several times each week
   - b. Once a week
   - c. Once every two weeks
   - d. Once every month or so
   - e. Twice a year
   - f. Once a year
   - g. I’ve never contacted him/her
   - h. I don’t know who it is

41. It is important for us to understand the degree to which you are or have been involved with CO-SEED. Please write a NUMBER in each of the following boxes in the right-hand column. Write 0 in the box if it does not apply to you.

<table>
<thead>
<tr>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. How many required staff-wide CO-SEED events (such as an in-service day or staff meeting) have you attended?</td>
</tr>
<tr>
<td>b. How many optional, specialized CO-SEED training sessions (such as a facilitator’s training) have you attended?</td>
</tr>
<tr>
<td>c. How many CO-SEED mini-grants have you applied for?</td>
</tr>
<tr>
<td>d. How many CO-SEED summer institutes have you attended?</td>
</tr>
<tr>
<td>e. For how many school years have you been a member of the CO-SEED Team (or Theme Team) that meets monthly in the evening?</td>
</tr>
<tr>
<td>f. Other CO-SEED involvement? Please note the # of times.</td>
</tr>
</tbody>
</table>

Thank you for taking the time to fill out this survey!
Please return this survey in the envelope provided to a CO-SEED staff person or to:
CO-SEED Program Evaluator
ANEI, 40 Avon Street, Keene, NH 03431
CO-SEED Community Member Survey (REVISED)

Thank you for taking time to complete this survey. Your input is appreciated and will help us to better understand the CO-SEED project. Many of the questions ask you about your impressions of your community’s public schools. If you are not too familiar with the schools, please just provide your opinions to the best of your ability.

Your answers will be kept confidential. Please do not leave blank.

Section 1: School and Community: Please use the four-point agreement scale on the right to answer questions 1-21.

<table>
<thead>
<tr>
<th>Do you agree?</th>
<th>Not at all</th>
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</table>
Do you agree?

<table>
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<tr>
<th>Question</th>
<th>Not at all</th>
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<td>41. Community-based schoolwork helps prepare students to find employment after high school.</td>
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<td>3</td>
<td>4</td>
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</tr>
<tr>
<td>42. Community-based schoolwork is an effective way of teaching basic academic skills.</td>
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<td>3</td>
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</table>

*Community-based schoolwork is sometimes called project-based learning, service-learning or place-based education. Students, with their teachers and other community members, get involved in solving real-world problems in their communities (including the school building and school yard) using math, science, writing, reading and communication skills.

Section 2: Participation: Please use the four-point agreement scale on the right to answer questions 22-30.

Do you agree?

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>Mostly</th>
<th>This is very</th>
<th>I'm not</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. I am aware of the important needs in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>44. I am aware of what can be done to meet the important needs in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>45. I feel a personal obligation to contribute in some way to the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>46. I am or plan to become actively involved in issues that positively affect the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>47. I can use my professional skills and talents to positively influence community issues.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>48. I believe that I can personally make a difference in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>49. Youth in my community are actively involved in making the town a better place.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>50. Youth in my community regularly participate in community affairs such as town meeting day or town commissions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>51. Youth in my community regularly participate in volunteer activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
Section 3: For each question, circle one number that best matches your answer. Use the five-point frequency scale on the right to answer questions 31-35.

<table>
<thead>
<tr>
<th>How often?</th>
<th>Nev</th>
<th>Not very</th>
<th>A moder amount</th>
<th>Very Regu</th>
<th>Constantly/ often than</th>
<th>I'm not</th>
</tr>
</thead>
<tbody>
<tr>
<td>52. Parents are invited into the school to work with students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>53. Parents are invited to view presentations or exhibitions of our students’ schoolwork.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>54. People from the community, other than parents, are invited into the classroom and the school to work with students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>55. The school grounds are regularly used as an educational resource to learn about the environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>56. Students leave the classroom for learning activities in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Section 4: Your Relationship to the Schools

36. Please circle one answer. Do you currently have children in school?
   a. Yes, I currently have children in this community’s K-12 schools.
   b. No, I do not currently have children in this community’s K-12 schools

37. Please circle all that apply. For what purposes do you go to the school (other than picking up or dropping off children)?
   a. Attending student plays or performances
   b. Watching school sporting events
   c. Voting
   d. School-related meetings
   e. Meetings not related to the school but held at the school (including town meeting)
   f. Using the playground or fields
   g. Recreation or other after-hour programs
   h. Helping teach students
   i. Working with/leading students in other ways. Please describe: ____________________________
   j. I am employed by the school district. In what capacity? _______________________________
   k. Other purposes: _______________________________
   l. Other purposes: _______________________________
38. **Please circle one answer.** As a community member, on average how often do you go to one of the schools (other than for the purpose of picking up or dropping off children)?
   
i. Several times each week  
j. Once a week  
k. Once every two weeks  
l. Once every month or so  
m. Twice a year  
n. Once a year  
o. I’ve never gone to the school  
p. Other: ____________________________

39. **Please circle one answer.** Have you worked on any community-based schoolwork with students (other than your own individual child) in the past year? *(Examples might include: helping students create an interpretive trail, working on an historical study of the town with them, helping students set up school recycling, etc.)*
   
c. Yes  
d. No  
   
a. If yes, please describe the project(s).

40. **Please circle one answer.** Are you a member of the CO-SEED Team (or Theme Team) that meets monthly in the evening?
   
a. Yes  
b. No  

---

**Thank you for taking the time to fill out this survey!**

Please return this survey in the envelope provided to:  
CO-SEED Program Evaluator  
ANEI, 40 Avon Street, Keene, NH  03431
CO-SEED Student Survey (4-12) (REVISED)

We are interested in your ideas about your school and community. There are no right or wrong answers! Please answer every question and give your completed survey to your teacher.
We appreciate your help.

Section 1: School and Community:

For each question, circle one number that best matches your answer. Please use the scale on the right to answer questions 1-9.

<table>
<thead>
<tr>
<th>Do you agree?</th>
<th>Not at all</th>
<th>I agree a little</th>
<th>Mostly agree</th>
<th>This is very true</th>
<th>I'm not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. In our school, we learn a lot about nature and the local environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>31. In our school, we learn a lot about local people and culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>32. Our classroom assignments and homework are often about the place where we live.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>33. I think my school is really good at academics (reading, math, science, social studies, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>34. I think my school has a really good sports program (physical education, after-school sports, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>35. I think my school has a really good arts program (music, art, dance, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>36. I think my school is really good at local community studies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>37. I think my school is really good at education about the environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>38. It is clear to me how the things I learn in school apply to the real world.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Section 2: Participation: For each question, circle one number that best matches your answer. Use the scale on the right to answer questions 10-23.

<table>
<thead>
<tr>
<th>Do you agree?</th>
<th>Not at all</th>
<th>I agree a little</th>
<th>Mostly agree</th>
<th>This is very true</th>
<th>I’m not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. I feel like I am part of a community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>40. I pay attention to news events that affect the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>41. I feel like I can make a difference in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>42. My class can do something good for the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
### Do you agree?

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once or two year</th>
<th>Once every two</th>
<th>About every week</th>
<th>At least once a week</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. I know a lot of people in the community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>44. I try to think of ways to help other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>45. I think that helping other people is something everyone should do, including myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>46. I know what I can do to help make the community a better place.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>47. I know what I can do to help protect the local environment (nature).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>48. I have learned skills for helping the environment or the community by doing school projects.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>49. I have learned skills for helping the environment or the community from my parents.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>50. I have learned skills for helping the environment or the community by reading.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>51. When I grow up I would like to live in this community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>52. If I live in this town when I grow up, I will be able to find a job I like.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

### Section 3:

Please note that the scale has changed to **How Often** these things happen, and that you have **five choices** now for questions 24-29. For each question, circle one number that best matches your answer. You will need to ESTIMATE, or make an educated guess.

### How often?

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Once or two year</th>
<th>Once every two</th>
<th>About every week</th>
<th>At least once a week</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>53. Parents (mine or other kids’ parents) spend time helping out in my classroom and in my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>54. Parents are invited to see presentations or exhibits (like posters or artwork) of students’ schoolwork.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>55. People from the community, other than parents, spend time in the school working with students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>56. Classes in my school go on field trips in the local community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>57. Classes in my school learn about nature by going out into the schoolyard.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>58. Kids in our community do volunteer work and community activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
Section 4: Please write an answer to the following questions in the space provided.

59. In the past year, what kinds of people have helped you learn new things? They may work in your school all the time, or may have come to your school for a special visit. **Make a list of the different kinds of adults who are involved in your school, either in the classroom or on field trips or other projects.** Please use their job title or a description of their role rather than their names.

  • example: *my teachers*
  • example: *local fireman came in to teach our class*

  __________________________________________________________
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________
  __________________________________________________________

  ----------------------------------------------------------------------------------------------------------
31. Please list any **school improvement**, **service-learning** or **community projects** you have participated in over the past year (including the summer). Then put a check mark (□) in one of the columns to the right to let us know whether the project was something you did:

- with school or your class,
- with another club or organization
- on your own or with your family or friends.

(If you have not participated in any service-learning activities, you may leave this blank.)

<table>
<thead>
<tr>
<th>Your service or community projects</th>
<th>With school</th>
<th>With another organization</th>
<th>On my own</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>example</strong>: my class created a school recycling program</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>example</strong>: planted trees on town green with scouts</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

*Other examples:* setting up school recycling; presenting information at a town meeting; visiting a nursing home; working in a school garden; monitoring a river’s water quality; improving a trail. These are just a few examples...you might have done these or something different.

The End.

Thank you for completing this survey!
APPENDIX H: POEM BY GILFORD 4TH GRADER

THE HUNT

I have the sharpest eye
A beak as sharp as a rocky cliff
the sky hides me in its LAIR...
as I glide through the sky not making a sound...
The piercing sound of my screech as I dive POW!!!
I can feel the softness of mouse then I perch on a rock
I can taste the mouse I’ve just caught as it cries in mercy
I say think you for your life and I will carry your spirit forever.

April 16, 2003
11:06 AM
Grade 4
APPENDIX I: CO-SEED PROCESS ELEMENTS PRIORITIZATION WORKSHEET

- In this activity, the Co-Seed project’s budget for working with your community is $1.00. This money represents grant funds provided to your school/community through Co-Seed.
- Your task is to distribute $0.75 amongst these 13 Co-Seed activities and services according to those you value most. $0.25 has been designated for program administration and development.

If you care to think aloud, I’d be interested to hear how you make your choices.

<table>
<thead>
<tr>
<th>Service provided to your school through grant funding for the Co-Seed project</th>
<th>Amount of money you would designate for each activity. Total may not exceed $1.00</th>
<th>Co-Seed’s current allocation of funds</th>
<th>Rank order of most (1) to least (12) important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antioch New England Graduate School staff consultation and Seed Team facilitation.</td>
<td>.14</td>
<td>.14</td>
<td>X</td>
</tr>
<tr>
<td>Antioch New England Graduate School program fundraising, codification, dissemination and administration.</td>
<td>.14</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Facilitation and implementation of the community Vision to Action Forum.</td>
<td></td>
<td></td>
<td>.06</td>
</tr>
<tr>
<td>Antioch New England Graduate School interns working with your school and teachers.</td>
<td></td>
<td></td>
<td>.01</td>
</tr>
<tr>
<td>Environmental Learning Center staff working with teachers and students to implement classroom based education.</td>
<td></td>
<td></td>
<td>.27</td>
</tr>
<tr>
<td>Evaluation for program improvement &amp; funding; providing information to administrators, teachers, and community members.</td>
<td></td>
<td></td>
<td>.11</td>
</tr>
<tr>
<td>Service provided to your school through grant funding for the Co-Seed project</td>
<td>Amount of money you would designate for each activity. Total may not exceed $1.00</td>
<td>Co-Seed’s current allocation of funds</td>
<td>Rank order of most (1) to least (12) important</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>On-site professional development provided to teachers and administrators (e.g. inservice days).</td>
<td></td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>Teacher honoraria provided to take professional development or to do presentations outside of normal workday.</td>
<td></td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Teacher release time for project planning or professional development.</td>
<td></td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Training teachers to be facilitators of curriculum planning and the Seed Team planning process.</td>
<td></td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Developing a web site of your site’s Co-Seed work to use as a resource to communicate the progress of this work in your school.</td>
<td></td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Teachers, students, parents and community member participation in the summer institute.</td>
<td></td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Money for mini-grants. Site based Seed Teams make decisions about how to spend this money.</td>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Other services not mentioned, please specify.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other services not mentioned, please specify.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX J: BEEBE SCHOOL PROJECT-BASED UNIT SUMMARY K-8

### 2002-2003 School Year

<table>
<thead>
<tr>
<th>GRADE</th>
<th>NAME OF PROJECT</th>
<th>WHAT IS THE ESSENTIAL QUESTION?</th>
<th>HIGHLIGHTS/ACTIVITIES OF THE PROJECT</th>
</tr>
</thead>
</table>
| K     | Kindergarteners as Malden Community Helpers         | How can we show the people in our community that we care?                                     | - Donations of mittens and decorations to local nursing homes and Malden families.  
                   |                                                      |                                                                                               | - Writing and illustrating a class Malden Book to be donated to the Beebe and Public libraries.  
                   |                                                      |                                                                                               | - Writing and illustrating a Thank You Book for Malden community helpers to be given to the Police and Fire Stations. |
| 1ST   | All About Me Project                                 | What makes up our community?                                                                 | Students will produce an “all about me book”. They will do an oral presentation of their book, which will be video taped.  
                   |                                                      |                                                                                               | Classes will take walking tours of Malden to get a tour of the City Hall, Post Office, Police and Fire Stations, Stop and Shop and a bank. |
| 2ND   | Beebe Butterfly Garden                               | Why will certain butterflies make our butterfly garden their home in Malden?                 | - Design and construct a student generated Butterfly Garden graphic illustrating the butterflies that are indigenous to Malden.  
                   |                                                      |                                                                                               | - Design a new sign for the Beebe School’s Butterfly garden.  
                   |                                                      |                                                                                               | - Replenish the plants in the garden.  
                   |                                                      |                                                                                               | - Fund raiser for these projects. |
| 3RD   | We Are Readers Project                               | How can we use the new reading series and other resources in Malden to encourage our 3rd grade class to become lifelong readers and | - Bookworm contest. Student raffles and class awards will be given for the most books read. Hallway chart of progress.  
                   |                                                      |                                                                                               | - Chinese writing  
                   |                                                      |                                                                                               | - Tour of the public library. Librarian from the public library coming to Beebe and speak with the students.  
                   |                                                      |                                                                                               | - Public library card for each student.  
<pre><code>               |                                                      |                                                                                               | - “Lit Kits” - Theme related books could be |
</code></pre>
<table>
<thead>
<tr>
<th>GRADE</th>
<th>NAME OF PROJECT</th>
<th>What is the ESSENTIAL QUESTION?</th>
<th>HIGHLIGHTS/ACTIVITIES OF THE PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>purchased or donated and bundled together to be used by a class.</td>
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<td>- Monthly themes for book topics.</td>
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<tr>
<td>4TH</td>
<td>Habitats and Ecosystems. Using the Stone Zoo as an extension of the Beebe Classroom</td>
<td>How can we make a connection between our environment and that of the Sierra Madre?</td>
<td>- Students will visit Stone Zoo 2x during the school year to do a pre and post assessment of the student’s knowledge on habitats and ecosystems.</td>
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<td>- Students will sign a pledge and become Habitat Specialists.</td>
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<td></td>
<td>- Students will learn about all aspects of the Sierra Madre including, plants, animals, geography and the local people of the area.</td>
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<td>- Students will learn about the need for having respect for all that surrounds them by using the Huichol Indian culture as a model.</td>
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<td>5TH</td>
<td>Earth Justice…because the earth needs a good lawyer</td>
<td>Earth Justice. What can we do as Malden citizens to help save our environment?</td>
<td>- Pairs of students will chose a topic focusing on environmental concerns and research it. They will offer ways to help correct or reduce the problem.</td>
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<td>- A book will be composed by the students and put on display for use in the schools library.</td>
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<td>6TH</td>
<td>Immigration Unit</td>
<td>What is immigration? What are the positive and negative problems facing immigrants? Why did people settle in Malden? What is the impact on neighboring communities?</td>
<td>- Field trips to Freedom Museum, Malden Cemetery, and bus tour around the neighborhoods in Malden.</td>
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<td>- Speakers from the Malden community and the Malden Historical Society.</td>
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<td>- Research on famous immigrants and their accomplishments in the U.S.A.</td>
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<td>6TH</td>
<td>Animal Behavior and Classification. Collaboration</td>
<td>How do we incorporate hands on activities to better serve the</td>
<td>- Hands on in class activities including such topics as bird beaks, owl pellet dissection and animal behavior.</td>
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<td>- When possible animals from the zoo will visit</td>
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<tr>
<td>GRADE</td>
<td>NAME OF PROJECT</td>
<td>What is the ESSENTIAL QUESTION?</td>
<td>HIGHLIGHTS/ACTIVITIES OF THE PROJECT</td>
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|       | with Stone Zoo. Weather Projects | learning diversity of our special needs students? | the classroom.  
-A field trip to the Stone Zoo will give students opportunities to observe and record animal behavior.  
-Prior to field trip students will make enrichment items that will be given to the zoo animals on the day of their field trip. |
|       | Interdisciplinary Bread Unit | What is the significance of bread in our lives and in the lives of others? | -Students will learn all about the chemistry of bread making. It will be interdisciplinary.  
-Students will visit Piantedosi’s Bakery and learn about all aspects of the company.  
-Students will be making bread and serving at the Bread of Life meals.  
-Students will be producing their own documentary for MATV to highlight all aspects of this unit. |
| 8TH   | Recycling Project | Give it Back. What is mankind’s responsibility to preserve? | -8th grade students will articulate and inform the younger grades about recycling and how to recycle in the school.  
-8th grade students learned all about paper and made paper with 1st grade students.  
-Students also wrote articles for the Beebe Buzz about recycling and making paper.  
-Made and hung posters around the school about why it is important to recycle.  
-The end result will be a working recycling program for the entire Beebe School. They began recycling paper. |
**APPENDIX K: GREEN SCHOOL GUIDELINES**

(Developed by ANEI and based on the CO-SEED Program Model)

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### Green School Snapshot, Quick Self-Assessment Tool for Schools

<table>
<thead>
<tr>
<th>Major Green School Element</th>
<th>Green School Snapshots</th>
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<tbody>
<tr>
<td><strong>Educational</strong></td>
<td></td>
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<tr>
<td>Community focus</td>
<td>Environmental literacy and sustainability</td>
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<tr>
<td><strong>Sustainability</strong></td>
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<td>School grounds</td>
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<tr>
<td><strong>Leadership &amp; Management</strong></td>
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<td>School Community</td>
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The full version of these Guidelines is available on the ANEI web site at http://greenschools.SchoolsGoGreen.org