

Fall 11-20-2019

## Exploring the World Around You: A Guide to Learning About the Natural World

Jordyn Kuemerle  
*Bowling Green State University, [jmkueme@bgsu.edu](mailto:jmkueme@bgsu.edu)*

Follow this and additional works at: <https://scholarworks.bgsu.edu/honorsprojects>



Part of the [Early Childhood Education Commons](#)

[How does access to this work benefit you? Let us know!](#)

---

### Repository Citation

Kuemerle, Jordyn, "Exploring the World Around You: A Guide to Learning About the Natural World" (2019).  
*Honors Projects*. 542.  
<https://scholarworks.bgsu.edu/honorsprojects/542>

This work is brought to you for free and open access by the Honors College at ScholarWorks@BGSU. It has been accepted for inclusion in Honors Projects by an authorized administrator of ScholarWorks@BGSU.

Exploring the World Around You: A Guide to Learning About the Natural World

Jordyn Kuemerle

Honors Project

Submitted to the Honors College

at Bowling Green State University in partial fulfillment of the

requirements for graduation with

UNIVERSITY HONORS, December 08, 2019

Dr. Heather Jordan Department of English, Advisor

Dr. Lisa Handyside School of Counseling and Special Education, Advisor

### Abstract

This paper discusses the research, methodology, and purpose of my Honors Project. My project is a workbook for children to complete with their parents or guardians all about exploring nature. Language and literacy development is the overall focus of my workbook, but children who complete it also learn about shapes, colors, and comparing sizes in nature. The original inspiration for this workbook came from reading Molly Bang's 2016 book, *Picture This: How Pictures Work*, and I originally wanted to make a children's book in nature. After further research I found out that many educators and education professionals agree that children should spend time outside in nature as they learn and grow. They also agree that parental involvement is an essential component in a child's learning. While there is much research to back these statements, there are little resources available to parents about how to incorporate nature into their child's learning. With the creation of my workbook, I plan to change that by providing a useful guide to working with your child to encourage the exploration of the natural world.

*Keywords: nature, nature education, natural environment, workbook, preschool*

### Introduction

The idea for this workbook came to me after reading Molly Bang's 2016 book, *Picture This: How Pictures Work*. While reading the book, I remember thinking about how unique her book is and how important it is to understand how we perceive images. I was initially intrigued by Bang's (2016) first question in her book, which is, "How does the structure of a picture-or any visual art form- affect our emotional response?" (p. xiv). This was something I had never considered in all of my years of viewing illustrations and pictures. After reading the book and learning about how there are principles for how an image should be set within a page, I thought about whether or not it was possible to follow these same principles while out in nature. If the way things are arranged on a page affect how images are perceived, then does the way we view our environment determine our emotions? This is the question I was hoping to explore while creating this workbook, and I believe that the way one views the natural world around them does affect their thinking. Throughout Bang's book, she states her principles of images and then provides explanations on how they work.

Her twelve principles for illustrations can easily be applied to what is seen in nature, especially her principles on space. Bang claims that objects placed in the upper half of a picture are seen as being free. Some things we see in nature, such as birds, the leaves on trees, and clouds are seen moving freely in the wind. On the other hand, items closer to the bottom are seen as being heavier and grounded. This is seen in nature through tree roots and stumps, rocks or boulders, and soil. Bang also notes that larger objects are perceived as being stronger than smaller objects. Therefore, a tree is seen as being stronger than a bush because of its size. In addition, the tree stands horizontally, which means it is perceived as reaching up and holding a lot of energy according to Bang's work. Branches on trees; however, are usually diagonal so

they are seen as being dynamic and holding tension. Bang also notes that the center is the main point that the eyes are attracted to. This is evident within flowers. Some flowers, like sunflowers, grow tall and end up in the center of vision when looking at various landscapes. Most flowers also have a bright center that the eye is attracted to. Light colors also promote feelings of safety and security while darker colors make others seem scared or tense, which is reflective in the bright colors found in nature. Finally, Bang discusses the outline of shapes and how they make us feel. Rounded shapes make us feel comforted while sharper shapes make us feel more scared. Leaves, flower petals, and even the blades of grass all have different outlines on them which causes us to feel a variety of emotions when looking at certain plants. Molly Bang's principles were originally created about illustrations, but as you will soon learn with this workbook, they can be applied to nature as well.

### **Literature Review**

The first thing I found out from my research was how to create a children's book, which is when I chose to read Molly Bang's 2016 book, *Picture This: How Pictures Work*. While reading this book, I learned how to use pictures in order to tell a story. Bang discusses how pictures that have round edges, light colors, and are placed within a stable background are seen as being calmer. On the other hand, pictures with sharp edges and dark colors are seen as being more intense. Therefore, these images may be used more within the climax of a story or when a problem is introduced. Much of a child's understanding of a story comes from the illustrations that accompany the text. Therefore, all illustrations need to be strategically placed within a book to produce certain emotions from the audience. This book actually inspired me to write a children's book for my honors project. The importance of using pictures to show meaning of a book was then also included in Perry Nodelman's *Words About Pictures: The Narrative Art of*

*Children's Picture Books*. Nodelman, like Bang, also states that pictures should be strategically placed within a book's page in order to convey meaning to a young audience. Both of these sources stressed the importance of focusing on illustrations in a picture book since children learn mostly from pictures at young ages.

Moving on from just the pictures, I decided to have my story take place in nature, so my book could teach about nature education. One source that provided a lot of knowledge on using nature education in an early childhood classroom was The North American Association for Environmental Education's Guidelines for Excellence series, which are used to introduce strategies for teaching nature education in the classroom. Intended to be read by educators, this series is structured by the grade level each one talks about. This source provided useful strategies for engaging students and encouraging them to utilize the materials found in the natural world around them. With this knowledge, I will be able to incorporate learning about nature within the story I write, and also within my workbook. The whole purpose of my workbook is to encourage children to expand their learning outside, and this source provided many tools to help me accomplish this. In Stephen Kellert's article, *Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children*, he discusses the three ways in which children learn in nature. These ways are with unrestricted physical contact with nature, restricted physical contact with nature, and through symbolic interactions with nature. According to Kellert, all three of these interactions need to be incorporated in nature education during the early childhood years. These sources will contribute to my creation of activities in my workbook as they explain the various methods that educators should use to create activities that engage their students with nature.

In order to really focus in on nature education, I chose to spend time researching Maria Montessori and her method of teaching since much of her method involves nature, using natural materials, and gardening. One source really helpful in providing more detail about her theory was a 1996 book titled *Montessori Today: A Comprehensive Approach to Education from Birth to Adulthood* by Paula Lillard. In this book, Lillard goes into detail about how the Montessori method of education is used from early childhood onto adulthood. While I chose to focus on the early childhood years for my project and the book expands upon that, it was still full of knowledge on the general components of the Montessori method of teaching and using natural materials within the classroom. This general knowledge will help to guide me through using some aspects of the nature part of Maria Montessori's teaching to create activities for my workbook about nature. Since it is all about learning in a natural environment, Maria Montessori's method for teaching is the most appropriate to use when creating my nature workbook.

### **Methodology**

When I first had the idea for my project, I planned to make a children's book set in nature; however, I changed my mind after talking to my primary advisor about my project. After talking through my initial idea, we considered what it would be like to make the book into a workbook instead so students can learn to appreciate nature through being active participants. Plus, this would allow for students to benefit from time spent outside. I conducted research on the benefits of spending time in nature and the Montessori method of education. I chose to focus on Maria Montessori's approach to education because she talks a lot about the benefits of nature and learning through natural materials. At the time I completed my project proposal, I also worked at a Montessori school with pre-Kindergarten students. When creating the workbook, I

thought of activities I had completed as a kid, I had done through Girl Scouts, and some that I had done through working with preschoolers. Then, I thought about ways to change these activities so they focused on the different parts of a book, colors, letters, and comparing the sizes of objects. All of these skills and objects need to be learned by children when they are in preschool and Kindergarten. I incorporated the different parts of a story for children to learn about concepts of print through the creation of their own story.

After deciding what to write about, I began writing the workbook. After receiving feedback from both of my Honors advisors, I edited the workbook before adding in images of nature and examples of the activities into the book. I wanted to give examples inside of the workbook to guide children, but I did not want them to focus too much on the examples. One of the main goals of my workbook is for children to complete it how they choose to, and to make it unique to their surroundings and experience. Nature is not the same everywhere, and I want children to have the chance to explore and appreciate the environment they are growing up in and not focus on the environment I live in. I took pictures around where I live and in a few spots I vacationed at, but the workbook does not encompass every single type of environment in the world. Therefore, I tried to make it inclusive to all types of environment without putting too much emphasis on a very green Midwestern environment. After the pictures were all added in, I printed the book to present it and complete the project.

### **Why I Chose to Focus on Nature**

Going out in the natural world is important for children to learn and develop. Spending time in nature allows children to explore and use their natural curiosity and desire to learn. Natural materials—such as leaves, sticks, grass, flowers, and rocks are very easy and safe to be



manipulated, used as building materials, and are easy to move from place to place. Through manipulation of materials found outside, children are able to use their imaginations and create symbols for various items found in nature. Creative thinking and the ability to explore are vital to a child as they continue to learn and grow. As children age, they use creative thinking and exploratory learning in their classes and in everyday life. Not only can nature allow children to engage in symbolic and imaginative play, having children care for nature can also teach them about responsibility. Teaching your child how to care for the environment, take care of plants and other living organisms, and clean up outside will teach them to be responsible for the environment. They will also learn how to help the planet and be eco-friendly. Another benefit of nature exploration is that it is convenient and can happen in any landscape. No matter where they live, children can spend time outside and learn to appreciate the world around them. There are so many opportunities for children to engage in activities outside in any type of environment.

In addition to it being beneficial, I grew up spending time outside at home. From a young age, my family took me outside and encouraged me to explore nature and play in it. I always loved seeing the various bright colors outside and finding cool rocks and leaves. From Kindergarten up until my senior year of high school, I was a Girl Scout. Therefore, I spent a lot of time camping, canoeing, and hiking. For the past few years I have worked as a preschool teacher and have seen how the children I teach spend their time outside playing with their peers, and interacting with the nature around them. They enjoy picking flowers, looking at bugs, and playing in the dirt. These experiences have led to my love and appreciation of nature. I hope my workbook instills the same appreciation I have for nature into the children who complete the workbook.

### **Forest Schools Movement**

One thing I learned about through one of my advisors while completing this project is the Forest Schools movement. As of right now, these types of schools are new to the United States, but they are starting to pick up. According to the Forest School of Minnesota (2017), forest schools allow for students to “open up to learning, by eliminating the distraction for the need to defend oneself from hurtful interactions.” These schools teach children through adult models of how to speak to and respect one another, which allows for students to freely explore the world around them and learn from nature. Letting early childhood students learn through their interactions with nature allow for them to become creative and use their tactile senses to increase learning. Michele de Castillo, who runs the Forest School of Minnesota, claims that environmental learning “is essential to our health and well-being in so many ways and it helps children tremendously in their ability to learn” (Forest School of Minnesota, 2017). Inside these schools, students spend the majority of their time outside, even in weather where most other schools would keep their students inside for recess. Children are able to use their senses to play and interact with what they find in the natural world for their early childhood education. These students also are learning how to interact with other students their age and how to respectfully share about their opinions and experiences. After learning of these forest schools, I believe that my workbook has a similar goal to them and is important for getting students to learn outside.

### **Reflection and Conclusion**

Overall, I had fun creating this workbook. I felt like I was writing something that would be useful to many parents that they have not seen before. Being an Early Childhood Education major, I have been told how much play and being in nature is beneficial for a child’s development. I had many courses cover the play aspect of this, but there has been little information taught to me about how to incorporate nature into learning. Of course, a lot of this

can come from bringing natural materials into the classroom, but there is not much focus on how to let children explore nature and all of the objects found within it. Before coming up with this idea, I was working at a Montessori school. Maria Montessori, who created the basis for these schools, believed in children learning in the natural environment. This was reflected in the use of wooden shelves and work (which were activities they children completed to learn from) but was also included in outside time. While we were outside, the children were able to climb trees, pick up sticks, play in the snow, dig in the dirt, pick flowers, and spend time in the garden.

Admittedly, climbing trees and playing in the stick area part scared me at first, but I was able to see what children were capable of when playing outside. They used the natural resources as inspiration and symbols for their play, asked questions about their surroundings because they wanted to know more, were fascinated by the bugs and animals around them, and loved walking through the garden. All of the kids were active and rarely got bored as their imaginations kept them wondering. Their curiosity and exploration were intriguing to me and made me realize that not all children have this outdoor freedom scheduled in their day.

Letting children play in the natural world is so important to allow them to be creative and learn to take risks, but many educators and parents do not get taught how to incorporate nature into their teaching routine. I certainly did not realize how much the preschoolers at my work enjoyed and learned so much while being outside. Therefore, making this workbook was not just about educating parents, it was also about teaching myself more. The goal was to encourage parent engagement with their children and to teach parents how to promote safe nature exploration to their child; however, I also learned a lot through my research before writing this workbook. I did not really realize how important of a role going outside has on a child's development. When I have my own classroom in the future, I plan to take my class outside as

much as possible. Not only will this help them to learn about the environment, but it will also give them a break from being inside and allow for them to take time to clear their heads so they can accurately retain lessons learned in class. I also plan to bring in more natural materials and some materials from outside to my classroom for lessons.

### **Further Implications**

After completing and presenting my project, I feel like it could be expanded upon. One way I think it could be expanded upon is through creating a series of workbooks to cover more educational areas, such as math, science, and social studies. Also, making a workbook specifically for students with disabilities or adapting them to add in accommodations and modifications would allow for all children to utilize my work. I believe that every child has the ability to learn with the proper accommodations, so I would add these into my current workbook so no child is kept from spending time outside. I also would reconsider how I represented nature and would try to add in more examples of different environments. As I mentioned above, everyone is living in a unique environment, so incorporating ideas for how my activities could be adapted for children who do not live near a lot of grassy areas or parks would be one additional thing I could go back and add in the future.

## References

- Bang, M. (2016). *Picture This: How Pictures Work*. San Francisco: Chronicle Books LLC.
- Davidson, W. F. (Director). (2004). *Maria Montessori: Her Life and Legacy* [Video file].  
Davidson Films. Retrieved November 18, 2018, from Kanopy.
- Fantuzzo, J., McWayne, C., Perry, M., & Childs, S. (2004). Multiple Dimensions of Family Involvement and Their Relations to Behavioral and Learning Competencies for Urban, Low-Income Children. *School Psychology Review, 33* (4), 467-480.
- Forest School of Minnesota (2017). About: Beginnings. *The Forest School of Minnesota*.  
Retrieved from <http://www.forestschoolmn.org/beginnings>.
- Kellert, S. R. (2002). Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children. In Kahn, P. H. & Kellert, S. R. (Ed.), *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations* (pp. 117-153). Massachusetts: The MIT Press.
- Lillard, P.P. (1996). *Montessori Today: A Comprehensive Approach to Education from Birth to Adulthood*. New York: Schocken Books.
- Meier, D. R., Sisk-Hilton, S. (2013). *Nature Education with Young Children: Integrating Inquiry and Practice*. New York: Routledge.
- Nodelman, P. (1988). *Words About Pictures: The Narrative Art of Children's Picture Books*. Georgia: The University of Georgia Press.

Simmons, B. (2016). Guidelines for Excellence: Early Childhood Environmental Education Programs. *The North American Association for Environmental Education: Guidelines for Excellence Series*, 2-58.