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# The Process of Creating Place-based, Environmental Children's Literature

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THE PROCESS OF CREATING PLACE-BASED, ENVIRONMENTAL CHILDREN'S  
LITERATURE

By

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presented in partial fulfillment of the requirements  
for the University Scholar distinction

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Approved by:

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## **ABSTRACT**

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English (Teaching)  
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### The Process of Creating Place-based, Environmental Children's Literature

This paper summarizes the findings of a literature review on place-based education and presents the idea that environmental literature can be a tool for providing both parents and educators an avenue of offering children a place-based experience. It builds on the ideas that the most common barriers associated with ensuring that students are engaged with their place are time and monetary restraints. Literature minimizes these challenges by bringing a place-based experience into homes and classrooms and helps to inspire children and adults alike to explore their place and become actively engaged citizens. This paper then describes the process of creating an environmental place-based children's book through the original experience of the author herself. The completed capstone will culminate with the publication of a children's book set in Montana where the main character, a young girl named Madison, explores the landscape and records her adventures in her nature journal. This book also endeavors to teach young people about the importance of citizen science and the native species the American pika. Through the lens of the young explorer children will be exposed to the flora and fauna of Montana as well as learn the importance of climate change in the future of pika populations.

Faculty Mentor: Phil Condon

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## The Process of Creating Place-based, Environmental Children's Literature

### **Introduction**

The catalyst behind my decision to create a place-based children's book for my senior thesis project was a comprehensive literature review on the benefits of place-based, outdoor education that I completed during the Fall semester of 2011. This literature review outlined three different case examples of place-based education in Montana and summarized research done on a national level. The conclusion of the literature discussed both the benefits and challenges associated with providing students with authentic place-based experiences. David Sobel, an educator who helped develop the philosophy of place-based education, offers a definition of place-based education in his book, he says, "Place-based education is the process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science and other subjects across the curriculum"(Sobel 2004, p.4). For the purpose the literature review, place-based education was defined as a hands-on, project based approach to learning that exposes students to the environment and issues within their own communities. At its core place-based education utilizes local environments to teach lessons in many different subject areas.

While place-based education can encompass a variety of different subjects all across the curriculum, the literature review omitted such subjects as service learning, mathematics, social studies, and economics. It instead primarily focused on outdoor education, environmental education, and science-based programs. The literature review found that there were both philosophical and scientific benefits for including place-based education in a school environment. One surprising benefit that has been shown by multiple studies is an increase in test scores and other standardized measures of achievement, such as GPA, for schools that use outdoor, place-based education. These same studies also recognized increased retention rates of material as well as improved creative and critical thinking skills. (Gruenewald 2003; Lieberman and Hoody; 1998 Promise of Place 2009; PEEC 2010). One key study done by Lieberman and Hoody (1998) looked at 40 different schools in 12 states. These schools had developed their entire curriculum around their own local communities and natural resources in the area and used them as the context for student learning. They conducted interviews with over 250 principals and educators, and over 400 interviews with students. They compared place-based programs with traditional programs in 14 schools. In these schools they found that the students in the place-

based programs showed better performance in 36 of 39 of the measures than did their peers in the traditional programs. They also found from the interviews they conducted that students showed increased pride and ownership in accomplishments and increased engagement and enthusiasm with the subject matter (Lieberman and Hoody 1998).

Other research shows that students also had records of better attendance in schools that implemented these place-based programs (SEER 2000; Gruenewald 2003). It was also found that students had a decrease in behavioral problems and destructive classroom management issues when they were learning through these alternative methods (Falco 2004; Lieberman and Hoody 1998). Athman and Monroe (2004) also conducted a landmark study on students critical thinking skills and motivation to achieve when in place-based programs. For this study, 400 freshman and senior high school students from eleven different schools in Florida were interviewed and asked to complete the Achievement Motivation Inventory, the Cornell Critical Thinking Test, and the California Measure of Mental Motivation. These students were controlled for variables such as GPA, gender, and ethnicity. It was found that place-based, environmental programs significantly raised scores on all three tests (Athman and Monroe 2004).

The literature review concluded that the two biggest challenges in providing place-based education to students were time constraints and monetary constraints. Time constraints mostly stemmed from district and national requirements and cost constraints were mostly associated with transportation and equipment. Although more studies may be necessary to conclude that there is a positive correlation between place-based programs and standardized test scores, it is important to note that several studies do indicate that this is the case. If this is true the current curriculum and ideas of teaching to the test should be re-evaluated. Also, if there is a strong correlation between place-based outdoor education and higher test scores this reduces the claim that there is no room for them within the curriculum. Even if test scores are not increased by place-based, outdoor education, students gain immense benefits from this type of learning that can not be reproduced by classroom text book learning.

The literature review concluded that it appeared that the benefits of place-based education out-weigh the challenges, particularly in places like Montana where those challenges are relatively minimal. The proximity to sites lessens the amount of time for transportation and in some cases can reduce or eliminate transportation costs. In bigger urban centers it seems that it is more challenging to get students to sites. However, because students seem to see an increase

in motivation and these students in urban centers are the ones who have the most to gain from a meaningful connection with nature it is still beneficial to integrate some sort of place-based learning into the curriculum. It may take some creative curriculum planning to insure that these lessons can fit into state standards and can be closer in proximity to schools. Some examples of creative planning could include incorporating school gardens to learn native plants and food production or investigating a small local stream or bringing place-based, age appropriate literature into classrooms.

As a future educator I was astounded by the findings of both the case studies and the literature that I reviewed while writing a research paper that is summarized in the paragraphs above. I also knew how important place-based education from my own experiences working with programs such as the Montana Natural History Center and the Watershed Education Network that deliver place-based, environmental education to students in Missoula. I also found through my courses in education that it is increasingly necessary to provide relevant useful information to students in this global age and therefore it is important to look into alternatives like place-based education that can be used to enhance the learning process for students across the country.

For my senior project I wanted to create a tool that could help both educators and parents bring place-based education into the lives of their students and children. Place-based children's literature is a solution that helps address both the challenges of monetary and time constraints in schools by providing a way for students to learn about their place through writing and illustration. A children's book is also a great tool for parents looking for opportunities to get their own children engaged with the natural world and looking for different ideas for outdoor experiences. There is a need for more authentic reading experiences that allow children the opportunity to explore their own place and find value in the area that they call home. The project of creating a book was capstone experience that incorporated both my love for teaching and learning, with my English and Environmental Studies degrees. I hoped that I could create a tool that would inspire kids to go exploring outside, give them an interest in their own place, and teach them about an important environmental issue.

## **Process**



To begin the process of writing and illustrating a children's book I attended a seminar on creating children's books lead by Rhea Ashmore and held at the Missoula Public Library. This seminar discussed the technical decisions that must be made when producing children's literature. Ashmore emphasized the need for a title page, dedication, and authorial bio, as well as gave some suggestions on how to procure book reviews. She also went through a presentation on the steps to writing a children's book. These steps include; researching and brainstorming, preparing the book contents, drafting the story, revising to improve, and finally, publishing. Ashmore then went over different possible genres for children's literature and asked that the participants first decide which genre to write in. There are many literary genres and types of children's books. One of the first decisions an author needs to consider is whether to write prose or poetry and whether to write a picture book or a chapter book. The next decision in determining the genre is deciding whether the book is going to be fiction or nonfiction. A fictional book or narrative can be realistic fiction or fantasy with other options within each of those categories and nonfiction can be informational or biographical (Ashmore 2014).

### **Research and Brainstorming**

*Choosing a Genre:* For my project I decided on a picture book written in prose intended for an audience of 3 to 7 years old. To tell a story that would both inspire kids to explore and inform them about a particular environmental topic I decided that I needed to write a book to be both a narrative and a non-fiction text, so I begin to brainstorm ways that I could interlay an informational text within a fictional narrative. I came up with the solution of having the main character keep a nature journal. The nature journal provided an avenue to introduce informational text while simultaneously telling a story.

*Topic Research:* The nonfiction part of my text required that I complete research on the information that I wanted my book to contain. I decided that I wanted to have my book teach children about the American pika, *Ochotona princeps*. The pika makes a great topic for a children's book because it is a species that is native to Montana and is species that is in danger of losing its critical habitat due to climate change. Pikas live in alpine environments on rocky talus slopes near areas of vegetation and are herbivores that store plant material in haypiles so they can eat it during the winter months. Pikas are very sensitive to warm temperatures and temperature above 80 degrees Fahrenheit can be lethal to pikas if they are

exposed to these temperatures. I relied heavily on information collected by the Craighead Institute which is based in Bozeman, Montana. The Craighead Institute has been using citizen scientists to collect data about the distribution of pikas around Western Montana. In order to get much more widespread data the Craighead Institute asks that citizens record pikas they see while hiking taking note of the GPS coordinates and taking a picture if possible. Then when they return they can visit the Craighead website and log their sightings in the survey. This is just one of many citizen science projects researching pika distribution in the Western United State and Rocky Mountain area(Craighead). In my book I wanted to introduce the idea that children can make valuable contributions to the scientific community by utilizing their powers of observation. I also wanted to inform kids about the pikas and the problems associated with a changing climate and encourage them to explore their place and record the things they see and experience.

### ***Drafting***

During the drafting phase it is necessary to make lots of technical decisions about the language and medium and type of illustrations that will be paired with each page. I wrote two different drafts to begin with. I wrote one in present tense and one in past tense. After having multiple people read the two copies and offer their opinion, I determined that the past tense was the best way to convey the message I wanted to get across. I also determined that working in third person was best with limited first person being used on the nature journal pages. I spent a long time working on figuring out a name for my main character. I wanted the kid in my book to be a little girl because I wanted to reinforce the idea that women and girls can make great explorers and scientists. I wanted the name of her character to reinforce the ideas of place-based learning and an reflect a book set in Montana. I considered Darby, Seeley, and Aspen before deciding on Madison after the river that runs near Bozeman, Montana. I also experimented with different ideas for illustrations using techniques like collage, watercolor, and finally deciding on colored pencil.

### ***Revision***

The process of revision required significantly cutting down my language to make it clear and succinct. It also required that I took the scientific information about pikas and rewrote it into sentences that my target audience of 3 to 7 year olds could understand. During the revision process I also finalized my illustrations and paired each page of writing with an

illustration. I also added a section with instructions for making your own nature journal so that kids can take the inspiration from the book and transfer it into real life skills.

### ***Publication***

The publication process included lots of experimentation with getting the physical illustrations into a computer format to overlay text and create a printable copy. For this phase I tried different scanning options as well as taking high quality photographs of the illustrations. I also learned two different programs Adobe Photoshop and Adobe Indesign in order to create the combination of text and illustration that I wanted. The next step for my project is to fundraise for the cost of the copyright and the barcode and print a limited run of copies so that I can get them into the hands of kids.

### **Discussion and Further Studies**

Place-based education is an incredible tool for engaging students with their place and helping to inspire an active participation with the world around them. Environmental place-base literature is a great tool for both educators and parents to use because it draws on the positive aspects and benefits of place-based education while minimizing the costs and time associated with providing students with these sorts of opportunities. While children's books do not act as a substitute for these place-based experiences they can act as an important supplement to the place-based education program. I am hopeful that my book will inspire more place-based literature. I am also hopeful that this book will encourage a students to read, explore, and write about the environment where they live and thus will help to form actively engaged citizens.

In the future I would like to conduct a study to see what impact place-based literature and citizen science programs can have on student achievement and motivation. I would also like to write more books about Madison's adventures in Montana. I have already begun brainstorming for two more books about citizen science opportunities for kids and will begin working on them once I have finalized the publication details of this first copy.

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