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## **Songs And Salamanders: Investigating The Relationship Between Music And Environmental Education**

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SONGS AND SALAMANDERS: INVESTIGATING THE RELATIONSHIP  
BETWEEN MUSIC AND ENVIRONMENTAL EDUCATION

by

Walker Vuolo Nyenhuis

A capstone project submitted in partial fulfillment of the requirements for the degree of  
Master of Arts in Education: Natural Science and Environmental Education.

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Capstone Project Facilitator: Laura Halldin

Content Expert: Henry Huber

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## CHAPTER ONE

### Introduction

Music is an integral part of the human experience. It can take many forms, tell stories, energize or relax listeners, and in the context of education it can teach. This paper and its associated capstone project examine the following question: How can environmental educators use music to increase students' understanding of the natural world? I chose to investigate the relationship between music and the context of environmental education because I believe that there is immense potential for expanding environmental literacy through songs and other forms of musical exploration and instruction. This is a relationship I have witnessed firsthand in my career, and I have used this project to dive into the methods and reasons that environmental educators choose to employ music as a teaching tool.

In this introductory chapter, I share my personal connection to music along with my professional experience facilitating environmental education through musical performances and programming. I also state my rationale for examining the relationship between music and teaching, highlighting the social emotional benefits that music can bring program participants. In the second half of the chapter, I discuss sharing music with youth as a community-building tool before exploring research related to music and brain development.

#### **My Personal Background**

While I have always enjoyed listening to music, I can distinctly remember the first time that I identified myself as a musician. A few weeks before my junior year of high school, my friend Tom invited me and several of our mutual friends over for a

bonfire. To my surprise, he brought out his acoustic guitar and shared some of the songs he had been practicing recently. One of the songs was “Ain’t No Rest for the Wicked” by Cage the Elephant (2008), which we had both discovered earlier that summer. Between Tom’s playing and my singing, we arranged a cover version of the song that evening, which we eventually auditioned and played at our high school’s “Coffee House” concert later that fall. That song was the catalyst for a number of performances I planned, rehearsed, and performed throughout my high school and undergraduate years. For me, performing was an incredible boost to my confidence, and it helped me develop some of the strongest interpersonal relationships I have ever had.

### **My Professional Life**

After I graduated from Luther College in Decorah, IA, I began thinking of my relationship with music as a skill that I wanted to bring into my professional life. When I began pursuing my career as an outdoor and environmental educator at Eagle Bluff Environmental Learning Center in Lanesboro, MN, the primary method I used to fill my musical and performance bucket was leading evening campfires. An educational theme that I often highlighted with groups of students was “megafauna” because many of the songs I knew from my experience as a summer camp participant were related to large animals such as moose, sharks, and bears. I distinctly remember leading the song “Baby Shark” with a group of middle schoolers for the first time, and I am pleased to report that this particular campfire was a few years before the song experienced a fervent revival over social media. My year-long fellowship at Eagle Bluff helped me earn my Environmental Education Certificate at Hamline University and decide that I wanted to continue working in the field of environmental education.

The next two years brought me to seasonal outdoor and environmental education positions at YMCA camps across the country: Camp Seymour in Washington State and Frost Valley YMCA in New York State. I continued looking for ways I could incorporate music into my teaching, and evening campfires remained the most consistent outlet for explicitly linking environmental concepts and music. Teaching scientific content was not always the top priority of skit nights and fires at these camp programs, but I believe that participating in the experience of singing and in some cases performing helped students strengthen their relationships with their peers and the natural world. It was also immeasurably beneficial for our team of educators to have a few songs ready to share when there was a long transition time between classes and it was clear that students would benefit from engagement. At YMCA Camp Seymour, my team of naturalists would gather with our students at a central location between class sessions, and it was common for groups to arrive at our meeting spot at different times. Group songs provided an engaging way to welcome students to the meeting location and help everyone feel connected to the camp community.

I witnessed creative combinations of music and education while working for the YMCA. One program that I had the privilege of leading at Frost Valley YMCA was the “Bucket Brigade” in which family and retreat participants were invited to work on their drumming skills by using five-gallon buckets as instruments. With a few of my Bucket Brigade drumming groups, we ended our program time by performing songs for hundreds of guests in the camp dining hall. I had a few participants tell me that their highlight of the weekend retreat was performing with the Bucket Bridge. This is a program I hope to replicate in another role someday.

I witnessed some of the strongest connections between environmental education and music during my fourth year as a year-round naturalist when I began teaching at IslandWood, an outdoor school located on Bainbridge Island, WA. Every student who participated in IslandWood's School Overnight Program (S.O.P.) attended multiple evening programs during their four days on site, one of which was exclusively led by instructors and full of songs, stories, and skits that used performance as a method of teaching youth about the environment. Instructors had compiled a binder full of educational songs and skits since the program's formation in 2002. Turkey vultures, bats, and lichen were some of the topics that sparked singing, laughter, and curiosity from the students who attended these evening programs. We would send students back to their lodges with an IslandWood-specific version of Sarah Pirtle's song "My Roots Go Down" (1979). It was clear to me that music would be an element of the outdoor school experience that many of the students would remember.

### ***Going Forward***

At the time of this writing, I have worked at four residential outdoor schools, one public charter school, a restaurant, and the Minneapolis Park & Recreation Board since I first began my environmental education career in 2015. The details of the jobs I will pursue over the next few years are unclear to me, but I know that I want to continue teaching outside and I believe that music presents many opportunities to connect participants with others and their natural environment. Regardless of the titles I have or the work I do, one of my goals as an educator has always been to strengthen these relationships. I have used music as a teaching tool multiple times throughout my career as an outdoor and environmental educator, and I know that I am not alone. My goal in

sharing this paper is to highlight some of the most effective strategies and reasons that environmental educators have used and can use to introduce music to their students' environmental education experience.

### **My Rationale**

Music is an incredible vehicle of change, understanding, and compassion. It has the potential to improve student wellbeing and strengthen their comprehension of other content areas such as science and history. Yet, for a number of reasons, it is one of the first academic subjects to disappear from schools' curricula (Koza, 2006). My intent in writing this research paper is to advocate for more music in the field of environmental education. Outdoor and environmental educators have a wide range of comfort when it comes to sharing music with their students, but I believe there are strategies that most if not all educators can use to introduce musical concepts that benefit their students and complement existing lessons.

Research shows that the practice of learning and performing music is beneficial for the human brain, regardless of age. Melody and rhyme can increase a student's ability to retain information long after a program is completed (Salmon, 2010). This retention is also helpful for educators who cycle through numerous programs and content areas during their time in the field. Songs can help supplement information that educators share through verbal instruction or hands-on learning. One goal of this project is to identify what musical elements are most effective in teaching students about the environment, and which particular methods have worked well for educators in the field.

### **Music in Community**

Perhaps the most important reason to include music in environmental education

experiences is the potential it has to bring groups together in community. Since many residential environmental education programs are short-term and only available to most students once, it is crucial to have memorable moments that will encourage them to practice stewardship of the planet and each other after leaving the program. At the end of every week of IslandWood's School Overnight Program, for example, fifth and sixth-grade students have the opportunity to perform songs, skits, or other entertainment at the "Community Campfire." Instructors welcome students to the fire with singing and drumming on djembes. Gathering around a campfire to share stories and songs is a longstanding tradition that has been a part of the human experience for millennia (Cermak, 2012). It is a timeless place of connection.

### **Songs and Science**

The relationship between music and science is complementary and appeals to multiple learning styles. There are biological reasons for humans' appreciation and understanding of music, and music can be used to help its listeners better understand science (Cermak, 2012). Students who benefit from movement or audiovisual instruction especially benefit from the introduction of music to environmental education settings. Songs and actions can help students visualize abstract scientific concepts such as the water cycle, which I have had the pleasure of demonstrating for hundreds of students at IslandWood in the form of the Banana Slug String Band's song "The Water Cycle Boogie" (1991). In this paper, I share many other examples of environmental music and scientific content adapted for multiple ages.

### **Conclusion**

My research centers around the question of how environmental educators such as

myself can support our work with students by adding musical elements. I have chosen to frame my investigation with this question: How can environmental educators use music to increase students' understanding of the natural world? This topic is important to me because of my personal history as a musician and my professional experience teaching environmental education curriculum with songs, drums, and other engagement. Music can benefit students by helping them feel a sense of community and assisting them with remembering content from a lesson. As I write my literature review and prepare for my capstone project, I am thinking about the strategies that best facilitate student understanding of topics in the natural world. There is a lot for students to learn by observing the world around them, and I know that music can be an instrumental element of that journey.

The following chapters examine the relationship between environmental education and music in greater detail. My literature review focuses on four subtopics: literacy, social emotional learning, community, and stewardship. Evidence of students' connection to their peers and the natural world appear in multiple contexts, and researchers illustrate the importance of factoring student wellbeing into discussions of environmental awareness and action. Ultimately, the argument is quite clear: environmental educators can and should include music in their work.

## CHAPTER TWO

### Literature Review

Many researchers share an interest in the relationship between creative arts such as music and students' educational experiences. This paper focuses the investigation on the field of environmental education by asking the question, "How can environmental educators use music to increase students' understanding of the natural world?" Several themes connect the research that explores music's role in the multidimensional field of environmental education. The theme of literacy is an important consideration in this research because educators of multiple content areas have the potential to employ music as a tool for sharing information with their students. Increasing students' understanding of the natural world also aligns with the study of ecoliteracy, which helps to inform environmental awareness by teaching students about the connections between living organisms and non-living resources across myriad ecosystems.

A second theme of this literature review explores a behavioral outcome acknowledged by numerous authors: an increase of pro-environmental behavior because of student engagement with environmental education. Researchers argue that learning about nature through the arts can lead to students practicing stewardship of the environment and feeling a sense of responsibility for the natural world around them (Cermak, 2012; Coss, 2013; Shevock, 2019; Turner & Freedman, 2004). The practice of stewardship may look different depending on local or regional concerns and the subject matter examined by each researcher, but a common end result described in this literature is environmental education participants gaining a deeper sense of commitment to

protecting the planet. When educators plan meaningful encounters between students and the natural environment, the results are tremendous.

The third theme of this literature review reveals that many students who participate in musical experiences display growth in the area of social emotional learning (Adams & Beauchamp, 2019; Koopman, 2007; Laird, 2015; Yanko & Yap, 2020).

Broadly defined, social emotional learning describes the development of a person's emotional maturity and their ability to interact with others (Medin & Jutengren, 2020). It is an important consideration for educators of all subject areas because each student brings a different level of emotional maturity to educational experiences. Combining musical performance and engagement with the field of environmental education has the potential to improve a student's social emotional learning because of the confidence and proficiency associated with being outdoors and practicing creative skills (Yanko & Yap, 2020). These memorable and complementary experiences also provide opportunities for students to grow emotionally closer to those around them, thus strengthening their sense of empathy and sensitivity to others' needs (Laird, 2015).

Another important theme this literature review explores is the sense of community that comes from experiences such as environmental education programs or musical performances. For many students, learning in community is one of the strongest indicators that a student will retain information from an educational experience (Koopman, 2007). Participating in group learning encourages students' brains to practice several skills in communicating their ideas, listening to others, and processing both social and academic information. A benefit of this theme is the chance that environmental education students have to learn about cultures they may not know in great detail. Music

and its associated oral tradition of story-telling is one of the oldest and most effective methods of teaching children about content they may not have witnessed (Cermak, 2012). By learning about people who are different from themselves through musical, emotional, and educational experiences, students have the potential to gain a deeper level of understanding and compassion for the many levels of community in which they participate.

### **Literacy**

Literacy describes the degree to which students comprehend the information they encounter in educational settings such as classrooms, nature centers, or residential outdoor schools. Music is a tool that educators may use to increase student literacy in multiple content areas, including those related to environmental education. Research shows that incorporating melody and rhyme in lessons can help students retain information (Salmon, 2005). Learning complicated processes such as those explored in environmental education and other natural sciences also benefit from instruction in multiple settings, thus appealing to different styles (Hohenshell et al., 2013). A key argument for addressing literacy is the complicated relationship between the exposure, comprehension, and application of new information. While the journey to literacy is hardly linear, it is true that many students strengthen their awareness and application of material that they have time to observe and explore (Carmi et al., 2015; Shevock, 2019).

### ***Ecoliteracy***

Ecoliteracy refers to the level of understanding students have when it comes to ecological processes and environmental concerns. Some researchers argue topics related to environmental sustainability should appear across different content areas instead of

appearing as their own elective courses in educational settings (Clark, 2013). Music appears to be an ideal academic avenue for introducing scientific content to these subject areas because there are infinite possibilities when it comes to composing song lyrics. Since songs can be about any topic, writing lyrics that describe environmental concepts is one strategy that educators can use to communicate complex ideas. Cermak (2012) also suggests that asking students to write their own lyrics to songs is an excellent method of assessing what content the students are actually learning from lessons. He also stresses the importance of presenting environmental content to which students can relate, such as industrial pollution that directly affects their neighborhoods. Similar sentiments come from Koopman (2007), who argues, “Authentic learning itself takes place in contexts that are practice oriented and relevant to the learner” (p. 156).

Cermak (2012) goes on to describe a particularly interesting relationship between environmental education and the musical genre of hip hop. His research and curriculum focuses on hip hop as a means of teaching racially diverse classrooms about environmental concerns. “Green hip hop,” he argues, provides an opportunity to “balance out historical inequalities of who speaks for the environmental movement” (p. 193). By exercising creativity and crafting their own lyrics about environmental topics they are learning in class, Cermak’s students exemplify building strong and relevant connections to the world they encounter. At the center of his “green hip hop” curriculum is the theory of “critical ecological literacy,” which emphasizes the need of interpreting environmental crises for populations that are often the first and most severely affected by issues such as pollution and climate change. Rather than read about remote ecosystems that are abstract and largely irrelevant to communities who reside in urban areas, critical ecology literacy

as described by Cermak urges environmental educators to allow students opportunities to interpret ecological patterns in their neighborhoods that they may then process and express through music.

### ***Active Learning***

An important commonality between the arts and environmental education is the tactile approach both subjects provide their students. An essential element of contemporary environmental education is providing opportunities for students to learn about the world around them by making sensory observations (Adams & Beauchamp, 2019). A student's senses of sight, hearing, smell, touch, and taste help them engage with the natural world and draw conclusions based on experiences. Similarly, music encourages students to use their bodies and aesthetic sensibilities to interact with the world. Together, these two disciplines may introduce students to sensory experiences that will remain with them for years (Yanko & Yap, 2020). Morris (2019) describes the importance of highlighting sensory experiences through a lesson plan that demonstrates students' ability to differentiate textures between objects. In this lesson, sensory experiences in nature help to strengthen the bond between students and their physical environment by encouraging them to gather materials with different textures that they then combine in the visual representation of a campfire.

The process of observation is not limited to the natural world; it is also beneficial for students to learn by observing the skills and behaviors of other people. MacEachren (2018) calls on "Forest Schools" and similar environmental education programs to reintroduce the process of modeling and imitation as an important teaching strategy for young children. Looking to the First Nations of Canada for inspiration, she claims that

spending more time on “hand skills” instead of abstract topics can help to decolonize educational systems and expand children’s awareness and literacy with their immediate environment. “Imitation is one of the most powerful ways of learning in all children and that the imitative learning process is common to all humanity” (p. 92). Indeed, imitation plays an essential role in teaching musical skills such as rhythm and dynamics and may be just as important for environmental educators wishing to share ecological topics with their students.

The research of Hohenshell et al. (2013) reveals the benefits of introducing “choral repetition” in which students repeat and enunciate new terms in the context of a science classroom. Educators practicing this method of teaching first model a word or phrase for a group of students and ask the group to repeat what they have just heard. The study provides quantifiable data collected over the course of four assessments and concludes that the 22 students taught through choral repetition “showed learning gains for the nine items” (p. 40). Using a mixed-methods approach, interviews with the same students share the sentiment that the choral repetition method is helpful in retaining scientific information. 91% of the interviewed students also indicate that they could picture themselves teaching with the technique (p. 41). A popular phrase among environmental educators who teach through songs is “repeat after me” (Camp Songs, n.d.). This model exemplifies choral repetition because of the educators’ expectations that their audience will listen to the information delivered through song and echo its content with their own voices. Based on the results of Hohenshell et al. (2013), this strategy appears to be an effective method of teaching environmental education and other scientific concepts through music.

### *Environmental Music*

One of the arguments to investigate music in the context of nature is that animals and ecological phenomena are some of the original sources of music or “agreeable sound” (Turner & Freedman, 2004). This close link between the natural world and musical sounds can be witnessed in the form of waves, wind, birds, insects, and the staggering number of music-makers one may find while exploring the outdoors (p. 47). The class and sounds of nature may inspire human musicians to create art based on what they observe, which may help to bring awareness to the natural inspiration for the artist’s music. Musician Joe Reilly describes this relationship on his website with the phrase “Joe loves nature so much that he writes songs and sings about it, and he hopes that you and your family will sing along too” (Reilly, n.d.).

Musicians such as Reilly and the Banana Slug String Band demonstrate the connection between performance and environmental literacy by performing songs that invite audience participation and examine ecological content such as the water cycle, amphibians, and decomposition. The Banana String Band is a group of four environmental educators that have a catalog of 12 albums they have shared over the past 30 years with at least two million people (Banana Slug String Band, n.d.). Their songs explain ecological processes in ways that young learners can understand. In the song “Dirt Made my Lunch” (1987), the band explains how, “One thing dies to let another grow.” In addition to the verses’ narrative lyrics, there is intentional space throughout the song for students to chant “munch” in rhythm, which reiterates the idea that decomposers help to renew soil by eating through organic waste.

Folk music and folk knowledge are often intertwined and can have a significant impact on the transfer of knowledge between generations. Shevock (2019) argues that oral traditions such as storytelling and a community approach to teaching and learning music are influential in informing community members about their responsibilities to protect natural resources. A piece of evidence he provides for this argument relates to the many communities who have “sustainably passed music from generation to generation with large social institutions and associations dedicated specifically to music education” (Music in Place). Addressing music educators directly, Shevock laments that his field often prioritizes a “development” mindset over one of sustainability; focusing on the technicalities and artistry of performing music may distract students from themes of preservation and shared knowledge.

Joe Reilly uses his work as a musician and environmentalist to teach youth about the environment and highlight steps that they can make toward protecting the planet (Reilly, n.d.). Many of Reilly's songs include imperative verbs in their titles, indicating that he feels strongly about promoting cooperation between his listeners and the natural world. Songs such as “Be Kind” (2019) and “Stop Polluting” (2011) exemplify this call to action and reinforce themes of stewardship. Similar to the Banana Slug String band, Reilly also writes songs describing scientific phenomena such as the behavior of specific animals. On the song “Turkey Vulture!” (2011), Reilly raps in a first-person voice as the titular scavenging bird and describes how they “fly in a V-shape during the day” and “can smell dead animals a mile away.” These artists provide examples of using music as an avenue to teaching listeners about nature, oftentimes in ways that are creative and engaging for audiences of all ages.

## **Social Emotional Learning**

The ability to manage one's emotions and cooperate with others in a learning environment is at the core of social emotional learning (Medin & Jutengren, 2020). Many schools and environmental education programs emphasize this element of a student's development because of the benefits it can have on an individual student's well-being as well as the classroom culture as a whole. Both acts of engaging with music and spending time outdoors provide boosts to the growth of students' social and emotional development (Adams & Beauchamp, 2019; Yanko & Yap, 2020). Since environmental educators spend much of their instructional time with students outside, it follows that considering a partnership between music and environmental education would certainly lead to strengthening this area of a student's development. Literature associated with social emotional learning examines the benefits of factoring emotions into education while documenting the growth of students' self-care, compassion, aesthetic skills such as creativity, and reflection.

## ***Emotional Growth***

Music is a unique art form because of its ability to tell stories while also exploring a spectrum of emotions. Yob (2000) argues that the context in which one encounters a piece of music will decide what message they take from hearing the piece. While reactions to artistic expression may vary from person to person, it is clear that listening to music can inspire much more than aesthetic enjoyment from a listener. One of the potential outcomes Yob unpacks is care for others, since "music can evoke empathy and compassion by providing particular objects for contemplation" (p. 76). Similar connections come from Coss (2013), who posits that the emotional elements of music are

what make it worth sharing with students: “Engagement of emotions in learning context not only facilitates student reflection, but is also viewed as a transformative act.” When students feel emotional connections to the subjects they are learning, the odds of the students retaining academic content increase dramatically. They also develop important skills such as self-awareness and self-confidence (Koopman, 2007).

### ***Creativity***

Another element of social and emotional learning that researchers advocate prioritizing in educational settings from a student’s early age is creativity (Adams & Beauchamp, 2019; Kemple & Johnson, 2002; Yanko & Yap, 2020). Environmental educators have the opportunity to bring art projects and other creative lessons outdoors and contribute to this important competency. The combination of enjoying nature and creating art is powerful because of the ways students are able to exercise multiple aspects of their brains and personalities. Koopman (2007) posits that music allows those who witness it and perform it to “develop their artistic abilities and identity” (p. 153). By observing the world around them and interpreting what they observe into an expression of emotion, students strengthen their senses of self along with their connections to the natural world.

### ***Utility vs. Emotions***

A central debate of the literature detailing the collaboration between environmental education and music is the question of music’s utility versus its emotional role in the lives of students. Coss (2013) argues that viewing music as the means of practicing academic skills does not embrace its potential for emotional resonance with students. Citing the importance of addressing the multicultural issues that affect local and

global environmental sustainability, Coss claims that the only way for music educators to have an impact on students from all backgrounds is through the “actual emotional experiences of the students.” Shevock (2019) also mentions the importance of designing music lessons that align with “common, traditional, everyday contexts” (Music in Place). By worrying less about standards and more about individual students’ interests and relationships, music educators increase the chances of students participating in music at home and applying information directly to their lives. This consideration is equally important in environmental education. Listing facts related to elements of the natural world may achieve the utilitarian goal of transferring knowledge from the educator to their students, but emotional experiences such as encountering an educational animal or venturing into the woods for the first time is what students will find inspiring and remember throughout their lives. “Transformative” experiences as described by Coss come from meaningful engagement with one’s environment that increase students’ awareness of others and the natural world.

### ***Community***

Themes of community appear in a few different contexts throughout the literature concerning music’s role in environmental education. At an interpersonal level, students who engage in music with their classmates appear to feel more connected to a classroom or learning community (Laird, 2015; Yanko & Yap, 2020; Yob, 2000). The same sense of connection may apply to parks and other natural spaces where students can “explore what it means to live in harmony with local places” (Shevock, 2019). In a universal sense, students who have the opportunity to engage with environmental education programs that encourage observational, empathetic, and aesthetic skills may feel like they are part of a

global or ecological community. In all of these contexts, one piece of evidence remains consistent: music has the potential to bring people together.

### *Empathy*

The act of learning a piece of music and performing it with others can help develop a student's sense of empathy (Koopman, 2007; Laird, 2015; Watts, 2020). Empathy in the context of this literature describes the phenomenon of participants matching the behaviors and emotions of those around them, which can result in students feeling more comfortable in educational settings and competent in academic proficiencies (Laird, 2015). Researchers highlight a "mirror neuron" in the human brain that encourages people to adopt the affective behavior of the people with whom they are communicating. Laird (2015) posits that this neuron promotes listening skills and a "sense of camaraderie and community" between music students that can result in compelling performances and a compassionate learning environment.

Other reports from educators document how music helps people look outside of themselves. The benefits of introducing music to students is evident in the way these students grow closer together by engaging with lessons that may appear silly in the moment but ultimately create memories that will shape the students' sense of belonging for years (Yanko & Yap, 2020). According to Adams & Beauchamp (2019), bringing a group of people together to perform music in this way is a powerful community-builder. When everyone participates and feels like they are contributing to a collective outcome like a song or game, "egos and individual identities dissolve" (p. 263). Adams & Beauchamp cite evidence from their observations of primary school students making music together outdoors. One theme that appears from the interpersonal interviews in this

study is the sense of belonging that students feel while making music in nature: “a sense of interaction and harmony with their surroundings and each other” (p. 266). Shevock (2019) encourages music educators to allow their students time to reflect on their experiences listening to the natural world, which other educators may practice as well. Birds, insects, and trees are all part of the natural soundscape, but listening to them in the context of music and environmental education can create sublime encounters and a potent sense of connection.

### ***Collaboration***

Another argument for bringing students together to make music or engage with environmental education comes from the theory that people learn better when they are around others. Such collaboration can take many forms, including group performances, discussions, art projects, and many more (Morris, 2019; Yanko & Yap, 2020). Koopman (2007) highlights how the practice of facilitating dialogue between individuals in an educational setting helps to “promote collective understanding” (p. 157). Since everyone brings a unique combination of experiences and prior knowledge to group lessons and programs, it is reasonable to assume that multiple minds would hold more information than one individual student. While participating in dialogue or discussions, students are also practicing important social skills such as respectfully listening, interpreting verbal ideas, and assessing their peers’ emotions.

Another practice worth considering is “community music,” which Koopman (2007) simply describes as the phenomenon of people who “engage in musical activities collectively” (p. 153). Principles of community music can fit any age group or musical background, and the ultimate goal of coming together to make music is simply to elevate

participants' sense of wellbeing. Like other musical experiences, it is important for educators facilitating community music to adapt the experience based on the skill levels, interests, and experiences of the group. The same is true of effective environmental education, as content such as vocabulary should match the interest and background of the audience in order to be effective.

Social skills are inherent to rehearsing and performing music. Musical factors such as rhythm and dynamic require students to follow their peers and attempt synchronization, which implicitly translates to students observing each other's behavior and reacting accordingly. Laird (2015) argues that "a sense of shared intentionality" is a driving factor in promoting cohesion between people who make music together. By deciding to pursue the same goal of creating art through music, many students choose to silence their egos and look for opportunities to help the group. A shared sense of purpose aligns with many environmental education objectives as well, as groups of students seek common goals such as understanding the natural world through investigations, models, and observational experiences.

### **Stewardship**

At the heart of many environmental educators' motivation to teach is the hope that their work will help students appreciate the natural world and look for ways to protect it (Carmi et al., 2015; Cermak, 2012; Coss, 2013). This theme of stewardship appears throughout the majority of literature focused on connecting children and nature. Because of the emotional connections students can develop while practicing music and other art forms outdoors, there is immense potential for strengthening their sense of responsibility when it comes to the planet and its environmental concerns. Other researchers note that

studying the environment is emotionally challenging because of the widespread degradation and ecological crises facing the planet's inhabitants (Ruitenber, 2020). Environmental educators who wish to encourage caring attitudes for the environment and from their students face tremendous feats and tremendous opportunities.

Making the leap from student awareness to student action in the context of ecological crises is perhaps the most significant obstacle facing environmental educators (Ruitenber, 2020). Any change to the status quo is often met with vigorous debate, as schools and other institutions are slow to make changes, "lest they inconvenience anyone" (p. 835). The overall tone of Ruitenber's essay is one of realism. She argues that environmental educators should realize the challenges they face, declaring "there are no perfect conditions for transformation" (p. 836). Despite the article's melancholic stance, Ruitenber ultimately supports the idea of educational experimentation. Adopting this approach, implementing music is one step among many that educators can make toward building student literacy, appreciation, and confidence in the outdoors and greater context of environmental education. Every choice that educators make while introducing new information may have an impact on students' experiences and behaviors related to stewardship.

### ***Emotional Connections***

The research of Carmi et al. (2015) showcases the importance of "environmental emotions," which the authors use to describe the connections people report feeling to their surroundings. Environmental knowledge is an important consideration that educators should share with their students, but promoting the development of positive or responsive emotions for the planet dramatically increases the chances of individuals

turning their awareness into action. The researchers frankly state, “knowledge is not enough to motivate environment-friendly behavior” (p. 184). Many sources in this literature research note that music is an academic subject and complementary focus that is well-equipped to evoke emotions from students (Adams & Beauchamp, 2019; Cermak, 2012; Coss, 2013; Laird, 2015; Shevock, 2019). If environmental educators wish to engage their students’ emotions, introducing music to their lessons may be an important solution.

The emotional element of music may amplify the message of environmental stewardship outside of explicitly educational contexts as well. An April 2021 episode of the podcast *How to Save a Planet* focuses on the role of music in motivating societal challenges such as civil rights and climate change. The episode features an interview with Shana L. Redmond, professor of musicology and African American studies at UCLA, who describes music as an essential element of how people identify themselves as “part of or outside of any given community or society” (Pierre-Louis, 2021). Music evokes the emotional connections people bring to their interactions with others and the environment, which directly influences concerns and actions relating to environmental stewardship. Looking at the influence of anthems relating to the civil rights movement of the mid-20th century, reporter and producer Pierre-Louis asserts that incorporating elements of joy in the form of music could be a beneficial step in recruiting advocates for the movement to address climate change. As a “formative element of how we live,” music has a powerful influence on behavior (2021). Writing and sharing music containing an environmental message may help listeners look for ways to mitigate their impact on the earth. Promoting these connections between listeners and the natural world is a motivating factor for

environmental musicians; Reilly describes his music as an “an invitation to heal our relationships with ourselves, with each other, and with the earth” (Reilly, n.d.).

### ***Modeling Optimism***

If educators are thoughtful in their approach to integrating music and environmental education, there is enormous potential for lowering the environmental impact created by classrooms and other educational settings. Shevock (2019) notes that teaching music to young children can be relatively low in both cost and waste. It is possible for educators of any subject area to simply add a song, rhythm, or other musical element to the lesson they already have. Koza (2006) notes that “people do not need to buy anything to sing; they can make superb music with instruments obstructed from trash” (p. 35). By simply adjusting mindsets and looking for ways to reduce carbon emissions and their impact on natural resources, music and environmental educators alike can combine their fields without introducing excessive waste to landfills or their local ecosystems. According to Carmi et al. (2015), modeling behaviors that intentionally mitigate environmental degradation is an effective step in promoting stewardship from one’s students: “Stimulating environmental sensitivity can be achieved through non-formal educational settings and teachers who act as positive environment-sensitive role models” (p. 196)

### **Limitations**

While abundant evidence suggests that music and environmental education can benefit those who participate in programs incorporating the two subjects, it is worth discussing the limitations of introducing this content to students. Education is a complicated field, and it is important to acknowledge the shortcomings of one’s practice.

Troy Frensley et al. (2020) analyze the differences between students' self-reporting of their engagement with environmental education curriculum and the growth of environmental literacy captured through nine months of program observations. After comparing 1298 student surveys from participants in 81 environmental education lessons, the research team reports that moments of student engagement are "unreliable indicators of student learning outcomes." Similar to the debate between educational utility versus emotional benefits in informal education settings, this argument reveals that judging the effectiveness of programming through student enthusiasm and engagement does not necessarily mean that students are meeting academic standards.

Another limitation comes from the fact that it is challenging to communicate complex ideas when students are using their brains to focus on social dynamics and skill-building, both of which are priorities in music and environmental education. A key takeaway from Jurmu (2005) is that music has the potential to reinforce concepts in myriad subject areas, but it is rare to capture all of the subject's nuances in a song. Presenting the key ideas of one's lesson through music fits Pierre-Louis' (2021) definition of musical anthems as "short, easily-transferable pieces of knowledge." Instead of relying entirely on music, research suggests that a high level of content area literacy may come from incorporating lessons that appeal to multiple learning styles (Salmon, 2010). Environmental educators who use music to complement lessons that also include verbal instruction, games, models, and other visual media may have more success than those who try to capture an entire lesson through one modality. Even Hohenshell et al. (2013) admits that the choral repetition method should not be the only strategy educators use to share information with their students, which is significant considering their study's

success in documenting how effective repeating vocabulary words and phrases can be for students in a science classroom.

While it may be challenging to explain detailed environmental education lessons through music, overwhelming evidence suggests it is worthwhile to pair the two fields while teaching students about ecological concepts. Turner & Freedman (2004) urge environmental educators to think about introducing music as a means to helping students develop a “sensitive attitude to environmental and related socioeconomic issues, and to thereby foster environmentally responsible behavior, rather than as a means of conveying detailed knowledge” (p. 50). This is one of the most important reasons for using music to facilitate experiences in environmental education: music encourages emotional resonance.

### **Conclusion**

Environmental educators face the enormous challenge of teaching students about the environment and its myriad issues while promoting a sense of connection and stewardship to both the natural landscape and the students’ peers. Music is an important topic to factor into the discussion surrounding this question: How can environmental educators use music to increase students’ understanding of the natural world? Sharing songs with ecological concepts and requesting that students write lyrics about environmental topics are just two ways that educators can promote ecoliteracy among their students. Cultivating emotional connections between students and nature is one of the most important factors to consider when complementing environmental education with music. Overwhelming evidence suggests that music is beneficial for students’ social emotional learning and sense of community. Environmental educators who wish to

include musical elements in their lessons should be aware of their students' backgrounds and focus lessons on the contexts with which students are most familiar. When students feel like they belong, their path to feeling responsible for each other and the environment becomes increasingly clear. Learning about nature through hands-on and community-minded lessons such as music-making provides invaluable inspiration and opportunities for students to leave a positive impact on their surroundings. Music helps people care.

## **CHAPTER THREE**

### **Project Description**

Evidence from the literature suggests that there are innumerable benefits of integrating music into environmental education settings. Increased literacy, social emotional learning, community-building, and environmental stewardship are important topics that educators can and should consider when examining the relationship between the two subjects. This project investigates the question, “How can environmental educators use music to increase students’ understanding of the natural world?” The professional development of outdoor and environmental educators in an informal educational camp setting is the focus of this capstone project and its associated resources. In this chapter, I describe my research rationale through adult learning principles described by Darling-Hammond et al. (2017). I then examine the setting and audience of the professional development before detailing my ongoing strategies for training fellow environmental educators to include music in their teaching repertoire. In addition to the logistical details surrounding the project, I provide my personal reflections on introducing music to informal educational settings such as camps and residential environmental learning centers.

### **Project Format**

Each professional development seminar featured in my capstone project follows a similar format. Descriptions of the seminars’ outcomes and agenda lead to songs, lessons, and activities that participating educators may choose to share with students in their own classroom or other educational context. The most important outcome of each seminar is that participating educators will become comfortable learning and leading songs related

to environmental education. To aid this outcome, agendas for each song and activity include step by step instructions for teaching these songs to adult learners, and suggested time frames for each step are included as well. Along with the songs and activities, the professional development seminars described in the project highlight adult learning principles, associated vocabulary, and background information to provide helpful context for participants.

### **Adult Learning Principles**

Adult learning principles refer to the best practices that professional development facilitators should consider when presenting information to seminar participants. The inspiration for adult learning principles described in these professional development seminars come from Darling-Hammond et al. (2017). Another influence in developing the agendas for the professional development seminars is the “5E Model of Instruction” in which the following five verbs describe the facilitator’s approach to teaching: engage, explore, explain, elaborate, and evaluate (Science Resource Center, n.d.). This particular model is helpful while working with students of all ages, including adults.

### ***Active Learning***

Active learning is an essential element of effective adult education. Under this umbrella term, facilitators may select educational activities such as the use of artifacts and movement to strengthen participants’ understanding. Keeping adult learners engaged through kinesthetic activity increases the odds of participants retaining information from professional development (Darling-Hammond et al., 2017). Learning through movement and hands-on activities is also a defining feature of environmental education, and it should remain a priority in this series of professional development seminars.

### ***Modeling***

There are several examples of modeling present in this series of professional development seminars. Facilitators model the songs for participants in the form of call and response teaching, and the songs' content acts as a model for plant and animal behavior in the natural world. Modeling scientific content such as ecological relationships and energy flow is an effective training practice for educators in professional development settings (Darling-Hammond et al., 2017, pg. 11). Participating in these songs and their related activities will help participants conceptualize sharing similar content with their students.

### ***Collaboration***

Working with others is a helpful strategy in promoting adult learning (Darling-Hammond, 2017, pg. 9). Participating in a series of professional development seminars focused on music's role in environmental education allows participants multiple opportunities to practice new skills and observe their peers in collaborative environments. By working with other educators, participants have the chance to gain a stronger collective understanding of the material than they would have had individually.

### ***Learning in Context***

If possible, the most effective context for sharing these professional development seminars with educators is the classroom or environmental learning center in which they work with students (Darling-Hammond et al., 2017, pg. 5). It is also important to have a plan in place for sharing the material with students so that participating educators have immediate opportunities to practice the skills they acquire from the seminars.

### **Timeframe**

The professional development seminars described in this project are most effective as a series. Facilitating one seminar a week during the course of a semester or season is an appropriate timeframe for the material. According to Darling-Hammond et al. (2017), engaging adult learners in a series is more effective professional development, as it has “a greater chance of transforming teaching practices and student learning” (pg. 15). Each of the seminars presented in this project are a half hour in length and can be adjusted to fit the needs of the facilitator leading them.

### **Project Audience**

The target audience of this project was the teaching staff of the Outdoor Learning Program at YMCA Camp Ihduhapi in Loretto, Minnesota. Understanding the audience of this professional development project was crucial to effectively introducing training materials into the workplace. Camp staff came from myriad professional backgrounds and experiences, but most of the educators were new to the field of environmental education. For many, working for the Outdoor Learning Program was not their only job this past fall, so a rich array of perspectives influenced the professional learning environment. Regardless of their previous experiences teaching in environmental education settings, this project encouraged staff facilitators to implement musical elements into their instruction time with students in the Outdoor Learning Program. Based on the literature concerning music’s role in the emotional wellbeing of student groups, it is undeniable that the implementation of music in educational programming fits with the Outdoor Learning Program’s goal to encourage “community building and holistic personal growth through tasks that challenge participants in all aspects of self-concept” (YMCA of the North, n.d.).

The project focused on songs that have already exhibited success combining the two fields of music and environmental education. Music by the Banana Slug String Band and singer-songwriter Joe Reilly constituted many of the songs I chose to share with the adult learners in this professional development project. My hope was to be intentional and specific with the particular songs I chose because I wanted the environmental educators in my program to grow in their proficiency and confidence while sharing these songs with groups of students throughout the season. Rather than introducing these artists' entire discographies, I deliberately facilitated training sessions with one song at a time. Ultimately, the primary objective of this project was to help camp educators feel equipped to share environmental lessons that include musical elements with their students. To encourage the longevity of this project's results and help future educators at YMCA Camp Ihduhapi, I saved a digital copy of the professional development resources I created into the camp's online database.

To evaluate the success of the professional development session, I conducted short interviews with the participants to see how confident they feel about introducing music in their work as environmental educators. I was pleased to hear that most of the cohort felt comfortable sharing the songs we had developed as a group. To gauge the success of this project over a longer period of time, I will continue to ask the cohort of environmental educators to share songs or other musical activities with various groups of students and report how effective it is in communicating lessons with the participants in the Outdoor Learning Program. Ultimately, my intent in continually training the team of environmental educators this season was to offer them some of the same experiences that

we advertise for our participants: “new perspective, increased confidence, better interpersonal skills, and an improved sense of self” (YMCA of the North, n.d.).

### **Setting**

The professional development seminars described in this project are designed to take place in an outdoor learning environment. YMCA Camp Ihduhapi has multiple open fields that are surrounded by trails that travel through mature deciduous forests.

Participating educators will be asked to stand in a large circle for an introduction to the session’s activities before breaking into small groups. The bulk of these professional development sessions will involve learning one or two songs that combine the fields of music and environmental education. Because these training sessions will be outdoors, consistent movement will play a role in the educators’ learning experience. Movement is an essential element of outdoor learning and it also supports the Outdoor Learning Program’s goal to provide programming with an “emphasis on physical, mental, and emotional well-being” (YMCA of the North, n.d.).

When I began developing this project and its focus on professional development for environmental educators, the Outdoor Learning Program at YMCA Camp Ihduhapi was in the early stages of its fall season. There are many essential skills in engaging with program participants that my Program Director and I shared with our staff as groups visited our site over the past few months. Since music is a new element of our education program, finding time to effectively train staff in its implementation was challenging but rewarding. In late September, Wayzata West Middle School brought their sixth grade class for three days of outdoor and environmental programming, which provided the perfect opportunity to begin incorporating music into existing environmental education

lessons at camp. That said, the primary task of this project was never to dictate exactly when and how educators should share music with their students; this project was more concerned with providing professional development for these educators so that they may share music with their students when it feels appropriate.

As I mentioned previously, principles of effective adult education influenced the approach I took toward crafting this project. According to Darling-Hammond et al. (2017), memorable educational experiences for adults can come through “authentic artifacts, interactive activities, and other strategies to provide deeply embedded, highly contextualized professional learning” (p. 7). Most of the educators participating in my project’s professional development sessions have years of experience attending and leading outdoor programs at YMCA Camp Ihduhapi, so I feel confident saying that contextualized learning was an important element of our time together. In addition to utilizing site-specific lesson content, this project exemplified the effective strategy of modeling educational content for adult learners. By practicing songs in a call and response style, these training sessions provided educators with a “vision of practice on which to anchor their own learning and growth” (Darling-Hammond et al., 2017, p. 11).

There are a few notable outcomes I witnessed from these professional development sessions. The first is that my staff of informal educators became more familiar with scientific concepts that they could then begin introducing into multiple educational areas of the Outdoor Learning Program. Creating supporting materials is another consideration that I brought to this project. I created lesson plans that included lyrics and basic scientific content so that the program staff could have a physical reference to use as they prepared for visiting school groups. The second and most

important outcome I want to highlight is that training my staff to share music with their students represented an exciting step toward an increase in confidence, enthusiasm, and scientific literacy from both the educators and program participants. Research has shown that students who participate in music are more likely to retain information and enjoy their time in educational environments (Koza, 2006).

My hope is that this project will contribute to public scholarship in the field of environmental education by highlighting ways that informal educators can share music with their students. I want to share success stories that can be replicated in other outdoor learning environments. Having worked at multiple outdoor schools and other educational programs, I have observed enormous potential for introducing music to students in these settings. Singing about science and nature is memorable, and throughout the remaining school year I hope to encourage my staff to pursue opportunities to share music with our visiting students.

## CHAPTER FOUR

### Conclusion

Music and environmental education belong together. This project has explored the relationship between these two disciplines by asking the question: How can environmental educators use music to increase students' understanding of the natural world? In this final chapter, I summarize elements of my project while highlighting key learnings from both my research and experience. Examples from my professional life help to support these conclusions as I share how I intend to integrate findings from this project into my work as an outdoor and environmental educator. I also revisit my literature review and emphasize the benefits that music and environmental education have on students' social emotional learning.

An important theme of this conclusion chapter is the potential reach that my research and project may have beyond this semester. I have imagined a few different implications for this work because I believe there is much to gain by facilitating conversations between the worlds of music and environmental education. These implications represent a collaborative approach to serving educators and students; by taking the best elements of music classrooms and outdoor and environmental education programming, there is immense potential for encouraging student growth. However, it is also important to consider the limitations of one's work, so a paragraph of this chapter is dedicated to imagining ways in which my research related to music's role in environmental education could mature or pursue a different angle. I imagine a few focus areas for projects that could explore this relationship in a different or unique way. From

there, I speculate how this project could benefit the profession and my career in environmental education.

### **Key Learnings**

Throughout the process of creating my capstone, I often reflected upon my professional experiences as an outdoor and environmental educator. In many ways, the results of this project have been years in the making. A few months after my graduation from Luther College in Decorah, IA, I began training as a naturalist at Eagle Bluff Environmental Learning Center in Lanesboro, MN. This year-long fellowship program was an important milestone in my career because I witnessed the intentional integration of music and environmental education in the form of evening campfire programs.

Weaving lessons into songs was a common theme of my work over the next few years as I moved, taught, and learned at YMCA Camp Seymour, Frost Valley YMCA, and IslandWood. Each of these programs helped me become the educator I am today, and I use the lessons I learned at each site to influence the program I am currently developing and coordinating at YMCA Camp Ihduhapi in Loretto, MN.

As I workshopped professional development opportunities for the outdoor and environmental educators I helped to supervise this fall, I frequently thought about how I want to incorporate music into our programming at camp. Spending time in the physical space in which my team and I have and will lead songs with students was a surprising benefit of developing my capstone this particular semester. I was also pleasantly surprised at the amount of enthusiasm I encountered from the staff while facilitating training sessions related to music. My assumption was that learning songs would not be appealing for our team, but my supervisor shared with me that she witnessed a few

examples of the staff singing to themselves outside of the professional development context. This outcome aligns with an important goal I have had while researching this topic and creating these resources: integrating music into environmental education in a camp setting should be a fun experience.

### *Literature Review*

Something I appreciated about the process of creating a capstone project is that it allowed me an opportunity to weave my professional experiences with the research of others. In this next section of my summary chapter, I share some of the research that helped me reflect upon the relationship between music and environmental education in preparation for my own project. The most valuable research I found while assembling my literature review supports the idea that the process of learning and performing music has similar benefits to those of going outside. Adams & Beauchamp (2019) report how sensory observations in an outdoor environment are important for the development of students' social and emotional growth, which is true of creating music as well (Laird, 2015; Yanko & Yap, 2020). Since both of the disciplines have proven to be valuable experiences for students, it is reasonable to assert that combining them in the form of environmentally-minded songs would also provide educational value.

Another implication of this work is an increase of content-area literacy from both participants and staff. By breaking down scientific concepts into memorable and often humorous lyrics, these songs and associated professional development sessions have helped environmental educators become more confident in their program delivery and aware of natural phenomena. Science is typically the academic focus that outdoor and environmental learning centers highlight in their programming, but my research and

experience in the field have shown me that encouraging creative expression from participants in outdoor settings is incredibly valuable for their wellbeing and sense of connection. There is an immeasurable amount of content one can learn in relation to environmental topics, and my project promotes an ongoing conversation surrounding the use of creative arts in the fields of outdoor and environmental education.

When melding my own experience leading songs in outdoor and environmental settings with the work of other researchers, I was also curious about the most effective strategies for teaching content through music. Hohenshell et al. (2013) examine the importance of choral repetition, which is the technique I have used most frequently in both professional development and program delivery settings. Modeling songs in this “repeat after me” style allows for participants to hear the content presented by a facilitator before singing it with their peers (Camp Songs, n.d.). This strategy is what I would recommend to any educator using the resources I created for this capstone project. However, it is also important to think about different approaches one could make while looking into the relationship between music and environmental education. The next section of this chapter considers that question in detail.

### *Possibilities and Limitations*

For this project, I primarily focused on songs with lyrics that share environmental lessons or messages. While this provided a clear launchpad for the exploration of music’s role in environmental education, I realize that more resources focusing on nonverbal or kinesthetic learning could be beneficial for the field. It is certainly possible to facilitate connections between students and the natural world without explicitly stating what they are witnessing in the form of lyrics. An investigation into instrumental music used by

environmental educators could be an interesting continuation of this research. Another project could look into examples of educators using resources from the natural world to create music.

A significant limitation of this project comes from a lack of diverse perspectives. I am aware that all of the songs I selected for this first iteration of a resource manual were written by men, most of whom are white. However, I encourage everyone who encounters this project to think about this resource as a living document; my hope is that it will grow and change over time as more educators engage with its contents and contribute songs and activities that they bring from previous experiences. Since music is such a broad topic to cover with just one project, I can imagine future research focusing on its relationship to environmental education as practiced by specific communities. A particularly interesting study could look into examples of Indigenous music and the role it has played in teaching others about the natural world.

### **Going Forward**

I am pleased to share that my engagement with this research question will not end once this project is submitted. At the time of this writing, I am co-facilitating an outdoor and environmental education program with enormous potential for growth in the realm of music and environmental education. Within the umbrella of the Camp Ihduhapi's Outdoor Learning Program, there are two particular program offerings in which I intend to standardize the use of these songs. Predator and Prey is an ecology game in which participants take on the roles of different animals in the food chain; once they know their roles, they run across camp looking for plaques representing food, water, and shelter. Depending on the animal they represent, they may also be hunting other groups or

avoiding being hunted, which in the context of this game involves tagging each other. This past fall, my first professional development session focused on sharing the Banana Slug String Band's song "The Food Chain" (2007) with the staff and encouraging them to share it with our sixth grade participants later that week. They even had students act out the roles described in the song: a plant, a rabbit, an owl, and a decomposer. It was truly delightful to witness.

Another program I am developing at camp relates to water. "The Water Cycle Boogie" (1991) helped me conceptualize the movement of water between states of matter when I first heard it in a camp setting, and it was the song I was most excited to craft into a professional development opportunity for fellow environmental educators. I can imagine using this song to introduce or reinforce concepts we explore in the watershed investigation program I am developing for the coming spring.

### *Benefits to the Profession*

My capstone project benefits the profession because it provides learning opportunities for both novice and experienced environmental educators. The field of outdoor and environmental education often has a tendency to rely on word-of-mouth or rote lessons. While I appreciate the incredible value and history associated with these traditions, I believe that writing down curriculum and similar resources such as this manual is valuable for the continuity of educational content at outdoor centers. I am also aware that a spectrum of experience will encounter this resource manual of songs; it is my hope that the professional development I have designed will provide some context and valuable lessons for those who lead campfires and other programming with it. By providing the lyrics, key vocabulary, and a succinct look into the content described in

each song, I believe that I have created an accessible resource for outdoor and environmental learning centers that gives educators enough information to start integrating music into environmental education lessons.

This capstone project has revealed important reasons and strategies for connecting youth with the world around them in pursuit of this research question: How can environmental educators use music to increase students' understanding of the natural world? Music provides exciting opportunities for students to use their creativity in community while engaging with the outdoors, and focusing on the professional development of the staff leading environmental education programs has the potential to make those relationships even stronger. This collection of songs and lessons is one of many resources I intend on assembling for the staff I train and manage in my career. The growth of literacy, social emotional learning, and a desire to protect the environment are a few noteworthy outcomes of facilitating conversations between music and environmental education. Regardless of one's focus or approach, an essential theme describes the versatile work of environmental educators: creating a sense of connection between people and place.

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