

Introduction

At Shelburne Farms, we believe that early childhood education is the ideal place to begin creating a culture of sustainability. Young children are naturally curious and creative thinkers. They have a sense of wonder and awe about the world around them and are eager to explore. Early childhood education represents the beginning of formal education and provides an opportunity for children to develop a solid foundation of skills and attitudes upon which all subsequent learning will build. As educators, we can guide children's explorations through experiences set in nature, food, and community to foster a connection and conservation ethic between young children and the world.



Cultivating Joy and Wonder: Project Seasons for Young Learners

was developed to document and share the pedagogy, practices, and activities of Shelburne Farm's early childhood programs, and to further promote and define Education for Sustainability (EFS) in early childhood education. From working with the state of Vermont to write the first Sustainability and Understanding Place learning standards in 2000, to being a lead partner in the nation's first sustainability-themed magnet elementary school in Burlington, Vermont, Shelburne Farms has advanced and shifted the educational paradigm to include sustainability. Because of this work, Shelburne Farms has been recognized as a global leader in Education for Sustainability.

This guide begins by describing the foundation and framework of early childhood Education for Sustainability (EFS). We share our rationale for using nature, food, and community as the settings, or context, for early childhood EFS; and identify some EFS teaching and learning strategies. Stories, snapshots, and tips from educators and practitioners will give readers a sense of "what it looks like" and inspire educators to transform their own practice, program, classroom, or school. Although this guide was developed in Vermont and reflects our culture, landscape, and climate, most of the activities, recipes, and resources are easily adaptable. Use what makes your place unique to adapt this guide to suit your needs.



The Threads are themes of exploration that are built around big ideas and essential questions. These Threads guide seasonal adventures and explorations. Throughout each of the four Threads, activities are interwoven to include both self-guided learning opportunities and Facilitated Learning Experiences that flow throughout the seasons.



We believe that the deepest learning comes from asking good questions and allowing the learner to discover the “answer” to those questions in meaningful and relevant ways.



Each Thread provides a template for organizing your curriculum, learning experiences, and classroom. They are designed to encourage the discovery of the natural world, food systems, and community in an integrated and emergent way, through the use of essential questions and big ideas. We believe that the deepest learning comes from asking good questions and allowing the learner to discover

the “answer” to those questions in meaningful and relevant ways.

For classroom-based educators, each thread could become the basis of your curriculum for an entire year, or the Threads could also serve as resources to explore children’s emerging interests—in any order. Whether you are seeking to immerse students in an ongoing exploration, or are simply looking to identify an activity to use with students on a particular topic, this section will provide you with the clarity and focus to guide children’s learning. Likewise, farm-based educators can use this guide to design educational opportunities that relate to classroom curriculum through the use of big ideas, or gather ideas for setting up an outdoor classroom for school groups and families visiting their farm. Families may find inspiration throughout the Threads, either for setting children up for unstructured play at home, or for more planned experiences with their children.

Early Childhood Learning Standards and Developmentally Appropriate Practice

We believe education is at its best when it is emergent and driven by children’s interests and place. We’ve designed multiple opportunities within each Thread and Facilitated Learning Experience to meet state and national learning standards while leaving room for emergence and student interest. Early childhood learning standards primarily address the skills, knowledge, and attitudes young children need to develop for success in forthcoming years. This guide has been created with consideration of the NAEYC curriculum standards, NAEYC Developmentally Appropriate Practice (DAP) guidelines, Teaching Strategies GOLD Objectives for Development and Learning, and the Head Start program. We urge educators who are not already familiar with these standards and guidelines to become familiar with them. Most are available online.

Education for Sustainability in Early Childhood Education

When we say sustainability, we're simply using a term that for many cultures represents an age-old tradition: Improving the quality of life for all—economically, socially, environmentally—now and for future generations. Education for Sustainability (EFS) works to nurture the development of citizens engaged in creating sustainable communities.

An Education for Sustainability framework based on the work of Shelburne Farms' Sustainable Schools Project (see Figure 1), describes EFS as, “education that cultivates in students an understanding that the world is interconnected, that builds knowledge of the students’ human and natural communities, and provides students with opportunities to make a difference through service-learning.” With each lesson

learned, students develop their own understanding of the connections in their communities. Students’ personal appreciation and experience of interdependence build a foundation of understanding that will grow as they do, supporting global decision-making in their future.



Figure 1. Education for Sustainability Framework
(Sustainable Schools Project)

Education for Sustainability

is learning that links knowledge, inquiry, and action to help students build a healthy future for their communities and the planet. It helps teachers bridge grade levels and subject areas, curriculum and school operations, and parent and community partnerships.

— Shelburne Farms' Sustainable Schools Project

Learn more about Education for Sustainability at the Sustainable Schools Project's website:
www.sustainableschoolsproject.org



Education for Sustainability connects the larger goal of improving the quality of life for all with the learning experiences we provide for our children. While the term *Education for Sustainability* may be new to many educators, the concepts that



“One of the most significant responsibilities that [early childhood] professionals have is to support children to retain the sense of awe and wonder that they are born with, to add to that desire to nurture and protect what is beautiful, and to encourage them to appreciate that there are many possibilities for honoring life and wonders that the world holds.”

— Stonehouse, 2006
from the New South Wales, Australia Curriculum Framework 73

have identified some Big Ideas that help frame curriculum, projects, and build toward student understanding. For the purpose of this guide we have used:

- Change over time
- Community
- Cycles
- Diversity
- Fairness/Equity
- Interdependence

In early childhood education, an emphasis on care—for oneself, one’s community, and the land—takes precedence. Sustainability is about respect, responsibility, and reflection and can be a wonderful integrative theme to make sense of the world.

underlie EFS are not. Elements of EFS have been a part of the fabric of education philosophy and pedagogical approaches for hundreds of years.

We like to think of EFS as an integrating lens or theme. Imagine a hand lens you use to look at the world that illuminates the connections between the economy, the environment and social equity. Essentially, EFS reintegrates our view of the world, so we see the parts as well as the whole, and allows us to consider multiple perspectives. When applied to education, this *lens of sustainability* allows us to see the interconnections between curriculum, campus practices and ecology, community and family partnerships—education as a whole.

The term *sustainability* is an abstract concept for young children to grasp. One approach to helping children understand sustainability is to instead focus on smaller chunks, or what we call the *Big Ideas of Sustainability*. These concepts make the complexity of sustainability accessible to even the youngest learners. Shelburne Farms and our partners in EFS

The threads in this book are organized by the Big Ideas of Sustainability. Each thread focuses on one or two Big Ideas and provides ample opportunities for children to deepen their understanding over time. Some of the Big Ideas, like fairness, may not be explicitly taught, rather, they emerge as children discuss and discover what makes their classroom community fair and just. Other Big Ideas, like Change Over Time, may be the focus of classroom curriculum and revisited as the seasons change and new learning emerges. It's important to note that young learners are not expected to master these ideas. The goal is to allow children to become familiar with these ideas and help them to construct a foundation upon which they will continue to build meaning and deepen their understanding as they grow and learn.

Ultimately, Education for Sustainability is about hope. We educate for sustainability because we believe we can improve quality of life, now and in the future. For this to happen, it is vital that children and adults see themselves as deeply connected to the world around them, and believe in their own capacity to create change. In early childhood education, the goal of EFS is to nurture young children's connection to the world around them. It is about cultivating the skills, knowledge, and understanding in young children that allow them to contribute to building sustainable communities.



WHAT'S THE
Big Idea?

The Big Ideas of Sustainability

Change Over Time: All organisms, places, and systems are constantly changing.

Community: A group of living and non-living things sharing a common purpose or space.

Cycles: Every organism and every system goes through different stages.

Diversity: All systems and places function because of variety.

Fairness / Equity: Organisms must share resources to meet the needs of living things equally, across places and generations.

Interdependence: All living things are connected. Every organism, system, and place depends on others.

One Step at a Time: Our Education for Sustainability Journey

Sustainability Academy Kindergarten teachers Julie Benz and Sue Blair share the story of their professional journey of becoming teachers of EFS.



Julie Benz and Sue Blair

It's hard to believe it's been ten years since our school began its transition toward education for sustainability. In that time, we've moved from being a neighborhood school, Lawrence Barnes Elementary, to being a district-wide magnet school, the Sustainability Academy at Lawrence Barnes. There have been so many changes. At times, it feels like we have so far to go, but when we stop and look back, we really have come a long way.

When we first started talking about sustainability we remember not getting it. Our school had partnered with Shelburne Farms, and we had professional support, fantastic Farm educators in our classrooms working with us, and we were trying to understand, but we still didn't get it. It was like our teaching was *here*, and sustainability was *there*, almost like a separate subject to teach. But then we realized that it's not something separate—sustainability is a lens for looking at everything we are already doing. Looked at this way, we realize that it's often just a little tweak that moves our work toward EFS. We recycled paper before, but now we talk about why. We now see how areas of our curriculum line up with EFS, and how we can make it happen. It's a process, it doesn't happen overnight. We take small steps.

As a public school, we have a lot of curriculum requirements for what we have to do and when. It can feel like a big weight on our shoulders. But by thinking about the “tight” and the “loose”—the things we can't change and the areas where we have some flexibility, we've been able to do things differently. We always have the curriculum in the back of our mind, we know what we have to cover, but we ask ourselves: can we use an inquiry-based approach? Can we do this outside? How does this connect to the Big Ideas of Sustainability? How can our students have a voice in what we do?

When Sue switched to kindergarten three years ago, it launched our team, and having a partner that you have a good working relationship with has been key to our success in EFS. We learn from each other, we push each other. Neither of us feels like we're on our own. It's not scary going on a field trip with another solid adult you can depend on to care for your students. You know one class may be a little more challenging than the other but you can split them up, we can do this together.

Our essential question for the year is “What is a community?” and we feel it's really important that our students know what our classroom community is—that it's not two separate classrooms, but one community. At first, we ran our two classes separately, but now we're doing something new. This year,

from the beginning, we merged our children back and forth together. In thinking about our curriculum focus on community, there's the concrete focus, like when we do our community helpers unit, but there's also a representation of our big idea in the way we manage our groups. Not only are children learning what a community is, they're experiencing that we're a community, we work together, and all the adults in the community care about us. We are a kindergarten community and we started being one on day one.

We also began our outdoor classroom adventure. We had been inspired by a workshop we had attended at the spring 2011 Vermont Kindergarten Conference where we learned about another kindergarten class who spent their Fridays outside. After that initial workshop we started thinking about how we could get outside and connect our children with nature, and use our natural playground. Immediately our minds went to the roadblocks. Scheduling was a huge barrier: we needed a block of time where both classes could be free from specials and services to work together, and we needed some common planning time. So we went to our principal, and he made that magic happen. We established our gathering spot, and met there every Friday morning. This year, our second year, we brought our children outside from the beginning. We don't go out every day, but we're not limited to Fridays.

We've made a lot of progress in our curriculum as well. We try to integrate subjects whenever possible, for example, by including a literacy connection into our morning meeting that connects to our major unit, like our butterfly life-cycle unit at the beginning of the year. We use our school garden for sit spots. We try to close our outdoor classroom program every week with a sit spot activity where the children find a spot to sit in and take time to use their "owl eyes," then write a reflection in their Science Nature Guide on cardboard clipboards. We find ourselves easing up a little bit on some of the curriculum—we've realized that our children need to have some free exploration time. We're giving ourselves permission to do that now. And yes, we're not anywhere as close to where we were in our curriculum last year at this time, but our children are engaged and they are learning.



So we've slowed down. This year, from the very beginning of school, we've spent less time on content and more time on our community. And you can't grade this. When our children come inside on Fridays, after having spent all morning outside playing and exploring, we have great afternoons. They're happy; their energy levels come down; their behavior is better: they're ready to learn.

Our next goal is to find a block of time every day for this to happen. One more step on this journey, one small change at a time.

Nature, Food, and Community: The Why, What, and How of EFS in Early Childhood

“Learning is way more than words on a page. It’s water moving around our boots. It’s mud and cold. It’s all these sensory dimensions in the real world we’re part of. If it’s rivers kids are learning about, then standing in one and turning over stones to find stoneflies teaches in new ways that connects them. They gain new respect for the river. They have opportunities to see themselves as a part of something that has a long history and a long future. They become more hopeful. Through the experience they learn to become stewards.”

— Michael Quinn, *White River Junction, Vermont,*
from the *Promise of Place Report Card*

Fact Sheets from the Children, Youth and Environments Center for Community Engagement, 2011, University of Colorado at Denver and Health Sciences Center

- *Benefits of Nature for Children*
- *Benefits of Gardening for Children*
- *Students Gain from Place-Based Education*

- **Last Child in the Woods**
by Richard Louv. *Algonquin Books, Chapel Hill, NC, 2008.*
- **The Nature Principle** by Richard Louv. *Algonquin Books, Chapel Hill, NC, 2012.*

We are all connected: to nature, to food, to our communities. Understanding and nurturing these connections begins in early childhood and is cultivated through joyful encounters that inspire wonder and curiosity. In order to care for the world—from our backyards to the other side of the globe—we must first get to know and fall in love with it. Establishing a deep connection to our place through joy and wonder provides the foundation for developing an attitude of stewardship and responsibility. (*Wells & Lekies, 2006*). We have chosen to root our early childhood EFS learning experiences in the contexts of nature, community, food, and fiber, as these provide relevant and engaging contexts in which children can explore the Big Ideas of Sustainability and foster essential connections to their place.

Nature

Richard Louv’s work on Nature Deficit Disorder has brought widespread attention to each ensuing generation’s weakening connection to the natural world. Humans, as part of the natural world, are inherently connected to all that is wild. Yet children are growing up with fewer neighborhood places in which to play and explore. There is more parental fear of outdoor hazards and crime. The call of electronic media is constant and pervasive. Yet, there are proven benefits of time spent outdoors, including an increased ability to focus, increased emotional wellbeing, improved motor skills, increased creativity, reduced symptoms of ADD and ADHD, and an increase in stewardship behavior. (*Children, Youth and Environments Center for Community Engagement, 2011*)

Anyone who has ever seen children catching frogs, chasing fireflies, or making mud pies doesn't need research to understand the value of outdoor play. In our forty years of teaching outdoors, we see children flourish in natural outdoor spaces. Each season, we hear from amazed teachers who report that the most engaged of these children are often the same students who struggle in a traditional classroom. Nature begs for engagement and provides a space for active learning.

Food

Everyone eats and throughout our lifetimes, each one of us develops a personal relationship with food. It is literally what sustains us. In the United States we are experiencing an unprecedented childhood obesity epidemic. Many children live in food-insecure communities where access to food, especially healthy and fresh food, is limited. In the wake of an industrialized food system, our society has lost its connection to the origins of our food. The recent surge of interest in organic food, farmer's markets, and eating locally are evidence of our yearning for connection to our food and the need for sustainable and healthy alternatives. Education is the key to creating a sustainable and healthy food system. Children who have a chance to grow, harvest, prepare, and eat healthy food are more likely to make healthy choices on their own. (*Children, Youth and Environments Center for Community Engagement, 2011*). And when children have a chance to experience the food chain from seed to plate to compost to garden, they develop an innate understanding of life cycles and interdependence. Cultivating a healthy connection to food, food systems, and fiber is essential so that young people can develop the habits that will help them grow into healthy strong adults.

Community

Our connections to the people, animals, and plants around us make us who we are. Humans are not a solitary species; we need one another to survive. In the same way that children need opportunities to get to know the natural world so that they can develop a strong relationship with it, they need that same opportunity to connect

Vermont FEED



Vermont FEED (Food Education Every Day) works with schools

and communities to raise awareness about healthy food, the role of Vermont farms and farmers, and good nutrition. It act as a catalyst for rebuilding healthy food systems and to cultivate links between classrooms, cafeterias, communities, and local farms. Vermont FEED is a partnership of the Northeast Organic Farming Association of Vermont, Food Works at Two Rivers Center, and Shelburne Farms.

www.vtfeed.org





with the human and human-made community that they are a part of. When children develop a strong relationship with their community at an early age, they grow up knowing and feeling a strong sense of belonging. They also often display more responsible behavior, stewardship, and civic engagement. (*Children, Youth and Environments Center for Community Engagement, 2011*) Providing young children with a chance to explore and connect with their community builds the foundation for a strong relationship to their place.

To educate for sustainability, we usually begin by helping young children develop a relationship with and connection to the world around them, through nature, food, and community. While there is no one way to do that, what follows are some emerging teaching and learning strategies that we have found very promising.

Early Childhood Education for Sustainability: Teaching & Learning Strategies

In early childhood, Education for Sustainability builds on a child's natural curiosity and sense of wonder about world around him or her. Its purpose is to cultivate a connection to the world based in understanding, joy, and wonder. It is through exploring and connecting with nature, our food, and our community where young children grow to understand, experience, and live sustainably.

Early childhood Education for Sustainability is an emerging field that combines the most promising of early childhood educational strategies with the practices and pedagogies of Education for Sustainability. Early childhood EFS focuses on a play-based, place-based, emergent, and culturally relevant curriculum. Curriculum is also integrated and interdisciplinary, allowing more relevance, meaning, challenge and purpose, and bringing a breadth and depth to education that isolated disciplines can't provide.

Early childhood EFS, like early childhood environmental education, focuses less on the knowledge and application of skills, and more on developing a young child's values and attitudes about the world around them. Environmental Education and EFS are closely related to one another and often have similar intended outcomes—a healthy and just future and an improved quality of life. Education for Sustainability has its roots in Environmental Education and draws heavily from it. The North American Association of Environmental Education published guidelines for early childhood environmental education that state “Personal perceptions, attitudes, and connections with nature are the key goals at this stage, and facilitating positive experiences varies from child to child. These guidelines emphasize the development of individual feelings, beliefs, and inner unity with nature that are so critical in the early years.” (NAAEE, 2010. p.3) Early childhood EFS expands on these goals to include the relationships between environmental, social, and economic justice as well.



Play Comes Naturally

Laurel Bongiorno, PhD, Program Director, Education and Human Studies Division, Champlain College



Laurel Bongiorno

When asked to think of a favorite childhood memory, many adults return to an experience of outdoor play: collecting shells at the beach, diving into piles of crisp fall leaves, sledding down snow-crusted hills, or sinking into the deep cool of a lake to escape summer's heat. As adults, many of us continue to seek a natural connection, choosing to relax and rejuvenate by walking, hiking, snowshoeing, or just sitting by the ocean. We find ourselves deeply connected to nature, a connection forged in our childhoods through unstructured play in the natural world.

Will this generation's children have those same memories? Will they feel connected to the natural world? Will they find nature a place for peace and rejuvenation? Children need time to explore the outdoors and experience their natural surroundings. Children need time to develop their gross motor capabilities by running, jumping, and climbing. They need opportunities to make their own choices. And they need opportunities to play without structure. Where better to do all of this than in the woods, in a field, by a brook, or watching a worm or a butterfly? Yet less and less play is being seen in children's lives, and early childhood educators are being asked to be more and more accountable for children's learning.

Play and learning go hand-in-hand. When children initiate the play or choose freely to engage in play offered by others, they focus their attention on the play scenario; for example, playing the role of a vendor at a farmer's market. The child cognitively must know the appropriate setting and exchanges in a farmer's market. The child must know the language of the situation and may use terms such as organic, season, and harvest. In addition, the child uses small motor skills to bag the market goods and handle the money, and uses social and emotional skills to maintain the role of the vendor and play out the scenario with other children. Children learn in multiple domains through rich play opportunities like this one.

Children's play is their context for learning, their laboratory for understanding the world around them. The more open-ended and joyful the experiences children are offered, the more their curiosity and love of learning will be sparked. Play is also about discovery. Good science instructors have always understood that just telling students about a science concept is not enough, students need to engage and inquire directly—hence science labs. Consider play the same way. If children are interested in rocks, then take them outside to explore the geology of your area. If animals are capturing their interest, take them to a local farm, to wetlands areas, or to a forest to explore. Play is open-ended and so is scientific curiosity and discovery. Observing frogs on a pond, woodpeckers in the woods, chicks hatching in a classroom, ants working together, all delight children—and allow children to explore, examine, and predict.

Both classic and modern theorists and researchers support the connection between play and learning.

Jean Piaget focused on children's experiences with their surroundings, while Lev Vygotsky focused on children's learning through social interactions with peers and adults. Vygotsky considered play a preschool child's leading activity in regard to their learning and development. Maria Montessori considered children's play their work, emphasizing how ingrained play is in their whole being. Montessori also emphasized the importance of children being outside every day.

Contemporary theorist Vivian Paley links play and language and literacy development. Bodrova and Leong write about the rich learning opportunities offered in mature pretend play. David Elkind supports play and how children learn in multiple areas such as language and literacy, physical, social and emotional, and cognitive learning and development, yet he also highlights the joyful nature of child-initiated play. Joan Almon writes about the negative effects of the lack of play including increased anxiety and stress in children. Olga Jarrett writes about the lack of recess in the school setting and its effect on children's attention and ability to self-regulate. Dorothy Singer writes about parents across the world's consistent concerns about their children playing outside safely. Richard Louv addresses what he identifies as Nature Deficit Disorder and calls for a renewed connection to the natural world fostered through wild play.

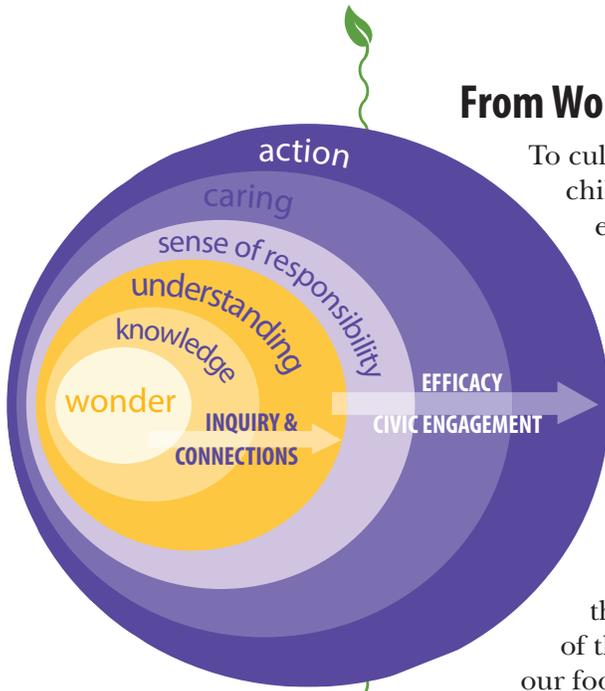
Children learn through interacting with their environment and applying their innate curiosity. Their natural actions are those of play. Play offers the opposite of didactic, direct instruction. Play is not about adults leading the way to address their own agenda. Play is about offering materials, environments, and opportunities for children to experience in their own time driven by their own curiosity. Play is joy, not drudgery.

To support children's understanding of sustainability it is important to keep play in mind. Offering opportunities for outdoor play will promote an essential connection to nature. Early childhood educators can offer opportunities for exploration of a variety of natural environments. They can offer play opportunities within the outdoor setting, and they can model relaxation and stress relief through walks outdoors or by being still and listening to the birds. They can expose children to everyday opportunities, such as tending a garden or feeding animals, or offer rich pretend play opportunities with props and vocabulary for these same activities. What is important is to keep the experience focused on opportunity, discovery, and play. As we remember our own outdoor experiences, we need to offer this generation of children the same opportunity to create their own memories of spontaneous, natural play.



We need to offer children the chance for spontaneous, natural play.

From Wonder to Action



To cultivate a conservation ethic in the early years, we engage children’s innate sense of wonder and curiosity as they explore the world through inquiry. We design curriculum that makes connections to relevant issues and to prior experiences. Ideally, we’re building students’ content knowledge, understanding of the Big Ideas of Sustainability, cultivating their creativity, and affirming their experiences. As children grow, this strong foundation of connection to their place develops a sense of stewardship. Through civic engagement and service-learning, we can deepen students’ sense of responsibility and encourage habits of caring and action.

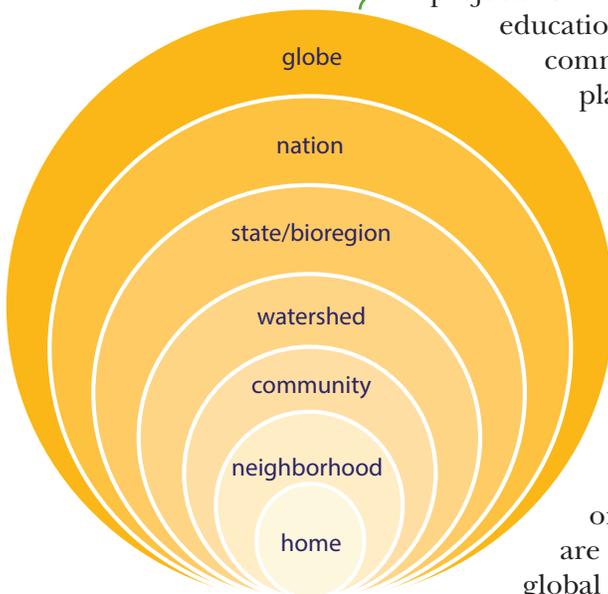
Figure 1 describes the developmental scope and sequence that moves children from wonder to action over the course of their lifetime. Through caring relationships with nature, our food, and our communities, we are capable of participating in, creating, advocating for, visioning, and engaging in a healthy and just present and future.

Figure 1. Moving from Wonder to Action

Special thanks to our colleague, Ewa Smuk, in Poland for helping us develop this graphic.

Place-based Education

Place-based education (PBE), or place-based learning, immerses students in local heritage, cultures, landscapes, opportunities and experiences, and uses these contexts as a foundation for the study of language arts, mathematics, social studies, science and other subjects across the curriculum. PBE emphasizes learning through participation in service projects for and with the local school and community. Place-based education expert David Sobel says, “authentic environmental commitment emerges out of firsthand experiences with real places on a small, manageable scale.”



Place provides the context for learning in Education for Sustainability. When children know and have a deep connection to their place, they are more likely to care for and contribute to making that place a better place for all to live in. Figure 2 describes the developmental scope of children’s ever-expanding sense of place.

Our youngest children focus first on home, their classroom, then their whole school, and community. As they grow, their awareness of place expands. By middle school, children are exploring the watershed and state or bioregion, and by the time they reach high school, they are able to build on their knowledge to consider national and global perspectives.

Figure 2: Home to Globe
(Sustainable Schools Project)

Service-learning

Service-learning, initiated and driven by students, provides a key strategy in EFS for fostering in young people a sense of agency, or an

Homework?

At this age?

As the push on academics makes its way further and further down into early childhood classrooms, many teachers of young children find themselves required to assign homework. Meg O'Connor, first grade teacher at the Sustainability Academy at Lawrence Barnes in Burlington, Vermont shares, a solution.



Julie Brown and Meg O'Connor

As the school year began, my colleague, Julie Brown, and I were drafting our back-to-school letter. When we got to the part about our homework policy and expectations, we started to question ourselves and our goals for sending work home in first grade. After reflecting on the more traditional homework we had been sending home, math and reading, we both realized that our students' school day is very long and demanding. Most of our students are at school from 8:00am–5:30pm. We wanted to find a way to connect our school day to our students' home lives without creating more of a burden for our families and we also wanted to support the development of the whole child, instead of the more traditional focus on math and literacy. As a result, we created a homework checklist.

The checklist always looked the same and had the same directions. Some of the options were consistent from week to week: read or have someone read to you, exercise or play outside for 15 minutes and write what you did on the back, help cook a meal, talk about what you learned at school; other options varied to reflect our current academic lessons: count by 5's to 100, write five words that have "-at," tell a Writer's Workshop story, find five solids outside.

We also built in a routine around the homework. It went home every Friday and was not due back until the following Friday. We worked to make the checklist options things that every child and family could achieve and only asked that 10 items be checked off each week. The checklist turned out to meet the needs of many families and it was a wonderful way for us to learn more about what our students liked to do at home. We would often get little notes describing cooking projects or family hikes, which then added back to the richness of our classrooms.

understanding that they, as individuals, can make a difference. For young children, service-learning is most effective when the recipients of the service are close to home and directly related the child and his/her interests. Age-appropriate service-learning might look like a kitchen garden where children are growing food for their school, families, or community dinners. By giving young children the opportunity to make a positive difference in the lives of those they care about, they learn that they matter and that they do make a difference.

Reflections on a Day of Service

Sue Blair's Day of Service Project. Sue teaches kindergarten at the Sustainability Academy at Lawrence Barnes Elementary School in Burlington, Vermont



Sue Blair

On a bright and sunny Tuesday in early May, students at the Sustainability Academy, along with teachers, parents, neighbors, and community members, participated in our Second Annual Day of Service. It was powerful to see every student at our school engaged in meaningful service-learning projects: painting murals, building compost piles, cleaning up the campus, planting an ABC garden, building bat houses, painting rain barrels, replanting peace gardens, and so much more. Everywhere you looked children were busy making a difference.

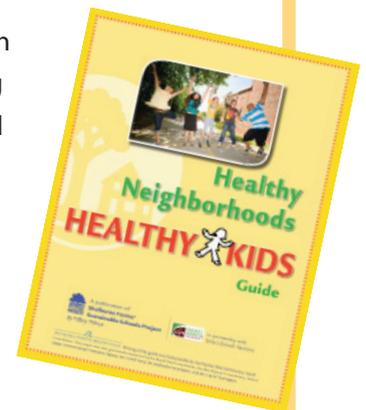
For me, the highlight of the day was watching our youngest students making such a big difference. For my kindergarten class, the day of service was the culminating activity in our year-long theme and study of “community helpers.” It also reflected a shift in my teaching. I wanted students to “own their work,” and make deeper interdisciplinary curriculum connections. I wanted students to know that their ideas mattered. By modifying Shelburne Farms’ curriculum framework, Healthy Neighborhoods/Healthy Kids, for use with younger children, we moved our study of community from the classroom to the neighborhood. First, we drew maps of our neighborhood and identified the names of some of the



streets near the school and their homes. Then, we met with community helpers who work hard to make our neighborhood a safe, happy, and healthy place for all to live in. Finally, we began to think about how each child could be a community helper.

You can download “Healthy Neighborhoods/ Healthy Kids Guide” for free at www.sustainableschoolsproject.org

Students decided it was important for our schoolyard and neighborhood to have animals and plants, to be clean, and to have safe places for kids to play in. Students were interested in assessing and improving these aspects of our neighborhood and school community. Students then went on neighborhood walks to evaluate those criteria. Was the neighborhood clean? Did it have animals and plants? Were there safe places to play? After the walks, students brainstormed



projects the class could do on the Day of Service to meet the needs that they had uncovered on their walks. Students planned to create a shade garden that would provide a habitat for animals, to build two sandboxes for kids to play in (our school didn't have any), and organized a neighborhood cleanup. The projects were completed on our Day of Service and the students were thrilled at the difference they made in our community.

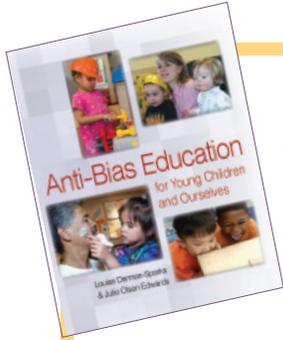
Instead of just learning about community helpers, students learned that "We All Can Be Community Helpers!" Students are excited to play in their new sandboxes, to water and take care of the garden they planted, and to keep our schoolyard clean. They shared their ideas, worked hard, and made a big difference. Their pride in their work is evident. The sandboxes and gardens will make our schoolyard a better place for humans and animals, but the most important transformation is the students' emerging awareness that they can make a difference.



Here are some tips to cultivate self-efficacy, agency, and a culture of caring in young children:

- Listen to children when they have an idea for making a difference. Ask them questions to guide their thinking about what may or may not be feasible. Incorporate the planning of a project into your curriculum.
- Keep the duration of the project short. Young children's interests change rapidly. Service-learning will be most effective if children start and finish the project in a short amount of time without a lapse in between.
- Help children make connections between their interests, experiences, and learning by asking, "How can we help?" and "Is there something we can do?"
- Give children ample opportunities to learn how others in the community help, and then ask the children how they can help. Record their ideas. Encourage children to make a plan. Reflect on their plan and revise it based on new learning and understanding.
- Have children take care of something. Whether it's a houseplant, a garden, or a special place, teaching children to care builds the foundation for service-learning and civic engagement in the future.
- Keep projects close to home and concrete, where children can see the results of their work.

Anti-bias Education and Cultural Competency



Anti-bias Education for Young Children & Ourselves

Louise Derman-Sparks and Julie Olsen Edwards' work is seminal in the field of early childhood education, diversity, and equity. *Anti-Bias Education for Young Learners and Ourselves* is a critical yet highly thoughtful approach to creating educational communities where all learners thrive. In addition to building humane classrooms and anti-bias practice, Derman-Sparks and Edwards support educators as they develop their own critical consciousness around power and privilege in an incredibly user friendly way. The learning in this book will support you in building a classroom, a curriculum, and a practice that honors the experience of all the children and families.

Anti-bias education is vital to education for sustainability. In order for anyone to function at their highest level, we all need to be part of a community that values and respects who we are. Our education system isn't set up to embrace difference and value individuals, and the history and lived experience of many children and their families simply isn't acknowledged or valued in school culture. Many children do not see themselves reflected in their classroom, or often in their teacher's understanding of the world. An anti-bias education is intentional in its approach to creating equitable and just classrooms that not only reflect, embrace, and cultivate each child's experience, but work to acknowledge and dismantle oppression.

Biases, especially those that develop into systemic oppression, are learned. Young children's innate curiosity and lack of self-consciousness make them natural leaders in questioning and undoing oppression. Adults need to engage with them honestly, and often need to unlearn the biases we perpetuate.

The Goals of Anti-bias Education

Based on the work of Louise Derman-Sparks and Julie Olsen Edwards in their book, *Anti-Bias Education for Young Children and Ourselves* (NAEYC, 2010), p.4-6. See box above.

1. Each child will demonstrate self-awareness, confidence, family pride, and positive social identities.
2. Each child will express comfort and joy with human diversity; accurate language for human differences; and deep, caring human connections.
3. Each child will increasingly recognize unfairness, have language to describe unfairness, and understand that unfairness hurts.
4. Each child will demonstrate empowerment and the skills to act, with others or alone, against prejudice and/or discriminatory actions.

Social justice is a key component of sustainability and as adults we have an obligation to identify and interrupt oppression. Regardless of developmental stage, our ability to be just stems from understanding who we are and how we fit into our social and cultural context. Affirming the identities, families, personalities, and culture of young children breeds strong self-concept and sense of belonging, which leads to understanding and empathy.

In the next section we have identified ways to set up your classroom for each thread. However, the suggestions included in the Thread,

Who Are We? (p.47), offer more in-depth guidance on how to create a welcoming and affirming learning space to help all children feel like they belong. Though we have identified these suggestions within that Thread, it is our hope that you will refer to these suggestions at all times.

Promising Practices of Early Childhood Education for Sustainability

Shelburne Farms has worked with teachers, schools, community partners, and governments nationally and internationally to develop and pioneer Education for Sustainability practices. Shelburne Farms' Education programs have engaged thousands of young children in exploring the world around them, cultivating their natural curiosity and sense of wonder, and fostering joyful relationships between children and their immediate worlds. The following practices have emerged from our collective Education for Sustainability and early childhood work. We believe these practices nourish the skills, knowledge, and attributes young children need in order to contribute to sustainable communities.

Promising Practices of Education For Sustainability

Early Childhood!

PROMISING PRACTICE 1

Curriculum is integrated and place-based.

An integrated curriculum grounded in one's place—the local human and natural community—is key to Education for Sustainability in early childhood. In order for children to become citizens who are engaged in creating sustainable communities, they must care for, and understand the interconnectedness of their human and natural community and world. To foster this sense of caring and proclivity toward action, children must first be provided with the opportunity to explore and connect to their places, guided by their senses of wonder and curiosity.

EXAMPLE: A preschool class steps out the school doors to explore the community around them. Building capacity for safety and learning, the teachers start with short excursions outside the school yard, practicing walking safely on the sidewalks, sticking together, and going a little further each time out. As children's capacities grows, the class takes pictures of favorite or interesting spots. These photos are printed in triplicate to use in the classroom in a matching game and to be added to the class map. During a bread unit, the class visits various neighborhood stores to buy and taste a variety of breads representing many of the cultures in the classroom.

PROMISING PRACTICE 2

Learning and curriculum are play-based and emergent.

Learning is seamless and is led by the child's sense of wonder, curiosity, and innate ability to construct meaning through play. The teacher

acts as a guide, creating opportunities for child-directed discovery, as well as facilitating learning experiences that build on the conversations, play, and questions that emerge from classroom dynamics and adventures.

EXAMPLE: A camp for preschool-age children spends the days outdoors in the forest. As the campers explore sections of the forest they create areas that represent Olympic challenges. Log walking and stump jumping are popular. Other campers create and play in castles and pirate ships fashioned from old stumps. When the teacher discovers a red eft, she gently captures it and invites the children over to examine it, and lets them take turns holding it. As she marvels at it with the children she asks them, "What else do you think we might find living here?" Later, the teacher suggests to the children that they could try walking like the red eft they found.

PROMISING PRACTICE 3

Sustainability is a lens.

When decisions need to be made, we might ask, "What would be a more sustainable choice?" Rather than being an add-on, Education for Sustainability provides an opportunity to use sustainability as a lens to envision the entire school or program—from how decisions are made, to curricular content, to purchasing supplies, configuration of outdoor play spaces, and connecting with families. Thinking and decision-making are guided by finding the optimal intersections of environmental integrity, social equity, and economic prosperity.

Promising Practices of *Early Childhood!* Education For Sustainability

continued.

EXAMPLE: A private pre-k program has a mission of social and racial justice and a commitment to maintain no racial majority within its program. Therefore, they offer sliding-scale tuition, and have eliminated the traditional financial aid and tuition program.



PROMISING PRACTICE 4

Campus and classroom demonstrate and practice sustainability.

Young children learn by doing. When the campus demonstrates and models sustainability practices, young children innately learn, and thus practice, sustainability. In early childhood the implicit practices are just as important as the explicit curriculum. Practices such as classroom composting, reusing supplies, and democratic decision making in partnership with children all implicitly model sustainability for young learners.

EXAMPLE: Recycling, using environmentally friendly cleaning products, composting, and gardening are all regular parts of the pre-k and kindergarten classes' daily routines. In an effort to help young children to really understand composting, one class uses a small, clear plastic bin to collect food scraps, dead leaves, plants, and a few handfuls of soil to witness the process of their food being broken down into compost.



PROMISING PRACTICE 5

Young children explore their connection to and relationship with the natural and built world through developmentally appropriate Big Ideas of Sustainability.

There are big ideas, or underlying concepts, that are fundamental to understanding and

demonstrating sustainability. In early childhood these Big Ideas of Sustainability are: cycles, change, fairness, community, diversity, and interdependence. These ideas are integrated into the natural rhythm of and learning that happens in early childhood. Young children explore these big ideas and their relationship to them through inquiry, play, and exploring their classroom, school, and neighborhood communities in relevant and meaningful ways.

EXAMPLE: Preschool-age children dive into the Big Ideas of Animal and Plant Cycles, and Change Over Time, as they explore what happens to the garden and animals in winter. Trips to the snow-covered garden show that small creatures are making tiny tunnels through the snow. Garden plants, grasses, and weeds have gone to seed and many of the seeds are scattered on the snow. Their teacher reads books about animal adaptations in winter and the class decides to set up a similar habitat in their classroom. Teachers supply plastic tunnels, white sheets, and some puppets, and the children create an indoor habitat to mimic what they found outdoors. This focus leads to continued observation as the snow melts and plants begin to grow again in the spring.



PROMISING PRACTICE 6

Young children have a voice, make decisions, and draw connections between their choices and the impact on their worlds.

Children need to see themselves as capable, knowledgeable, and participatory citizens. They need to be given the opportunity to make decisions, share their thinking, advocate for their needs and fairness, and problem solve to make a difference. Young children are capable of

Promising Practices of Education For Sustainability

continued.

understanding and observing change over time, and how they affect their small world through everyday actions and words. When children are given the opportunity to shape their own world in childhood they will grow to have the ability to shape the larger world.

EXAMPLE: Kindergarten students decide it is important for their neighborhood and schoolyard to have animals and plants, to be clean, and to have safe places for kids to play in. Students go on neighborhood walks to evaluate if these features are present in their neighborhood and schoolyard. Following the walks, students brainstorm projects the class could do on a schoolwide Day of Service to meet the needs that they had uncovered on their walks. Students plan and carry out the creation of a shade garden to provide a habitat for animals, build two sandboxes, and organize a neighborhood clean-up.



PROMISING PRACTICE 7

Local and cultural perspectives are considered and learned through building healthy relationships with family, classroom, and community.

Investigating and exploring the local community is key to Education for Sustainability, especially in early childhood. Young children need to be connected with their natural and built communities in positive and healthy ways. They need to explore and experience natural cycles, human diversity, and healthy relationships with others and the environment. The local human and natural worlds are the context for learning and provide a framework for global comparisons as a child’s worldview expands. Children investigate differences and explore multiple perspectives, respect, tolerance, and diversity.

EXAMPLE: As a part of their study of THE LITTLE RED HEN, the first grade begins to study the life cycle of wheat and the role bread plays in our diets. They visit a variety of local ethnic markets, grocery stores, and bodegas to find the different kinds of bread people in their community eat. At school, they hold a taste test and try all the different bread, sharing with one another the types of bread they eat at home.



PROMISING PRACTICE 8

Learning is relevant and connected to children’s lives.

Embedding sustainability into the fabric and life of the curriculum and school is essential to developing the attitudes, skills, and knowledge in our children so they can contribute to and build sustainable communities now and into the future. Our young citizens need to see themselves as a part of their community and need their learning to be reflective of the lives they are living. When we allow the community and students’ interests to guide learning and curriculum, academic achievement and engagement is high.

EXAMPLE: The kindergarten classes conduct a yearlong study of Community Helpers. As they learn about all the people and organizations that play meaningful roles in their community, and discover what they do, the children quickly begin to understand the importance of every member of their community. As the children explore how we all depend on each other, they start to appreciate the role these people and organizations play in their homes, classroom, and neighborhood communities. Through daily interactions, as well as several service projects, the children come to realize that, in fact, they are Community Helpers themselves.

Promising Practices of ^{Early Childhood!} Education For Sustainability

continued.

PROMISING PRACTICE 9

Children practice inquiry and open-ended questioning.

Scientific literacy and inquiry is crucial to building sustainable communities. It is essential for children to develop a healthy attitude toward, and understanding of, the environment. Inquiry is more than just asking questions; inquiry requires the learner to think critically, find and process information, use that information in real-life situations, and regularly engage in reflection—all vital twenty-first-century skills.

EXAMPLE: In a pre-k classroom, essential questions span several units of study. Questions are open enough to explore many topics of children's interests, but focused enough to allow children to make connections. When children explore "What's happening in winter?" focusing on the big ideas of change, cycles, and responsibility; they explore the changing landscape and weather from fall to winter, specifically observing trees, squirrels in their schoolyard, snowflakes, and how they take care of themselves and each other when the weather gets cold.



PROMISING PRACTICE 10

Anti-bias, equity, and justice form the foundation of our teaching.

Each one of us has a unique and vital role to play in creating the communities we want to be a part of, and the perspectives, experience, and background we bring shed more light together than they do in isolation. Creating classrooms and school communities with respect, justice, and equity at their heart—the kinds of classrooms that will allow each child to reach his or her true potential—require educators to investigate our

own power and privilege and often reframe our understanding of identity. Each child and each family who enter our classrooms bring with them tremendous assets, and many of us also carry personal and communal histories of oppression. EFS demands that every single one of us commits to teaching, finding and using materials, and creating a classroom environment that honors the culture, family structure, gender identity, race, and gifts of all our students. We also must commit to identifying, intervening, and exploring oppression with our students.

EXAMPLE: Teaching faculty, administrators, and support staff spend the course of a year reading and discussing the book COURAGEOUS CONVERSATIONS ABOUT RACE by Glen Eric Singleton and Curtis Linton. The book explores the role of race in education. They begin to better understand what different racial, cultural, and gender identities mean for themselves and their students and start to change the materials (books, toys, games) in their classroom and some of the language they use (no longer saying "boys and girls," for example). They develop a greater capacity for identifying and interrupting oppression and a better understanding of systemic forms of oppression.

Engaging Families and Communities

Developing partnerships with community organizations and businesses is key to building a successful early childhood EFS program. Partnerships can be formed in multiple ways, to meet a variety of needs, and are almost always mutually beneficial. Schools gain by developing relationships with their neighbors, and by making learning relevant and real, expanding the context for learning beyond the classroom. Community partners benefit from the opportunity to share their resources and work with the school and families. Students gain by seeing that learning happens both inside and outside of school.

Building relationships with families is also essential to developing a strong EFS program and community. When children see their family and culture as a part of the school and their learning experiences, they are better able to make the transition from home to school, and to feel the relevance of what they are learning outside the home. We know that children are generally more successful in school when their caregivers are engaged in their education, and families who feel more comfortable in the school community are more likely to be involved. Likewise, when families see the community as part of their child's education and learning, they are better able to support their children's learning beyond the classroom.

Families and Parents as Experts



It is vital for teachers to begin building relationships by getting to know students and their families as soon as possible. Home visits are an excellent way to start off the year, but if that isn't possible, "families as experts" conferences can often get the year off to a meaningful start. This allows educators not only to get to know children and their families, but to build trust and open lines of communication. Asking questions about how students learn, live, and play will help teachers establish classroom communities that reflect all families and all children.

Families can contribute to the life of a school in many ways that include, but aren't limited to, the classroom. Learning about the skills, interests, resources, and expertise families might like to share. Ask families what will work well for them in terms of communicating with the school and in what ways they are most interested in being involved. Talk about how family members can best support children's learning. The more you know about the grown ups who live with and care for your students, the better you will be able to work together to support each child's learning. You'll also be better

able to meet the needs of your classroom and school by knowing who makes up your community. Communicate with families regularly about what you're exploring as a class and look for opportunities to connect this learning to home and community.

Family Volunteers

Some programs encourage families to volunteer on a regular basis, while others make opportunities available as needed or when interest arises. Volunteering deepens upon a parent's or family member's connection to the school and establishes a culture of responsibility, stewardship, care, and community. It's vital to remember that families have wildly different schedules and resources, and not everyone is able to commit the same amount of time, money, or resources to a school community. It's important that all families still feel like partners in their child's experience.

Community Dinners

One sure way to gather a large group of people is around food—when meals are shared in a community setting, it allows many families to participate and build relationships with the school and one another. Community dinners are excellent ways to share student learning, learn from the community, try new foods, and most importantly, get to know one another in a family-friendly setting. Try the following:

- Host community dinners a few times a year with a seasonal theme.
- Engage children in the seed-to-table process, by growing the food, planning the menu, and cooking and serving the food.
- Invite families to share what is special to them by sharing meaningful family foods, either by bringing a dish for a potluck or helping to create the menu. Consider collecting the recipes to create a school cookbook!
- Work with local businesses, restaurants, organizations, and community members to share their resources, information, and activities with your school audience.
- Highlight a particular classroom project or curriculum theme so families can learn more about what children are exploring and learning.

Showcasing Student Work or Adventures

Families love learning about, hearing stories of, and seeing pictures of their children's learning. Post photos and capture dialogue of an adventure, trip, or learning experience for families to see and learn more about what children are doing while they are away from home. Children can choose which photos to share, and draw, write, or dictate their experience. By asking children, "How can we share our special places?", you'll encourage reflection and ownership of their learning. Photos and stories will help children recall and transfer their learning, remembering where they went, what they did, and how they did it.

Building Capacity for Community Outings

Burlington Children's Space, Burlington, Vermont. BCS is an NAEYC accredited early care and education program dedicated to serving all populations.

From our first days together, we begin building a foundation for successful outings with children, parents, and staff. As we leave the safety of our school to venture into the community, the children's skills develop and their abilities grow. We celebrate the successful moments and process the challenges. As the spaces we visit become more familiar and the children build confidence in exploration, these places become part of our culture—familiar scripts develop more complexities, and what was unexpected transforms into the anticipated.



Our age-appropriate outings build on clear expectations, routines, and a sense of adventure. As trust grows, we build skills. For infants, outings may consist of a grassy, lush lawn; a patch of dry dirt; a large puddle; or a cold mound of freshly fallen snow. The children move through and explore the space, employing sensory skills like touching and feeling. What are children's reactions, likes, and dislikes? The shared experience is meaningful and meets each learner's diverse needs.

As young as one year old, toddlers rely less on riding strollers and take short walking trips in the neighborhood, to the community garden, or to nearby parks. Through communicating clear expectations and using supportive language, we support children in mastering skills of crossing the street, sharing the sidewalk, and greeting community neighbors. Teachers practice establishing these expectations and boundaries for each space they visit. We always communicate with each other about where we are going, how we will use the space when we get there, and how we will handle the unexpected.

Preschoolers act as mentors to the older toddler children and soon collaborate on outings. We describe the destination to build anticipation before the groups come together to walk through the local neighborhoods. Sometimes when the toddlers return to school, they are greeted and celebrated by the preschoolers.

When adjustments need to be made, and at times the group returns to school, the children hear, "we'll try again another day." This allows the morale to stay high as the group comes back to school and keeps the time together positive. After a break, such as a new year, a return from vacation, or even a weekend, it is necessary to rebuild the trust and routines needed for successful outings.

Prior to each outing, teachers prepare by gaining familiarity with the space on their own and discussing their findings with each other. Teachers are extremely resourceful and are always thinking about what places would work for their group and will hold meaning for children.



Once we have visited a site with the group, we give children another chance to explore some of the materials and experiences we may have dabbled in when in the community. We do this by bringing these experiences into the classroom, a place where children, teachers, and parents may be more comfortable and willing to take risks. We allow children to investigate at their own pace in the classroom, build questions and theories, and then reinvestigate based on their newly gained knowledge. We document and discuss with each other, as well as with families, where we have been, what we did, and what we saw. We invite families to share their community trips through stories, photos, and artifacts. We reflect together. We share, document, and discuss with each other and parents again. We build trust. It is part of the teacher's job to show parents how outings are a worthwhile part of our curriculum. This reciprocal relationship between the classroom and the community continues.

TIPS FOR SUCCESS

 **Familiarity:** Teachers have to know the space, the route, and the risks and resources (including bathrooms, water, bus stops, etc.). Take practice walks without children to become familiar with the area.

 **The Journey:** The people you meet are not to be avoided, but greeted and included as part of the learning experience. Teachers at BCS consider this an important part of outings, allowing children to be active participants in their community. The guidelines they establish and interactions they model set the tone for this sort of advocacy.

 **Preparation:** It's important for the teacher to be aware of children's anxieties or worries about outings. Teachers need to make sure children will be warm enough, have comfortable shoes, provide bathroom opportunities, and offer food for the extra energy they may need.

 **Trust:** Collaboration and trust is essential between the teachers, children, and groups. Teachers need to be able to communicate fears and worries to others so a plan can be made. If a group member does not like crossing busy streets or is concerned about poison ivy, then a different route or destination can be planned. Addressing these concerns as a team allows for the team to decide if they will address the fear or find an alternative.

 **Ownership:** Involve children in all phases of the outing from making snacks, to voting on destinations, to packing the "outing bag" and helping each other when a problem comes up.

 **Flexibility:** Children can be involved in finding routes, making maps, photographing landmarks along the route, discussing which way to go when reaching an intersection, estimating the length (in minutes, steps, or miles) of a leg of the trip, or documenting what they see along the way. A camera and journals are essential tools.

A Tale of Two Early Childhood Education for Sustainability Programs

Education for Sustainability early childhood programming can take place in any setting. Here we share with you stories from two of our keystone programs, the Shelburne Farms Adventures Program, held in the rural, farm-based setting of Shelburne Farms, and the Pre-Kindergarten Program at the Sustainability Academy at Lawrence Barnes, a public pre-k program housed in an urban elementary school.

VOICE from the FIELD

Shelburne Farms

Entirely!

Outdoors Adventures Camp

"Can we go back and play in nature's playground?"

"I'm hungry, can we eat those vegetables?"

"I wonder if the fairies left us a note."

— Campers, Week 1, Outdoor Adventures Camp



Linda Wellings

Linda Wellings, Early Childhood Education Coordinator

Shelburne Farms has been offering summer day camps for young children for over twenty years. Camps vary from half- to all-day for children ages four to seventeen.

Camps for younger children are based out of our main building, the Farm Barn. They start each day in a classroom then head out on the land for adventures.

Our primary goal for our Adventure Early Childhood

Program is to be outdoors throughout the seasons as much as possible.

This summer, after much discussion, excitement, and trepidation, we decided to conduct our all-day camps for five-, six-, and seven-year-olds entirely outdoors.

When the staff envisioned the program, we knew we didn't want it to be the indoor camp moved outside. We wanted minimal supplies and to depend on the wonders of the forest and fields to provide motivation and loose parts

Who needs playdough when mud and clay are on hand in the woods?



with which to explore and play. Our only supplies were birch-bark-covered journals, pencils, markers, crayons, kid-sized garden tools, plastic buckets to move wood chips around, and lots of good children's books—both fiction and nonfiction—relating to the animals and plants of the forest, fields, and garden. We also brought some cooking tools: bowls, knives, cutting boards, foil, s'more supplies, and matches. Farm staff cut kid-sized stumps and chairs to use around the campfire and two beautiful, rough-slab wooden tables.



Our only furniture for the camp were these rough-slab wooden tables.

This new offering required some additional communication with families on the logistics of spending the entire day outside, and what it would mean for their child: drop off in the forest by our sugarhouse, snack and lunch in the woods or fields, rolling logs over to peek underneath, digging in the garden, getting dirty, and having fun! It would also involve using a Port-o-let, or going to the bathroom in the woods! We made sure parents understood this new set up, and gave them the opportunity to put their child into another camp. No one requested a move.

As the first day of camp approached, we were ready to go, but anxious. How would campers and parents react to this new setting? Our “outdoor classroom” was up a hill behind the barn—could parents navigate the hill? Would it be accessible for the campers and their families? Though we had a Plan B for those parents or guardians who could not manage the climb, we still worried. Staff was also apprehensive about following a more emergent teaching plan. What would we do each day? Would we have the materials we needed? Would kids be comfortable, have fun, and learn?

All these questions were answered on the first day of camp! Parents loved the walk up the hill; it was a great start to the day. Campers immediately started exploring their new “classroom,” looking under logs, drawing in their journals, and making tree-cookie necklaces. At our first circle gathering we set three guidelines for the week. On birch bark we wrote: Respect, Be Safe, and Have Fun. After talking about what the guidelines would look, sound, and feel like, we hiked up to Sheep's Knoll for morning snack. We were astounded by our campers' appetites for both food and learning.

As the week progressed, we continued to be awed by our campers. Their enthusiasm for creating a daily plan built around their own interests reinforced our decision to teach in a more emergent way. Parents' stories supported this decision. When asking her daughter what was on tap for tomorrow at camp, one mother was told, “Don't worry, the teachers will ask



Nature's own materials inspired the imagination and creative play of the campers.

what we would like to do and we'll tell them." We closed each day by talking with the campers about the possibilities for tomorrow; their suggestions became the adventure choices for the next day.

We started the week with a big pile of wood chips purposefully situated near our campsite. Every day upon entry, several campers would pick up tools and get to work, filling buckets with chips and spreading them out around our site where they thought chips were needed. Throughout the day, different children would tackle the chip pile. Slowly but steadily, the chip pile decreased.

The first week of camp coincided with the Olympics, and one morning a group of campers decided to create an Olympic stump-jumping event! Tree stumps around the fire circle were arranged so that children had to walk on stumps and never put their feet on the ground. We also had downed-tree-balance-beam-walking and vine-swinging events!



Camp coincided with the 2012 Summer Olympics, which inspired some "eventing!"

A large, upturned stump also held magic. Several mornings it became a pirate ship (we definitely heard threats of someone having to walk the plank!). A forest area where wild grapevines hang like perfect Tarzan swings where children can climb nature's jungle gym became a daily destination for some, while others continued down the wooded path to Fairyville and spent their time creating fairy houses. These campers would return daily to check and see if the fairies had left any notes. They were sure the slabs of wood with beetle carvings were written by the fairies and only needed translation for them to understand the message.

Our staff welcomed this play and would also engage campers in other options: turning over logs to look for salamanders and other critters, reading books, writing in journals, or harvesting garden vegetables. Every day was easily filled with age-appropriate experiences for our campers, based both in the natural world and in fantasy. We were pleasantly surprised by how the days flew by when we let children help determine the events of the day. We shared responsibility for our adventures and everyone benefited.

As the first week closed, the staff unanimously agreed that the move outdoors had been a huge success. But what about the parents? Their sentiments were obvious as each day they hung around after camp was over and were led by their children to visit the garden or nature's playground. On the last morning we had a campfire and parents did not want to leave. Formal camp evaluations came back with glowing remarks; such as, "being outside all day made it so unique," or, "the meeting place was fantastic." With such good feeling from campers, parents, and staff, we are eager to add more "totally outdoor camps" next summer. We are also planning to bring what we learned in the woods this summer to make better use of our outdoor classroom throughout the year, even in winter!



Sustainability Academy Preschool

Ruth Kagle, Sustainability Academy Preschool Educator, Burlington, Vermont

The Sustainability Academy Preschool opened in September, 2011, with funding from the Vermont Community Preschool Collaborative. Located in a public elementary school, it is a collaboration between the Burlington School District, Head Start, and Shelburne Farms. Unlike traditional images of Vermont, our school neighborhood is decidedly urban, mostly low-income, and rich with cultural and linguistic diversity. Our multi-age morning and afternoon programs reflect these demographics and include both typically developing children and children with special needs.

At the end of our first year, we reflected on our program's initial successes and challenges. We celebrated the development of a nurturing preschool community where our values are evident in classroom practices such as recycling and composting and children are engaged in hands-on, interconnected, nature-based learning experiences. We also acknowledged that we were still at the beginning of our journey to fully encompass the goals of Education for Sustainability and we identified extending learning opportunities outside the classroom as an area of growth for our program.

Although we wanted to spend more time outside, it needed to be meaningful learning time, intentionally planned, and connected to our curriculum. We wanted to include outdoor learning as early as possible in the school year but we needed to know that children were ready to follow teacher directions. We wanted children to be engaged and we needed them to be safe. In short, we shared the concerns of many other preschool classrooms. Here's how we got started in the second week of the 2012–13 school year.

The children arrive; some race toward the open door, ready with smiles and hugs, others are still tentative, holding tight to their grown-up's hand. Some families stop to chat with teachers, others rush to leave for work. Some simply say "hello" and "goodbye," carefully using the English words they have also taught their children. One grandfather puts his hands together and slightly bows his head as he looks at me and says, "namaste." He gently reminds his child to do the same before I repeat the greeting he has taught me.

Like most preschools, we have spent the first days establishing routines and getting to know one another. We have introduced new materials with stories and learning opportunities focused around color exploration. Children have explored color mixing with painting, playdough and at the water table; shared and graphed their favorite colors; and met Pete the Cat and his many-colored shoes. For the past couple of days we've been using a collection of paint chips to practice a color hunt-and-match game in the classroom. During morning meeting, we tell the children that we think they're ready to play the game outside.

It's a beautiful, warm fall day, so no lengthy outdoor dressing is needed. A teacher grabs the backpack with our emergency kit and other supplies. We review our safety rules and how to play the game. Each child takes a paint chip to use in their color hunt. We're ready to go.



We open the door and see the parking lot, the dumpsters, and flapping garbage. The world is full of color! A blue car, a green dumpster, a red wrapper. Then a brown squirrel on a silver chain link fence, a yellow leaf, pink chalk on a grey sidewalk, green grass, a brown tree trunk, blue sky, white clouds, black birds, orange tomato hiding in last year's raised bed garden; we are still less than ten feet from the classroom door.

We walk along the narrow strip of grass outside our school and children excitedly hunt for their colors. Gradually they begin to slow down and focus, carefully observing their environment.

Budding friendships grow a little stronger as children work together to find each other's colors. Children with limited words eagerly tug on hands and point to communicate their findings. They notice the many different colors of leaves, flowers, insects, toys in the neighbors' yards, the school bricks.

We reach the busy street outside the school and our focus widens again with an onslaught of noise and color; buildings, cars, trucks, street signs and people. A child sees a bright red truck and is desperate to rush across the street and put his paint chip on its shiny surface. We stop and review our safety rules, especially staying on the sidewalk. We meet another teacher on the street and children giggle as they match their paint chips to her clothes and brightly colored bag. They explore the white letters on a blue sign and the child with a blue chip happily identifies another color match. As we walk, children point out familiar landmarks; the grocery store, the big kids' playground, the street where Grandma lives.

We walk just one block along the busy road before turning onto a side street that leads us back into school grounds. Children who never enter school this way discover the colorful murals painted on these walls. They explore the brightly painted images and everyone finds a color match.

At our playground, we meet one of the children's grandmothers. She often arrives early and sits watching the children play. She speaks no English; each day we simply exchange smiles and nods. Today she is wearing a bright red cardigan. The child with the red paint chip triumphantly barrels toward her and for a moment I fear he may knock her down. He doesn't. She looks at his delighted face and at the paint chip firmly planted on her cardigan and suddenly she laughs. We exchange amused smiles and I feel our community expand as we share our learning game. The children dash into the playground and the game now includes slides and sandboxes.

We have returned safely from our big adventure. It was just a walk around the block but all adventures have to begin somewhere. We found that opening the door is a good place to start.

The Threads

When children have the opportunity to revisit places and ideas, they are able to build on prior experiences. This helps them to make sense of the interconnectedness of the world. Each of the four Threads in this section guides student exploration by focusing on an Essential Question and a few Big Idea(s) of Sustainability. Each Thread offers students multiple opportunities to explore their world. The Threads offer suggestions on how to create an immersive learning experience in your classroom, as well as provide a variety of facilitated and self-guided learning opportunities that flow throughout the seasons.

Beginning with the End in Mind

“Teachers are designers. An essential act of our profession is the design of curriculum and learning experiences to meet specified purposes.”

— Wiggins and McTighe

When designing curriculum, it can be tempting to begin with a single learning activity familiar to you or one that you think your students will love. Yet when curriculum is built one activity at a time, we risk creating a string of unconnected learning experiences that focus on content rather than the big picture. Instead, when the curriculum design process begins by first identifying the intended outcome(s), goals, and big ideas we want children to come away with, we’re often able to provide more relevance and context to facilitate children’s learning. This allows children to make real-world connections, construct meaning, and begin to truly understand what they are learning. In creating this guide, we’ve applied elements of the “backward design” curriculum development process, based on the work of Grant Wiggins and Jay McTighe (*Understanding by Design*), to guide our investigations of nature, food, and community.

As you explore each Thread, or Essential Question, you may find that you and the children are more drawn to one of the Thread’s Big Ideas than another. You may also find that your students express their understanding or learning in different ways—that’s okay. There are a variety of Enduring Understandings for each Thread, giving educators opportunities to work with what is most meaningful in their classrooms. However you approach it, the Essential Questions, Big Ideas, and Enduring Understandings help you frame the learning and make



WHAT'S THE
Big Idea?

The Big Ideas of Sustainability

Change Over Time: All organisms, places, and systems are constantly changing.

Community: A group of living and non-living things sharing a common purpose or space.

Cycles: Every organism and system goes through different stages.

Diversity: All systems and places function because of variety.

Fairness / Equity: Organisms must share resources to meet the needs of living things equally, across places and generations.

Interdependence: All living things are connected. Every organism, system, and place depends on others.

connections from adventure to adventure and season to season.

Essential Questions

Essential Questions are open-ended and have no one answer. They are intentionally examined throughout the course of study as children discover, explore, and make connections between current and prior learning experiences. Post your Essential Question in your classroom and ask it again and again. Share your Essential Question with families and ask them to explore the question at home. With a focus on Essential Questions, you'll find children naturally asking the question and making connections between experiences in the classroom, at home, and in the community.

Big Ideas

Big ideas provide context, and help us see a bigger picture. By breaking down a huge concept like sustainability into big ideas, we're better able to parse its meaning and to create meaningful learning opportunities for children. The Big Ideas act as a guide for learning new and relevant information, and

help us make sense of things. Part One of this guide offers more detail on the Big Ideas of Sustainability. Use the Big Ideas of each Thread to connect learning to the big picture and overall concept you want your children to learn and explore.

Enduring Understandings

Enduring Understandings articulate what it is we want children to know or learn as a result of their experience. Enduring Understandings take learning one step further than Big Ideas. The Enduring Understandings in each Thread elaborate on and clarify what children may take away from their investigation of the Thread's Big Ideas and Essential Questions.

Documentation and Assessment

Each Thread offers a variety of opportunities to reflect on, document, and assess learning. Observe children and note their engagement in each self-guided or facilitated learning experience. With the Big Ideas and Enduring Understandings in mind, talk with children about their experiences and thoughts. Use the discussion questions provided with each Facilitated Learning Experience to process the experience with children.

Children’s learning, both inside and outside, can be documented and displayed throughout the classroom. Photographs, journal entries (by children or teachers), or treasures (such as bird nests, or nut shells left behind by a squirrel) can all serve as artifacts of learning. By bringing some of the “outside” inside, children can continue to make observations and ask questions about their community and nature. Teachers can post the Essential Question in a prominent spot in the classroom and refer to it as the basis for repeated discussions. Children develop and refine their understandings through revisiting the question. Be sure to allow students to express this learning in a variety of ways, including drawing and conversation.

A **learning wall**, which is a dynamic, collaborative bulletin board, can display the children’s artifacts of learning, such as their drawings, maps, photographs, or treasures they’ve found in their backyards or on their way to school. Co-creating a map of your community can provide children the opportunity develop their sense of place and mental mapping, and provide a place to note the site of their discoveries. Use a learning wall to gauge understanding by observing the display of children’s reflections on their experiences. Revisit the learning wall frequently. Make it an interactive learning and assessment tool as you review prior additions and invite new contributions following each Facilitated Learning Experience.

Self-guided Learning Opportunities and Facilitated Learning

Experiences provide opportunities for students to engage with the Thread and Essential Question through a balance of self-guided play and facilitated experiences. We believe that both elements are essential for students to discover, explore, and construct meaning.

Essential Questions in Early Childhood: Framing and Connecting Learning

Angela McGregor Hedstrom, *Universal Pre-K, Dryden Elementary School & Happy Way Childcare Center, Dryden, NY*



Angela McGregor Hedstrom

Essential Questions are the framework for curriculum integration, providing a place to organize our Enduring Understandings and Big Ideas. Picture them like a sturdy branch, on which we can hang mobiles of interconnected ideas, tie together diverse experiences, climb to places of new learning, and swing from question to question. Essential Questions connect students to the processes of their place. The questions are engaging and inspire inquiry. Their timeframe is flexible—they can be used for each in-depth unit of study. The questions may overlap several units, explore a specific season, or connect yearlong learning. Especially in early childhood education, they can be reflected in everything students do at school from sensory activities, art projects, reading in the library, math investigations, singing, and meeting in circle time.

In my classroom, Essential Questions tend to arc across several units of study. For example “What’s happening in winter?” supported the Big Ideas of change, cycles, and responsibility. This took us about two months as we explored the changing landscape and weather from fall to winter, specifically observing trees, squirrels in our schoolyard, how we take care of ourselves and each other when the weather gets cold, and snowflakes. Questions like this are open enough to explore many topics of students’ interest, but focused enough to provide that vital place to hang our connections. Below are strategies I have found useful for using Essential Questions in early childhood.

Post the question prominently.

We wrote our question on large paper and posted it in our gathering area. We sometimes made an additional banner to accompany student work displays in the hallway.

Illustrate the question.

Start with a simple visual of what the question is about and populate the space as you continue to explore. For our question “What’s happening up in the sky?” we started with paper cut outs of clouds and as our studies took us to explore birds, we added photographs of birds. Eventually our exploration took us to the moon. At this point we added photos and drawings of the sun, Earth, moon, space shuttles, and stars.

Illustrate the responses.

Record student responses to the question at various times throughout the exploration to assess evolving understanding. Sometimes I write what students dictate to me and draw a quick visual to accompany

their words. Other times, I give them index cards to draw their responses, and then I document their words to accompany the pictures. These responses stay posted with the questions throughout the exploration.

Include parents, community partners, and your unique place.

To help answer our question “What is wonderful about water?” we met with a grandparent who is a marine biologist, a parent brought in shells and sand from a recent trip to the beach, another parent brought in rocks and logs from the pond near their house, and our music and movement teacher led activities about water and undersea creatures. We collected snow from our schoolyard to explore states of matter.



Craft questions that reflect students' own experiences and emerging interests.

Our question “What’s happening up in the sky?” emerged after “What’s happening in winter?” I think we were spending so much time looking up at trees and squirrel nests, that when the trees lost all of their leaves we were collectively more aware of the sky—airplane trails, storm clouds, birds flying south, the bright sun on a cold snowy day, and of course, beyond. Because Essential Questions undoubtedly lead to more questions, keep track of these and use with students to make decisions about further explorations.

Use words that young children can access and interpret for themselves.

I like the term “happening” because it’s about process. How does that work? Why is it the way it is? Who is involved? What does it look, smell, feel, sound, taste like? How does it change? How does it impact us? We could scientifically explain what is happening in winter, but with Essential Questions like this we really want to engage in the processes through experience, observation, and discovery. I also like to use words like “wonderful” and “special” to describe a specific theme. Asking “What is wonderful about water?” and “What is special about seeds?” invites learners to make meaning of the topic for themselves based on experience and sharing ideas with others.

We concluded our year with the Essential Question, “How does our garden grow?” Local farmers and gardeners visited as guest teachers. We encouraged plant-themed dramatic play, provided science and math investigations, and grew plants in our classroom. We explored the Big Ideas of interdependence and diversity. This question also provided the opportunity to reflect on our class as a diverse and beautiful garden, and our growth as individuals and as a community.

Seasonal Adventures throughout the Threads

"In the world of nature, every month is slightly different from the next, and so is every season. But interestingly, what makes each month unique does not vary that much, year after year."

— Clare Walker Leslie (*Nature All Year Long*, 1991)

The ever-changing seasonal landscape of the outdoors provides a place where learning and curriculum can be engaging, tangible, and inspiring. We enjoy eating fresh berries in the summer, watching the leaves change colors in the fall, going sledding in the winter, and hearing the sound of spring peepers and robins in the spring. Even if the climate doesn't change much where you live, most people find themselves excited for the next seasonal celebration or cyclical event. With changes all around us, it is only natural to reminisce about what happened last year at that same time and look forward to the imminent changes in the landscape.

Each Thread offers an array of seasonally appropriate Facilitated Learning Experiences. The cyclical nature of the seasons provides abundant opportunities for children to visit, discover, explore, inquire, pretend, wonder, and perpetually reexamine as each season unfolds and new learning opportunities emerge. For young children, these changes may stimulate new questions about why the leaves are changing color or why the sap is running.

Children are inquisitive and observant. Teaching by the seasons allows a child's questions about the world around him or her to become the springboard for your curriculum and the learning experiences in your classroom. It encourages children to take notice and make observations—all critical skills in early childhood.

"This winter is weird. Last year there was snow over my head all winter long. This winter there isn't any snow and I don't even have to wear my jacket."

— Ryland Leddy, Age 4, Burlington, Vermont

Wherever you live, you'll find a variety of ideas in each Thread for engaging children in answering their own questions about the world around them.



Connecting with Families

We believe that a strong family-school relationship benefits everyone. But in order to truly connect with your children's families, you must get to know them, and cultivate these relationships over time. Home visits are an ideal way to get to know families, but there are other ways to establish face-to-face connections. Remember, however, that what works for one family might not work for another. For example, a letter home will not allow families with limited literacy or English proficiency to grasp your message. Figure out how best to communicate with each family to share what is happening in the classroom.

- Face-to-face conversations at drop off and pick up or another arranged time
- Host a meal or gathering in your classroom
- Organize a school event or service project
- Phone calls, emails, or letters home (even text messaging!)
- Create a website or blog, Facebook, or Twitter account

Loose Parts, Play Spaces, and the Outdoor Classroom

Loose Parts

Cardboard boxes: one of the wonders of childhood. Who hasn't seen a child prefer playing with a box over the new toy that came inside it? The theory of loose parts is based on the premise that an object with an undefined purpose offers a child more opportunities for creative play than a toy with a clearly defined purpose. Loose parts are everyday objects—cardboard boxes, stones, plastic cups, shells, baskets, sand, straws, feathers, blocks—you name it. Loose parts offer children unlimited opportunities to develop creative and physical capacity. The movement, change, choice, design, and material management of loose parts support children's creative problem solving ability. Loose parts work well in any setting, but are especially suited for outdoor or dramatic play. As they work independently or together, children naturally negotiate how to use the materials.

Play Spaces

Play spaces in which children navigate complex environments, ripe with sensory stimuli, provide learning opportunities beyond specific lessons or play activities. Prefabricated plastic and metal playgrounds don't provide the sensory stimulation or diverse terrain that children need in order to develop healthy brain pathways and gross-motor function. Nature-based play spaces provide rich ground for the development of both fine- and

Camilla Rockwell, **Mother Nature's Child (DVD)**
www.mothernaturesmovie.com

gross-motor skills, as children navigate uneven terrain and different surfaces. (*Camilla Rockwell, Mother Nature's Child, DVD*)

Outdoor play spaces can take the form of gardens, green spaces, shorelines, sand pits, wooded areas, or anywhere else that feels safe for small children. Shady areas, like unused corridors alongside of buildings, can become landscaped streams or cultivated wetlands where students can explore the water cycle and ecosystems. Stools can be made from tree stumps, and blocks can be fashioned from logs. Play materials can be gathered from the outside and brought indoors when students can't be outside safely. Water tables can be filled with mud, snow, or stones; and wood scraps, acorns, and sticks can be brought inside as building materials.

Young children need toys that they can use to create storylines and process their learning. Puppets, dress-up clothing, kitchens and work benches, water and sand tables, blocks and building materials, toy animals and dolls with different skin tones and clothing allow a child to be creative and imaginative. Recycling household items, such as real pots and pans, kitchen utensils, old film cameras, clothespins, and old notebooks, can become excellent materials for learning through play. By modeling the principles and values of sustainability in the choice of play materials, we can start to shift the culture of school and make sustainability tangible. These props become a teaching tool not only for children, but for families as they come in and out of the classroom.



Outdoor Classroom

An outdoor classroom is different from an outdoor play space—it is a more defined learning space where children can gather in a group and expect more formal instruction. This space can serve many of the same functions as your indoor classroom; for example, for morning meetings, read-alouds, or class discussions, and need not be mutually exclusive from outdoor play areas. The outdoor classroom space can be anywhere—any natural area where the children can gather in

a circle—and you can change its locations to suit your needs. Because children spend so much of their time outdoors in free, unstructured play, they may need practice and instruction on the expectations for their behavior in an outdoor classroom.

Setting Up for Success in Outdoor Adventures

Before you venture out, you need to set expectations for your outdoor adventures, just as you do for your classroom. Use the same expectations and language that you use in the classroom for consistency. Remind children that the outdoors is home to many animals and plants, and just as children want those visiting their homes to be respectful, so they, too, must be respectful in outdoor settings: don't pick living plants, leave wild creatures, etc. You'll also need to develop expectations for behavior around sticks, stones, snowballs, etc. Inevitably, sticks are used as weapons and/or smacked against trees and rocks. That kind of behavior becomes a safety threat, so it's best to know how you want to handle it and set those expectations with children before it comes up. It can be helpful to discuss all your guidelines for expected behaviors with colleagues ahead of time, so that you can negotiate and establish your collective expectations.

Send information home to parents about the proper clothes for their children to wear on outdoor adventures such as hats, both in winter and summer, boots or close-toed shoes, and layers of clothing to match the weather. If parents are unable to provide the appropriate clothing, ask for donations or hold clothing drives to meet your needs. PTOs and PTAs will often supply fund-raising money to help with the proper clothing. Summer garage sales are a good place to buy all sorts of clothing at a reasonable price. Equally important is reminding parents to do tick checks if the class has been in the fields or woods. Send home pictures of what to look for and what to do if one is found.

When setting out on an outdoor adventure, make sure you are properly dressed with appropriate shoes and clothing to model for your students how they should dress. Ideally, each child would have a small backpack or bag they can carry on their back so their hands are free. Their bag would contain their own journal/clipboard, writing tools, toilet-paper-roll binoculars, and water bottle.

To avoid a disappointing first excursion, practice walking together, and build capacity by walking a little farther and longer each time. Some children who are not familiar with the outdoors are fearful of the unknown; be supportive as they break down those fears. Often our own fears can impact our students' experiences. It is helpful to be aware of your own comfort level as well as the body and verbal language you bring to outdoor experiences.

At Shelburne Farms, we remind children that they are much bigger than many of the creatures we may encounter such as salamanders, frogs, and earthworms. We encourage them to be "gentle giants"

What to Pack:

- first aid kit with emergency health forms, EPI pens if needed
- cell phone
- water bottle(s)
- sunscreen
- camera
- extra gloves, socks, and hats in winter
- if a long outing, small snacks for energy
- magnifying glasses or boxes
- extra pencils (+ small sharpener)
- markers
- paper

and return all living creatures back to their homes. We'll ask them to cover their hands with soil before picking up salamanders and worms, as these creatures breathe through their skin and lotions and soaps could harm them. *The Salamander Room* by Anne Mazer is a wonderful story to share with children to illustrate the need to leave wild critters in the wild.

Most of all, enjoy yourselves! The rewards of being outdoors with your class brings so many benefits for both the children and you.

A Word about Ticks & Tick Safety

EWWW!



deer ticks are tiny, the size of a poppy seed

Ticks can latch onto your clothes, skin or a pet's fur as you hike through the woods, walk through tall grass, or simply play in the backyard. Ticks often move to a warm, moist part of the body, such as the armpit, hair or groin, where they bite and feed by sucking blood. Though most are harmless, ticks can spread diseases such as Lyme disease. The most common ticks are deer ticks and dog ticks. If you find a tick on yourself or your child, remove it with tweezers as quickly as possible, and swab the wound with antibiotic ointment.

How to Check for Ticks:

1. Check your hair first. Run your fingers flat against your scalp and over your entire head. Hold your fingers together and use both hands. Touch your entire scalp, and feel for small bumps or objects against your head. If your hair is long, pull it up when you're finished.
2. Look over the rest of your body from the top down. Some ticks are very small, so look carefully at your skin. You are looking for a small, round, black or brown bump. Stand in front of a long mirror to look at your back side or ask a parent for help.
3. Raise your arms and check your armpits. Ticks like dark areas, so check your male and female parts just in case. Chances are that ticks ran up the outside of your clothing to your head, but it is better to be safe than sorry.
4. Put on some clean clothes. If you've made it this far without finding a tick, you are good to go.

Overview of Threads

Who Are We?

Thread: WHO ARE WE?

Who Are We? guides children to discover how who we are builds and shapes healthy communities and ecosystems. Through this exploration of the diversity of the human and natural world, young children will have the opportunity to examine who they are and what they see. By considering the questions, “Who am I?” “Who are you?” and “Who are we?”, children develop empathy, the ability to understand multiple perspectives, and an awareness of themselves and the world around them. They’ll observe patterns, make observations, sort and classify, and consider how differences contribute to healthy and fair communities.

Who Lives Here?

Thread: WHO LIVES HERE?

Who Lives Here? introduces children to the people, plants, and animals of their place. By asking and exploring the question, Who Lives Here? children discover how our human, natural, and agricultural communities are interdependent. Children will develop a strong understanding and sense of community and place, as well as begin to grasp how they are interdependent—no matter where they live.

What’s Happening?

Thread: WHAT’S HAPPENING?

What’s Happening? is an opportunity to explore, observe, discover, and examine how people, plants, animals, and communities change over time. This Thread focuses on building understanding of human and natural life cycles, adaptations, and transformations, as well as the interplay between the human and natural world. By studying how someone or something changes over time, students learn that our world is cyclical and in a constant state of flux. By returning to a place or concept throughout the year students form a deep understanding and appreciation of their place—which is foundational to cultivating stewardship.

How Are We Connected?

Thread: HOW ARE WE CONNECTED?

How Are We Connected? cultivates an awareness and appreciation of what sustains us: our food, fiber, and relationships. This Thread provides an opportunity to deepen our connection with our local food system. Beginning with our air, soil, water, and space, we begin the exploration of food, fiber, family and friends. We weave, knead, bake, and create products that we use and eat, and discover the joy of living with gratitude and in relationship to the world around us.



How to Use Threads

Each Thread is designed to stand alone as an in-depth focus for exploring our world over an extended period of time. They also provide inspiration and resources as you design your own course of study. Multiple Threads can be woven together to meet the needs of your classroom.

Designing learning opportunities that connect to the seasons makes learning relevant, rich, and meaningful for children. You may use each Thread to stimulate conversations or interest around particular questions or seasonal events. You might also use a Thread based on the questions or interests of your students. Maybe your children are particularly interested in learning more about the animals that live in their neighborhood, or in discovering the similarities and differences of the trees in your schoolyard. We have organized the Facilitated Learning Experiences into particular seasons with which we feel they are best aligned. However, we acknowledge that many experiences can and should be repeated throughout the year or with a different focus. Feel free to adapt and modify the experiences to be used in other seasons, to fit with the themes of other Threads, or to explore other Essential Questions that you generate with your students.

What is a Thread?

TO SUM IT UP!

A Thread presents the context and content through which children will explore an Essential Question and some Big Ideas of Sustainability.

Essential Question

The title of the Thread, the question that teachers and students can ask and apply to all experiences throughout the Thread.

WHAT'S THE
Big Idea?

Big Ideas

The Big Ideas of Sustainability are concepts that describe different aspects or components of sustainability. Because sustainability is such a complex idea, breaking it down into smaller elements make it easier to learn and teach. The Big Ideas specified in each Thread provide context to help children understand and make sense of what they are learning.

Enduring Understandings

Enduring Understandings elaborate on the Big Ideas by defining some understandings that we hope children come to through their exploration of the Essential Question and Big Ideas.

Connecting beyond the Classroom

Family Connections, Service-learning Opportunities, & Community Connections

When using an Education for Sustainability framework, the best learning often happens when the walls of the classroom dissolve, and learning happens everywhere: at home, in nature, out in the community. When children have an opportunity to contribute to the wellbeing of their human and natural communities, they begin to understand their ability to make a positive change in the world. This section offers suggestion on how teachers can engage families in exploring the Big Ideas and Essential Questions at home and in the community.

Self-guided Opportunities

Since children learn best through self-directed play, providing a variety of choices and materials throughout the classroom is an ideal way to promote learning. This section offers suggestions on materials that can be offered for children to explore. Many of the Facilitated Learning Experiences, once introduced, can also provide great opportunities for students to explore further on their own.



Loose Parts

Loose parts are movable props (natural and human-made) that children can use in a variety of ways, indoors and outdoors, as they play. Parts can be stacked, aligned, piled, moved, taken apart, and reassembled. They have no rules and can be used to suit the child's imagination. We list ideas for loose parts related to the Thread in this section.



Dramatic Play

Children learn through doing, and engaging in dramatic play allows them to experiment, explore roles, and develop language skills. This section suggests props that reflect the Thread, which children can incorporate into fantasy and role-playing.



Outdoor Play

Unstructured time and space for children to engage in self-directed outdoor play is crucial for children to develop a relationship with the natural world. This section offers suggestions on ways students can engage in unstructured play in an outdoor setting, including tools for exploration and discovery.



Art

An art studio or area provides an opportunity for children to creatively express themselves, as well as develop fine-motor skills. This section



identifies materials and supplies connected to the Thread for students to express their ideas.



Literacy

Developing children's language and literacy skills is a core component of early childhood education. This section, which we call "Linda's Picks," lists engaging books to help children develop these skills. Additional titles are listed in individual facilitated learning experiences. Provide opportunities for children to engage with literature throughout the room. Post photographs taken during the course of study, offer journaling as an activity choice, and invite students to label dramatic play props and art projects. Maps can provide models of words that connect to the community.



Numeracy

The early childhood classroom introduces children to numeracy and math. Children count, compare, classify, sort, graph, tally, as they learn about the Big Ideas in each Thread. This section will provide ideas for materials and activities to support the development of children's numeracy skills.



Explore Table

The Explore Table is a place where children can investigate and explore items related to the Thread topic. This section offers ideas on items to include at the Explore Table.

Facilitated Learning Experiences

Facilitated Learning Experiences, traditionally called *activities* or *lessons*, help teach and engage children in exploring the Essential Question throughout the seasons. Each experience lists objectives, materials, specific Big Ideas and Enduring Understandings, literacy connections, directions, discussion questions, and extensions.