



# Nightingale Notes

Special Edition November 2019

**Charles Crabill Woods**

**new NM LAND LAB**

**December**

- 2-6 Holiday Gift Shop**
- 2 Eagle Bookmobile
- 6 Eagle Farm Day
- 9 Eagle Bookmobile
- 16 Eagle Bookmobile
- 17 Eagles Carol at Shawnee Place
- 18 **All School Caroling—Parents Welcome**
- 19 **Winter Break Starts**
- 20 **Ski Club Enrollment Deadline**

**January 2020**

- 6 **Staff Day**
- 7 **Classes Resume**
- 13-17 Wing Explore Week
- 13 Eagle Bookmobile
- 15 Owl, Falcon Science Fair
- 17 **End of Quarter 2**
- 20 **No School MLK Jr Day**
- 21-24 Falcon Explore Week



An unexpected acquisition of 3.6 acres of forested land adjacent to the 2525 Limestone property has been made available to us by **Charles Crabill** of Springfield. We will be forever grateful. These wooded acres will expand our new Permaculture Greenhouse and Plant

Nursery that many of our high school Wings have been working on under the direction of permaculturalist, **Jared Martin** as he works to implement his "Peace-Comes-From-the-Soil" educational program.



***Peace Comes from the Soil***

*As we learn to take care of the Earth, we learn to take care of each other, thriving as a cooperative community and transforming what we perceive as scarcity into creative abundance.*





## PEACE COMES FROM THE SOIL

To create a nurturing and healthy learning environment at Nightingale, we seek to engender the values of collaborative learning, purpose-driven problem-solving, and the steadfast work of peace in our community.

As Maria Montessori said, “peace is the work of education.”



Here at Nightingale Montessori, new seeds are being planted on our grounds that will enable us to grow this fertile dream into a new and ever more fruitful reality.

“Permaculture” is a word that refers to a design science that is centered on a holistic systems way of thinking rooted in Nature’s irrefragable laws of resilience, adaptation, and interdependence. As we cultivate the land, restore the enchanted forest habitat with native species, plant kitchen herb beds, rain gardens, pollinator and medicinal plots, we will not only reap fruits, nuts, berries and mushrooms; we will



Russell gives presentation

learn the art of restorative justice, the skills of resilience and adaptation, and the know-how it will take to prosper in the challenging times of climate change.

“Peace on Earth – Peace with Earth”  
(Quaker Earthcare Witness)

## The Nightingale learning environment as modeled on the principles of permaculture



Owls teaching Chickadees

Permaculture is a both a philosophy and practical approach to land use based on three tenants:

1. Care for people,
2. Care for earth
3. Redistribution of surplus according to one’s needs

**Jared Martin** brings his love of permaculture design to engage students in building biodynamic gardens that support the school’s culinary program and connect the therapeutic practice of planting stuff: with lifetime academic goals. Last year, Jared expanded the hands-on activities that demonstrate the interdependence of all life. He likens the Nightingale learning community to the ideal design of a “planting guild.”

A **Planting Guild** is a model living ecosystem based on interdependent cooperation. Such a guild optimizes the survival and flourishing of each participating species. It is kind of “community” of plants that grow together and that is beneficial to all natural and human habitats. By working together the guild community produces denser and higher yields. A flourishing yield maximizes not only a thriving crop of edible species that support pollinator habitats and sequesters carbon, it also teaches the human skills of adaption, resilience, and collaboration.

We have discovered over the decades of designing Montessori learning environments, both indoors and outdoors, that by cultivating the love of the natural world we can provide a rich and integrating context for learning.

Our goal has been to encourage children to be conscious of their place in the food chain,

the processes by which their food is grown, produced, delivered, and consumed.

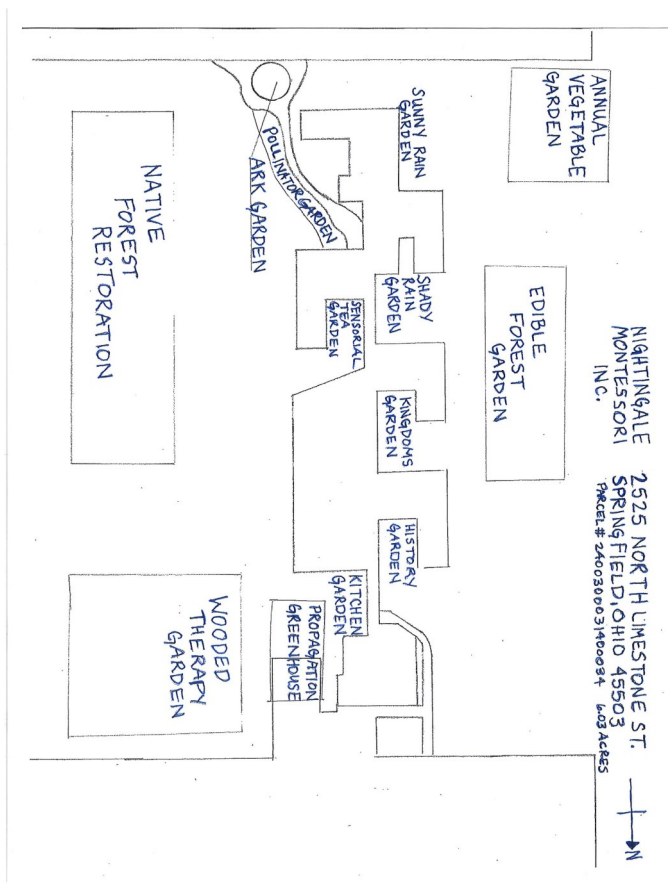
Our garden director and science teacher work together with the culinary team to integrate four major hands-on opportunities to learn about food, agriculture, and nutrition: our school gardens, meal preparation, school outreach through the Summer Feeding Program, and school field trips.

We have found that our school gardens, student kitchen experience, and community outreach programs, encourage children to choose healthy eating habits and learn the skills necessary for growing healthy communities.



The value of ecology and environmental education extends beyond the need for understanding scientific principles. Learning to value the natural world requires children to be out in it and it requires adults to take action to protect and improve the green spaces in our cities and countryside. When children interact within the environment with plants, soils, animals and atmosphere they become open to environmental education. They can engage in a process of exploring environmental issues, strategic problem solving and take action to improve the environment (NEEP, 1990) Working with students of all ages to illuminate the interactions between organisms within an ecosystem is the core of ecological education. Through studying those interactions and connections we can become aware of the interconnectivity of all things. That awareness can enlighten students to the fact that their choices matter. How they spend their time and money has an impact on the world around them.

One example of interactions that students can observe easily is on the stem of a peony plant. First of all students are stunned by the large, fragrant, even succulent flowers: human-plant interaction. Closer observation reveals numerous working ants traveling to and fro on stem and leaf: human-animal interaction. Amazingly, ants can be seen surrounding colonies of aphids and collecting their honey dew: animal-animal interaction. Students are stunned to see the ants are not hurting the



aphids, in fact, when a predatory lady beetle tries to eat an aphid, the ants defend them. The lady beetle is a beneficial insect, eating plant sap sucking insects, protecting the plant: animal-plant interaction. The Lady Beetle will lay eggs on the underside of the peonies leaves, which will hatch in 3-5 days: animal-plant interaction. The larva will eat aphids until they pupate into the adult form. The nutrition the beetle gets from the aphids comes from the peony sap they sucked from the leaves. The peony gets nutrition from the conversion of sunlight to glucose during photosynthesis: plant-environment interaction. The minerals and water used in this process come from the soil up through the plants vascular system. The health of the plant depends on the lack of pollution in the soil and water. Pollution comes from humans: human-environment interaction.

This complex web of interactions is one example of an endless supply of models and systems that can be studied to learn about our world. But if students do not get outside to make that first observation about the beauty of a flower, then the entire sequence of lessons is lost. Moving forward public gardens will be a catalyst for environmental education and will take students down the first steps to conscious stewardship of our earth.

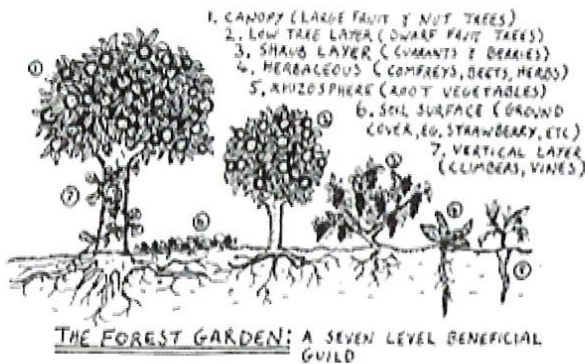


On Site Education offered at Nightingale Montessori  
as a Living Lab and Model System



**Season Extension** - using microclimates, raised beds, greenhouse or low tunnels.

You can maximize learning, ecotherapy and harvest through extending the growing season. Which crops are worth the effort? How can you prepare the soil?



**Building a Food Forest** - Most of us are not in the position to restore a forest. However, many people have gardens and access to open spaces, whether they are rural or urban. Schools have an amazing opportunity to regenerative agriculture. Visit our school to learn how to utilize these untapped resources and plant more trees.



**Native Edibles** are the foundation of our resilient garden system. Working with the needs of nature fulfills the needs for human yields. Native plants support a web of beneficial organisms, build a diverse and healthy soil, producing nutrient rich harvests.

# Nightingale Montessori is Implementing a Learning Garden : Using Permaculture Principles

## Permaculture : Perma-What?

### What is it?

This lesson is the first in a series introducing ideas of permaculture and how it is being utilized at Nightingale Montessori. Permaculture is the conscious

design of 'cultivated' ecosystems that have the diversity, stability, and resilience of natural ecosystems. It

is a harmonious integration of people into the landscape in such a way that the land grows in richness, productivity and aesthetic beauty.

This lesson will be an overview of the lessons to follow with explanations of responsibilities to the garden system. Each investigation will focus on different aspects of ecology.



### What will we do?

<p><b><u>Building from the Ground Up</u></b> Discussions about composting and the cycle of organic matter explain how soil provides nutrition for plants. The origins of soil will open up to the larger ideas including the lithosphere and humans' effects on it. <b>Student Responsibilities:</b> Removed weeds are placed in compost bins. The compost needs turned and eventually integrated into the soil.</p>	<p><b><u>Water Has Power</u></b> The power of water will be investigated from many angles: the tiny molecular level; as the rock eroding soil forming force; and as the human healing, plant growing must be conserved, essential compound of this Earth. <b>Student Responsibilities:</b> Each planting bed must be watered. Adding different types of mulch will conserve help water.</p>
<p><b><u>The Sun Will Come Up Tomorrow: The Predicable Universe</u></b> The patterns of the sun enable us to tell time, explain seasons and eclipses. The power of the sun fuels most of life on Earth. The same light that refracts into beautiful rainbows carries harmful radiation that causes a deadly type of cancer.</p>	<p><b><u>Plant Diversity Used to Explain Cellular Sameness</u></b> Investigating the rich diversity of native plants will fuel a discussion regarding the characteristics of plants and how they are inherited through genetics. Flower anatomy will be discovered and taken deeper to the cellular level. <b>Student Responsibilities:</b> Identifying plants will be important before pulling</p>



<p><b><u>Habitat Restoration</u></b></p> <p>Implementing Permaculture Design includes creating guilds. A guild is a grouping a plants, animals, insects, and other components that work together to help ensure their survival.</p> <p><b><u>Student Responsibilities:</u></b> Students will study Flashcards with organisms that outline their functions and habits.</p>	<p><b><u>Let Beauty Lead to Learning</u></b></p> <p>Moths and Butterflies will be examined to understand concepts like biomimicry, life cycles of insects, migrations, and camouflaging. “Aesthetics is the mother of ethics” will be a building point toward genuine care for our environment.</p> <p><b><u>Student Responsibilities:</u></b> Conscious movements in the garden preserve life.</p>
<p><b><u>Importance of Pollinators</u></b></p> <p>Hummingbirds, Bats, Bees, Beetles, Butterflies, and Flies are all essential agents facilitating fertilization in flowering plants. A discussion about beneficial adaptations will lead to concepts including selective breeding.</p> <p><b><u>Student Responsibilities:</u></b> Saving seeds will help students plan and project their minds into the future.</p>	<p><b><u>Sentinel Species as Biological Indicators</u></b></p> <p>The negative impact of the expanding human population is investigated. How can it be observed in nature and what are the variables that can be managed?</p> <p><b><u>Student Responsibilities:</u></b> Continue learning the diversity of species that are being explored in the flashcards.</p>
<p><b><u>Interdependence of Life</u></b> The cycles of different elements or compounds such as C, N, H<sub>2</sub>O, CO<sub>2</sub>, and O<sub>2</sub> will be investigated as examples showing how we are what we eat. Ethnobotany research can link our lives and history with plants.</p> <p><b><u>Student Responsibilities:</u></b> Each visit to the garden students will journal observations about their environment.</p>	<p><b><u>Stewards of the Earth</u></b></p> <p>Discovering the best practices for pruning, propagating, food preserving, seed saving and extending the season will encourage students to maintain their environment with skills. Principles of design will be investigated.</p> <p><b><u>Student Responsibilities:</u></b> Students will harvest any yield from the garden and store them appropriately.</p>
<p><b><u>Closing the System: Final Analysis of The Garden Project</u></b></p> <p>The implementation of permaculture principles will be evaluated. Advances in urban gardening practices will be summated and discussed. Observations about where energy is leaving the system will lead to suggestions for future improvements.</p> <p><b><u>Student Responsibilities:</u></b> Each participant will complete a survey and final reflection about their involvement, the progress and the success of the garden.</p>	

**Why will Participation benefit us or the Garden?**



Learning the concepts of permaculture will expand the knowledge and practice of integrated, sustainable agriculture and culture using the whole-systems approach of permaculture design. This will provide solutions for permanent abundance by training local people to become leaders of sustainable development in their communities. We must aim to demonstrate Permaculture Systems such as Food Production, Water Management, Soil Building, Food Forestry, renewable energy and Structures (Buildings) etc. whenever possible.

**What if a competition model of education was replaced by a collaboration model?**

All of us would leave our identities as comparative grades on the standard bell curve to become instead variously positioned knots in a net meant to catch a common goal. We would contribute our unique talents to the common goals of our interests. The attempt to standardize us would morph into the of discovering our purpose to develop.

**Montessori model -part A**

**People potential** enhanced with personal choices freed to manifest from the start - not suppressed to comparable standards of mythical norms

2. The drive to understand deeply through **higher - order thinking** is magnified through the use of mostly hands-on manipulative Montessori material.



Personal potential enhanced in class specially prepared for individual levels



1. The **curiosity** of the toddler would be enhanced by a method of education that fosters the self paced and personally motivated goals inherent in human nature. Montessori is that method.



Curiosity

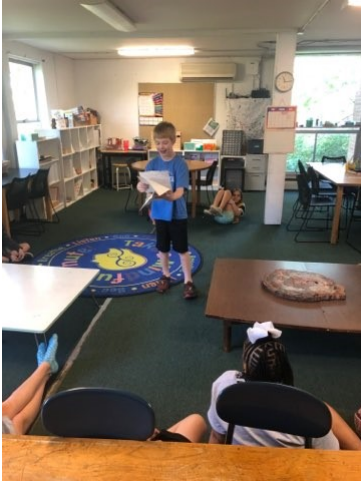


Maximum Effort





3. The human desire to **create, and the ability to adapt and construct** could be enhanced through self selected project-based learning normal within Montessori curriculum.



Luke shares creative writing story



Activity to develop students' personal potential



Tower building

4. The Montessori method promotes the urge to maximize one's energy to further a goal **through repetition at one's own pace results in a self - imposed ambition of perfection.**

### Montessori model - part B Community Responsibility

1. We enjoy the diversity of **as many differences as people make apparent.**

2. We study history and **other cultures to displace egotistical and self- centered attitudes.**

3. We study **common problems and how we address them together.**

4. We feel the pride of **team work when get a result for a common project.**



Helping elder to cross the creek

5. Have **restorative justice in place and conflict resolution to help** fairness and understanding prevail.

6. The realization that we can be **helpful and responsible daily** to our friends and community becomes a habitual way to heighten our own sense of self worth.

### Grace and Courtesy

The Hummingbirds' eating area is designed to accommodate the different skills and abilities of infants and toddlers. Bottle-fed infants are held while being fed; however, as soon as the child begins eating food, he/she is invited to join the rest of the class. Instead of using high chairs, which do not promote independence, low chairs are used to allow the child to get in and out by themselves. The Hummingbird teachers sit at the level of the child, facing the child, during feedings until he/she is capable of attempting to feed him/herself. When the child is ready, they are given the opportunity to feed themselves, practicing and mastering their developing movement skills. Once the child has made significant progress in using utensils and a cup, he/she is invited to sit around a table in a chair more suited for their developing needs.





The children are encouraged to practice appropriate vocabulary including “yes please” and “no thank you.” If something is spilled, the child assists in the clean-up. The Hummingbirds are encouraged to scrape their leftover food into the trash, place their dishes in the sink, and use the recycle bin when possible. This is a multi-step process that the children enjoy participating in. As they wait patiently for their turn in the restroom, many of the children enjoy wiping their area with a wet cloth. On the way to the restroom, each child places his/her dirty bib and washcloth into the laundry basket for washing.



Practical Life



Sharing a story



Studying other countries



Working as a team



Sharing group responsibility



Cooking for community



Experienced together



One shares win all



Whole class made meal



Making words together



Puddle provides self and group awareness





Who thought we would have a closing in November? The possibility of a school delay or closing increases with cold weather. **NM** will make the **decision to close/delay by 7:00 am**.

We have students and staff that come from as far and wide as Clark County, Logan County, Champaign County, Greene County, Clinton County, Montgomery County, and Madison County. Our delay/closing decision will be based on our school location, Springfield City. **We will follow the Springfield City School closing announcement with the following exception: WE WILL DECIDE IF WE ARE DELAYED OR CLOSED BY 7:00 AM AND THIS DECISION WILL NOT CHANGE REGARDLESS OF A CHANGE MADE BY THE SPRINGFIELD CITY SCHOOL SYSTEM.** Often, the Springfield City School System will delay to gauge a later weather situation and then change to a closing. Many families find it very difficult to make an arrangement for a delay and then make another arrangement when the delay changes to a closing. If Springfield City delays and we feel the visibility, road conditions, dangerously low temperatures or ice conditions warrant concern, we will announce a closing. Otherwise, as Springfield City delays, we will delay and remain delayed even if Springfield City changes their status to a closing.

Families that travel to **NM** need to make their own decision as to the safety of the weather and road conditions. If your area is delayed/closed and you decide to remain home, please notify the office. The attendance will be excused due to inclement weather.

Our Rapid Fire email and Call One notification will be sent to all emails and cell phone numbers your family has on file in the office, followed by a notification to the following television stations for morning school announcements.

**WHIO (Channel 7)**  
**WKEF (Channel 22 and Channel 45)**  
**WDTN (Channel 2)**

This information will also be given to the radio stations **WONE (AM), 106.5 WDSJ, WIZE, B 94.5, WXEG, 103.9, Channel 99.9, WTUE, Mix 107.7, K99.1 FM, and 95.3 Eagle.**

**MAKE SURE YOUR EMAIL and Cellphone Numbers ARE UPDATED AT THE NM OFFICE**

Please send an email from the email address to which you would like this message sent to.

The **NM Science Fair** will be at school on **January 15, 2020 from 6:30 – 8:30 pm**. We hope to have 50 students presenting. In order to get all of the judging of projects completed in a reasonable time frame we need about 20 judges.

The projects are judged by a team (2) of judges. Please let us know if you can volunteer to be a Science Fair judge. First time judges, never fear, there will be a judges' meeting before the fair (while the students are setting up their projects) and you can find out how to judge a project. All efforts are made to pair returning judges with new judges.

The fair will be closed to all parents and visitors during judging. Please drop off your student at 6:30 (they will not be able to enter earlier). Students that are accompanied by a Science Fair Judge will be allowed to enter at 6:15 so that our judges' meeting can start on time. You may then come back to view the projects and/or pick up your student at 8:30. If you have any questions, please contact the office.

6:30 drop off Student to set up project

6:45-8:30 Judging – all projects closed to parents and visitors

8:30-9:15 Projects viewed by guests

Volunteers can notify the NM office or email to Cristina at [chipp@nightingaleschool.org](mailto:chipp@nightingaleschool.org) or Jayne at [jwoodward@nightingaleschool.org](mailto:jwoodward@nightingaleschool.org) Please **consider this opportunity! We need volunteers!**



The 2018-2019 Yearbook is on sale now! Each copy is \$15. Please order one through the office and we will send it home with your child.

Email at [administration@nightingaleschool.org](mailto:administration@nightingaleschool.org)