Nature-based Activities Offer Solutions for Schools

PARENTS, TEACHERS AND administrators are asking the hard questions of how to conduct schooling this fall in the reality of the novel coronavirus (COVID-19). Many best-case scenarios may seem hard to pull off with especially young, wiggly, energetic students.

Even before COVID-19, more schools and teachers across the nation were incorporating nature within the classroom. Now more than ever, the outdoors offers solutions for both planning scenarios amid the pandemic and for children’s long-term academic success.

Research shows that it is developmentally appropriate and incredibly beneficial for children to learn by playing, climbing, experimenting, problem solving, splashing, communicating, exploring and more. When they explore the world around them while making connections across their five senses, powerful memories are made, curiosity sparks and holistic growth increases.

However, if children learn best hands-on, what does that look like during a pandemic?

Integrating outdoor spaces with a traditional classroom can seem daunting. Merry Lea’s Environmental Education Outreach (EEO) team supports public and private schools in realizing that immersive learning doesn’t have to be completely sacrificed this fall, especially when outdoors.

For example, making mud and figuring out what to do with it can be a surprisingly complex challenge as students explore and learn.

Students might problem solve, communicate with peers, observe, classify and more. Artwork may appear in individuals’ journals, berry-licious smelling potions concocted, homes for toads and nests for swallows engineered or other experiments may be conducted.

All with mud.

Outside, there are no door handles to bleach, or toys to disinfect, or worries about poor ventilation. Kids may still end up with mud on their faces, but at least mud is a washable marker of a good time.

Additionally, the Centers for Disease Control and Prevention (CDC) and public health officials report that the rate of transmission for COVID-19 is reduced when spending time outdoors.

“As research develops, educators see the need for fostering and developing the ‘whole’ child,” says Krista Freel, a Merry Lea environmental educator. Spending time outside supports children’s developmental, cognitive, emotional, physical and social growth in unique ways that a highly structured indoor classroom cannot provide.

“Nature not only provides cognitive stimuli for children, but also helps reduce the stress and anxiety children may be feeling during this time in a pandemic,” Krista explains.

The EEO team works to get research-based teaching techniques and tools into the hands of educators, especially local teachers.

They recently hosted a free virtual workshop for educators interested in learning more about the research, pedagogy and approach within Forest Kindergartens and Nature Preschools. These programs are regional adaptations or alternatives to typical forest schools.

Merry Lea pioneered the first examples of nature-based programs in Northern Indiana three years ago. The EEO team helped implement several Kinderforest programs over the past three years and started a partnership-based Nature Preschool fall of 2019.

Kinderforest includes multiple return visits to a natural location at least once a month. Students in the collaborative Nature Preschool program between Merry Lea and Cole Center Family YMCA spend two hours a day outside, four days a week, in all weather and seasons during the school year.

There are many formats Forest Kindergarten and Nature Preschool programs may take. These nature-based programs and the pedagogy associated with them are

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Connecting with the Past

WHAT’S PAST IS PROLOGUE...

Although I have heard that phrase many times, I never gave it much thought. During my first month as executive director, I found myself reflecting on how history sets the stage for the future; in particular, how the history of Merry Lea has laid the groundwork for the organization’s continued success.

During periods of organizational transition such as this, it is important to create space for reflection. Reflecting on how we got to where we are now also honors those who made the present moment, and in turn the future, possible.

CREATING A VISION

It all started in 1964 when Lee Rieth returned home one day and informed his wife Mary Jane that he just purchased 80 acres of land in Noble County. As the story goes, her gasped response was, “You did what?”

Mary Jane soon overcame her initial apprehension and together the Rieths developed a vision for their new property: a place for people to connect with the natural world. The Rieths envisioned this land to be a site where spirituality and environmental ethics would be inexorably bound. In 1967, the Merry Lea Nature and Religious Foundation was established.

Merry Lea grew rapidly over the next decade as new parcels were purchased and public education programs and community events developed. The Rieths continued to be the driving force behind the organization as they determined to understand humanity’s place within the environment. This led to ecological conservation and the incorporation of spiritual belief into land management practices.

By the late 1970’s, the Rieths expanded their vision to establish partnerships with local colleges. They invited institutions of higher learning to use the property for education and research.

In 1980, ownership of the property was transferred from the Rieth family to the Mennonite Board of Education and Goshen College. The resulting financially independent but programmatically synergistic relationship between Merry Lea and the college has proven to be extremely beneficial for both organizations. Thanks to the generosity of donors, diligent grant writers and a vision-driven endowment, Merry Lea continues its educational mission.

Larry Yoder became Merry Lea’s first executive director following its acquisition by Goshen College. Under his leadership, the property expanded to its current size of 1,189 acres by 1986.

Throughout the 1980’s and 1990’s, public education programs continued to expand. Goshen College biology students and faculty catalogued much of the property’s biodiversity. When Bill Minter joined the team in 1991 as land manager, he ushered in a new era for Merry Lea that emphasized increasing ecosystem diversity. To date, Bill has led efforts to create more than 50 acres of wetlands and over 75 acres of prairies and savannas.

When Luke Gascho arrived as executive director in 1997, he spearheaded initiatives to develop collegiate education programs. During Luke’s 22-year tenure, three such programs were created: Master of Arts in Environmental Education, Agroecology Summer Intensive and Sustainability Leadership Semester.

Merry Lea’s environmental education programming continued to expand...
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Throughout this period with the launch of PROWL, an afterschool nature club, and the Kinderforest program. Both continue to serve our local Wolf Lake community.

CONTINUING THE VISION

When Goshen College acquired Merry Lea from the Rieth family, I was a young boy in southeast New York learning about the natural world during field trips to local nature centers.

As Bill Minter was starting to shape and refine Merry Lea’s ecosystems, I was shaping and refining my own environmental worldview through the pursuit of a biology degree at a small college in northern New Jersey.

As Luke Gascho was pushing the organization to further refine its environmental education and collegiate programs, I was furthering my own professional aptitude by working as an environmental educator in New York. I dreamt of someday shepherding the mission of a similar organization, and eventually pursued advanced degrees in environmental conservation in Illinois and Florida. I moved to Indiana in 2016 when my spouse Suzanne Beyeler, a 1995 Goshen College graduate, was hired as the Environmental Studies Director at Manchester University.

After working as an environmental consultant for several years, I eagerly applied for the available Merry Lea Executive Director position. And the rest, as they say, is history.

Merry Lea is a precious gift that was lovingly created and passed on to us by more people than I can possibly write about here. To all those that I did not mention, know that you are not forgotten. I am humbled by the awesome responsibility that has been entrusted to me as executive director. To all who came before me, the current Merry Lea staff and the rest of our community, I promise to do my best to facilitate the success of our organization as we pursue its core mission:

1. Providing a natural sanctuary for Indiana’s plants and animals
2. Providing environmental education for all ages
3. Providing a setting for re-creating opportunities that benefit the human body and spirit.

So, what comes next in the story of Merry Lea? I can’t wait to find out! I hope you will continue to join us on this journey.

Sign up for PreK-12 Programs

Merry Lea is offering PreK-12 environmental education opportunities this fall. The EEO team plans to offer three options to schools in the midst of COVID-19:

1. In-person field trips with modifications: We are offering a limited suite of programs with protocols in place to ensure public health and safety. These include: maintaining small groups, being exclusively outdoors, using face masks and other precautions.
2. Schoolyard programs: Merry Lea educators will travel to schools to conduct programs with classrooms on their school grounds or nearby natural areas. Safety modifications will be in place for this in-person experience.
3. Live distance learning: Schoolchildren will interact with Merry Lea educators digitally in real-time to engage in activities, watch demonstrations, experience animal encounters and more!

To learn more or sign up, teachers should contact Katie Tipton at kctipton@goshen.edu

Last fall over 2,000 students came to Merry Lea to learn and explore our one-of-a-kind nature preserve. This fall, school children are at risk of losing high-quality outdoor experiences due to COVID-19.

To overcome barriers that schools face during this unprecedented time, we are modifying and designing in-person and virtual programs. We seek to ensure that students can still have authentic and safe experiences with nature.

With fall fast approaching, we need your help to address the increased costs associated with modified programs. Your support will allow us to purchase: duplicate supplies for smaller physically-distanced groups, webcams and associated technology, hand sanitizer and personal protective equipment, and other program supplies.

Help us launch into fall programming with success!

With your generosity, we hope to raise $7,500 to help us meet these needs.

To donate, please go to goshen.edu/merrylea and click on “DONATE” in the top banner. You may give directly online, or print and mail the donation form to Merry Lea with your donation enclosed.

Contributions of the following items would also be greatly appreciated:

Hand Sanitizer, Microfiber Cloths, Adult and Child-Size Disposable Face Masks, Disposable Gloves, Disinfecting Wipes

If you would like to donate any of the above items, please contact Maria Tice at mariact@goshen.edu | 260-799-5869
Meet the Summer Farm Crew

AS THE MERRY LEA SUSTAINABLE FARM team supports and maintains healthy ecosystems, they also strengthen communities through growing and sharing food, tackling projects and building camaraderie. Throughout this past summer, the farm crew demonstrated resiliency by completing tasks and running the farm with good spirits.

Summer on the farm looked very different in comparison to previous years. In response to the challenges brought by COVID-19, the Agroecology Summer Intensive (ASI) program was canceled.

This decision was bittersweet, as described by Farm Manager Kaeli Evans. “At first, we weren’t sure if we could have any students living at Merry Lea, including farm crew. But thankfully, we brought on our three student workers who have really held the farm together this summer.”

“The farm crew shifted into areas normally planned and managed by the ASI students,” Kaeli explained. One such area was the education garden. This garden is one where PreK – 12 students on a field trip can taste their way through learning about the farm ecosystem.

ASI students typically create the layout, prepare, plant and maintain the education garden in preparation for field trips. This summer, the three farm crew members took over this task. They worked hard to build 16 raised beds and created a healthy garden that will be enjoyed by future ASI and PreK-12 students for many years to come.

This project was in addition to their weekly tasks of mowing, weeding, planting, shoveling, watering, harvesting, preserving food, caring for animals, pruning fruit trees and managing pests.

“Throughout it all, even with a smaller group of students, there was still so much learning and growing taking place on our farm,” Kaeli said. “I don’t think I could have asked for a better group of students to be my first farm crew.”

Kristen Oliver ‘23
BIOLOGY MAJOR
Sharon, Wisconsin

For a biology major on a pre-veterinary track, getting hands-on experience in caring for farm animals is great preparatory practice. Kristen Oliver worked closely with Merry Lea’s animals, especially the goats, this past summer.

Each day, Kristen helped socialize the young goat kids, born in early May, to become familiar with humans.

These daily checks also allowed the humans to become familiar with the goats and know their behavior intimately.

This intimate knowledge allowed Kristen and the farm crew to notice when a goat kid fell ill due to a common pasture parasite. She devotedly bottle fed the goat every eight hours: even if that meant waking up at 3 a.m.

Due to her diligence and care, she successfully helped nurse the kid back to health.

Aside from making sure the animals were happy and healthy, Kristen spoke to the impact she made on the farm’s land.

Kristen and the other farm crew members worked hard in preparing and readying the farm’s education garden. They created raised beds and carried out a laborious process called double digging.

Double digging involves moving the soil so it is healthier and easier for plants to grow. Merry Lea has heavy clay soils, so double digging helps loosen these soils up before they’re topped with a layer of topsoil and compost.

“This process is good for [many] years, so I am very happy to be part of something that will last a long time,” Kristen explained.

Kristen is a rising sophomore at Goshen College and was the youngest farm crew member this year. Even though she did not take many agriculture classes before working here, she quickly learned the ropes and saw the fruits of her labors.

“Knowing how hard you work and seeing the impact that I have made on Merry Lea is the best feeling,” she described.

“This summer has opened my eyes to all the hard work farmers do around the world, and it makes me want to learn more and pursue a sustainable farm in the future!”
Elizabeth Breckbill ‘21
ENVIRONMENTAL SCIENCE MAJOR
Kidron, Ohio

Elizabeth (Liz) Breckbill has known about Merry Lea for a while now. She took classes taught by Merry Lea faculty at Goshen College on soil science and restoration ecology, and was looking to get involved with farming practices. As a farm crew member, she had the opportunity to apply those courses and build her familiarity with Merry Lea more deeply.

“The information I learned in these courses...have been helpful in understanding and making connections with the tasks I was doing at Merry Lea,” said Liz.

The intersection between Liz’s major and her work on the farm were evident.

Liz is pursuing an earth and climate science track within her environmental science major.

“I am particularly interested in understanding sustainable farming practices and how they can be implemented in response to climate change,” she said. “Some of the practices I have seen used at Merry Lea this summer could be the next step for many farmers once traditional farming practices can no longer be used.”

The examples she gave describe the cyclical nature of sustainable farming. Crops like rye were planted in the garden last year to protect the soils during the winter, otherwise known as cover crops. To prepare the garden for planting this summer, the farm crew sent in the goats to graze, then the pigs to root up and till the soil, and the chickens to peck and further mix the soil. All the while, the animals’ manure added nutrients to the garden. Compost from farm and kitchen scraps were then added with the plants, cutting out the need for expensive farm equipment or excess fertilizer.

Even though this process takes a lot of time, these practices could become a common solution in response to changes caused by climate change, according to Liz.

Liz and the entire farm crew began to reap the benefits of sustainable farming during their last month. In late summer, more crops are harvested like red, white and black currants.

“It is very rewarding and exciting to see the payoff that can come from all of the hours we spend caring for and planting the different crops around the farm.”

Levi Ebersole ‘21
SUSTAINABILITY MANAGEMENT MAJOR
Corvallis, Oregon

Levi Ebersole was not new to living at Merry Lea. He participated in the Sustainability Leadership Semester (SLS) in the fall of 2019.

During SLS, Levi worked with the Elkhart County Food Council: an organization seeking to improve food quality and security for the community. He researched organizational structures that might strengthen the all-volunteer food council and proposed social media strategies for promoting the council.

“Working with the [Elkhart County Food Council] definitely led me to consider working for similar nonprofit organizations more seriously,” Levi said.

Because of SLS, Levi developed a love for Merry Lea. Although this love was certainly a factor in his return, he got to experience a different side of Merry Lea this summer: our farming systems.

At the beginning of summer, the farm crew cultivated various plant starts – young plants or seedlings – and planted flower and vegetable seeds in the gardens and greenhouse.

“One of my favorite things [was] seeing our flowers and vegetables grow from seeds or starts into beautiful and productive plants,” said Levi, echoing the sentiments of the other farm crew members.

Seeing the daily progress of plants producing food and knowing that food will be enjoyed by many can be rewarding.

However, Levi also identified a different motivator for returning to Merry Lea, saying, “I have always been interested in farming and the food system in general.” He joined the farm crew with special interests in gaining hands-on experience in sustainable agriculture and learning how to run a farm.

“I definitely can make connections with some of my sustainability classes that I have taken...but I don’t think any classroom can come close to the experience and learning that comes with day to day farm work.”
collectively referred to as nature-based early childhood education: a powerful way to support our youngest learners.

Participants from 11 states and two countries outside the United States joined the four-part series in late July. The vast majority were from northeast Indiana, which was the target audience and context for the workshop.

“I personally enjoyed the opportunity to present content and engage with participants in a radically different way!” says Merry Lea’s Director of EEO Marcos Stoltzfus.

And it certainly was radical from typical webinar formats. However, hosting an interactive, online workshop is no easy feat.

“We had to be very deliberate to think of ways to make activities accessible to everyone,” Marcos describes. They structured the virtual workshop to incorporate live presentations, videos of students performing activities, organized link-sharing, small group interactions, pre-recorded tours from guest speakers, engagement with participants’ questions and much more.

All the while, members of the EEO team had to ensure their scheduled activities accommodated the number of participants — in one session that included 65 individuals. “It’s exciting to think about how much more accessible this has been because it was a digital offering,” says Marcos.

Despite the workshop being digital, participants also engaged in modeled activities and discussed with others in small groups. This helped teachers think about how these tools can be adapted to their settings.

Krista led a session that was all about sit spots: an influential tool that can help connect students with their physical environment.

A sit spot is a student-selected location in the outdoor classroom, which students routinely visit to sit and observe on each program day. A child might choose a log, the base of a tree, or an open area with a view.

During this independent time, students do not interact with other students. Rather, they explore their space and develop self-awareness through journaling: they can draw, record observations of what they hear, smell or see, write questions and more. They might also sort leaves or organize rocks and pay close attention to the things around them.

Krista not only described the research and components of this routine, but had each participant go outside and do a sit spot. After the allotted time, they came back online together and split into digital groups and discussed their experiences.

One participant reflected on this, saying, “I valued the fact that even on Zoom, we still took time to commune with nature a little bit. I am always happy when we do breakout groups, because it’s a powerful way to connect with others in the class.”

Along with networking with fellow educators in the field, participants learned about play-based learning and outdoor education philosophies.

Dr. Jean Lomino from Wauhatchie School, a forest kindergarten school in Tennessee, gave a live presentation for the group. Dr. Lomino dove into the forest school education model: describing pedagogical approaches that justify this approach to children’s development and education. She also modeled how to communicate these ideas articulately to parents, administrators and the community.

Participants later saw this model of nature-based education in a tangible way by touring different spaces and hearing from other practitioners’ experiences.

In the last session, participants “visited” various outdoor classrooms by watching videos to see what they look like and how time within that space may be structured. Participants saw the Nature Preschool site at Merry Lea, the Kinderforest site for Central Noble Primary School and Oak Farm Montessori’s site for their forest school programs.

Overall, one goal of this workshop was to create an informal regional network of educators exploring nature-based early childhood education. This common space will work to support, encourage and share resources for peers in the field. Connecting and sharing with fellow educators was a highlight for many participants.

**Even though the EEO team missed having opportunities for in-person connections, they received very positive feedback from the participants.**

Some educators found the workshop to be relevant and justifiable for their setting. Indiana teachers who participated could receive Professional Growth Points. Connecting Kinderforest and Nature Preschool activities to state academic standards is a relevant topic that teachers may seek.

“I value how these programs meet state standards in such creative ways. Not only do these programs meet students’ academic needs, but it seems to liberate them and foster great respect for nature as well,” said one participant.

Other educators described this workshop as timely.

Another participant said, “I’m so thankful for these sessions which have sparked new excitement in the midst of the heartbreaking uncertainty of the current back-to-school dilemmas and plans.”
Wildflower Gazing and Grazing

JONATHON SCHRAMM, PROFESSOR of sustainability and environmental education, leads the charge into the field of wildflowers with large insect nets bouncing over his shoulder.

Marching behind him are three graduate students armed with field guides, open notebooks and pens.

From first glance, the prairie we stand in flourishes with white, yellow, purple and orange flowers. Butterflies and dragonflies flit from one bloom to the next in chaotic dances. The static buzzing implies there is more life within the grasses that we cannot see.

It makes sense that a natural history class would come out to a prairie to identify wildflowers. However, this natural history session is focused on agroecology: where is the farm?

Over at West Goodrich Prairie, behind the Michael Yoder Dome, is the site of a different Merry Lea farm system. If the time is right, one might catch a glimpse of a bull’s horns poking through the thigh- to chest-high wildflowers: an obvious hint that these wildflower fields are in fact part of a farm system.

There are three beef cattle grazing on natural prairie grasses in this section of Merry Lea. Jonathon and Goshen College Professor Ryan Sensenig are conducting research on the potential for sustainably grazing domestic livestock on native prairie plants.

The cattle are moved from plot to plot for varying lengths of time. Standing in one of those plots, Jonathon tasks the graduate students with finding evidence of cattle having grazed here.

There are clear signs of trampling where a bull decided to lay down. Matted grasses outline the sheer size of these gentle giants. A couple students point out some flowers that seem to be missing compared to other plots, implying these were most favored by the cattle. Other flowers seem to be more plentiful: the spared survivors.

One of these spared prairie species is wild bergamot (Monarda fistulosa). Danilo Rodriguez, South Bend, Ind., dives into his field guide, navigating through terms like petioled, tubular, bilabiate, corolla and more to capture what the identifying features of this flower are.

To the untrained naturalist, wild bergamot could be described as a flower with floppy, stringy purple hair in the shape of a ball. Before he arrived at Merry Lea, Danilo was volunteering for the Peace Corps in Panama when he was evacuated due to COVID-19. He found this master’s degree program after returning and was drawn to Merry Lea’s diversity of natural habitats and the chance to design creative curricula.

Alex Mihalik, New Castle, Pa., had already sat down in front of their chosen, not-yet-known wildflower. They sit with book in hand and grasses towering over them, as they identify this flower which bears a curious resemblance to Queen Anne’s lace.

Alex was a teaching intern at Au Sable, Mich. before joining Merry Lea’s master’s program. Their desire to help communities learn how to better interact with and restore the environment brought them to the program.

To Jaime Webb, Goshen, Ind., these are familiar fields. Various Goshen College classes have brought Jaime out here before as an undergraduate. However, these fields still hold a wealth of knowledge unknown to them. It doesn’t take long for Jaime to find a flower they don’t know and begin to identify it.

Jonathon steers the class to become a sensory-rich experience.

After Danilo describes the distinct aspects for identifying wild bergamot, Jonathon urges the students to smell the leaves.

Their sweet fragrance unlocks a new realization and connection. A smell that had gone unnoticed now is abundantly fragrant in the field where wild bergamot surrounds us.

“Smell can really help with identity and memory,” says Jonathon. He describes how the open sun amplifies the smell and wafts when walking through a prairie.

He then encourages them to take a nibble at the leaves. Mixed expressions appear on their faces at the slight peppery taste.

Apparently, the cattle didn’t like the peppery taste either: hence its abundance in this plot.

Understanding the biodiversity of the prairie is a key component of understanding this
Events

Enchanted Forest

WHERE:
Farmstead Site

WHEN:
Friday, Oct. 23 and Saturday, Oct. 24
7 p.m. – 8:30 p.m.

Save these dates on your calendar!

This family-friendly event will be modified to promote public health and safety. Stay tuned on our website and Facebook page for program-specific details about what to expect and how you can participate.

$3.50 per person. Registration will be required — date to be determined.

Learn more at: goshen.edu/merrylea

Wildflowers, continued from page 7

type of farm production system. Grass biomass – plant material used for energy production in a renewable process – is converted into beef mass as the cattle graze. However, because this area primarily functions as a prairie habitat, only a light agricultural footprint is produced.

Not only is the cattle’s food (wild prairie grasses) immediately available, but the cattle also contribute to the landscape. As they ingest grasses, they poop in the same prairie. This keeps nutrients and material cycling continual and close within the habitat.

The graduate students follow Jonathon to a control section of the prairie: a plot that cattle have never grazed in all five years.

There are slight differences in size and abundance of plant species. Goldenrod and mountain mint are more common here in contrast to the recently grazed section where there were very few.

The sensory experience continues as the class transitions to Merry Lea Sustainable Farm.

As students feel the sandpapery stems and leaves of rosinweed (Silphium integrifolium), they hypothesize about other benefits the prairie pockets provide.

Throughout the session, it became apparent how holding classes outside at Merry Lea was a powerful way for the master's cohort to explore and study their new home. Introducing them to the textured landscapes and aromas of prairies and farms creates deep connections across disciplines. From the black walnut smell when getting out of the van to the mountain mint and the red currants at the farm, the outdoor world seems to welcome and usher in a fresh start to the academic year.