



A Theme-based Magnet School

PROPOSAL

May 8, 2007

For Jeanne Collins

*From Shelburne Farms' Sustainable Schools Project (SSP)
and Burlington Legacy Project*

What do we mean by Sustainability?

“improving the quality of life for all – economically, socially, environmentally – now and into the future.”

ABSTRACT

Burlington is currently charged with promoting student equity and academic excellence for all students – this is a challenge and an opportunity. Shelburne Farms’ Sustainable Schools Project (SSP) in collaboration with Burlington’s Legacy Project respectfully submit this proposal for a Sustainability-themed Magnet School rich in science and community problem solving to support Burlington in meeting this challenge. A Sustainability-themed Magnet School would be standards-based and integrative allowing for curriculum to connect disciplines and offer opportunities for unique collaboration between teachers. Shelburne Farms’ Sustainable Schools Project, working with the Burlington School District, teachers, parents and community partners would support the planning and implementation of the magnet school. Sustainability as an overall approach gives us a framework to address education in the context of social equity, economic vitality and environmental integrity. The K-5 elementary school would serve Burlington’s youth, families and community and be a “learning laboratory” that would promote excellence in all Burlington schools, informing and inspiring communities around the globe. Students would be engaged in hands-on, experiential learning in their own communities while building an understanding of real problems, skills, and content in a larger global context. The magnet school’s curriculum, integrated around the common theme of sustainability and community, offers opportunities for deep learning in science, foreign languages, communication skills and the humanities. Overall, the budget for the magnet school would be similar to other elementary schools, with the addition of foreign language teachers, a dedicated SSP staff person, and capital investments to the building to reflect the focus on sustainability.

MAGNET SCHOOLS

The magnet school concept, while an enormous breakthrough 20 years ago, needs to be updated to meet new realities. Magnet schools should be expanded and universalized, and begin to focus on the needs of youth, their families, and the community.

WHY A THEME-BASED MAGNET SCHOOL?

- ★ To support economic integration of Burlington schools
- ★ To promote academic opportunity and excellence for students and teachers
- ★ To improve student learning and the development of critical thinking skills and behavior so students may become active and engaged citizens
- ★ To offer multi-age teaching and learning opportunities
- ★ To improve and deepen teacher practice and collaboration
- ★ To build stronger community partnerships
- ★ To encourage parent/family involvement
- ★ To offer seamless educational instruction with extended-day services
- ★ To enhance the curriculum; especially in science

From **Building Burlington's Future**

A magnet school is a public school that draws students interested in specific subjects such as the arts, public service, or sciences, or a special teaching method. Examples could include: a school that was technology rich; a school that had a well developed content focus on science and/or mathematics; a school with a business focus; a school that placed a strong emphasis on writing or the performing arts or social justice; a school with a project-based, student-inquiry approach; a school with a targeted, sequential skills instruction; a school that had a unique approach to the early grades such as offered by the High Scope or Regio Emilio models of early childhood education. Themes and/or pedagogies are often determined with broad community input.

A magnet program would aim to reduce or prevent the isolation of a certain group of children and youth by attracting parents to choose the school because of its programmatic focus.

Magnet schools were originally started in the hope that their geographically open admissions would end the type of racial and class segregation that happens when student assignment is based on neighborhood districting.

A THEME-BASED MAGNET SCHOOL IN BURLINGTON

GOAL To create a school (or a school within a school) with a distinct curriculum, instructional approach, and cohesive vision in line with the District's goals, state and local curriculum and assessment, and Burlington's unique culture and character. The school would build upon the successes of Shelburne Farms' Sustainable Schools Project (at Lawrence Barnes and Champlain Elementary) and current BSD efforts in improving curriculum, instruction, and student achievement.

GUIDING PRINCIPLES

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 resilience 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 absorbing 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. It 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)

PEDAGOGY *"... the essential question [of the unit] connected the whole theme back to community and our lives, the neighborhood, personal choices, our lives in our community, and our lives as part of the global world. This helps children move from their own neighborhood, environment, and sense of place to their place in the greater world."*

- Burlington Administrator

Learning would be project-based, place-based, and use a student inquiry approach. Student learning would be informed and directed by community issues and student interests. Sustainability concepts—such as diversity, interdependence, and cycles—would drive the curriculum and essential questions for each grade level. A learner-centered focus would allow for students to explore relevant and meaningful issues to fully engage them. A science curriculum embedded in community problem-solving would be integrated, rigorous and standards-based. Integration of disciplines would allow for deeper student learning and engagement, fruitful collaboration among teachers and authentic connections with the community.

EMBEDDED PROFESSIONAL DEVELOPMENT AND IMPROVING TEACHER PRACTICE

Professional development for teachers would be directly linked to BSD's current professional development goals and strategies, including the use of professional learning communities. Teachers would continue to use and build their knowledge and skills in *Understanding by Design* and through sustainability themes would link content to authentic community needs and opportunities. Professional learning communities will provide the opportunity to improve practice through a sustained cycle of collaborative curriculum design, implementation and reflection.

"I've never worked so hard before in my life, but it has never been so worth it. What these students are learning and doing is real. This is real education. I've always wanted to teach this way, but never took the time."
- Burlington teacher (paraphrased by SSP staff member)

"We are really building a community in this school. In the last couple of years the community in the school has gotten a lot closer and easier. I see a big difference in how parents come in and how kids expect to treat each other and the environment."
- Burlington teacher

"[Teacher's name], her whole way of teaching and structuring has changed, and it's been very powerful and exciting."
-One teacher's observation about SSP's impact on her fellow teacher

SUSTAINABILITY AND COMMUNITY CONNECTIONS

The theme of sustainability is perfectly tied to the city's focus and reputation as a livable, healthy, green city and the mission and expertise of many community organizations. A sustainability theme and the pedagogy of education for sustainability offer meaningful community connections and partnerships with staying power (see Shelburne Farms' SSP description). The city of Burlington, community partners and BSD will strengthen their ties and transcend the boundary of school walls to use the community as a classroom.

In place-based education, the community becomes the curriculum. One of the key ideas is that when one has developed an attachment to one's place and the skills to act upon that attachment, an individual will 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. According to Robert Putnam (2001), author of BOWLING ALONE, social capital refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit. An intensification of social capital then leads, in the long run, to healthier communities, both natural and social. This construct is an essential part of the theory of change embedded in the SSP logic model...
(SSP PEEC Report 2003-2004)

AUTHENTIC STUDENT LEARNING

Students who are genuinely engaged show a decrease in behavior challenges, and while the theme of sustainability alone is not compelling to young students, the projects and content that emerge are rich, diverse, and meaningful to students and teachers. Research shows, and anecdotally we know that all students thrive in an environment that is engaging and related to their lives. The integrative concept of

sustainability provides teachers ways to link content to the real world so that it reflects daily living, thus offering students the opportunity to discover the “wonder” behind such practices as composting, energy conservation or civic engagement.

The link between student motivation and achievement is straightforward. If students are motivated to learn the content in a given subject, their achievement in that subject will most likely be good. (Marzano, 2003, p. 144)

Several SSP teachers were explicit about the positive impacts that hands-on and sustainability-related work had on students with special needs. These students may be recent immigrants learning English, those with social and emotional challenges, or those with developmental delays.

(PEEC Cross Program Evaluation Report 2002-2003 p46)

“The kids have told me that they feel invested in the health of their neighborhoods. They are proud of their community improvement projects and understand the importance of maintaining clean, safe neighborhoods.”
-SSP community partner

“I think SSP helps our students look at the world in a different way, and I think [SSP staff] will help to empower them. They’ve begun to do that and I think that their program will continue to help students to know that they can make a difference. Whereas I think that’s important for any child, it’s about four times as important for our children because they are disenfranchised. ...most of them live in poverty...so I think it’s critical for them to feel like they could be empowered to be a citizen.”
- Burlington teacher

A PARTNERSHIP IN LEARNING

The magnet school would be developed and implemented by Burlington School District in partnership with Shelburne Farms’ Sustainable Schools Project (SSP), teachers, students, families, and community organizations including the city of Burlington and the Legacy Project.

Over the past five years, SSP has been working in partnership with more than 30 community partners to enhance curriculum and campus ecology/practices, including the Intervale Center and local farms, Center for Community and Neighborhoods (CCAN); the University of Vermont, City Market, Community Works Journal, Linking Learning to Life, Vermont Forum on Sprawl, Our Curriculum Matters, and many local businesses and volunteers.

POTENTIAL TIMELINE

Spring 2007:	School Board/community support of concept Assign task force to oversee development
Summer 2007:	Develop more detailed proposal for discussion with major funders Professional development for teachers offered through Shelburne Farms’ SSP
Fall 2007:	Presentation to public and broader school community Secure funding Develop curriculum map and evaluation tools Professional learning communities begin for magnet school
Winter 2008:	Identify principal, staff and teachers

	Identify and fund needed capital improvements
	Student registration
Summer 2008:	Continue teacher professional development
	Construction of capital improvements
Fall 2008:	Sustainability-themed magnet school begins first year

WHAT WOULD A TYPICAL DAY LOOK LIKE?

Sample Curriculum Overview

Kindergarten through Second Grade

Students and teachers focus on developing a sense of place, an awareness of the natural world and of themselves in context of the surrounding communities. This understanding and appreciation will enable students to be better stewards of their community.

In Second and Third Grade

Students and teachers develop a deeper understanding of the local environment and culture by exploring the neighborhood that surrounds the school and by discovering how the world is interconnected.

In Fourth and Fifth Grade

Students and teachers learn about community needs, personal and group responsibility/teamwork, and decision-making. Students explore their local community and the natural communities that support their neighborhoods. The skills student gain and refine over the year help them understand real community issues and address them through service-learning projects.

The cafeteria is buzzing at 7 a.m. Families arrive early to participate in the breakfast program where students indulge in a healthy meal and engage in interactive activities that help them understand the life cycle of their food and how it got to their plate. Each morning the early care program offers fun hands-on activities that build students' knowledge and skills in science and language. The cafeteria and the meals provided reflect the students' understanding: the walls are decorated with "food art" and messages about keeping young bodies and minds healthy. All the meals served contain fresh produce, whole grains, and local products, and offer teachers countless curriculum connections. Later in the day older students and an Intervale farmer will be offering taste tests of a new recipe using local carrots.

Families and teachers take advantage of the early start to the day and several parents meet in the community room to plan the upcoming "Harvest Event". The diverse group includes

community members and organizations whose mission relates to the school's focus of sustainability, science and the global/local context. They meet regularly to host events and develop a weekly newsletter about school happenings and opportunities.

When the bell rings for classes to begin students make their way to classrooms that are vibrant and dynamic. The curriculum focus and character of each class is reflected in the way the room is structured and the resources inside. For example, the second grade classroom focused on interdependence (how the world is interconnected). This morning they are beginning a unit of study on natural resources, including water and the animals that depend on water for survival. The living ma-

chine (a model water ecosystem) bubbles in the corner and will become the central focus for the inquiry-based science lesson. Tomorrow a visit to ECHO will focus on amphibians and build students' knowledge of animal life cycles for their reports on frog life cycles. The reports will be developed into an informational brochure for homeowners who live in the vicinity of vernal pools. Each unit weaves into the next under the year-long essential question, "How do our lives depend on Lake Champlain?"

Every teacher is involved in a professional learning community and has multiple opportunities to hone their craft through workshops, week-long summer institutes, internships with local organizations and after-school study circles. At 3 p.m. teachers meet in the community room/lab to discuss a piece of student work. Using the Critical Friends Group protocols each teacher has the opportunity to bring in a piece of work and get feedback from their colleagues. Today, the 4th grade teacher has brought in a student report and wants to know how she/he can help improve the student's development of a conclusion paragraph that exceeds the standard.

At the same time that the teachers are meeting, students are engaged in the after-school programs, which are rich and diverse and support the classroom curriculum. The programs range from language study in the community to gardening and cooking. Each student begins the afternoon with free time in the school's playground, which has elements that promote physical health and reflect the natural ecosystem, including a small fish pond and native plants garden. The after-school programs offer students the opportunity for extended service-learning projects in and with the community as well as in the school.

PARALLEL OPPORTUNITIES

- ★ Coordinate efforts with the Parent and Community Involvement Coordinators
- ★ Offer extended school day program including after school programs and early care services connected and coordinated with the classroom curriculum
- ★ Coordinate and offer summer programs
- ★ Strengthen district-wide implementation of Shelburne Farms' Sustainable Schools Project. The magnet school would serve as hub for strengthened place-based and science curriculum, foreign language learning, and green school practices
- ★ Coordinate evaluation with the Place-Based Education Evaluation Collaborative (PEEC) partners

RESOURCES AND RESEARCH

Resources:

<http://www.yaleherald.com/article.php?Article=4834>

Common Ground and the Barnard School in New Jersey are charter and magnet schools respectively that use the environment as the integrating context.

http://www.anei.org/pages/615_beebe_health_and_science_magnet_school.cfm

http://www.promiseofplace.org/stories_from_the_field/case_study.php?id=2

Beebe Environmental and Health Science Magnet School is a K-8 school in Malden, Massachusetts, an urban community outside Boston.

Research:

http://www.promiseofplace.org/why_pbe_matters/closing_the_achievement_gap.shtml

Closing the Achievement Gap: 40 schools in 12 states (California, Colorado, Florida, Iowa, Kentucky, Maryland, Minnesota, New Jersey, Ohio, Pennsylvania, Texas, Washington) that have designed entire school curricula and structure around using the local community and natural resources as the context for learning.

http://www.promiseofplace.org/why_pbe_matters/research.shtml

The research summarized examines place-based education projects from across the country.

THE THEORY AND FRAMEWORK OF SSP AND EDUCATION FOR SUSTAINABILITY

Goals and Strategies of Shelburne Farms' Sustainable Schools Project

Goals:

- Improve student learning
- Increase student engagement in their communities

Strategies:

- Curriculum connections
- Community partnerships
- Collaboration
- Campus ecology

More than twenty years ago Shelburne Farms made a commitment to work with Burlington Schools and community partners to enrich teacher practice and offer a hands-on experience to thousands of school-aged children and their families. Shelburne Farms has offered professional development opportunities, educational resources, funding, as well as field trips and in-class teaching support.

Most recently, Shelburne Farms has impacted teacher practice, student civic engagement, and community members' involvement in education through the development and funding of the Sustainable Schools Project (SSP). This innovative, whole-school model uses sustainability as an integrative concept for curriculum development, campus ecology improvements, community partnerships, and

teacher collaboration. While SSP's pilot sites are Champlain and Lawrence Barnes Elementary Schools, the project staff has supported teachers at all of the districts schools through professional development programs and specific content-related projects, including the Burlington School Food Project and the 4/5th grade curriculum *Healthy Neighborhoods/Healthy Kids*, and study circles/Critical Friends Groups.

Working with PEER Associates as part of the Place-Based Education Evaluation Collaborative (PEEC) , SSP is also part of a rigorous evaluation focused on student engagement and teacher practice. (see www.peecworks.org for evaluation reports on SSP)

EDUCATION FOR SUSTAINABILITY SUPPORTS LEARNING THAT:

- ★ Is focused on both the global and local context. Opportunities exist for local and global stewardship, foreign languages (Mandarin), and international partnerships.
- ★ Ensures meaningful and long-lasting partnerships with community organizations and other communities and schools.
- ★ Is integrated and interconnected. Under the umbrella of sustainability, it is natural and synergistic to integrate current BSD efforts (including Responsive Classroom, curriculum development using *Understanding by Design*, and literacy and science efforts) with place-based pedagogy, service-learning, and community/parent interests, including food, farming and nutrition education, improving school food, and campus ecology and green school practices.
- ★ Includes parents and families in both in-class and after-school activities.
- ★ Is deeper and more complex than traditional environmental education. It is linked to, and shows the connection between social equity, economic vitality of communities, and environmental integrity.

SHELBURNE FARMS' SSP SUCCESSES TO DATE

TEACHER OUTCOMES

Teachers are increasingly:

- ★ Using essential questions to plan and teach their students throughout the year. *(from PEER Associates evaluation)*
- ★ Creating units of study that weave together various disciplines, often using concepts of sustainability as an integrating theme. *(from PEER Associates evaluation)*
- ★ Connecting their curricula with that of other classrooms, including special subjects such as art, physical education, and music, and across the grade levels. *(from PEER Associates evaluation)*
- ★ Participating in study circles that use Critical Friends Group protocols to build professional learning communities in individual schools and across the district.
- ★ Connecting their curriculum to the community and the theme of sustainability; 90% of Champlain teachers reported that their students are learning outside the school walls more than they did prior to SSP.

- ★ Developing science units that are inquiry based and directly connected to the standards and grade expectations.
- ★ Developing authentic and ongoing assessments for sustainability units.

STUDENT OUTCOMES

Through SSP work, students are exposed to diverse new places in the community, and – equally as important – they begin to develop a deeper understanding of places they already knew. This exposure comes on various levels: a greater awareness of schoolyard flora and fauna, increased knowledge of the different groups that make up a neighborhood, and heightened insight into the ways that a business fits into the local economy. *(from PEER Associates evaluation of SSP at Champlain)*

SCHOOL OUTCOMES

- ★ Healthy Neighborhoods/Healthy Kids Project, designed to introduce concepts related to community design, public safety, civic engagement, and personal health, focusing on the relationship between the “health” of our neighborhoods and our personal well-being, implemented in the 4th/5th grades at Champlain, Lawrence Barnes and H.O Wheeler
- ★ Literacy Kits developed for informational text sets with Jane Miller, District Literacy Coordinator
- ★ After School Program manual developed for Burlington schools and community partners
- ★ Enhanced cafeteria and campus ecology practices in partnership with the Burlington School Food Project partners and Chittenden Solid Waste District
- ★ Partner with Barnes PTO and Food and Wellness Committee

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