

The Cultivation of a Relationship with the Natural World in Children and Adolescents:
A Grounded Theory Multiple-Case Study

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Abstract

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The overall aim of this grounded theory multiple-case study was to better understand how K-12 independent schools (“schools”) in the United States cultivate a connection between children and adolescents (“students”) and the natural world (“environment”) by exploring the interplay between this connection and (a) the school community (“community connectedness”) and (b) personal sense/belief about spirituality. The aim was guided by key research questions, which include: (Q1) How do schools in the United States cultivate a connection between students and the natural environment? (Q2) Why do schools cultivate a connection between students and the natural environment? (Q3) What is the interplay between the natural environment and the school community? And (Q4) What is the interplay between the natural environment and personal sense/belief about spirituality? This study utilized a grounded theory multiple-case study approach to conduct a secondary analysis on data previously collected as part of a parent study. Representative data from 4 of the 20 schools (Cedar Highlands, Mapleton, Tabiona, and Rocky Ridge) in the parent study were analyzed for the purposes of this grounded theory multiple-case study. Data were collected by conducting 1- to 2-day site visits to each school. Data collection methods included: (a) face-to-face individual interviews and group discussions with key school personnel (including teachers, faculty, staff, and parents); (b) general observations (including, but not limited to, classes, student groups/activities, faculty meetings,

campus life, school culture, and extracurricular activities); (c) desk review of reports and documents (including organizational documents, such as strategic reports, and public documents, such as blogs and articles); and (d) audiovisual materials primarily in the form of photographs. For the current study, an inductive analytic strategy was utilized to identify emergent concepts from the previously coded data. Within the inductive framework of the current study, cross-case synthesis, with a case-based approach, was utilized to compare within-case patterns across the four individual cases and to address the research questions. Emergent themes and results from cross-case synthesis were utilized to develop an initial working theory of environmental education that is spiritually formative as a component of overall healthy development.

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Chapter 1: Introduction

Healthy development in childhood and adolescence lays the groundwork for well-being and thriving in adulthood (National Academies of Sciences, Engineering and Medicine, 2019). In this context, healthy development means building the necessary cognitive, emotional, and social skills to become a healthy prosocial adult (Casey, 2019). Numerous factors known to promote healthy child and adolescent development have been well documented in the literature and include components such as sufficient sleep (Kopasz et al., 2010; Paruthi et al., 2016), proper nutrition (Bryan et al., 2004; Hollis et al., 2020), exercise (Hills et al., 2007; Rasmussen & Laumann, 2013), and play (Ginsburg, 2007). Within this field of developmental science, scholars have also examined the phenomenon of spirituality and its role and impact on child and adolescent developmental processes (Erikson, 1968; Miller, 2015; Roehlkepartain et al., 2006). Empirical research has suggested that spirituality promotes healthy child and adolescent development, with early childhood considered to be a period of spiritual emergence (Benson et al., 2003; Coles, 1990). This emerging spirituality becomes particularly salient during adolescence, when it plays a significant role in identity formation and development (Lerner et al., 2006), which is the main developmental task of this period (Levy-Warren, 1996).

Although spirituality is an innate human capacity (Benson et al., 2003; Hay et al., 2006; Newburg & Newburg, 2008), it has to be nurtured and developed throughout the course of life (Fowler, 1981; Kendler et al., 1997; Koenig et al., 2008; Lerner et al., 2006). Spirituality is often conceptualized as an awareness within the individual of a sense of connectedness between the self and the rest of the world, including other people and the environment (Skamp, 1991). Given its role in healthy development, it is important to understand how spirituality can be cultivated in

children and adolescents. Thus, a vast body of research has examined the factors and processes that influence spiritual development in youth (Benson et al., 2012; King et al., 2014). One factor that has been identified as influential in the development of personal spirituality in children and adolescents is the environmental context of the child or adolescent (Benson, 2006), or the community of which they are a part. Specifically, connectedness to community (referred to herein as “community connectedness”) has been identified by some as a key component of spirituality for youth (De Souza & Hyde, 2007). One place where youth can experience community connectedness is through the school they attend (Rowling, 2008). Adapted from the definition by Dove and colleagues (2018), community connectedness within the school, for the current study, is defined as how school systems cultivate and promote networks and students’ feelings of belonging within the school community. Another influential factor in the development of personal spirituality is exposure to and contact with nature (Kellert, 2006; Schein, 2014). Direct experiences with nature can invoke feelings of wonder and awe (Hart, 2006; Shiota et al., 2007), which for children and adolescents can be gateways to spiritual experience (Hart, 2006).

Not surprisingly, schools, which have historically been communities that support the development of the whole child, offer many opportunities for students to engage and be in relationship with nature, as many schools view nature as an integral component of whole child education. The cultivation of this relationship with nature within the K-12 school setting is addressed, to date, through the field of environmental education (“EE”) (Smith & Knapp, 2011). EE refers to education taking place in a natural or classroom environment, that teaches students about the environment and its challenges, with the aim of instilling attitudes and actions promoting environmental sustainability (Barrable, 2019). EE programs today vary in form, but

can include single-day programs, facilitated by an external vendor, or multiple-year programs that are assimilated into the school curriculum and include elements from both the classroom and the outdoors (Wheeler et al., 2007). Similarly, EE can also take the form of afterschool programs that are facilitated by nonprofit organizations.

The majority of existing EE programs today successfully teach students about nature, through focusing on ecological education, environmental stewardship, and youth and community development. Very few EE programs, however, actually teach students how to be in relationship with nature. For instance, although environmental stewardship is a type of relationship between students and the natural world, most EE programs approach environmental stewardship through an anthropocentric, or human-centered, view towards the relationship between humanity and the natural world (Hoffman & Sandelands, 2005), and are interested in preserving the environment for the sole purpose of serving the interests of mankind (Bourdeau, 2004). The type of relationship that EE programs should be trying to cultivate between students and the natural world is aligned more with how many indigenous peoples view themselves in relationship to nature. This indigenous perception of ecology, referred to as kincentric ecology, is defined as the following:

The manner in which indigenous peoples view themselves as part of an extended ecological family that shares ancestry and origins. It is an awareness that life in any environment is viable only when humans view the life surrounding them as kin. The kin, or relatives, include all the natural elements of an ecosystem. Indigenous peoples are affected by and, in turn, affect the life around them. (Salmón, 2000, p. 1332)

At the core of this model is the belief that humans “live interdependently with all forms of life” (Salmón, 2000, p. 1331). Through this lens, individual health (spiritual, physical, social, and mental) is dependent on harmonious living with the natural world (Salmón, 2000).

Consequently, approaching EE through a similar lens of interconnectedness and interdependence

should also foster the spiritual development of children and adolescents and simultaneously help cultivate community connectedness within the school.

Given what currently exists in the field of EE today, there is room for expansion in ways that are spiritually supportive. Many standard EE programs are unsuccessful in cultivating a true relationship between students and the natural environment because they fail to meet the developmental needs of the child or adolescent, specifically the need for individuation and identity formation, spirituality, and connectedness to community. The developmental needs of children and adolescents need to, and can, be addressed as the linchpin of EE. For children and adolescents, this means learning about themselves as part of nature and through relationship with nature.

This dissertation examined four K-12 EE programs in which students come to know themselves in deep relationship with nature through a process of spiritual development, community formation, and immersion in the outdoors. The formation of strong bonds, both in community (Desrosiers et al., 2011; Kelley et al., 2007) and in nature (Trigwell et al., 2014), lays the groundwork for the development of personal spirituality. It is hypothesized that through this transformative personal journey, nature will become a part of each student's personal and spiritual identity, and eventually the student will come into a felt awareness that nature is home. Ultimately, the deep developmental growth of the child and adolescent may occur through the discovery process of an EE program, which occurs as the child and adolescent comes to know themselves as part of nature. The overall aim of this grounded theory multiple-case study was to better understand how K-12 independent schools in the United States cultivate a connection between children and adolescents ("students") and the natural world ("environment") by exploring the interplay between this connection and (a) the school community ("community

connectedness”) and (b) personal sense/belief about spirituality. Emergent themes and results from cross-case synthesis were utilized to develop an initial working theory of environmental education that is spiritually formative as a component of overall healthy development.

1.1 Background

1.1.1 Spirituality’s Impact on Child and Adolescent Developmental Processes

Of particular importance is how spirituality relates to the broader developmental work of childhood and adolescence. In this context, spirituality is defined as an inner sense of relationship to a higher power (i.e., God, nature, spirit, the universe, the creator) that is loving and guiding (Miller, 2015). Foundational to this understanding is the belief that children are born with an innate capacity for spiritual connection (Wane et al., 2011). The evidence for this intrinsic human capacity lies in human biology (Benson et al., 2003). More specifically, a vast body of research and theory has argued that the human brain is structured to support human engagement in religious and spiritual experiences (d’Aquili & Newberg, 1993; Joseph, 2001; Newberg & d’Aquili, 2000).

Distinct from other lines of development, the innate spirituality in children appears whole and fully expressed. It is seen in their engagement with nature, in the bond between child and parent, in their openness and curiosity and in moments of connection that are inherently nourishing (Miller, 2015). For instance, when a 7-year-old child expresses “I love everybody and everything even ants, God made ants to be loved not trodden on” (Seden 1998, p. 58), their words suggest a felt sense of interconnectedness with all the creatures and things in the universe (Smith & McSherry, 2004). Similar to other lines of development, this emerging spirituality can be nurtured and supported by people and by the surrounding environment (Button et al., 2011; Koenig et al., 2008). If nurtured and supported in childhood, spirituality can prepare the child for

the essential developmental tasks of adolescence, including individuation, identity development, emotional resilience, character development, and the pursuit of meaningful work and healthy relationships (Miller, 2015).

Adolescents are trying to determine their place in the world and how they relate to it (Erikson, 1968; Hamman & Hendricks, 2005). One of the main developmental tasks of this period is identity formation (Erikson, 1968; Levy-Warren, 1996). Identity formation occurs through the context of relationships (Nawaz, 2011), as adolescents work to establish their individual (Erikson & Erikson, 1998) and spiritual identities (Templeton & Eccles, 2006) while simultaneously learning how to form mutually satisfying and fulfilling relationships with peers, friends, and family (Collins & Laursen, 2004). Through this process of relational development and community formation, adolescents learn how to be both independent and one in community. During this critical period of identity development, spirituality has been conceptualized as providing a relational system offering the adolescent security and reduced anxiety, a meaning system to address the adolescent's existential questions, and an identity-motivation system organized around spiritual goals and values (King & Roeser, 2009). Spirituality also offers the adolescent a protective health benefit, with a vast body of research identifying spirituality as a protective factor against numerous negative health outcomes (Cotton et al., 2006) including depression (Pearce et al., 2003; Wright et al., 1993), anxiety (Davis et al., 2003), suicide (Greening & Stoppelbein, 2002; Rew et al., 2001), substance abuse (Hodge et al., 2001; Miller et al., 2000; Ritt-Olsen et al., 2004), and high-risk behaviors such as physical risk taking and risky sexual behavior bereft of emotional intimacy (Cotton et al., 2005; Holder et al., 2000; Miller & Gur, 2002).

1.1.2 Community's Impact on Child and Adolescent Spiritual Development

In examining the factors that contribute to spiritual development in youth, a vast body of literature has emphasized the important role of a sense of connectedness to community (de Souza & Hyde, 2007; Rowling, 2008). The significant role of community in spiritual development is not a novel idea. In describing the link between community and spirituality, Dokecki et al. (2001) referenced how, in indigenous populations, spirituality is experienced in and through relationships with people and nature, and also informs the indigenous view of community:

It became clear to us that they have an elaborate and intimate sense of relating (a) temporally, to past, present, and future generations of their people and (b) spatially, to the land, especially the place where they dwell. It is in these relationships that they experience spirituality. Matters of spirit (both human and divine) are central to the daily lives of these people and their understanding of community. (p. 502)

Dokecki et al. went on to argue that spirituality provides the foundation for community.

One salient community for children and adolescents, that has also historically played a significant role in child and adolescent development, is the school (Roeser et al., 2000). Youth spend more time in school than in any other environment (Monahan et al., 2010). The school community offers the people and place for youth to experience connectedness through relationships with peers and adults within the school community (Monahan et al., 2010). Not surprisingly, schools have also been conceptualized as sites of spiritual development for youth (Adam et al., 2016; Revell, 2008).

1.1.3 Nature's Impact on Child and Adolescent Spiritual Development

Another significant factor that contributes to the spiritual development of youth is nature (Louv, 2008; Schein, 2014). Exposure to and contact with nature can be spiritually formative for both children and adolescents (Louv, 2008). For instance, playing in nature can elicit feelings of wonder in children (Schein, 2014). Fuller (2006) argued that the experience of wonder is one of

the defining elements and principal sources, of spirituality. Nature can also provide experiences of transcendence (Bethelmy & Corraliza, 2019) by evoking a sense that there is something greater than the individual (Louv, 2008). In his research examining the spiritual experiences of children, Hoffman (1992) found that many transcendent childhood experiences occurred in nature.

The transformative power of nature and its role in spiritual development can be further understood through Johnson's (2002) essay in the *International Journal of Wilderness*, where he identified six spiritual benefits of nature: (a) the enduring, (b) the sublime, (c) beauty, (d) competence, (e) experience of peace, and (d) self-forgetting (p. 29). In describing how nature evokes each of these transformative experiences, Johnson began by explaining that through nature, humanity encounters the "enduring" and has the opportunity to directly experience those cycles and structures that are ancient and timeless. These direct experiences then open opportunities for humanity to experience power and mystery through the immensity of natural structures like mountains, rivers, glaciers, and the vast ocean. He further explained that through their power and ability to invoke awe, these structures can feel almost God-like and allow for the experience of the "sublime," or the awareness of humanity's inherent weakness and vulnerability in comparison to the forces of nature and the wilderness landscape. This humbling can then lead to increased presence, as human aspirations, imperfections, and frustrations are in some ways absolved in the grandiosity of the natural landscape. Johnson argued that the experience of "beauty" that is felt in the natural landscape helps to cultivate a feeling of spiritual peace and comfort. Furthermore, the challenges endured in the wilderness, when successfully overcome, can lead to feelings of empowerment, capability, and worth, which result in experiences of

“competence.” Johnson described the “experience of peace” that is so often felt in the wilderness as a byproduct of these aforementioned experiences:

Identification with the enduring aspects of nature, minimization of ordinary concerns before nature’s sublimity, physical removal from the sources of everyday anxieties, experience of beauty, feelings of competence, and the attention-focusing effect of the challenges encountered all contribute to the mental calm so often found in wild-nature. (p. 31)

Finally, Johnson (2002) explained that all of the aforementioned benefits lead to the final benefit, “self-forgetting,” or the ability to, in some capacity, abandon the individual ego and surrender to the natural world.

1.1.4 Nature’s Impact on Child and Adolescent Developmental Processes

In addition to its many spiritual benefits, exposure to and contact with nature supports overall healthy child and adolescent development (Taylor et al., 2006). A significant factor for children’s physical, social, and psychological development is good motor skills (Hestbaek et al., 2017). Play in natural environments has been shown to improve motor development in children. The term *natural environment* refers to an environment “not designed or cultivated by humans” (Fjortoft, 2004, p. 24). For example, a study of kindergarten students in Norway found that children who engaged in free play for 1-2 hours daily in the forest next to their school showed significantly better improvement in motor ability, especially in balance and coordination, in comparison to the children who engaged in free play for 1-2 hours daily on the traditional outdoor playground. These findings showed that the physical diversity in a child’s play landscape, offered by a natural environment like a forest, enhances opportunities for a child’s learning and development (Fjortoft, 2001). Additionally, nature has been shown to support the healthy emotional development of children (Louv, 2008). For instance, a study by Wells and Evans (2003) found that the presence of nature near a child’s home moderated the impact of life

stress on the child's psychological well-being in a sample of 337 rural children in Grades 3 through 5. Children with more nature around their home reported lower levels of psychological distress, as measured by symptoms of behavioral conduct disorders, anxiety, and depression.

Similarly, research has shown that nature also supports the emotional development of adolescents. A critical component of healthy adolescent development is the ability to self-regulate (Farley & Kim-Spoon, 2014). A study of adolescents in Finland found that many participants preferred to go to natural settings after arguments, setbacks, or after experiences of difficult emotions. These findings suggested that natural environments can serve as places of self-regulation for adolescents (Korpela, 1992). As previously discussed, identity development is another critical task of the adolescent period (Kroger, 2005). Engaging in activities that promote personal and character development contributes to the adolescent's process of identity formation. Immersion in nature, through participation in outdoor wilderness programs, has been shown to be influential in personal and character development through improving self-confidence, self-esteem, independence, autonomy, and initiative in a retrospective study of youth (Kellert, 1998). For example, in reflecting on their experience of participating in an outdoor wilderness program, one participant expressed the following:

Participating (occurred at) a pivotal point in my life. It gave me the opportunity to take a risk. It strengthened my sense of self. It gave me a feeling of purposefulness, self-respect, and strength that I had never had before. When you have confidence in yourself it affects every aspect of your life. (Kellert, 1998, p. 217)

1.2 The Existing Field of Environmental Education

Given the critical role of nature in overall healthy child and adolescent development, including spiritual development, it is important to understand how schools, a place where children and adolescents spend the majority of their day, help to foster this connection between students and the natural world. In K-12 education, this is addressed through the field of

environmental education. The term *environmental education* was originally coined by William B. Stapp in 1969 (Smith & Knapp, 2011); however, the present field of environmental education has been created through the interweaving of various fields of education, including nature study, conservation education, outdoor education, and experiential education (Wheeler et al., 2007). Derived from the United Nations's definition of environmental education in 1977 (United Nations Environment Programme, 1978), Wheeler and colleagues (2007) defined environmental education as "a learning process that increases knowledge and awareness about the environment and associated challenges; develops the necessary skills and expertise to address these challenges; and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action." The aim of environmental education is to create a community of citizens who are knowledgeable about the biophysical environment and its related problems, willing to aid in solving these problems, and determined to strive for their solutions (Stapp, 1969). A significant portion of current environmental education occurs in the K-12 school setting (Wheeler et al., 2007).

To further understand the current state of the field, four environmental education programs are further described herein. These four programs are not the cases for the current study; however, they have been included to help illustrate the current state of the field of environmental education and were influential in selecting cases for the current study. Specifically, methods of engagement, anticipated outcomes, and examples of implementation are reviewed. Outward Bound (2021), an educational nonprofit organization that provides experiential and outdoor education programs tailored to youth and adults, represents a typical environmental education program that teaches ecology, stewardship, and community values through overcoming challenges while immersed in wilderness settings. The Chicago Wisdom

Project (2015), a holistic afterschool program tailored specifically for urban youth, shows how elements of environmental education can be adapted for urban youth and designed for implementation outside of the school setting. Environmental education programs and curricula derived from the Earth Charter International (2020a), a global document and movement to support a more just, sustainable, and peaceful world, as well as Journey of the Universe, a movement whose aim is to provide a new evolutionary story of the universe (Tucker, n.d.), show how environmental education programs, in addition to teaching ecology and stewardship, can help foster an interdependent relationship between students and the natural environment, and through doing so, support child and adolescent spiritual development.

1.2.1 Outward Bound

Outward Bound (OB) was initially founded in 1941, with the establishment of the first Outward Bound School in Aberdovey, Wales, by prominent 20th century educator Kurt Hahn and businessman Lawrence Holt. Designed initially to develop character, the original model created in Aberdovey was a 4-week course that provided rigorous athletic training, taught seamanship, and assisted students in the preparation for a land-based expedition scheduled for the end of the course (Freeman, 2011). Today, OB has 11 schools in the United States (Outward Bound, 2021a) and more than 30 schools internationally (Outward Bound International, 2020), which offer numerous courses that aim to foster the development of character, leadership, and service in its students through challenging learning expeditions in wilderness settings. Although not an exhaustive list, course offerings include backpacking trips, mountaineering trips, whitewater rafting trips, canoeing trips, dog sledding expeditions, and sailing trips of various durations in length, from a few days to an entire semester (Outward Bound, 2021a).

The American School in Switzerland (TASIS) considers OB to be an integral part of a student's education. Students attend an OB expedition that begins at the Outward Bound wilderness center in Fussen, Germany, during their sophomore year, a tradition that began in 2000 (TASIS, 2016). One of these trips, that occurred in February 2016 is described in further detail and compared to what a "typical" day looks like on an OB expedition, as denoted by the OB website.

On the Saturday that began the trip, the group left TASIS at 8:30 a.m. and traveled to the Outward Bound Center by bus. Upon arrival, the group unpacked, participated in a group exercise activity outside, ate dinner, and went to the local ice skating rink. The group went to bed at an early hour to rest and prepare for the upcoming days ahead. Each student spent Sunday morning getting to know their assigned group and designated OB instructor through a series of team-building exercises. For example, one team-building activity asked individuals to share about their goals and fears for the week (TASIS, 2016). The other team-building activities were described by one TASIS chaperone as involving "shouting, aggressive posturing, and some form of physical contact" (TASIS, 2016). These team-building activities are in alignment with a typical OB expedition design, where the progression of each course is intentionally tailored to first cultivate self-esteem and self-confidence through a series of activities designed for students to experience success while engaging in a new environment (Outward Bound, 2021b).

One of the groups was scheduled to leave Monday for their 3-day trek. For this group, Sunday was spent teaching students how to plan for a wilderness expedition. Students engaged in route planning, creating grocery lists for needed items, and packing backpacks. During this process, teachers (chaperones) were asked to refrain from offering advice or designating student leaders (TASIS, 2016). Allowing students to take responsibility for the planning and decision

making, without the influence of adult voices, aligns with the aforementioned goal of fostering student self-esteem and self confidence in a new environment, through the experience of being successful in the planning process.

On Monday morning, the group departed from the Outward Bound Center and stopped at the grocery store, where the students in the cooking group bought food for the trip. Once the food purchases were complete, the group started their hike uphill with snowshoes and large backpacks. On a typical OB trip, each afternoon the group arrives at a new campsite and is tasked with setting up camp, partaking in dinner preparation and cleanup activities, and getting ready for sleep. The group collects firewood, builds a campfire, and cooks dinner over the campfire. After dinner, the group washes any dishes that were used. The night ends with an evening meeting that provides space for reflection about the day, relationship restoration, and planning for the upcoming day (Adam, 2014). Similarly, after 7 hours of hiking on snow-covered trails, the group reached the Fritz Putz Hut, their lodging for the next two nights. Given the group was staying in a hut and not camping outside, not as much camp setup was needed. The group changed out of their snow gear, and the Italian students cooked a pesto pasta dinner for the group. After dinner, an evening meeting ensued where challenges of the hike were addressed and discussed and the strengths of specific team members, or as one chaperone described it, “the perseverance, toughness, and leadership of certain team members,” were acknowledged (TASIS, 2016). Everyone was in bed by 10 p.m.

A typical day on an OB expedition starts with getting up early. The morning typically includes a morning meeting, stretches and/or light exercise, breaking down the camp, preparing and eating breakfast, joining a tailored skill lesson led by the instructor, and briefing on navigation prior to travel (Adam, 2014). In alignment with this model, the TASIS group arose

early on Tuesday morning and prepared and ate a light breakfast of cereal, bread, and jam. As the group was staying in the hut they would return to, they did not need to break down the camp until their last day. The tailored skill lesson included instruction around how to put on avalanche beacons and snowshoes (TASIS, 2016).

Typically, once a group departs camp, group members travel with packs weighing up to 70 pounds (Adam, 2014) either on trails or on the water, depending on the specific course. Traveling consumes the entire day as the group tends to cover a large amount of territory (Outward Bound, 2021c). Similarly, the TASIS group departed after their skill lesson and attempted to hike to the summit of Schlagstein Mountain; however, after hiking for several hours on the trail, the OB guide informed the group that they could not continue to the summit due to an avalanche warning. The group returned to the hut where a different group of students prepared pasta for everyone (TASIS, 2016).

On Wednesday morning, the group worked to clean and organize the Fritz Putz Hut, with the goal of leaving the hut exactly as it was found before descending on the group's final hike towards the Outward Bound Center (TASIS, 2016). This level of cleaning is in alignment with how OB teaches the "leave no trace" principles (Leave No Trace Center for Outdoor Ethics, 2021), which guide campers to do a full sweep of their campsite to ensure that nothing is left behind and everything that was brought to the site, including food and trash, is packed and taken with the campers when they leave. The group returned to the Outward Bound Center. As their official trek had now ended, the following 2 days were filled with team-building exercises and outdoor activities at the Outward Bound Center, with a return to TASIS on Saturday.

OB engages students through direct immersion in the outdoors. Students are intentionally placed in challenging situations in wilderness settings, with an underlying pedagogical

philosophy that growth occurs when students stretch themselves beyond what they think they can accomplish. Student success in these challenging situations helps to cultivate increased self-esteem and self-confidence. Furthermore, students learn how to work as part of an interdependent team. These concepts are further illustrated in one student's reflections about her experience on the TESIS Outward Bound trip:

Outward Bound did two important things for me: Firstly, it nourished my love for the outdoors and introduced less experienced students to outdoor recreation. Secondly, and more importantly, it made me feel confident enough to challenge myself outdoors as well as in a group/team setting. It builds leadership skills and an invaluable trust among peers. (TASIS, 2016)

Overall, OB is successfully designed to facilitate personal growth and to cultivate a relationship between students and the outdoors; however, it lacks the deep spiritual ethos that is at the forefront of the other two curricula that are described below, Journey of the Universe and the Earth Charter. The OB program lays the groundwork for the formation of individual spirituality through its outdoor immersion programming, but could deepen its approach if concepts from the Earth Charter and Journey of the Universe were integrated into its existing programming.

1.2.2 The Chicago Wisdom Project

Wisdom Projects, Inc., headquartered in Baltimore City, Maryland, is a 501(c)(3) nonprofit organization with two divisions, including the Chicago Wisdom Project and the Baltimore Wisdom Project. Its mission is to “reimagine education and reimagine the world by enhancing the lives of youth and adults with holistic education, intercultural understanding, and anti-oppressive, liberationist thought leadership” (Wisdom Projects, Inc., 2021). The Chicago Wisdom Project, established in 2009, offers afterschool programs, rites of passage retreats, summer camps, and community events, predominantly for youth who live on the south side of

Chicago. This division also runs a community garden and urban farm (Chicago Wisdom Project, 2020). According to the founder and director of the Chicago Wisdom Project, Theodore Richards, the overall work of the organization is holistic; however, environmental education is an approach that is utilized and is an integral component of the organization's curriculum and programming.

The underlying philosophy of the Chicago Wisdom Project (2015) is derived from the belief that a worldview or cosmology is created through narratives, stories, and myths that describe humanity and humanity's place in the world. The project argues that the creation of a meaningful, just, and sustainable future calls for new narratives that acknowledge that humanity is "embedded in a web of ecological and communal relationships" (p. 9). To create such narratives, a whole-person approach is necessary. To accomplish this, the Chicago Wisdom Project uses a holistic curriculum that addresses five key components:

(1) the intellect, in which youth examine and critique the narratives they have been given by the dominant culture; (2) the interior life, in which youth explore their feelings in community, learn techniques to deal with stress and anger and participate in rites of passage; (3) the body, in which youth learn to explore their world as part of nature and with their hands; (4) the natural world, in which youth experience themselves as a part of an ecological system; (5) and finally through creative arts, in which youth learn from and teach through their re-imagined narratives. (p. 9)

To understand the role of environmental education in the work of this organization, the curriculum from a Chicago Wisdom Project afterschool program for teens is described in detail below.

The curriculum itself is designed around the seasons to emphasize the natural cycles of the Earth. Each season has a specific focal point, derived from that season's climate and rhythm, and includes questions, themes, and intended outcomes for the particular season that are expressed through 12 weekly lesson plans (Chicago Wisdom Project, 2015). To further

understand the curriculum as well as its implementation and methods of engagement, two lesson plans from two different seasons, autumn and spring, that pertain to environmental education are described.

Autumn is denoted by “the *via transformativa*” and focuses on change, transformation, and harvest. During the third week of this season, students engage in tree planting. The target outcomes for this activity include increasing students’ critical consciousness, appreciation of nature, and knowledge of mindfulness practices. After completing this activity, students should be able to: “(1) describe their relationship to nature; (2) identify the difference between typical farming methods (e.g. factory farming) and permaculture; (3) understand how the human being fits into the food forest, permaculture-based model; and (4) plant a tree” (Chicago Wisdom Project, 2015, p. 21).

The lesson begins as every lesson in the curriculum does, with a sacred circle. Students form a circle, and the sacred circle starts with a brief meditative exercise that can focus on breathing, yoga, or martial arts and then transitions into a 10-minute check-in that provides space for each student to express feelings (physical or emotional) as the other students in the circle are asked to listen without interrupting. This opening activity is followed by an intentional dialogue (30 minutes) that explores barriers to students viewing themselves as part of nature (Chicago Wisdom Project, 2015). The following questions are posed to the group for inquiry-based discussion: “What are stereotypes of someone who enjoys being outside? What are stereotypes of farmers? What is your community’s perception of planting trees or being in nature? Which communities have more trees in them? What is our relationship to trees? Why do they matter to us as human beings? What is permaculture? What is a food forest?” (p. 21). A concentric circles (mandala) model of an ecosystem is also displayed and discussed, and a discussion is facilitated

around how getting food from a food forest differs from getting food at a fast-food restaurant. This dialogue is followed by a 30-minute activity, tree planting. Students are taken outdoors and provided with instructions around how to plant a tree from the facilitator or from a trained farmer or gardener. This lesson then concludes with a 10-minute closing circle, where questions from the original discussion are revisited and students are asked to share one reflection on their experience of the tree planting they just completed and explain how this experience differs from being in the classroom (Chicago Wisdom Project, 2015).

This lesson engages students first through community. Students learn, through the sacred circle exercise, the value of each community member and how to listen actively. Next, students are engaged through structured discussion, designed to encourage reflection around the student-nature relationship and the exploration of stereotypes particularly relevant to urban youth that may prevent the formation of this relationship. For example, in a culture that values monetary success and status, the stereotype of a farmer as being from a lower class may unconsciously deter urban youth from immersing themselves in the outdoors. Examining how the number of trees differs depending on the community that they are in allows students to explore how factors, such as wealth and socioeconomic status, contribute to the presence or absence of trees in a community. Assisting students in exploring permaculture, food forests, and the importance of trees to human beings helps cultivate an understanding of interconnectedness and interdependence and introduces concepts like sustainability and responsibility. Experiential learning is then used to engage students in the outdoors through tree planting. This activity may help to cultivate the student-nature relationship and provide students with the opportunity to participate actively in a sustainability initiative, fostering civic responsibility through participation in an environmental cause.

Spring is defined by “the via creativa” and focuses on birth and rebirth. During the third week of this season, students engage in a cosmic walk. The target outcomes for this activity include increasing students’ critical consciousness, expanded sense of self, and appreciation of nature. After engaging in this lesson, students should be able to:

- (1) describe a new creation story; (2) describe at least one purpose of creation stories;
- (3) describe how they (their life and their potential) are part of the story; (4) describe their connection to all other parts of life (e.g. trees, animals) through shared ancestry/origins;
- (5) identify how this connection can lead to greater interdependence and appreciation of all humanity (regardless of ethnicity, region). (Chicago Wisdom Project, 2015, p. 49)

The lesson begins with the sacred circle exercise (10 minutes), which includes a meditation and a brief student check-in, followed by an intentional dialogue (30 minutes) around the following questions: “What is a creation story? What purpose does it serve? What are some examples?” (Chicago Wisdom Project, 2015, p. 40). This dialogue is followed by an activity, the cosmic walk (40 minutes). The purpose of the cosmic walk is to assist students in understanding the story of the Universe through the lens of modern science. The timeline of the Universe is represented through a 140-foot rope. Numbers are marked to scale along the rope, each indicating a new emergence in the story of the Universe. Each new emergence, or phase, is depicted as representing a piece of ourselves, through acknowledgment of our ancestors and their presence in each of us, and as a rite of passage, as humanity learns a new way of being in the cosmos. A large spiral is formed with the rope, and each student is asked to choose a specific number. The story of the Universe is then read to the group and framed by the following introduction:

The story of the Universe is the story of each of us. Each phase, each moment in this story is the Universe giving birth to us. Each moment represents the birth of our common ancestor. Out of unimaginable light the universe was dreamed into being. It contained all the light, energy, and potential for everything that would ever come to be, all contained within the vessel of hydrogen. (Chicago Wisdom Project, 2015, p. 49)

Fifteen different parts of the story are then read and discussed, with most parts of the story including a “rite of passage” and an “ancestors” component. For instance, part 1 of the story, the “Primordial Fireball,” is described as occurring 13.7 billion years ago. The rite of passage for this part of the story reads “from emptiness to oneness. This moment represents the birth of the Universe into existence” (Chicago Wisdom Project, 2015, p. 49). The ancestors component reads “everyone and everything comes from the same source. What does this mean for you?” (p. 49).

The story closes with the following:

Today, in this moment of grace, all humans can finally understand their common origin story, embracing and celebrating their different stories within a single Earth community in a single sacred universe. Like the Uroboros, the beginning of the Universe is like the end: each of us, right now, carries with us the memories of this story. Within us, we have the capacity to give birth to a new world. (p. 51)

Intentional discussion should follow this exercise guided by the following questions:

“How do you feel about this scientific account of the Universe? Is it overwhelming? Does it feel meaningless? Do you prefer it to the religious accounts you may have heard? What does this story mean for how we treat one another? What if this were the story of our ancestors and us? What if we were all related? How does this story relate to other creation myths?” The lesson ends with a closing circle and time for reflection (Chicago Wisdom Project, 2015).

Similar to many of the activities in the Journey of the Universe curriculum, this activity engages students through a curricular lesson that provides a new creation narrative with which urban youth can identify. The story’s emphasis on interconnectedness may help youth to understand and further identify how they are also an integral part of the creation story. The ability for youth to see themselves as a part of creation may help to foster a relationship between youth and nature, and ultimately help youth see themselves as an interdependent part of the greater community of life.

Although environmental education is only a piece of the overall Chicago Wisdom Project curriculum, it successfully cultivates a relationship between urban youth and the outdoors through experiential activities, direct immersion in nature, and curricular instruction around environmental topics. Furthermore, the spiritual ethos that appeared to be lacking in the OB curriculum is visibly present in the Chicago Wisdom Project curriculum, its pedagogical framework, and intended student outcomes. Similar to the Journey of Universe and Earth Charter curricula, the environmental education aspect of the program works to instill in urban youth the belief that nature is home and they too have a place in the creation story.

1.2.3 Journey of the Universe Curriculum

The Journey of the Universe curriculum is derived from the *Journey of the Universe* book (Swimme & Tucker, 2011), film, and podcast conversations and is tailored primarily for use in secondary schools (King, n.d.). Journey of the Universe was created by Mary Evelyn Tucker, Senior Lecturer and Research Scholar at Yale University, and Brian Thomas Swimme, professor at the California Institute of Integral Studies in San Francisco. It was inspired by the work of cultural historian and scholar of world religions, Thomas Berry, who in 1978 felt called to tell a “New Story” of evolution and the emergence of life (Berry, 2003). Journey of the Universe builds on Berry’s *The Universe Story* (Swimme & Berry, 1992), which he wrote in collaboration with Brian Swimme in 1992 (Tucker, n.d.). The goal of the project is to provide a new evolutionary story that integrates the sciences and the humanities in such a way that it evokes the emotions of awe and excitement, fear and joy, belonging and responsibility (Tucker, n.d.).

The curriculum itself is specifically designed to cultivate interdisciplinary thinking, creativity, and meaning making in adolescents, and its lesson plans are aligned with the chapters

in the *Journey of the Universe* book (King, n.d). To further understand the curriculum and its implementation and methods of engagement, three lesson plans are described.

The first lesson plan, “Beginning of the Universe,” focuses on the themes of creativity and story. Four different activities are offered, one of which is the option to create a cosmic autobiography from the point of view of the universe with a chapter about the student’s own experience in the Great Flaring Forth. The option to integrate an artistic illustration that complements the narrative is also presented (King, n.d.). In this example, students are being asked to insert themselves into the story of evolution through artistic expression, cultivating a sense of connectedness and belonging, and providing an opportunity for the students to create a version of the evolution story to which they individually feel connected. In this activity, the story itself engages the students, which is in alignment with Berry’s (2003) earlier writings regarding the important role of story in shaping emotional attitudes, integrating knowledge, and guiding education. This activity is then followed by specific discussion questions that further reinforce the themes of creativity and story. For example, one discussion question that can be utilized is asking students what part of this story evokes awe or wonder for them. Although not a part of this curriculum, this question could be expanded on to include the sharing of experiences in nature that evoke awe or wonder.

The second lesson plan, “The Formation of the Galaxies,” focuses on the themes of attraction and allurement. Five different activities are offered, one of which is the following:

The Journey book says that “We know now that the galaxies emerged from the primordial vibrations in the birth of the universe. These vibrations in matter certainly had a special power of creativity. Perhaps we can regard them as a kind of music, a ‘music of spheres’”. Find a song that might resonate with the process of galaxy formation and listen to it a few times. Then, write down some reflections on how the rhythms of the song might parallel these processes: What part of the song might sound like a vast cumulous cloud? What might sound like a series of waves passing through the cloud? What might sound like the bursting of the initial cloud into smaller galaxy clusters? (King, n.d., p. 3)

This activity engages students through music, utilizing a well-known medium to assist students in making parallels between the components that led to a song and the components that led to the creation of the universe. It helps cultivate a deeper understanding around the unfolding of the universe, Earth, and humanity through the interweaving of science and the arts. Furthermore, it leaves space for the emergence of awe, mystery, and wonder as it utilizes a medium (song) that often evokes such emotions in its listeners. Given that a sense of awe, mystery, and wonder is often associated with spirituality, this activity, along with the others in this curriculum, can also be spiritually formative.

This activity is then followed by a series of discussion questions. One discussion question that can be utilized is first explaining that each culture has its own understanding of the origins of the universe. Students can then be asked to choose one or two cultural explanations for the universe and compare and contrast the cultural explanation to the scientific story (King, n.d.). This question engages students in a cross-cultural dialogue, allowing them to see and understand that fundamental scientific truths can often be expressed differently through the lens of various cultures. Similar to the Earth Charter curriculum that is described next, the fundamental values of mutual understanding and cooperation are taught through critical examination of the science, coupled with the cultivation of deep understanding and appreciation for all cultures, including those that are different from our own. This may lead students to the understanding that regardless of culture, we all have our own unique story in the journey of the universe, which may help foster a sense of personal embeddedness within the evolutionary story of Earth's unfolding. This concept is denoted in the film (Kennard & Northcutt, 2013) as the idea that "We belong here. We have always belonged here."

The third lesson plan, “The Emanating Brilliance of Stars,” focuses on the themes of resonance, awe, and wonder. One of the activities offered asks that students go outside on a clear evening without a phone. They are asked to gaze up at the stars for at least 10 minutes. Once they return indoors, they are asked to spend time journaling about their experience through poetry or prose. In this specific activity, students are engaged through direct experience in the outdoors and are intentionally put in an environment that may evoke feelings of awe and wonder through experiences such as observing the placement of the stars in a vast and immense sky, noticing the sheer beauty of the stars, or feeling a sense of peace or self-forgetting as they are star gazing. In many ways, the same activities that help cultivate a connection with the Earth also help cultivate personal spirituality, as students may begin to question their place and role in a vast, interconnected universe. Students are also engaged through writing and reflection, allowing them to further explore and integrate their experience.

This activity is then followed by specific discussion questions. Questions that ask students to explore what it means to say “the stars are our ancestors” and to reflect on whether learning this changes the way they think and feel in relationship to the larger universe are laying the groundwork for students to explore the interconnectedness and interdependence of all life.

Although only three lesson plans were explored here in depth, the curriculum contains 11 lessons and integrates components from the book, film, and podcast conversation series. In summary, the Journey of the Universe curricular lessons engage students through an initial activity followed by collaborative discussion that is deliberately framed with specific questions to help cultivate a basic understanding around the evolution of Earth and to foster a sense of awe, mystery, and wonder that will lead students to feel they have their own place in the evolution story and, ultimately, they do—and always have—belonged here (King, n.d.).

1.2.4 Earth Charter-Based Curricula

Earth Charter-based education programs and curricula are derived from the 16 fundamental principles outlined in the Earth Charter (EC), a global document that aims to provide an ethical foundation for a more just, sustainable, and peaceful world (Earth Charter International, 2020a). It is important to note that the Earth Charter uses the term “Earth” to refer to our planetary home. In his essay “Crafting Principles for the Earth Charter,” published in *A Voice for Earth: American Writers Respond to the Earth Charter*, Steven Rockefeller (2008) explained that the term “Earth,” not “the earth” or “the Earth,” should be used to refer to our planetary home because it denotes “respect for the planet and its ecosystems upon which human beings and all life are dependent for survival and development” (p. 8). To support the development of these efforts, the Earth Charter International Secretariat produced a guidebook in 2005 offering curricular materials and guidance around how teachers and educators can integrate the principles of the EC into their classrooms. At the classroom level, this integration can manifest in various ways; however, the underlying pedagogical approach is that each EC principle can and should be applied to any subject (Earth Charter Initiative International Secretariat, 2005). Although not an exhaustive list, examples of how these principles can be applied curricularly to classes in the creative arts, language arts, foreign languages, and social sciences are described herein.

For example, principle 14b states “Promote the contribution of the arts and humanities as well as the sciences in sustainability education” (Earth Charter International, 2020b). Asking students to artistically express one principle of the EC through an artistic medium of their choice (drawing, poster design, drama, music) is one way that this principle applies to the creative arts (Earth Charter International Initiative Secretariat, 2005). This activity can begin with an initial

discussion around the EC, its history, and its principles, and the activity could be framed with the following discussion questions: “1) How does the selected principle affect you, your family, your school, your community, and the rest of the world? 2) Think of one specific instance where this principle is important? 3) How could this principle be shown in visual form? 4) Draw a picture of that situation or choose another way to illustrate the principle” (Earth Charter International Initiative Secretariat, 2005, p. 25).

Students are able to express concern for Earth through a creative process of activity and discussion that utilizes both intellect and emotion (Earth Charter International Initiative Secretariat, 2005). Furthermore, the discussion questions provide opportunities for students to learn key principles around sustainable development. For example, asking students to examine how a selected EC principle impacts the individual student as well as their family, school, community, and the rest of the world engages students in a cognitive process that may lead to further understanding around global interdependence and shared responsibility. Ultimately, such questions allow teachers to move beyond academic content and create an educational environment that cultivates the values, knowledge, and skills that may lead students to make ethical decisions that promote environmental protection, social justice, and peace (Earth Charter International Initiative Secretariat, 2005).

This activity can be done with various EC principles and can be adapted to both primary or secondary school settings through the selection of an EC principle that is most appropriate for the particular student age group (Earth Charter International Initiative Secretariat, 2005). For example, without any changes in language, principle 15a “prevent cruelty to animals and protect them from suffering” (Earth Charter International, 2020b) is appropriate for either a primary or secondary school setting, whereas principle 16a “encourage and support mutual understanding,

solidarity, and cooperation among all peoples and within and among nations” (Earth Charter International, 2020b) is more appropriate for a secondary school setting (Earth Charter Initiative International Secretariat, 2005).

In the application of the EC principles to language arts, students may be asked to reflect through writing around the content and language of the EC. In primary school, students may be asked to write a poem or an essay that is inspired by an EC principle, describe what they believe Earth will be like in 25 years, or explain what they believe their role to be in making Earth a better place. Asking students to reflect through writing on where Earth will be in 25 years engages them in an examination of how current patterns of human behavior will impact the future of our planet as well as teaches the interconnectedness between the social, ecological, cultural, economic, political, and spiritual dimensions of sustainable development. Prompting students with questions around their individual roles in making Earth a better place helps cultivate a sense of universal responsibility, a fundamental value of sustainable development. In secondary school, students may be asked to identify other landmark documents that were written to inspire and motivate people and to compare the language within these documents to the language of the EC and assess if the documents were written for different audiences (Earth Charter Initiative International Secretariat, 2005). Through this lens of critical analysis, students are provided the opportunity to deeply examine and further understand the EC principles and to engage in an activity that grounds them in what civic participation can look like in a democracy.

In foreign language classes, the principles of the EC can also be applied. EC principle 16a states, “encourage and support mutual understanding, solidarity, and cooperation among all peoples and with and among nations” (Earth Charter International, 2020b). To apply this principle, secondary school students can be given a youth-adapted or original version of the EC

Preamble in the language being studied. After having the opportunity to read the text, the group can engage in a discussion framed by the following questions: “What are some problems with the translation? Can you ever have a perfect translation? Are there some words/expressions that exist in one language, but not another? Why do you think that is?” (Earth Charter Initiative International Secretariat, 2005, p. 27). This facilitated discussion lays the groundwork for students to explore a key value fundamental to the EC: mutual understanding. Through the examination of the translated EC text, students directly experience the discrepancies between one language and another and may begin to understand one obstacle that can hinder the development of mutual understanding: differences in language and communication.

The social sciences provide a foundation for rich learning opportunities in regards to EC principles and concepts. For example, facilitated student discussions can explore the applicability of universal principles in considering the diverse beliefs and views that exist today (Earth Charter Initiative International Secretariat, 2005). In further exploring the concept of universal principles, principle 16f can be utilized: “recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which we all are a part” (Earth Charter International, 2020b). This principle can be examined in secondary school through guided discussion framed by the following questions: “Why does ‘oneself’ come first in this principle? What do you think is meant by ‘right relationships’? Do you know of any belief system that would disagree with this principle? What is the opposite of peace? How is this against all the ‘right relationships’ that the principle above mentions?” (Earth Charter Initiative International Secretariat, 2005, p. 29). These questions provide a foundation for students to explore their role in the larger community of life and learn sustainable development through the continued exploration of fundamental values, such as universal responsibility, and

key themes, such as interconnectedness, that are essential to the EC movement (Earth Charter Initiative International Secretariat, 2005).

In summary, the EC-based curricular lessons engage students through an initial activity that introduces the EC and its principles. This activity is often followed by collaborative discussion that is deliberately framed with specific questions to foster and cultivate the fundamental values necessary for ethical and sustainable living. Given the types of programs that exist today in the field environmental education, there is room for growth and adaptation to further support the spiritual development of youth as a component of overall healthy development. This dissertation presents empirical research examining 4 K-12 environmental education programs where students come to know themselves in deep relationship with nature through a process of spiritual development, community formation, and immersion in the outdoors.

Chapter 2: The Current Study

The overall aim of this grounded theory multiple-case study is to better understand how K-12 independent schools (“schools”) in the United States cultivate a connection between children and adolescents (“students”) and the natural world (“environment”) by exploring the interplay between this connection and (a) the school community (“community connectedness”) and (b) personal sense/belief about spirituality. The aim was guided by the following key research questions:

Research Question 1. How do schools in the United States cultivate a connection between students and the natural environment?

Approach to Q1: This area of inquiry focused on the school-based practices, programs and pedagogical frameworks that are being implemented in routine practice in the school setting, as an effort to cultivate a connection between students and the natural environment, across four schools.

Research Question 2. Why do schools cultivate a connection between students and the natural environment?

Approach to Q2: This area of inquiry focused on the pedagogical frameworks that guide schools in creating environmental education programming across four schools.

Research Question 3. What is the interplay between the natural environment and the school community?

Approach to Q3: This area of inquiry focused on how engagement with the natural environment, through environmental education programming, cultivates relationships and community across four schools.

Research Question 4. What is the interplay between the natural environment and personal sense/belief about spirituality?

Approach to Q4: *This area of inquiry explored how engagement with the natural environment, through environmental education programming, cultivates spirituality in students across four schools.*

Chapter 3: Method

3.1 The Initial Study

The current study was derived from the parent study which spanned 3 years. This grounded theory (Charmaz, 2014; Clarke, 2007; Corbin & Strauss, 2015) multiple-case study (Merriam, 2009; Stake, 1995; Yin, 2018) examined spirituality and school culture in 20 schools, including those that were privately and publicly funded and that identified both as religious and secular. The parent study was funded and directed by Dr. Lisa Miller (the principal investigator) and additional researchers, with active participation from the students at all levels of data collection and interpretation between 2018 and 2019.

The aim of the parent study was to further understand K-12 school culture that was spiritually supportive. This study used a purposeful sampling strategy with maximum variation (Patton, 2002) and snowball sampling (Naderifar et al., 2017) methods. A purposeful sampling strategy was chosen to ensure that the selected cases would provide further insight into the phenomenon of interest (Creswell & Poth, 2018), spiritually supportive school culture. In this regard, schools were selected who were identified as successful in the integration of spiritual development and curriculum, pedagogy, daily practices, and school culture, as identified by the primary investigator. Maximum variation sampling was chosen to ensure that cases were diverse with regard to previously established criteria (Miles & Huberman, 1994; Patton, 2002).

These criteria included schools that were both faith-based and secular, public and private, and diverse in regard to geographic location. Snowball sampling was chosen to ensure that cases were information-rich (Creswell & Poth, 2018; Miles & Huberman, 1994; Patton, 2002). This entailed Dr. Miller and members of the research team speaking to their individual networks to inquire about schools deemed to have spiritually supportive school culture. Sites were selected

and recruited directly through the primary investigator, Dr. Miller, who met with or spoke to the head and/or principal of each school and invited them to partake in the study. Fourteen private schools and six public schools were selected for the study. Among the private schools, two were Jewish, four were Catholic, three were Episcopal, one was Sufi, and four were secular. Among the secular schools, one was strongly oriented in mindfulness, two were strongly oriented in nature-based programming, and one was strongly oriented in community-centric and social/environmental and civic values.

The six public schools were secular with regard to religious affiliation; however, each had a specific educational orientation including: (a) activism and servant leadership, derived from the principal's upbringing as the son of two Black Panther Party members; (b) restorative justice, community, and unity; (c) mindfulness; (d) community values; (e) academic growth and achievement; and (f) restorative justice and community. This study was approved by the Institutional Review Board (IRB) of Teachers College, Columbia University.

Multiple sources of data were collected across 2 of the 3 years of the study including: (a) **observational field notes** from researchers conducting site visits; (b) **transcripts from interviews** conducted with key informants (e.g., school personnel including teachers, faculty, staff, and parents); (c) **transcripts from focus groups** conducted with school teachers; and (d) **reports from public and private school fellows** describing the spiritual life of their respective schools (see Appendices A and B for report templates). Fellows were teachers and/or faculty members, whose primary role was to plan and organize the school site visit and complete the follow-up report. The author of the current dissertation served as the liaison between the research team and the 20 participating schools.

3.2 The Current Study

This dissertation utilizes a secondary analysis of data previously collected as part of the parent study (Chapman et al., n.d.) described above. Representative data from 4 of the 20 schools were analyzed for the purposes of this dissertation.

3.2.1 Data Collection

Data were collected by conducting 1- to 2-day site visits to each school. These site visits were curated by a selected faculty member, designated as the school “fellow,” and were designed to showcase the spiritual life of the school. Data collection methods included: (a) **face-to-face individual interviews and focus group discussions** (Brinkmann & Kale, 2015) with key school personnel (including teachers, faculty, staff, and parents); (b) **general observations** (Angrosino, 2007) (including, but not limited to, classes, student groups/activities, faculty meetings, campus life, school culture, and extracurricular activities); (c) **desk review of reports and documents** (Creswell, 2016), including organizational documents, such as strategic reports, and public documents, such as blogs and articles; and (d) **audiovisual materials** (Creswell, 2016), primarily in the form of photographs.

Interviews were guided by research questions (Creswell & Poth, 2018) and a specific topic—*spirituality*, and followed a semi-structured guide for inquiry of predetermined questions (Rubin & Rubin, 2012; Weiss, 1995) to permit the unearthing of new themes and ideas. Focus groups (Rubin & Rubin, 2012) were facilitated by the public school fellows in the public schools and by members of the research team in the private schools. The aim of the interviews and focus groups was to gather information and opinions regarding the implementation of spiritually informed pedagogy and curricula in private and public school settings. Focus groups were semi-structured (Rubin & Rubin, 2012) and questions (see Appendix C) included the following:

- What are the main educational challenges of our time and/or what are the biggest issues your school/system is facing?
- What does the term *spirituality* mean to you?
- Do you think schools should actively and formally nurture a child's spiritual development?
- What concerns do you have?
- How do you think the different stakeholders would respond to such an initiative?
- Do active and intentional/moral development practices have a role in a formal school setting?

All interviews and focus groups were audio-recorded, with the permission of the participants, and transcribed verbatim (see Appendix C for focus group discussion guide).

Further, when the school site visits were complete, each private school fellow was asked to submit 22 qualitative multipart questions, in the form of a report, on the spiritual life of their specific school (see Appendix A for these questions). Each public school fellow was asked to submit 23 qualitative multipart questions, in the form of a report, on their specific school (see Appendix B for these questions). Reports were based on a structured template created by the research team.

Participants who volunteered for interviews and focus groups were not compensated; however, designated private and public school fellows were compensated \$7,500 and \$5,000, respectively, for their work in planning and coordinating the site visit as well as for writing and submitting the follow-up report. For the purposes of this dissertation, observational field notes, transcribed focus group discussions, and interviews as well as the reports were used to answer the research questions tied to the main aim of the current study.

3.2.2 Data Analysis

Phase I. Purposeful sampling methods (Emmel, 2013; Patton, 2002) were used to select four schools from the original sample for inclusion in the present study. Cases were selected based on the following inclusion criteria: (a) this writer attended the site visit and/or visited the school prior to the site visit; (b) the writer, in conjunction with the faculty advisor, identified the school as having environmental education programming embedded within the overall curriculum; and (c) the school had a sufficient number of references, more than 14 combined, coded as either “nature” or “nature consciousness” from the original qualitative data. The codebook defined nature as “exposure to outdoors or other natural environments” and defined nature consciousness as “schools facilitating opportunities to form deep, lived relationships with nature and with all life.” Based on these criteria, the schools selected for the current study included the following: Cedar Highlands, Mapleton, Tabiona, and Rocky Ridge.

There are limitations to the current study. Selecting four privileged independent schools is one limitation of the current data set. These schools have greater access to financial resources, and their student bodies are comprised of youth from higher-income households and greater proximity to green space compared with many under-resourced and high-poverty schools. Thus, findings from the current study may not be directly applicable to these under-resourced and high-poverty schools, where students face many structural barriers that continue to promote racial and socioeconomic disparities in access to green space (Dai, 2011).

Phase II. Following this initial study, the lead researcher (this writer) performed all data analysis tasks with consistent consultation with the faculty sponsor. The data analysis, relevant to the current study, involved three primary stages: (a) managing and organizing the data; (b) reading and memoing for emergent ideas; and (c) describing and classifying codes into themes

(Creswell & Poth, 2018). First, data in the form of transcribed interviews, focus groups, field notes and reports were cleaned, formatted, and entered into NVivo, a qualitative data analysis computer software program. A file management system was created by organizing files according to school type (public or private) and type of document (interviews, focus groups, field notes, or fellows' reports). Second, research assistants and this writer read through the transcripts and field notes to get a sense of the data in their entirety before breaking it into parts through the process of coding (Agar, 2008). Memos (Rubin & Rubin, 2012) were created informally and included short phrases, ideas, or key concepts that occurred to the reader while reading (Creswell & Poth, 2018); these were recorded in external documents.

Third, open coding (Glaser, 2012; Strauss & Corbin, 1998) was utilized to create codes for new emergent themes. Open coding was selected, as opposed to establishing an a priori (Guest & MacQueen, 2008) codebook, to ensure that the analysis would not be limited to prefigured codes (Crabtree & Miller, 1999); rather, it would reflect the views of the participants (Creswell & Poth, 2018), which is essential within the qualitative framework of grounded theory research (Charmaz, 2008, 2014). During this process, a short list of tentative codes was formulated that corresponded to text segments (Creswell & Poth, 2018). This list of initial codes was developed by the research team based on the themes that emerged during the memoing process as well as on meetings and discussions with the research team following each site visit. A codebook was created that included the name and description of each code (Saldaña, 2016). These codes were then assigned to text and images. Next, codes were collapsed and expanded based on emergent themes. Throughout this coding process, codes and coded material were analyzed for theory development, in alignment with the constant comparative method (Saldaña, 2016), which “develops concepts from the data through coding and analyzing at the same time”

(Kolb, 2012; p. 83; Taylor & Bogdan, 2015). Through this method, similar codes were grouped together as concepts through an iterative process of comparison and conceptualization (Saldaña, 2016). The most salient concepts were then utilized in the formation of a theoretical framework of school culture that is spiritually supportive (Chapman et al., n.d.).

Following the development of this theoretical framework, new codes were developed based on: (a) the theoretical framework—the 11 drivers of spiritually supportive school culture; and (b) the report headings that categorized the 22-23 qualitative questions that private and public school fellows were asked to answer and submit following their respective site visits. Following this new code development, selective coding (Strauss & Corbin, 1998) was then utilized, as the transcripts were reread and selectively coded for data relating to the 11 drivers of spiritually supportive school culture and the report headings. Throughout the process of open and selective coding, weekly meetings were held to discuss coding, refine the codebook, and identify emergent themes. Open and selective coding was primarily completed by seven research assistants. At least two coders coded each text document using the NVivo qualitative analysis computer software.

3.2.3 Sample Characteristics

Cedar Highlands is an independent, co-educational, K-12, Episcopal day school located on the West Coast. Cedar Highlands serves 1,132 students, of which 40% are students of color and 26% receive financial aide. There are 156 faculty members, of which 65 hold advanced degrees. The average class size is 14.

The religious affiliation of Cedar Highlands is Episcopal; however, the educational orientation is one of community-based inquiry and commitment to the holistic development of students. Derived from an Episcopal foundation, the school's mission orients the institution as a

“community of inquiry committed to academic excellence and to nurturing decent, loving and responsible human beings.” Cedar Highlands was selected from the original sample for the current study for three primary reasons: (a) this writer had attended the 2-day site visit from May 8-9 in 2018; (b) the school has environmental education programming embedded within its overall curriculum, as identified through observations and interviews during the site visit, and through review of the qualitative data set, including a kindergarten gardening program, an experiential education program, and an outdoor service learning program; and (c) the school had sufficient references (9) coded as nature and 6 references coded as nature consciousness.

Mapleton is an independent, co-educational, 9-12, nonsectarian boarding and day school located on the East Coast. Mapleton serves 310 students, of which 16% are students of color and 30% receive financial aid. There are 80 faculty members, of which over 80% hold advanced degrees. The average class size is 12. The student-to-teacher ratio is 4:1.

The religious affiliation of Mapleton is nonsectarian; however, the educational orientation of Mapleton is one of deep relationality and active engagement in community, primarily through service. This is reflected in the school’s former mission statement from 1992 (since shortened for brevity), which states the following: (a) “close, nurturing and stimulating relationships between students and their teachers have been the school’s hallmark since its founding,” and (b) “Mapleton School...requires meaningful, active involvement in the daily life of the school” (Fellows Report). The belief that every student should feel “known and needed” is felt among the student-to-student interactions, student-to-teacher interactions, and faculty-to-faculty interactions. Stewardship of the natural world is embedded within the school’s curriculum and culture and is one of the school’s five core values. Mapleton was selected from the original sample for the current study for three primary reasons: (a) this writer had attended

the 2-day site visit from May 3-4 in 2018; (b) the school has environmental education programming embedded within its overall curriculum, as identified through observations and interviews during the site visit and through review of the qualitative data set; and (c) the school had sufficient references (25) coded as nature. Regarding the second reasons on programming, these programs include the Trevor Zoo, an environmental council, a chapter of Students Concerned About Planet Earth (SCAPE), a Carbon Neutral Committee, community-wide participation in Earth Day, a school-wide recycling program, a farm, a community garden, outdoor/adventure stewardship trips to the Adirondack and White Mountain, and a RISSC program (4½-day outdoor learning or community engagement trip). Moreover, although not a program, the school employs a director of stewardship and sustainability.

Rocky Ridge is a private, independent, co-educational, PreK-8, Sufi day school located in the South. Rocky Ridge serves 217 students and employs 52 faculty members.

The religious affiliation of Rocky Ridge is Sufi; however, the educational orientation of the school is one of mindfulness, contemplation, and immersion with nature. Situated within the local mountains, the school is guided by a holistic model of education, which incorporates the following seven domains: (a) spiritual, (b) mental, (c) creative, (d) emotional, (e) social, (f) natural, and (g) physical. Rocky Ridge was selected from the original sample for the current study for three primary reasons: (a) this writer visited the school from October 5-7 in 2017; (b) the school has environmental education programming embedded within its overall curriculum, as identified through observations during this writer's visit and through review of the qualitative data from the official school site visit, including nature-based classroom lessons, nature-based programming, and nature-based pedagogical frameworks; and (c) the school had sufficient references (50) coded as nature.

Tabiona is an independent, co-educational, 9-12, nonsectarian boarding and day school located on the West Coast. Tabiona serves 259 students, of which 51% are students of color and 29% receive financial aid. There are 60 faculty members, of which 73.5% hold advanced degrees. The average class size is 11. The student-to-teacher ratio is 6.5:1.

The religious affiliation of Tabiona is nonsectarian; however, the educational orientation of Tabiona is one of community and environmental education. The underlying philosophy of the school is derived from the founder, who believed that “the most worthwhile education combined a vigorous academic life with rugged outdoor activities that engendered self-reliance, concern for others, and fidelity to four principles: honor, fairness, kindness, and truth” (Tabiona Fellows Report). Tabiona was selected from the original sample for the current study for three primary reasons: (a) this writer had attended the 2-day site visit from May 10-11 in 2018; (b) the school has environmental education programming embedded within its overall curriculum, as identified through observations and interviews during the site visit and through review of the qualitative data set, including the horse program, the outdoor program (including camping), and global studies trips; and (c) the school had sufficient references (49) coded as nature and 10 coded as nature consciousness.

3.2.4 Rationale for Qualitative Data Analysis

Qualitative research (Denzin & Lincoln, 2005, 2011) methods were utilized, through a grounded theory (Charmaz, 2014; Corbin & Strauss, 2015) multiple-case study design (Yin, 2018), also referred to as a collective case study design (Stake, 1995), to investigate how K-12 independent schools in the United States cultivate a connection between children and adolescents (“students”) and the natural world (“environment”).

A qualitative approach to inquiry (Denzin & Lincoln, 2005; Sandelowski & Barroso, 2006) allows for a problem or an issue to be explored in a way that permits a detailed and complex understanding of the phenomenon of interest (Creswell & Poth, 2018). For this study, a qualitative approach was advantageous for three reasons: (a) it allows participants to share their stories and direct experiences (Sandelowski & Barroso, 2006); (b) it permits the exploration of interactions among people, which are often difficult to capture with quantitative measures and statistical analyses; and (c) it allows for an in-depth understanding of the setting in which participants address a problem or issue (Creswell & Poth, 2018)—in this case, the school. The strength of qualitative methods is in its design. It is designed to study the experiential life of people (Polkinghorne, 2005); as Schwandt (2001) stated, “Qualitative inquiry deals with human lived experience. It is the *life-world* as it is lived, felt, undergone, made sense of, and accomplished by human beings that is the object of study” (p. 84). Since a student’s relationship with the natural environment is inherently a personal lived experience, a methodological approach designed to study the experiential life of people, and one that allows interpretations to be derived from individual narratives, seemed appropriate.

3.2.5 Rationale for Case Study and Grounded Theory Approach to Qualitative Data Analysis

Within the paradigm of qualitative research, there are several approaches (Carter & Henderson, 2005; Elliott & Timulak, 2005). The specific approaches selected for the current study included case study and grounded theory research. Case study research seeks to further understand a contemporary phenomenon through the study of a case (or cases), extensively and in its real-world context (Yin, 2009, 2018). The specific type of case study research selected for the current study was a multiple-case study, which is defined as a case study that comprises two

or more cases (Yin, 2018). Grounded theory research extends beyond descriptions and aims to generate a theory, or theoretical explanation, for a particular process (Corbin & Strauss, 2015).

For the current study, case study methodology was selected for two primary reasons: (a) the research questions seek to further understand and explain a phenomenon of interest: how schools cultivate a relationship between children and adolescents and the natural world (“environment”); and (b) the research questions necessitate a detailed description of this phenomenon. This is in alignment with Yin’s (2018) recommendations for when to conduct case study research: “The more that your questions seek to explain some contemporary circumstance (e.g., “how” or “why” some social phenomenon works), the more that case study research will be relevant. Case studies also are relevant the more that your questions require an extensive and ‘in-depth’ description of some social phenomenon.” A case study approach, through a multiple-case study design, is valuable in this context because it permits an in-depth examination and understanding of the specific phenomenon—how schools cultivate a relationship between children and adolescents and the natural environment—through examination of this phenomenon across four different schools. Furthermore, this mode of qualitative inquiry was preferred for the current study, as opposed to alternative methods of quantitative inquiry, because the behavior under investigation—how schools cultivate a relationship between children and adolescents and the natural environment—cannot be manipulated (Yin, 2018); thus, alternative modes of inquiry, such as experiments, that rely on the manipulation of behavior would not be effective in further understanding the phenomenon of interest.

Grounded theory research (Corbin & Strauss, 2015; Creswell & Poth, 2018) was also selected for the current study for one primary reason: a primary goal of the researcher (this

writer) was to develop an initial working theory of environmental education that is spiritually formative as a component of overall healthy development.

3.2.6 Research Design

The method of case study research involves five essential components of research design: (a) a case study's research questions, (b) propositions, (c) cases, (d) the logic linking the data to the propositions, and (e) the criteria for interpreting the findings (Yin, 2018). The method of grounded theory research consists of "systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves" (Charmaz, 2006, p. 2). Through utilizing the previously coded data, similar codes were grouped together as concepts through an iterative process of comparison and conceptualization (Saldaña, 2016). The most salient concepts were then utilized in the formation of a theoretical framework of environmental education that is spiritually formative as a component of overall healthy development.

3.2.7 Method

Defining research questions provides the rationale for the study (Yin, 2018). The current study explored four research questions: (Q1) How do schools in the United States cultivate a connection between students and the natural environment? (Q2) Why do schools cultivate a connection between students and the natural environment? (Q3) What is the interplay between the natural environment and the school community? and (Q4) What is the interplay between the natural environment and personal sense/belief about spirituality?

Study propositions were created for each research question, identifying what should be examined within the scope of the current study. These propositions should begin to tell the

researcher where to look for pertinent evidence (Yin, 2018). The propositions for the current study were:

1. Schools cultivate a connection between students and the natural environment through intentional school-based practices, programs, and pedagogical frameworks that are implemented in an effort to foster a connection between students and the natural environment.
2. Schools cultivate a connection to the natural environment to foster community, nurture individual spirituality, teach universal values of character, and enhance learning.
3. School-based practices, programs, and pedagogical frameworks that cultivate a connection to the natural environment often simultaneously cultivate a connection to the school community.
4. School-based practices, programs, and pedagogical frameworks that cultivate a connection to the natural environment often simultaneously cultivate individual spirituality.

According to Yin (2018), the cases that are researched should be (a) defined and (b) bounded. Defining the case is the process of identifying what the case will focus on. The current study comprised four cases, defined as schools: Cedar Highlands, Mapleton, Tabiona, and Rocky Ridge. Bounding the case is the process of clarifying the boundaries of the case “with regard to the time period covered by the case study; the relevant social group, organization, or geographic area; the type of evidence to be collected; and the priorities for data collection and analysis” (p. 31). For the current study, the researcher utilized individual and group unstructured interviews conducted with key school personnel, including teachers, faculty, staff, and parents;

classroom and school observations; and reports describing the spiritual life of each school. Site visits for the selected four schools were conducted over a 1- to 2-day period, over the course of 8 months, during the fall and spring of 2018.

3.2.8 Analysis

Linking data to propositions refers to the anticipated data analysis steps that are utilized in the case study (Yin, 2018). For the current study, an inductive analytic strategy (Yin, 2018) was utilized to identify emergent concepts from the previously coded data, specifically around the following codes: (a) nature, (b) nature consciousness, (c) pedagogy, (d) notable programs and practices, (e) school community, and (f) spirituality. Within the inductive framework of the current study, cross-case synthesis, with a case-based approach (Byrne, 2009; Ragin & Becker, 1992; Yin, 2018), was utilized to compare within-case patterns across the four individual cases; as Yin (2018) stated, “in a case-based approach, the goal is to retain the integrity of the entire case and then to compare or synthesize any within-case patterns across the cases.” For the current study, cross-case synthesis with a case-based approach meant identifying the within-case patterns for each school, as in determining how each school individually cultivates a relationship between the student and the natural environment; reasons why the school cultivates this relationship; the interplay, if any, between the natural environment and the school community; and the interplay, if any, between the natural environment and spirituality. After drawing tentative conclusions regarding this process for each school, “the analysis would proceed to examine whether there appeared to be replicative (literal or theoretical) relationships across the case studies” (Yin, 2018).

Within-case Analysis. For the current study, within-case analysis included the following steps: (a) providing a detailed description of each case (Creswell & Poth, 2018); (b) identifying

emergent themes within each case (Creswell & Poth, 2018) through analysis of previously coded data, including the creation of matrix and network displays (Miles et al., 2014) that were utilized to view collated data, derived from multiple sources, and links and relationships between nodes; and (c) creating four case reports that provided the foundation for cross-case analysis.

Cross-case Analysis. For the current study, cross-case analysis included the following steps: (a) conducting a thematic analysis across the cases (Creswell & Poth, 2018), including displays such as matrices and networks (Miles et al., 2014) that were utilized to collate and compare results across schools; and (b) developing assertions that described the meaning of the cases and the lessons learned (Creswell & Poth, 2018; Stake, 1995).

Grounded Theory Development. For the current study, the most salient concepts derived from (a) the previously coded data, (b) the within-case analysis, and (c) the cross-case analysis were then utilized in the formation of a theoretical framework of environmental education that is spiritually supportive.

Interpreting the Findings. The criteria for interpreting the findings should always be established. For the current study, rigor was addressed through establishing confirmability, credibility, transferability, and dependability (Korstjens & Moser, 2018). Confirmability was addressed by utilizing (a) multiple data collectors—various members of the research team attended each school site visit, and (b) multiple coders—seven different coders coded the collected data. Thus, the findings of the research were confirmed by multiple researchers (Korstjens & Moser, 2018). Strategies to establish credibility included (a) prolonged engagement (Korstjens & Moser, 2018) with the school site visit and follow-up report; (b) persistent observation (Korstjens & Moser, 2018) over the course of 2 days; and (c) triangulation (Korstjens & Moser, 2018) including data triangulation (multiple sources of data were collected),

investigator triangulation (multiple researchers were involved in site visits, coding, and analysis), and method triangulation (multiple methods were used to collect data). Transferability was established through the strategy of thick description (Korstjens & Moser, 2018), which provided detailed descriptions of the cases and the school environments. Dependability was established through a thorough description of the research process (Korstjens & Moser, 2018).

Chapter 4: Results

Four case studies are presented. Each case study begins with a short description of the independent school (“school at a glance”) and a brief overview of the school’s approach to environmental education. The research questions of the study are addressed within each case, namely: (Q1) How do schools in the United States cultivate a connection between students and the natural environment? (Q2) Why do schools cultivate a connection between students and the natural environment? (Q3) What is the interplay between the natural environment and the school community? and (Q4) What is the interplay between the natural environment and personal sense/belief about spirituality? Subsequent to the individual cases, a cross-case analysis is conducted and grounded theory development is explored. To protect each school’s identity, pseudonyms were used in place of the actual school names and any other identifying locations.

4.1 Case 1: Mapleton

4.1.1 School at a Glance

Mapleton is an independent, co-educational, 9-12, nonsectarian boarding and day school located on the East Coast. Mapleton serves 310 students, of which 16% are students of color and 30% receive financial aid. There are 80 faculty members, of which over 80% hold advanced degrees. The average class size is 12. The student-to-teacher ratio is 4:1.

4.1.2 Environmental Education at Mapleton

Environmental education at Mapleton is conceptualized through the lens of environmental stewardship, community service, and, ultimately, spirituality. As two of the school’s core values and integral components of its mission statement, the ethos of the school is embedded in environmental stewardship and community service. The school intentionally cultivates stewardship and service to foster the spiritual development of its students, as reflected

in the school's original mission statement. For Mapleton, environmental stewardship and community service are lived expressions of spirituality. One faculty member described this when writing about the school's mission statement, which includes environmental stewardship and service: "...the mission is a lived experience of spirituality." She continued:

Ours is a lived mission in which spiritually supportive practices are woven into the fabric of our culture and pedagogy. Therefore, spirituality, as expressed through curiosity about all life, deep knowing, respect for one another, self-giving, and gratitude, is at the core of our community practice. Students, faculty and all other stakeholders experience this through programs and curricula.... The intention is to create welcome and inclusivity across all constituents, so that the lived experience of Mapleton's mission continues to be open to all and binds us as a broader, interconnected community.

As described above, the cultivation of environmental stewardship and community service, as part of the school's mission and values, is lived out pedagogically through the school's programs and curricula. At Mapleton, environmental stewardship and community service are not limited to a specific class or auxiliary program, but rather are through lines that run through everything the school offers, including curricula, programs, student life, discipline, community service, and community-building initiatives. Four notable programs are fundamental to the school's environmental education programming: the community service program, the zoo, the farm, and the recycling program. These four programs, and Mapleton's approach to environmental education, are further described herein. This portrait of Mapleton focuses on the school's zoo, as it is a unique component of the school; however, the community service program, the farm, and the recycling program are briefly discussed as part of the school's overall approach to environmental education.

4.1.3 Connections to the Greater Community Through Nature

Mapleton requires all students to engage actively in community, primarily through service. This requirement is referred to as a community service commitment. Student

engagement with the natural world often occurs through these service opportunities. Four community service periods are scheduled into the weekly schedule under the leadership of the Community Service Coordinator, the faculty member responsible for coordinating each student's placements. To fulfill their service requirement, students have the opportunity to engage in more than 45 services that primarily serve the Mapleton campus and community; however, during their first year, students are required to work one season each at the on-campus zoo, the recycling program, and the on-campus farm to fulfill this community service commitment. The community service curriculum is intentionally designed to provide students with foundational experiences in environmental stewardship. For instance, in describing why the school requires all freshmen to complete a rotation at the zoo, the farm, and the recycling program, a faculty member said the following:

Yeah, about five years ago...we took away their choice of community service and we said we're going to tell you what you're going to do for the year. And their year was comprised of three rotations. One was the zoo for one third of the year, one third of the year the community garden, and one third of the year the recycling program. And the idea was that these were three sort of founding principles about stewardship of the natural world that kids were able to get through here without ever experiencing prior to that. And we said, boy, just seems like they oughta at least experience this. They might not like it, they may do it once and they may run. But at least we've introduced them to the idea. And so that began about five years ago and that is true for all our freshmen. So, they come in and they do these three rotations.

Beyond this requirement, one-third of the student body chooses to continue work in each of these three settings. The hope is that through community service, students will have the opportunity to experience responsibility and take leadership opportunities. Although many schools have a community service requirement for graduation, the structure of Mapleton's program, which orients service towards the school community, allows students to form relationships with peers, faculty, and staff, which helps to facilitate feelings of connectedness to the school community.

4.1.4 Building Relationships with Animals

The zoo, which is located on the Mapleton campus, was founded in the 1930s. At that time, the zoo served two objectives: to provide an environment where students could take care of animals, and through that process, to provide a setting where they could simultaneously learn biology. After roughly 50 years of operation, the zoo underwent a drastic renovation and expansion, which resulted in the new zoo that is currently in operation today. The new zoo, which is still located on the Mapleton campus, houses more than 150 animals and eight endangered species, and provides opportunities for students to work directly with wildlife. The zoo has been accredited by the Association of Zoos and Aquariums (AZA) since the 1980s and maintains a full-time zoo staff of adult faculty, in addition to the students who work there.

Expanding beyond its initial objectives, the zoo now exists as part of the school's science program, community service program, and overall curriculum of the school. The purpose of the zoo is to foster (within its students) an appreciation for wildlife, cultivate stewardship of the natural world, and encourage service to others through engagement with living animals via affiliated academic classes and research.

Student responsibilities at the zoo include animal husbandry, or caring for a specific animal or a group of animals; preparing animal diets; assisting with zoo maintenance; and assisting with the creation of new exhibits. Students are also exposed to veterinary medicine. Throughout the course of 1 year, a student will be assigned to three different animals to gain breadth of experience with the animals at the zoo. Through their work at the zoo, students gain firsthand experience engaging in wildlife conservation work, including work with endangered species. One of the most important aspects of this work is providing the setting for students to form real connections with the animals. One faculty member described this in further detail:

What I believe and what I've been pushing for years...that to truly get students to buy into stewardship and conservation of the natural world, they've got to make a connection somehow. And in today's world, that connection is harder and harder to form. Students do spend more time learning about nature on the internet and on all these various shows that present wildlife. Beautiful cinematography, don't get me wrong, but it's not the same as being in the same room with an animal that just pooped and you've got to shovel it up. Or an animal that's sick and dying, or an animal that just gave birth and everything's rosy and it's great. Those are connections that get formed between a person and another living being that really make the difference.

Through hands-on experience students learn about the natural world and are able to connect to it in an authentic and profound way. For example, as part of their husbandry, students are responsible for feeding their animal(s) twice daily, including on the weekends, and maintaining their animal's living environment. These experiences can also be spiritually formative for adolescents as they provide opportunities for students to experience the power and mystery that can accompany witnessing birth and death as well as awe, peace, beauty, competence, and self-forgetting (Johnson, 2002). An effort is made to cultivate connectedness between the student and the animal for which they are responsible in various ways, one in particular which is equating the comforts of the animal's living environment to the comforts of the student's living environment. One faculty member who works at the zoo described this process:

Well, usually I pitch it this way: I say, "Look, you're going to go home to your room tonight. I'm going to have taken all your bedding away and I'm going to spray water on your bed, and by the way you don't get any clothes tonight. You're just going to have to go to sleep tonight on your wet bed. And I want you to think about how that's going to feel.... You're not going to feel very happy about that, right? So, I want you to think every time you leave, does my animal have a fresh bed of hay? Is everything clean?" All those things that we want them to do. But instead of just saying, "Here's the list of what you do, now do it," giving them a reason to understand why it's important to do it from their perspective. They want their nice cozy pajamas. They want the heat to be on. They want the bed to be soft. There's things that they can understand in that sense because we've put it in their terms.

This authentic connection between students and animals is partially formed by giving students real responsibility in various ways, one of which is through animal husbandry with endangered species. In one of the school's public videos on their website, one faculty member described how work with endangered species teaches responsibility: "Having endangered species at the zoo teaches them a great deal about responsibility because what greater responsibility is there than to be in the care of animals that are on the brink of disappearing?" Allowing students to be responsible for these animals provides them with an opportunity to engage in meaningful and impactful work.

Through this work, students come to realize the interconnectedness of all things. For example, through their work with endangered species at the zoo, one student described the connection between the natural environment and the preservation of various species during this same video: "The part I enjoy most about the zoo is actually working with the animals. It inspires me to try and do better for the environment because I want these animals to last." This student demonstrated awareness around how treatment of the environment can impact an entire species and, thus, she was motivated to care for the environment. As another student reflected on the zoo in this video, she said, "In a small way, you kind of feel like you are affecting the world." This example illustrated how awareness of the interconnectedness of all things extends beyond the Mapleton community, to include the greater community of life. This student knew that by caring for animals at the school zoo, her impact extends beyond the school community and she has become aware of the difference she is making in the world. These experiences can foster individual spirituality as the students begin to see themselves as interdependent parts of the greater community of life.

The lens of environmental stewardship and community service is also used to further strengthen this connectedness between students and the greater community of life. For instance, the zoo educates students around the cyclical events of birth and death in a unique way. Every year, the zoo broadcasts a live great blue heron nest to the public:

We broadcast a live great blue heron nest that happens to nest in the middle of the zoo and have for the last...since 2009. Last year, everything is going gangbusters. We're four hatched eggs into it and one unhatched egg. The parents are doing their job feeding the babies. We just during the day watched a nice feeding. Everything's going great. We have a chat room so there's lots of viewers. About 2:00 in the morning on camera, because we have infrared light so the camera can see, the herons can't, so that's fine. A great horned owl swoops in, knocks the mom off the nest, comes back a little while later, kills all the babies and eats them. So horrific for the watchers. Really really upset, really terrible. Of course, it's the end of our little show that we're putting on. So we're working through a lot of telling people, "You have to understand this is nature. These are not our herons. It's not our owl. This is Mother Nature. It's just playing out before our eyes." Normally, Mother Nature plays out behind the scenes and we don't always see it, but this is real life, this is what happens. And one viewer got it right, or understood at least. She said, "This really is sad, but if we were watching a great horned owl nest and mom brought this food back, we would think that's the best mom going out there." That food had to come from somewhere.

The viewing of the great blue heron nest allowed students, and members of the local community, to learn about the duality of nature, nature's life cycle, and food sourcing through an immersive experience. Furthermore, this broadcasting, and the zoo's other broadcastings, are community-wide events:

Our various broadcasting cameras are definitely used a lot "in-house" as well as being broadcast to the greater audience on the web. Footage is most significantly used in the Animal Behavior class, but it is available to everyone and is used at different times, depending upon teacher interest, curriculum, and something interesting going on other than the usual on the camera feed. Nature can be harsh and sometimes those moments provide the biggest opportunities to teach. For example, we have had siblicide in Great Blue heron nests, and this is often the first time students have ever heard of such a thing. It's actually pretty common in nature, but television often gets sanitized down.

The idea that students had the opportunity to discuss this and other events with their peers and teachers, and also within the context of their classes, helped to foster a sense of connectedness to

the school community. This practice also illustrates how environmental education at Mapleton is a through line, occurring both inside and outside of the classroom environment.

For Mapleton, part of fostering a connection between students and the natural environment, and part of assisting students in understanding the duality of nature, comes through conversing with students around these topics. One faculty member from the zoo described this approach in further detail:

Our class is community service, but we see students in a lot of different avenues, so depending on our situation and what we're doing, we have the ability to talk to students about this stuff. It just depends on the students and their interest and when you see them. Fortunately, we can sometimes get them to have really deep conversations about all of those things.

These conversations not only educate students but can also help to foster school community and individual spirituality through a relational approach. For example, Dokecki and colleagues (2001) referenced how, in indigenous populations, spirituality is experienced in and through relationships with people and nature and also provides the foundation for community. Similarly, deep conversations between faculty and students around environmental topics provide opportunities for relationships to form between students and faculty members and establish a setting for students to explore their personal relationship with the natural environment. These relationships, with faculty and with zoo animals, are the building blocks of community at Mapleton.

4.1.5 Leadership Opportunities in Nature

The zoo is also used as a setting for students to take on leadership opportunities to further serve the community. For example, at the zoo, students have the opportunity to become student curators. The student curator is a designated leadership role at the zoo and mirrors the structure and hierarchy of a traditional zoo. Similar to a traditional zoo, the student curator is responsible

for animal management and some student management, specifically assisting and helping other students when needed. One faculty member described the student curator role as follows:

Our curators are trained pretty extensively to help us provide the husbandry care to the collection including diet prep, cleaning, creating, and providing enrichment activities for the animals, and making behavioral observations. When possible, we also include them in veterinary activities. They also serve as intermediate supervisors providing a closer age cohort for simple questions than the staff. It is also a way for them to try on leadership and hone their skills. We give them some training but continue to try to improve in that area.

Students are selected through a voluntary application process and undergo rigorous training to obtain this leadership position and to be able to respond to zoo emergencies. One faculty member described this process:

They have an opportunity, just like kids in their other community services, to apply to be a leader here if they want. For us, those positions are called student curators. That's done on purpose to try and mimic the zoo world a little bit and to help them understand in the zoo world how things work. So there are keepers and then there are head curators, et cetera. And so our students apply if they want to be a curator. They don't all get it, but we try to look carefully at what they can do and what kind of leadership they can bring to the table.... We typically have between eight and ten or eleven student curators. Out of that group we will usually choose one to three seniors that will be head curators. And they really become almost unpaid staff members. They're down here a ton, we put them through rigorous training. And they really could respond in almost any emergency as well as most of the career people that I see. And I go and inspect zoos all over the place. And these kids are passionate and they really learn their stuff well.

Through leadership opportunities at the zoo, students are again given real responsibilities and are provided with opportunities to guide their peers. Ultimately, through their work at the zoo, students are provided with multiple opportunities to engage in meaningful work that is authentic and are placed in an environment that cultivates leadership, responsibility, curiosity, stewardship, service, and spirituality.

4.1.6 Connectedness to Community

The zoo, and the lens of environmental stewardship, is also utilized to cultivate connectedness to community through creating opportunities for students to feel valued through

hands on work outdoors. Zoo Squad is an optional offering for students who want to further engage with the zoo or for students who want a Physical Education (PE) alternative. Through intentional activities designed for students to experience both challenge and success, students are able to experience what it means to feel like a valued member of the community:

So we have something in the afternoons called Zoo Squad, which is a sports alternative. We tend to see students that are either very interested in the zoo, or are but, sort of odd balls that don't quite fit in the traditional sports program. You know they're not big team players, or they're not really skilled athletes. And so we inherit a lot of those students. And that little rail fence there, was built by a couple of students and I, who, the students really had no idea what they were going to do, how they were going to build a fence. But I said, "No, we're gonna build a fence and it's gonna look okay." As we were going and building the fence, they got more and more confident, and really in the end, they were quite proud of their accomplishment. But we do a lot of hands-on stuff like that with the kids, who this is their first experience at it. And so, it kind of gives them a place to hang their hat, and to feel there's something that they can show off.

Aside from being a sports alternative, Zoo Squad provides opportunities for students to overcome challenges within wilderness settings and experience feelings of competence, which can be spiritually formative (Johnson, 2002) for youth.

4.1.7 Care for Creation: Service to the Natural World

The farm, which is also located on the Mapleton campus, includes a greenhouse and a working vegetable farm which supports community gardening, composting, beekeeping, and hands-on work. Produce that is grown on the farm is delivered to the campus dining hall and also donated to the community, such as to the local food pantry. Students who are assigned to the farm rotation have various responsibilities, which may include building, composting, weeding, harvesting, cultivating, sustainability and diet research, beekeeping, and cooking. Student leadership roles at the farm include a Farm Curator and a Principal Farmer. In describing the role of a Farm Curator and a Principal Farmer, one faculty member said the following:

Similar to a zoo curator, a farm curator is in charge of a particular station or project on the farm and leads and directs student farmers in their group. These may include composting and soil enrichment, building garden beds, hoop house care, green house care, harvesting, plant cultivation, crop rotation plans, introducing new food types, local farm sourcing, and cooperation and outreach. The Principal Farmer is the lead student Farmer who directs the curators, in cooperation with our faculty farmer.

The recycling program at Mapleton is a service that tries to promote the correct disposal of recyclable materials. In describing the leadership opportunities that are available to students through the recycling rotation, one faculty member said the following:

We have two head recyclers who design the routes for recycling on campus, assign teams to the routes and sorting, check on the successful completion of routes, communicate with campus staff to improve our practices, and to be the voice of recycling to the school in assemblies and other gatherings.

This same faculty member described the various responsibilities that students can expect to have on this rotation:

Students either have a campus collection “route” or are at the collection sorting center. A route is a cluster of buildings/bins for which each student or team is responsible. They bring their collections to the recycling center, which is where the sorting happens. Sorters make sure that the collections are recycled properly so that they will be processed appropriately. We have a service come to pick up collections. Raising awareness, education, and improving practices are an important part of both of these services, and students play an important role in observing, analyzing, and evaluating whether we are following best practices.

This student-led and student-run recycling program helps to cultivate environmental stewardship by giving students real responsibility and providing them with opportunities to experience true impact.

Beyond service, environmental stewardship is reinforced through various clubs and committees staffed by students, faculty, and board members, including an Environmental Council. The purpose of the Environmental Council is to promote sustainability through the integration of environmental stewardship with campus programs, policies, and activities. The group will often recommend and implement projects that are supportive of Mapleton’s mission

of environmental stewardship and the school's goal of carbon neutrality. Clubs like these are vital to environmental education programming because, as described by Wheeler and colleagues (2007), environmental education extends beyond mere acquisition of knowledge regarding the biophysical environment and its associated challenges, and aims to develop the skills necessary to address environmental challenges and foster commitments "to make informed decisions and take responsible action." One student described her experience being involved with the Environmental Council:

And then I joined a community service called the Environmental Council, where we kind of instead try to do all the policies for the school to implement, to make ourselves a little bit greener. And I think one of my favorite experiences with them was...gardening community service, to build gardening beds, like eight by ten gardening beds. And then we brought soil and seeds and the beds on earth day over to a homeless shelter and installed them for them, and that was definitely one of my favorite experiences, just meeting those people and planting stuff for them. It was really cool.

This example further illustrated how connection is utilized to cultivate environmental stewardship. Whereas before connection to animals was utilized as a pathway to foster a relationship between students and the natural environment, this example illustrated how connection to those within the local community also helps to cultivate a relationship between students and the natural environment. Additional clubs that are relevant to environmental education programming include a club that focuses on Planet Earth and another one that focuses on carbon neutrality. Students also have the opportunity to attend a 4½-day experiential-learning program, where they engage in an outdoor learning/adventure stewardship trip to Adirondack Park, Lake Placid, or the White Mountains.

4.1.8 Spiritual Connections in Nature

Stewardship is further reinforced through the physical campus of Mapleton, which provides many opportunities for student engagement with the natural environment. As one

faculty member stated, “No doubt, our 800-acre campus, with marshlands, woods, fields, and streams, is itself an ever-present gateway for environmental awareness.” Simply immersing students in the natural environment helps to build connections between students and nature. One faculty member described why Mapleton prioritizes this immersion in nature for its students:

I think a lot of times we fail at getting people out into nature enough, which is one of our bigger initiatives with ninth graders. We have put together really a good program, at the very least to force them out into nature. A small percentage of them are there all the time anyway so that’s easy. But a bigger percentage of them, and seemingly a growing percentage, really have never been out in nature. They’ve never gone just watching birds. They haven’t been out in the dark where there’s no manmade lighting. We force them to do that. In their bio classes, they get in the marsh and get sopping wet and dirty and collect samples. And they’ve never done that. None of them.

Aside from engaging in the opportunities that nature provides (such as bird watching and collecting samples), the school prioritizes immersion in nature for its students to help cultivate a connection between students and the natural environment.

This immersion in nature often helps to cultivate an awareness of the impermanence of the natural environment, knowing that it could disappear if it is not taken care of by human beings. The school attempts to foster this awareness of impermanence by cultivating authentic connections between students and the natural world. For example, at the zoo, students form real relationships with animals who are endangered, and thus students are forced to acknowledge nature’s impermanence each day through their work with endangered species. This concept of impermanence is further reinforced through the school’s recycling program and various clubs and committees that address concerns for Earth, including climate change. One faculty member described his own experience of feeling this awareness of impermanence, which he also hoped to foster in his students:

Just being out in nature again is like being in the zoo. You draw connections to nature that you know could go away. We have two dogs, we're constantly walking them in the woods and fields. It's a gift. It's really a beautiful space, and to have that space go away would be a sad thing.

Immersion in the natural environment, as experienced through Mapleton's campus, also allows for experiences of awe and wonder, which can be gateways to spirituality (Hart, 2006). One alumna described her experiences of awe when she reflected on her time at Mapleton: "I am thankful for a campus and surrounding landscape that is so exquisite, it still takes my breath away." When a current student was asked about her favorite places to go on campus to find peace, she noted:

There are so many of them. I really love Smith Hill, especially at sunrise.... It's a hill just kinda down the road. You can just kinda see it as you drive off of campus. But the view from up there during the sunrise is really beautiful, because you kinda see the sunrise over the mountains, but also kinda reflected on the marsh area. So it's really beautiful.

She continued, "Just being on the cross-country trails is really nice, just taking a walk on them through the woods is really relaxing." These examples illustrate the awe, wonder, and experiences of relaxation and peace that are often found through student engagement with and immersion in the natural environment—all influential in the formation of individual spirituality.

4.1.9 Connections to the School Community Through Nature

For Mapleton, environmental stewardship and community engagement are inherently interconnected. As one faculty member stated, "We are ever-mindful of our place in the ecosphere, and every member of the community participates in some form of environmental stewardship on a regular basis." In many ways, the school fosters connectedness to community through environmental stewardship. For example, the entire community, including students, faculty, and staff, honors Earth Day each year by cleaning up more than 25 miles of roadside in a nearby county. For Mapleton, the definition of community extends beyond students, faculty,

staff, board members, and alumni to include the natural environment. Decisions that are made in the best interest of the community often include what is best for the environment. For example, when the on-campus zoo was being redone, an effort was made to build the deck of the zoo from a tree that needed to be cut down on campus:

When we redid it, we wanted to do as many things as we could to sort of capture the spirit of Mapleton and also the building. So I stopped up here because this deck is one of those things. This deck is actually made out of a tree called slippery elm. Those two sort of straighter looking trees across the way, those are slippery elms and then these two down here with kind of the corrugated bark are slippery elms and that one, that is a stump across the way, was a slippery elm that was in the last throes of being alive, and it was leaning relatively this way, so it had to come down and this deck is made out of that. A guy from the class of 1954 and I milled it up and did the work to turn it into boards. So it's stories like that—are really near and dear to me (zoo faculty member) because it talks about community and it talks about, you know, using resources that are available right close by and not always just buying everything from some other compared source. You know, there are spots where the deck may look a little rougher than if we had bought commercially prepared material, but to me that just makes it more homey and more a part of Mapleton than, again, if we had just bought either a plastic deck or something like that. So anyway, that's the story of the little tree and this deck.

This quote illustrated the intertwined relationship between environmental stewardship and community engagement. The slippery elm trees that grew on Mapleton's campus were repurposed into boards to build the deck of the zoo instead of being cut down and discarded. This decision was made to benefit both the school community and the zoo (the community now had a deck outside the zoo) and the environment (the slippery elm trees were repurposed instead of being discarded). Furthermore, the opportunity for the zoo faculty member to build the deck with the alumnus provided an opportunity for connection and relationship.

4.1.10 Capstone Project

The reciprocal relationship between environmental stewardship and connectedness to community, as well as the through line of environmental stewardship at Mapleton, is further illustrated through an example of how two students approached one of their academic

requirements for graduation, their culminating senior project. This culminating experience is Mapleton's capstone program and results in a project formed around one of the student's unique interests through a mentorship model. Given the flexibility of the project, those students who are interested can tailor their project to support the work of the zoo. One faculty member described two students whose projects directly related to the zoo:

We have two students working on CES's this year that are evaluating different animal possibilities. One is looking at Snow Leopards. Whether we can do Snow Leopards or not. And there's some possibility there, so we're still in the imagining phase of that. And one student is looking at the possibility of housing Freshwater Rays. So they're a lot smaller than the ones that we typically think of, the big Saltwater Ocean Rays. These guys get to be about a foot or smaller across and we have some potential to do those too. But that's a great example where we try to have students be involved as much as possible and do the legwork on some of these things because it helps them learn more than just saying, "Oh, we're going to do rays, here's what you need to know." So that part is there. I'll see if we get there. This is probably more likely than any of the others. But involves building the structure first.

Through providing students with real responsibility within the community, such as having students conduct research around the feasibility of the zoo adding additional species to their collection, students feel valued within the community and, thus, more connected to it. Furthermore, this example illustrated how environmental stewardship at Mapleton is reinforced in various settings, both inside and outside of the classroom. This culminating project also provides an opportunity for students to incorporate themselves into their work and thus feel valued. This was demonstrated through another student's project, which explored how an audio tour could enhance the experience of the on-campus zoo. In describing their project, one student wrote:

I grew up speaking French and English, and I learned Spanish while at Mapleton. I love learning languages, and my language classes have always been my favorites at school. Outside of class, I spend a lot of my time at the zoo. It is a place that is close to my heart. I want my CES to bring these two passions together.

In describing their plan to complete the project, the student wrote:

My plan is to make an audio tour of the zoo in three principal languages, French, English and Spanish. My first step will be to make a template of what I will say (in English) and in this, personalize the tour with general facts and other elements such as songs, poems and stories to appeal to all ages. The tour would be cut into chapters and subsections, to allow for simple changes when there are future changes (i.e., a new animal). I would then translate the template into French, and work with the language department and/or another student to translate it into Spanish. The last part of the experience would be to test the audio tour on students and visitors to see if the audio tour enhances the experience of the zoo.

This example reinforced the through line of environmental stewardship at Mapleton, this time illustrated through a curricular requirement for seniors. Furthermore, it exemplified the interconnected relationship between environmental stewardship, community, and student learning, as the student identified a need within the community and worked to create a product that would meet that need and prove to be beneficial for community members. Lastly, this example illustrated how the assignment, and environmental stewardship at Mapleton, took into account one's personhood and one's passions, or those things that make them come alive.

4.1.11 Discipline

At Mapleton, the natural environment is also utilized as a setting for restorative work, and often this restorative work involves doing something in service of the larger school community. Restorative work, in this context, refers to work that is assigned in response to minor disciplinary infractions. During their 4 years at Mapleton, students may be assigned "work detail" as a natural consequence for minor disciplinary infractions, such as skipping community service obligations. The school utilizes a restitution approach to discipline first, before taking a more punitive approach, if necessary. This means that when students do something that harms the community in a small way, such as skipping community service, their restitution involves restorative work, or work that is in service of the larger community. Through restorative work, students are

reminded of what it means to be a member of a community. This learning often occurs relationally, as work detail is often completed with a faculty member. In describing his work with one such student who was assigned work detail, one faculty member noted the following:

A large locust tree fell on Mr. Smith's house, one of our deans and teachers over on the far side of campus. In the third storm I guess about a month ago or three weeks ago. And I spent the bulk of yesterday afternoon with one of my students who had a bit of work detail because he was struggling to really understand the bigger picture at Mapleton, shall we say. But we worked for about four hours together to cut up some large stumps really. Just sixteen inches by however wide the trunk of the tree was. To put out there as little sitting stools for children that we have kind of a teaching space where they can all sit on the stumps and we can present something to them. And the ones that we have out there now were a little smaller and they're getting old...so these are brand new ones, but again it was involving students in the project and getting that done.

In many ways, the school takes a spiritual approach to discipline by assigning students to work details that provide opportunities for students to connect with animals and the natural world as well as to learn about what it means to be a part of a community. In further describing how the school utilizes restitution as an approach to discipline, before taking a more punitive approach, one faculty member discussed how the community service team approaches students who skip their community service responsibilities:

They're teenagers. It depends on the service. The zoo one is a big one, if they don't go, because then animals aren't getting fed and that is a problem. We do have student leaders in there that will cover for them, and then those students that didn't show up have to perform a work detail later. A lot of times their work detail is in the zoo, so they have to come in on the weekend and do additional work for the zoo, since they didn't meet their obligations. Typically, that's what we do with community service, is if they don't show up to their community service, they have to do a work detail and provide service to the school in some other way.... At the same time, if it becomes a habit, then we have to get a little more punitive, because we need to break the cycle. A lot of times, Mr. Smith and I will also meet with the student and kind of find out what is going on, why they are having such a hard time making it? Is it something with the service? Is it just that they're having a hard time getting up in the morning? What's the exact circumstances surrounding it, in order to try and get them on board?

Ultimately, through their work at the zoo, the farm, or as part of the recycling program, students are provided with multiple opportunities to engage in meaningful work that is authentic and are

given real responsibilities. Through this work, they are able to feel a sense of belonging within the community. As one alumni reflected on her experience at Mapleton, “I am particularly thankful for the entire zoo staff, who provided me with a sense of belonging when I felt like an outcast.”

4.1.12 Summary

Mapleton fosters a connection between students and the natural environment through programs and curricula in order to cultivate environmental stewardship; to foster connectedness to community, including the school community, the local community, and the greater community of life; to instill values of service; and to provide opportunities for students to develop individual spirituality. For Mapleton, environmental stewardship is a lived expression of spirituality, and the natural environment provides opportunities for students to experience awe, wonder, beauty, peace, and competence, as well as provide a setting that fosters connectedness to the school community. Ultimately, these experiences help nurture individual spirituality as students come to view themselves as interdependent parts of the greater community of life.

4.2 Case 2: Tabiona

4.2.1 School at a Glance

Tabiona is an independent, co-educational, 9-12, nonsectarian boarding and day school located on the West Coast. Tabiona serves 259 students, of which 51% are students of color and 29% receive financial aid. There are 60 faculty members, of which 73.5% hold advanced degrees. The average class size is 11. The student-to-teacher ratio is 6.5:1.

4.2.2 Environmental Education at Tabiona

Environmental education at Tabiona is conceptualized through the lens of outdoor education. Outdoor education is embedded within the school’s philosophical approach and

mission statement. Philosophically, the school's founder sought to educate students around how to live for their own greatest good and for the well-being of their fellow citizens. To this end, he believed that a valuable education should teach self-reliance, concern for others, and the principles of honor, fairness, kindness, and truth through a rigorous academic curriculum that is augmented with challenging activities in outdoor and wilderness settings. This philosophy informs the school's mission, which seeks to train young men and women in the art of living through augmenting the school's rigorous academic program with lessons learned from taking care of a horse and from experiences in the wilderness.

Two notable programs are fundamental to the school's environmental education programming: an animal program that focuses specifically on horses (herein referred to as "the Stallion Program"), and the Outdoor Program, which includes week-long camping trips at the beginning and end of every year. The school's environmental education programming is further strengthened by the school's proximity to wilderness settings, its physical campus, the school's faculty and staff, and the school's academic curriculum.

4.2.3 Building Relationships with Animals

Tabiona's Stallion Program is an essential component that underlies the school's approach to fostering a connection between students and the natural environment. In describing the Stallion Program, one faculty member said the following:

One of the most unique aspects of the Tabiona experience is our Stallion Program. Every freshman is required to ride throughout their first year, and in so many ways, this program captures a great deal about our culture. We seek to create a culture of adventurousness, comfort with risk-taking and failure, and respect for nature and the Tabiona community.

The Stallion Program at Tabiona is required of all freshmen, although many students choose to continue riding throughout their 4 years at Tabiona. The majority of students have

never ridden before they arrive for their first day of school. For example, one student, who played on Tabiona's baseball team, reflected on the experience of learning how to ride at Tabiona with no previous experience:

I had never ridden, so I didn't really know how it was going to work. I was kind of diving headfirst into the unknown, if you will. But it was great. The teachers really help you digest all of the knowledge that is thrown at you and a huge part is that my best friends and I were going through the same exact thing, and that made it a lot easier.

During the first week of the fall semester, all freshmen are paired with a horse and are required to ride and care for their horse for the entirety of freshman year. Student responsibilities regarding their horse include mucking their horse's stall before class in the morning, learning riding skills and riding their horse in the afternoon, and feeding their horse every evening. At the beginning of the year, students learn to ride through partaking in organized riding lessons before crafting an individualized training regimen, which is tailored for each student to prepare them for the school's annual horse event. The school's annual horse event is one of the school's central traditions where Tabiona students, including freshmen and many upperclassmen, compete in various horse races, including barrels and poles, the rescues race, ring spearing, and the silver dollar pick-up. Students are celebrated and cheered on by current Tabiona families, alumni, and school visitors as well as faculty and staff.

In many ways, Tabiona's Stallion Program is designed to foster connectedness to community. In describing the overall sense of community at Tabiona, one student said the following:

If you ask anyone involved with Tabiona what the most special part of Tabiona is, chances are they will probably say something regarding the community. A student body that is welcoming and close-knit, a faculty that is directly involved with the student body, and a network of alumni through generations all are a testament to this strong community.

The Stallion Program helps to cultivate the peer-to-peer relationships that help form the foundation of this community. One student described her experience as a freshman in the Stallion Program by saying that the Stallion Program “is quite the bonding experience for the freshmen class.... Throughout the year, freshmen learn a lot from each other and from their horses about perseverance, responsibility, and patience.” For example, when a student oversleeps, it is common that one of their peers will wake them up after noticing that their stall is not clean. There is a felt sense that the students are in the experience together. Another student described the “bonding” that is experienced through the school’s riding program:

Riding is usually said to be an individual sport, and at most places it is, but at Tabiona, riding is a bonding experience that culminates at the school’s annual horse event, when we all race each other and go through obstacle courses. Seeing the difference between the timid and inexperienced freshmen we were in November and the confident and skilled riders that raced in May was a triumphant and fulfilling experience. I felt so proud of us all.

This sense of camaraderie around riding is felt among the entire freshmen class and can be motivational for many students when faced with the challenge of riding. One student described this: “Learning to ride was a difficult, frustrating, and often emotional journey.... What motivated me to get back on my horse were my fellow freshmen, who had fallen off their horses just as I had and gotten right back on.” This example illustrated how experiencing challenges in nature, alongside one’s peers, can not only foster connectedness to community but also teach character strengths such as resilience, perseverance, and grit.

Horse Packing is another component of Tabiona’s Stallion Program where this sense of community continues to be fostered through horse camping experiences, where small groups of students and adults pack up their horses and burros with supplies and leave for a long weekend in the backcountry. Each freshman student goes on a weekend horse-packing trip during their first year. During this experience, students learn the proper knots, techniques, and safety protocols for

packing a horse or burro for a multi-night trail ride. Additional opportunities for student horse-packing trips occur throughout the year. In describing one of these horse-packing experiences, one student said the following:

The entire freshman horse-camping program leads to the freshmen learning again that, hey, it doesn't matter who I am, what background I come from, we're all in this together, we're going to smell after a few hours on these horses, but that's where most of the fun comes in.

This student's reflections illustrated how in many ways nature is an equalizer, stripping students of typical identifiers, such as race, socioeconomic status, and sexual orientation, which in turn provides an environment for authentic connection—an essential component of community. Furthermore, students are again provided an opportunity to connect with the natural world. To this end, students also learn about relationships through their experience riding horses—not just about their relationships with their peers but also about their relationship with their horse. One student described this: “My horse taught me that I shouldn't be down when I make mistakes and that this a team effort. She taught me that relationships matter.” Often, horse riding and wilderness trips merely provide the setting for which students can form meaningful relationships, with each other, with their teachers, and with nature.

A faculty member described the interconnected relationship between the school's environmental education programming, a sense of community, and spirituality: “Implicitly, our Outdoor and Stallion Programs both foster spirituality in the sense that they emphasize the value of community and an intimate connection with nature.” At times, spirituality is felt through the relationships that form within the community. As another one faculty member said:

As an educator at Tabiona, a ‘deep way of being’ is to look into the eye of a student you're working with and feel that you're really communicating. That you're in the act of both listening and being listened to. That you're sharing in that sense of awe of the universe. Sometimes the ‘universe’ isn't the great starfield in the sky but instead the human spirit we all share. Tabiona has a ‘spirituality’ of relationships.

This deep relationality contributes to a sense of connectedness to community and illustrates how the school's environmental education programming influences the way community members understand and perceive relationships.

4.2.4 Connections to the Greater Community Through Nature

Tabiona's Outdoor Program has been a part of the school's identity from its founding. The Outdoor Program runs wilderness trips that provide students the opportunity to travel in the backcountry. At the beginning of the year, freshman students do a weeklong orientation that includes camping and backpacking in a nearby wilderness setting. This trip includes prefects and dorm leaders. Furthermore, every fall and spring, all Tabiona students and faculty go on camping/backpacking trips, and many students and faculty go on additional weekend camping/backpacking trips throughout the year. The school also offers instruction in outdoor sports such as rock climbing, winter camping, and sea and river kayaking. For example, students can choose to go on a 6-day hiking trip through the trans-Sierra that the school offers every year. They can also choose day trips such as fly fishing, paddling near Santa Cruz Island, or hiking in the Big Sur backcountry.

4.2.5 Spiritual Connections in Nature

At Tabiona, students often find spirituality through their experiences in the natural environment, whether that be by engaging with nature via required outdoor activities, experiencing the school's physical campus, learning about the natural environment in the classroom, or feeling in relationship and in community with their peers and/or teachers while in nature. In describing what students at Tabiona believe about spirituality's place in education, one faculty member wrote the following:

In general, if spirituality is a “deep way of being where one feels connected to all life and has awe and reverence for the universe,” then our students say that they most often find a sense of spirituality in being immersed in the natural beauty of Tabiona’s campus, through the Stallion Program, and during camping experiences. But while an appreciation and reverence for nature is an obvious element in any Tabiona education, our students also find a “connection to all life” in the way that we foster a close-knit community among the wide variety of people on campus (students, faculty, staff, faculty children, etc.). Finally, as limited as we are by the so-called “Tabiona bubble,” students are also very mindful of all the “life” that is happening *beyond* their gates and strive to bring awareness of those things to campus. Many of our clubs try to raise awareness about the experiences of people across the country and around the globe.... The majority of our students (75+%) also engage in some form of community service during their time at Tabiona, and in doing so, honor the connection between all humans and show concern for the needs of others. It seems to me (as a former student and current teacher), that our student body has valued all of these elements of their education for a long time and continue to think that these experiences have an essential role to play in their development.

This immersion in, and connection with, the natural environment is further reinforced through the physical campus of Tabiona. In describing the physical campus of Tabiona and how its proximity to nature impacts the climate of the school as well as permits student engagement with the natural environment, one faculty member said the following:

In [name of city], it is sunny just about every day of the year, and our literal climate certainly affects the more metaphorical ‘climate’ of our school. All our classrooms and dorm rooms have exterior doors and all-school assemblies are held in an outdoor amphitheater; thus, our students spend a large portion of their time physically outside. This, combined with the fact that students are required to participate in a sport every day after school, means that our students live relatively healthy, active lives immersed in the outdoors. Our campus lies at the edge of [the forest], and this proximity to wilderness (and our immersion in it through riding and camping) lends the whole campus an air of natural ruggedness.

Furthermore, through the experiences of the Stallion and Outdoor Programs, students continue to be regularly immersed in nature and, consequently, are invited to form a relationship with the natural environment and cultivate individual spirituality through that relationship. One faculty member described this as follows:

An emphasis on spirituality is primarily evident in our close connection with the natural world (horses and mountains, etc.), our strong emphasis on community and our values-based education. Our Stallion and Outdoor Program requirements, as well as our location on the edge of [the forest], ensure that a student is often immersed in the natural world and invited to develop a relationship with and reverence for nature.

Tabiona has many advantages over other schools with regard to proximity to greenspace; however, in many ways, the adults at the school are the ones who help to foster connectedness between students and the natural environment and assist in creating spiritually formative experiences for the students. To this end, the school also aims to cultivate and/or strengthen a relationship between its faculty members and the natural environment. Not surprisingly, the faculty and staff at Tabiona share a love for the outdoors. As one faculty member stated, “Many of our faculty have a deep connection with the natural world, a respect for the planet/universe, and an interest in honoring our connection with all of humanity.” This is not accidental, as the school’s hiring process intentionally recruits those with this profile and also those who care about community. This same faculty member continued:

To some extent, our unique faculty “requirements” ensure this. The requirement that all faculty members camp with our students deters some applicants and attracts others, but in part because of this requirement, the adults that do accept a position at Tabiona either already have or quickly cultivate a love/awe/reverence of the outdoors. Secondly, the requirement that teachers be fully immersed in dorm life ensures that the faculty who come to Tabiona care deeply about investing in community.

Aside from the requirement that faculty camp with students, professional development for new faculty is intentionally designed to instill and strengthen the connection between new faculty members and the natural environment. New faculty training includes a backpacking trip as part of new hire professional development. One faculty member described this: “For new faculty, the week is especially intense.... PD actually begins the previous week with a 4-day backpacking trip in the [mountains], and then continues with all kinds of meetings/trainings related to life at

Tabiona.” For Tabiona, cultivating a connection between students and the natural environment begins with cultivating this same relationship with its faculty.

Students can also experience spirituality in the classroom through learning about the natural environment. One student, who had become very involved in the school’s Astronomy Program, said the following in reflecting around spirituality’s place in education at Tabiona:

In astronomy, you learn how expansive the concept of time is which makes you realize your place in time is a very small point. But you get an appreciation for everything that has come before and everything that will come after. This is highlighted in astronomy, but you then think about it in other classes too. For example, when I’m worried about something, I see these things as not as important in the grand scheme of things.

This example illustrated how fostering a connection between students and the natural environment can also occur through curricula in the classroom, and how this connection can simultaneously lay the groundwork for students to develop spirituality. This student is experiencing what Johnson (2002) referred to as the “sublime,” as she became acutely aware of her place in the vast universe and as her worries were in some ways absolved in what she perceived to be the grandiosity of time and the universe. In reflecting on this same question, another student focused on the physical campus of Tabiona:

There’s something about this valley. It makes me want to...well, I’ve gone to church some—but every time I go onto the field before a football game, I become spiritual. There’s just an energy here that’s weird. Quite honestly, there’s just something here. At the football field, I say the Our Father and it helps me put my thumb on something because there’s something here. I don’t think there’s something that we do, there’s just something about this valley.

This student was describing two of Johnson’s (2002) spiritual benefits of nature, the enduring and the beauty. The enduring was experienced through the student’s immersion in the valley and an engagement with a natural structure that is ancient and timeless. The student experienced the beauty of the valley and became “spiritual,” which Johnson referred to as an experience of

spiritual peace elicited by the beauty of nature. Another student experienced the beauty of nature through a sunrise during one of Tabiona's global studies trips. Global studies trips are part of the school's Ethics and Global Citizenship initiative. As described in the strategic report, "The program is designed to educate students about global affairs and foreign cultures. It has three elements: a speaker series, curricular development, and international student travel." The student shared the following:

One of my favorite moments was visiting the temples at Angkor Wat at sunrise. Our entire group woke up around four o'clock in the morning and shuttled over to the temples in a couple of tuk-tuks, which are like little motorcycle-drawn rickshaws. After completing the necessary steps to enter the temple, we arrived at Angkor Wat just in time to see the sun rising behind the temple. We were absolutely mesmerized; just seeing the beautifully carved temples in the awe of the sunrise is something I will never forget. Visiting the temples at sunrise felt so special, and I knew how lucky we were to have experienced it. To me, international travel is not about visiting some place new just to take photos and share them on social media; it is about gaining a deeper understanding of our global community and, perhaps, even a deeper understanding of yourself.

For this student, witnessing the sunrise was an experience that invoked awe, which for Johnson (2002) can be spiritually formative, as it allows for the experience of the "sublime," or the awareness of humanity's inherent weakness and vulnerability in comparison to the forces of nature and the wilderness landscape. Furthermore, the student's reflections illustrate a yearning to learn more about themselves as well as about the greater community of life. Understanding interdependence and appreciating humanity are both important spiritual concepts.

Another student reflecting on spirituality's place in education at Tabiona said the following:

We're actually centered around spirituality because if you look at the programs we're known for (horses, camping, rock climbing), we're really focusing on the connection between you and nature—whatever nature means. You are learning to *be part of nature* instead of dominating it and learning to become one with the world.... And also, because we're small, the community is very personal and you get to know everyone around you—which is spiritual because spirituality emphasizes the connection between minds and souls.

This student's experience reflected a belief that individual spirituality is fostered by a deep relationship with both nature and community. Furthermore, the student felt that the school intentionally cultivates spirituality, a connection between students and the natural environment, and community through the school's outdoor programming.

One key component underlying the relationship between nature and spirituality is the awe that nature can evoke. In reflecting on her experience partaking in Tabiona's summer wilderness education program, one student said the following about one of the camping trips she had attended:

This program has impacted my life significantly. By being exposed to the natural world in a way that I had never been exposed to it before, I learned how vital being in nature is to humans, especially teenagers. There are two memories from my time there this summer that perfectly enunciate this: The first was probably the second or third day of the trip, we were all playing camouflage (we had just eaten a magnificent lunch). I realized that I was having more fun then, just playing with them, than I had had in awhile, because I seriously hadn't just played in awhile. Sure teenagers goof off all the time, which of course is fun, but we also get caught up in this seriousness, and the need to feel mature and adult-like. I hadn't realized how much we needed to just play again, and we were playing outside. Quite literally just running around in the woods, without any distractions from electronics and without needing to feel like we had to fit in someplace. The second memory was on the last day of the trip, when we were back at camp. I was sitting by the stream, looking out at the meadow. The birds were singing, the grass was dancing, the wild flowers smelled sweet, the trees were standing happy and strong, and the mountains were looking as magnificent as ever. I suddenly had a strong urge just to be more a part of it, so I quietly crept across the brook and sat under a willow, distancing myself from the people. It was then that I saw a doe and her two tiny fawns. They couldn't see me, but I just sat there and watched in awe. I still think about that day all the time, and truthfully ever since then, I've had a constant, nagging urge to be back. Being at that place makes me feel whole, and while backpacking and getting dirty may not be everyone's thing, I honestly believe that everyone needs what it provides.

Experiences of awe can be gateways to spirituality. This student's reflection illustrated how she experienced awe while immersed in nature, and the value that she believed nature provides for young people.

4.2.6 Summary

Tabiona cultivates a connection between students and the natural environment through programs and curricula, specifically the Stallion Program and the Outdoor Program. This connection is further strengthened by the school's proximity to wilderness settings, including the school's physical campus. Additionally, the school also invests time and resources in choosing faculty who align with the school's vision of environmental education. The school invests in its environmental education program because it is a lived expression of Tabiona's mission statement, and the school believes that cultivating and nurturing this connection, between students and the natural environment, is a valuable component of adolescent development. Furthermore, Tabiona believes fostering this connection, between students and the natural environment, is essential in educating young men and women to reach their full potential and be good citizens. One faculty member described how the school's co-curricular requirements accomplish these ends:

Our co-curricular requirements (week-long camping trips at the beginning and end of every year, the freshman horse program...) are all a testament to the ways in which we push the students to participate in the activities stated in our mission statement that we believe have value and enable our students to become their best selves.

To this end, the environmental education programming at Tabiona is intentionally designed for students to learn valuable life lessons, to foster traits of good character, to cultivate connectedness to the school community and to the greater community of life, and to nurture student's individual spirituality.

4.3 Case 3: Cedar Highlands

4.3.1 School at a Glance

Cedar Highlands is an independent, co-educational, K-12, Episcopal day school located on the West Coast. Cedar Highlands serves 1,132 students, of which 40% are students of color and 26% receive financial aid. There are 156 faculty members, of which 65 hold advanced degrees. The average class size is 14.

4.3.2 Environmental Education at Cedar Highlands

Environmental education at Cedar Highlands is conceptualized through the lenses of service learning, community building, stewardship, and spirituality. Two notable programs are fundamental to the school's environmental education programming: the experiential education program and the outdoor service learning program.

Students in Grades 4-12 participate in the school's experiential education program, which includes a required, week-long, annual excursion that is intentionally planned to provide opportunities for students to form a lived relationship with the natural world, to foster community, and to reinforce concepts learned in the classroom. As described in the strategic report:

The school's programming includes participation in the experiential education program for students in Grades 4-12. With the wide variety of geography available, excursions are planned yearly to provide each class with an intimate encounter with mountain, island, seashore, desert, or river environments and to include opportunities for service, community building, and to connect the curriculum of the classroom to the world beyond our gates.

In addition to these annual excursions, provided through the experiential education program, students also have the opportunity to participate in the school's Outdoor Service Learning Program, which offers trips to various locations and provides students with the

opportunity to travel, volunteer, and, on some trips, immerse themselves in another language and culture. These two programs are further described herein.

4.3.3 Spiritual Connections in Nature

Through fostering a process of self-discovery and self-reflection, the experiential education programming at Cedar Highlands teaches students about the interdependence of humanity and nature as well as the benefits of immersion in the natural environment:

We recognize that in order to educate students both intellectually and emotionally, the school must explore those areas of learning that stimulate the processes of self-discovery. The program teaches students that: the earth is a living organism and each of us is an integral part of that organism; within a natural setting, the individual can better appreciate the coordination of sensory, intellectual, and aesthetic powers; self-examination combined with collective enterprise and positive risk-taking is often more fully realized in an unfamiliar setting; educational experiences will be greatly enriched and personalized in an experiential context.

The annual experiential education trip for the tenth grade class is Joshua Tree National Forest. As part of this experience, students are intentionally placed in challenging situations within a wilderness setting. These challenging situations also help to facilitate positive risk taking. The importance of trust and teamwork is reinforced through activities where success is only possible through a collaborative effort. One faculty member described the challenging task of navigating the talus cave system at Joshua Tree:

One of the activities that we do with kids in Joshua Tree is to take them through a talus cave system, and that doesn't seem so daunting at first, but there are several sections of the cave where one person can go at a time, and it's a pretty tight squeeze. You're pressed down on all sides by the rock, and certain people can't actually fit because they're too big, and you only know where to go because you're being told by the person in front of you what the correct way to go is, so you have to trust the person in front of you. And you all have to be on board with what you're doing, because otherwise someone can get hurt, and you don't want to get hurt in the middle of a talus cave where you have to squeeze people through holes. A lot of groups that I've taken through those caves really come together because of that shared challenge, but usually it has to get to a tough place first before that coming together occurs. With the Cedar Highlands kids, they were together from the moment they began. They were singing throughout the cave, and when I suggested a moment of silence in the first room that was completely dark, they

were all into it. They were all like, “Yeah, yeah. Shh. Turn off your voice.” And we sat there for a long time, and in reflecting upon the experience afterwards, they loved it. They loved that moment of silence, which to me is the best part of the cave, this like total quiet that you don’t get very many places in the world at all, that we get to sit in as a group in this like shared sort of sacred experience for just a minute. And that being special to them was special to me.

Through this experience, students learned that successfully overcoming this challenge was only possible through collaboration and trust. Students were forced, due to the natural structure of the talus cave system, to relinquish individual control and rely on their peers in front of them for navigation guidance. This experience simultaneously fostered community through shared experiences, such as students singing and sharing silence together in the first room of the cave, in addition to the shared experience of overcoming a challenging situation through a collaborative effort. Furthermore, the experience of overcoming the challenge of navigating the talus cave system provided opportunities for the cultivation of individual spirituality through the experience of competence. Johnson (2002) noted that experiences of “competence” often result when challenges endured in the wilderness are successfully overcome and that this “competence” is a spiritual benefit of nature.

This connection, between students and the natural environment, is further cultivated through the school’s Outdoor Service Learning Program. The goals of the outdoor service learning trips include student immersion in nature, the cultivation of stewardship, service learning, and opportunities for students to experience reverence and awe for the natural world. In describing the mission of the Outdoor Service Learning trips at Cedar Highlands, one faculty member said the following:

I mean, the purpose of them, the stated purpose, is to help our students connect with the natural world, with wilderness in a personal, hopefully spiritual way. At the very least, in a way that encourages a self-inspired stewardship. Right? That’s kind of the mission.

In many ways, the trips are designed to allow opportunities for students to experience the sacred through the natural environment. As described by one faculty member:

I have the honor of planning trips in conjunction with Cedar Highlands students and faculty with the goal of immersing ourselves in the natural world, away from the city, where it is easy to feel separate and disconnected from nature. I grew up in the woods of Vermont, spending most of my time after school running through undeveloped wilderness with my younger sister and two dogs. There was a feeling of true belonging there in the forest, a feeling that shaped my beliefs and pursuits all through my childhood, and to this day I seek it out wherever I can. This feeling comes back to me when I am still and sitting at the water's edge, or leaning into the wind on a rocky mountaintop, or perhaps lying back on the soft grass to stare up at the night sky, full of stars and mystery. This sacred feeling is what our Outdoor Service Learning program is all about, and it is this experience I seek to bring to your children. I hope to instill in them the reverence and awe I feel for our beautiful planet. I hope that, through this feeling, they will fall in love with the mountains and the rivers, the animals and plants, and through this love become stewards and guardians of the Earth.

The itinerary of each Outdoor Service Learning trip varies; however, an overview of the trip to Big Sur is discussed to provide context around some of the typical activities and flow of a trip. The duration of the Big Sur trip is 4 days. Mornings begin with an optional yoga and contemplative practice, and after breakfast, the service project begins. This particular service project involves the Big Sur River. One faculty member described this project:

In Big Sur we are tending to the Big Sur River. We will be planting natives [plants], removing invasives, and maintaining the health of the river bank so that the activity around the bank doesn't erode the river at an undue speed. The health of the river is really the health of the ecosystem around there. Basically, we're just caretakers of the river.

Afternoons and evenings are spent building community through games, meals, activities, and free time. One activity on the trip is the cosmology and wonder circle, a storytelling activity that is led by the group leader around the campfire. The group leader tells the story of evolution.

In describing how this unfolds, this faculty member shared the following:

First, I frame it by telling them about the human relationship with mythology and how mythology is really just cultural storytelling. That almost every culture throughout history has a creation myth or the story of how things came to be, how you got to where you are, and it's the story that connects everything. Every culture has a different creation myth,

and we give some examples. Then I tell them our modern creation myth, which is the scientific story of the unfolding of the universe. I describe from the Big Bang or the moment before the Big Bang, all the way up through present day, which is quite a story to communicate orally and around a campfire with no visual aids. But they seem to love it. It's a little different every time because I have the outline in my head, but it's not a script. There's a certain amount of poetic license that I take, but I try to go through all of these major thresholds of growth and evolution and the increasing complexity of the universe as it unfolds. That's informed by quite a few different sources.... But it's always getting more refined and better year after year, but basically, we tell the story of the universe and say, "This is where you fit in the story." Then they can place themselves in this currently unfolding tale, which is our shared story. They can see, "Okay, I see where I am in the big picture. I see where I am and why that matters." The whole trip, the goal is to get these kids to feel like they matter in the grand scheme of things and to have a basic understanding of where they fit in that story, the role that they play. What is their relationship with the rest of the cosmos?

In many ways, the choice to tell the story of evolution poetically, theatrically, and around a campfire helps to elicit awe and wonder from the students; furthermore, it provides an opportunity for students to see themselves as part of the evolution story. Similar to the Chicago Wisdom Project, the choice to relay the story of evolution through this particular narrative allows the students to reflect on humanity and its place in the world. This type of narrative helps students to explore the interconnectedness and interdependence of all life as they begin to realize and acknowledge that humanity is "embedded in a web of ecological and communal relationships" (Chicago Wisdom Project, 2015, p. 9). This interconnectedness and interdependence continues to be explored through the next part of the activity, the wonder circle:

Then after we do the story of the universe, our little cosmology talk as I call it, we have a wonder circle. I mean, wonder circle is all about questions. We go from what is known, or what we think we know. Because I do tell them, "This is just what we think we know." We don't present any knowledge as fixed at all because that's unscientific. Then we go into the realm of mystery. We say, okay, so now that we have all this information that we feel like we think we know pretty well, we have a grasp of the basic shape of things, what are the things that you now wonder about? What are the things that you're curious about? What are the things that you feel like are missing in the story that you want to know the answers to? They'll ask questions like, "What is the universe expanding into?" or "If we don't know how life started, how did it really start? Is it rare? If we don't know if there's other life out there, is there intelligent life in the universe besides us? Where's the universe going? What's the end of the story? What happens after you die?"

They ask these kinds of questions. The idea of a wonder circle is that you're just asking questions as they arise and nobody responds to the question. You just let the question sit in the silence, so that everybody can contemplate in their own way, in their own minds and hearts, how that question lands in their body, and then allow it to inspire further questions. The point of the wonder circle, it's just the questioning. Then if they do really well with it, they understand the heart of the game, and they've asked some really excellent questions, we typically will do a little follow-up where we discuss some of these questions and possible answers. Some of the questions they asked, frankly, there are pretty solid answers to. Instead of addressing them in the wonder circle, we address them in this follow-up activity of, okay, everyone's going to pick a favorite question or something that they really, really want to talk about. We talk about four or five really big questions, and we just discuss, "What do you guys think is the answer to this? What's a possible answer that you might have?" If there is some scientific partial answer or full answer to one of the questions, then we'll try to present that as well. But I do encourage them just to steer towards questions that really are a mystery to modern science.

This exercise further cultivates awe and wonder as students grapple with questions around evolution and the unfolding of the universe. For example, when asked to describe their favorite part of this trip, one student noted, "I also liked the question circle we did at the campfire because it really made me curious and wonder about things I never had before." The cosmology and wonder circle was intentionally designed and facilitated to evoke curiosity and wonder, and this student's reflections demonstrated that it was successful in eliciting these emotions. Wonder is considered to be an important component and a primary source of spirituality (Fuller, 2006) In this regard, aside from eliciting curiosity and wonder, this activity was also laying the foundation for the cultivation of individual spirituality for these adolescents.

The evening also includes a game of Werewolf, which is a full group game, as well as free/social time. Werewolf is a game where each individual takes on a role in a theoretical village and tries to uncover who the werewolves are. Both of these activities help build relationships that move students to feel connected to the community. In describing what occurs during free time, one faculty member said the following:

Yeah. But really everybody just stays around the campfire and gets to do what they want. They can chat with their friends, they can talk to the teacher chaperones, they can just sit around the fire and be silent, they can get some tea. We serve warm drinks like hot cocoa and tea and little desserts and stuff. That's the free conversation portion. Frankly, any moment where we have free time, you see that we have free time every day...before dinner and after our nighttime programming, that is actually the most important part of every trip. The free time is not as meaningful if it's all the time. If all of your time is free time, there's not enough structure. It's really hard for things to take shape. But if everything's too rigid, then there's none of this inner alchemy that takes place in the heart and the mind of the student or the teacher or whoever. All of the structured stuff is actually to support these moments of free time where essentially the students and teachers are in a state of play.

In further describing how this state of “play” is at the core of the trip’s model, this faculty member said the following:

Play is actually part of the program in my view. I gear everything around this attitude of play, and I try to encourage that attitude of play for literally everything we do so that service is play, our hiking is play, our environmental education is play. Everything, I try to gamify as much as possible, or make things fun. If we're doing work, we might be singing and dancing while we're doing it. The element of play is central to the philosophy of how we run our trips. The free time is that most concentrated play time. I was going to say kids, but just generally, I think when people have a space that is dedicated to play, then they feel invited to be wholly themselves, where they don't have to bring one aspect or another to what they're doing, where they can just naturally let it all flow. It's where all of the moments of joy and discovery, and true mystery can come to the surface for them and really solidify in their consciousness. Before that, everything's bubbling below in this unconscious subconscious space. Then when they have the freedom away from structure, these things naturally bubble up into how they see the world and how they interact with it. The freedom to play also allows them to maintain that positivity and attitude of gratitude throughout the rest of the trip. It makes them feel as though, “This is something I'm doing for me, not something I'm doing because I'm told or because somebody else wants me to do it. This is something that I have given as a gift to myself.” If we don't have the free time, we don't have the element of play, and nobody sees the trip that way.

It is through these moments of “play” that students experience awe, wonder, mystery, and connection to themselves, their peers, and the larger group. Students also experience a sense of internal freedom during these moments of “play,” where they feel welcome to be their full selves. This sense of internal freedom, and invitation to be authentic, is similar in some ways to

how students experience nature, as an environment where they can be their full selves. One student reflected on the importance of free time on their trip:

My favorite part was the free time we had on the beach after the hike.... The free time was one of the only times I have ever had time to spend with those teachers outside of a school setting, which was really cool and fun.

Ultimately, the trips offer students many opportunities for connection with themselves, with their peers, and with the natural environment:

Our students take an active role in planning and executing an escape from crowds and smog to connect with each other, themselves, and the Earth. We marry curriculum with community and environmental service, leadership development, personal reflection, and team-building. The students who have taken part in these trips will tell you how in just a few days they learned more about themselves, how they have undergone an internal shift toward deep connection, and how they are now invigorated with new purpose.

These opportunities for deep connection, with nature, with themselves, and with their peers, can serve as gateways to spirituality for these students. In reflecting on this, one faculty member said the following:

Spirituality in my mind is the understanding of and the experience of felt connection, not just intellectually but in your body. The more deeply connected that an individual feels to their community, whether that's the human community or larger in scope, the entire eco-community, the more spiritually activated they might feel. When I have kids on my trips say, "I've had a spiritual moment," universally these are moments of feeling connected to each other and to the natural environment. Usually it's to the entire Earth as a living system. That's when they really feel, "Whoa! I'm connected to the living system of the global ecosystem in the same way that a child is connected to its mother in the womb." There is an invisible umbilical cord connecting us to this system, all of us. It's the conscious recognition of that connection in the body as a felt experience, that is when kids report spirituality.

Many students shared anecdotes about the connections they felt in nature during these Outdoor Service Learning trips. One student noted that their favorite part of the trip was the following:

Being out in nature and remembering why I wake up in the morning. The inter-connectivity of nature reminds me that I'm just a speck in the universe and that I need to appreciate that I exist, and not waste time searching for a purpose, because it is all what I make it.

This student's reflections revealed the felt experience of interconnectedness between self and the natural landscape, while also demonstrating how the natural environment can influence adolescent identity formation by instilling a sense of purpose. Another student noted, "My favorite part of the trip was Whale Tail (a geological formation that looks like a whale's tail where students watch the sunset). It was a really spiritual moment for me and definitely the most beautiful sight I have ever seen in person." Beauty that is experienced in nature can help foster a feeling of spiritual peace and comfort (Johnson, 2002). The beauty that this student experienced at Whale Tail seems to have played a role in the "spiritual moment" described. Another student noted the tranquility felt when immersed in the natural landscape: "I loved going to the monastery, but I'm not entirely sure why. I think I really liked it because we were entirely surrounded by nature, which felt very tranquil and calm." Johnson (2002) described the tranquility and calmness this student experienced as an "experience of peace" that is often invoked by nature. This experience of peace manifests as humans identify with those aspects of nature that are enduring and timeless and as ordinary worries and concerns are minimized in the presence of nature's sublimity (Johnson, 2002). Similarly, another student shared that they "loved the monastery, it was something I have never seen and it evoked emotions and sensations I've never felt before, definitely a must-have moment." Another student explicitly made the connection between the monastery and spirituality: "I really liked going to the monastery because it was really spiritual and the forest was super pretty. I also really liked the talks we had about life in groups." This student also referenced moments of connection they were able to have

with other members of the group. These moments simultaneously help to cultivate connectedness to the school community.

4.3.4 Connections to the School Community Through Nature

Faculty members and students felt a strong sense of connectedness to community at Cedar Highlands. When one faculty member was asked what appeals to them about the Cedar Highlands community, he said the following:

Several things. The first thing is that it actually feels like a community, that there is a through line with pretty much everybody that interacts here, whether it's the teachers, or the administrators, or especially the students and the operations staff. There's this sense that we're all here not just for ourselves, but for each other. I have found in my seeking for community in a lot of different places in my life that that's actually not terribly common, and so that was something that attracted me right away to Cedar Highlands even before I considered the idea of working here.

One factor that contributes to this strong sense of community are the relationships that form through experiential education and Outdoor Service Learning trips. These relationships are made possible through the many opportunities that students have to connect with their peers on these trips. These moments of connection simultaneously help to cultivate connectedness to the school community. For example, when asked to reflect around their favorite part of the Outdoor Service Learning trip they had recently attended, one student said the following:

It is very difficult to choose my favorite parts of the trip because I loved every aspect of the trip. From the beach/tide pooling to the long hikes with picnic lunches to the community service to the discussion/reflection time after each day, even the long bus rides! Every activity (and nonactivity like eating meals and washing dishes) was a bonding experience for me, and I feel that I have obtained a closer relationship with each person who was on the trip, beyond saying hi as I walk past them. Some of my favorite bonding times were eating dinner together, digging up bush roots, and lounging on the couches. These were some of the best moments because by the end of the trip, I felt like I'd known the others for years, despite getting to know many of them only four days ago.

This student's reflections exemplified the connections they made with their peers on this trip. Other student voices revealed similar sentiments as they reflected on the same question. One student noted:

Cooking food together and playing games. It was an easy way to get to know each other on a deeper level. I had thoughtful conversations as well as laughed more than I have in a long time. Really, though, I loved it all.

Another student shared, "The times that all of us were listening to music and telling stories and laughing together like nothing mattered. Those are moments I will never forget." A third student shared, "Playing spike ball and watching the sun set on the beach. Also getting to know people while hiking." Another student discussed the relationships that resulted from the trip:

The memories and connections made. I made friends with some students I had never known before, got to know some teachers I did not know too much about, it felt like a big family in a way, and I will certainly never forget this trip.

Similarly, another student also discussed relationships and connection:

The people and the connections that we made because I know they will last longer than anything else that we got from the trip. I also loved the memories that I made because they may have lasted a few moments, but I know they will stay with me for the rest of my life.

Another student noted, "Meeting people in our community. Knowing that I have a connection with more people is comforting." Often, these moments of connection to peers and the community occurred through planned activities or during free time. Hiking is one activity where many students experienced connection. For example, one student noted, "I really liked the hike because of the great view, and the great conversations on the way up and down." Other moments of connection were made stronger simply by being in a more remote and natural setting. One student described this: "I really liked watching the sunset from Whale Tail because it felt very spiritual and grounded. It also made me feel closer to myself and my peers." This student's words revealed how partaking in a shared experience of connection on various levels—

aesthetically, spiritually, and relationally—helped them to feel a stronger connection with self and with community.

4.3.5 Care for Creation: Service to the Natural World

Environmental stewardship and service are embedded into Cedar Highlands’s environmental education model. Cedar Highlands partners with local parks to create environmental stewardship initiatives that can be returned to annually as part of the school’s Outdoor Service Learning trip program. In describing one of these environmental stewardship initiatives, one faculty member said the following:

...we partner with local parks service to create some kind of environmental stewardship initiative that we can return to year after year. At first, when the program was in its infancy, it was one-off service projects connected to each other year to year, and we didn’t like that. I mean, it was fine, but we thought there was something more substantial we could be doing. On Catalina, we have taken the stewardship role of the campground that we always stay at, and we’ve planted hundreds of oak trees there, and we have been tracking their growth since we planted them four years ago. We partner with the conservancy to not only do some education around that, but also to be doing the data tracking and doing any maintenance service, removal of invasive species, that kind of thing, in the area so that it’s like the Cedar Highlands group is taking care of the little harbor, this campground. If you’re a returner, you can go back year after year and see the progress that your work is making. If you are new, you get the story of, oh, how this project has evolved over time. It really reveals the relationship between people and place. It starts to get kids connected to this idea of “Oh, my relationship with the land, my stewardship with the land, it’s a long-term, lifelong relationship.” It’s not something that you’re just visiting once and then leaving. There’s no actual leaving the land. We’re all here, all the time.

In reflecting on one of their trips, one student discussed their thoughts regarding the service project of which they were a part:

I loved our service project because the location infused our work with a sense of the mystical or religious purpose. I felt everyone really wanted to do their best to help this elderly woman who was a central part to the larger religious community.

This student’s reflections revealed how many times service work is infused with spiritual and communal undertones. It is through this work that students become open to connection, and

many may begin to feel the interconnectedness and interdependence of all life, starting with those within their own school community and extending beyond their own community to those within the community they are serving.

Another student also discussed the service aspect of their most recent trip to Big Sur: “I also enjoyed the community service aspect of the trips as well. I was able to learn about the invasive species of plants and help out by removing them.” Similarly, another student noted, “I also really loved the service projects we did. Bagging and labeling at the hermitage and planting the native species on the sand dunes was really fun. I learned a lot about myself and the Big Sur environment.” These student voices demonstrated how the service projects on the Outdoor Service Learning trips are also designed to educate students about the natural environment through an experiential approach, which involves hands-on work outdoors.

4.3.6 Summary

Cedar Highlands fosters a connection between students and the natural environment through its programs and curricula, specifically the experiential education program and the Outdoor Service Learning program, as well as through community service, which is a fundamental component of the Outdoor Service Learning program. For Cedar Highlands, environmental education is a fundamental component of holistic education. Environmental education programming at Cedar Highlands provides numerous opportunities for students to experience the benefits of immersion in the natural environment. It is also used as a vehicle to cultivate stewardship, instill values of service, foster community, nurture spirituality, and reinforce academic concepts that are learned in the classroom. Ultimately, these trips provide opportunities for deep connection with self, the environment, and the community, which helps

students feel more deeply connected to their school community and simultaneously nurture individual spirituality.

4.4 Case 4: Rocky Ridge

4.4.1 School at a Glance

Rocky Ridge is a private, independent, co-educational, PreK-8, Sufi day school located in the South. Rocky Ridge serves 217 students and employs 52 faculty members.

4.4.2 Environmental Education at Rocky Ridge

Environmental education at Rocky Ridge is a lived expression of the school’s mission statement, which, in part, aims to develop students to be leaders in building an environmentally sustainable world. The school adheres to a holistic learning model that aims to support child learning and development across seven domains: spiritual, mental, creative, emotional, social, natural, and physical. These seven domains serve as the foundation for all the school’s curriculum and programming. Most relevant to environmental education, the “natural” domain is described as embodying “reverence for nature, nature engagement, stewardship & environmental action, and scientific knowledge.” These characteristics serve as the four primary outcomes and learning goals of the natural domain. The “natural” domain is guided by a fundamental belief regarding the natural world and sustainability:

Through understanding nature, we understand ourselves, each other, and the greater community. Therefore, the learning environment extends into the natural world and into the greater community, and children spend as much time outside as possible. Children who have a relationship with nature will take care of it.

Child development and learning in the natural domain are primarily cultivated through the school’s environmental education program, which is further discussed herein; however, the “natural” domain is also consistently interwoven into academic lessons daily, as are all other

domains. The environment, and the natural domain, is a focal point of the academic curriculum at Rocky Ridge up until the middle of third grade:

So, at age nine is when we introduce the cradle of civilization. And so, from there through the end of eighth grade, our whole curriculum is humanities-based, roughly chronological. Whereas preschool through middle of third grade, they're studying the natural world, they've studied every phylum by the end of third grade except for fungi in fifth.

In addition to the natural domain being integrated into the academic curriculum, the school's environmental education program requires that each grade level work with the school's resident naturalist for at least six 1-hour learning blocks throughout the school year. The resident naturalist is a faculty member who is responsible for "fostering and supporting these child-nature relationships for all Rocky Ridge students." Structurally, each session begins with a nature-based centering practice or a story to set the context for the lesson and aims to emphasize one or more of the natural domain learning goals.

4.4.3 Spiritual Connections in Nature

Rocky Ridge views nature as a "spiritual teacher," and this philosophy is reflected through many of the school's educational methods. Through these educational methods, the school aims to create a culture that honors the human-nature relationship while simultaneously fostering a more authentic connection between children and the natural environment. This intention is described in the school's strategic report:

A culture that is permeated by a materialist philosophy sees the Earth as a commodity—a resource to be bought, sold, quantified and controlled. In this view, humans are separate from nature instead of interdependent. Many of the educational methods at Rocky Ridge aim to shift this paradigm by paying homage to the sacred bond between nature and humanity and connecting children to nature on heart and soul level.

This reverence for nature and the philosophy of interdependence between nature and humanity are further reinforced through the school's curriculum and programming. As described in the strategic report:

Our lessons, programming, and explorations aim to revere Nature as sacred and approach her with wonder and awe and build in time to commune with her. We play with Nature by awakening our senses, taking risks, adventuring, engaging deeply in the sciences and meaningfully in stewardship and she is the backdrop for celebrations and rites of passage.

This reverence for nature and philosophy of interdependence are further exemplified through one of the six required kindergarten environmental education sessions. The focus of this particular session was on “using the art of questioning to explore nature artifacts” and involved using a “specimen basket,” which was a collection of nature artifacts that belonged to the school's resident naturalist. The resident naturalist met with the kindergarteners under a large oak tree. The session began with a centering practice where the group was asked to sit in a circle and breath together as a candle was lit, holding the intention that “nature is our teacher.” The idea of nature as teacher was further illustrated in the following description of the activity in which the kindergarteners participated:

Without saying a word, I removed one artifact from the basket, and with extreme intention and care, slowly removed the silk, uncovering small bits of it at a time. Once fully uncovered, a turtle shell was revealed. Small gasps and oohs emerged from the kids but no words, no questions, and no comments. Each student's eyes were locked only on the turtle shell. I began investigating it; looking closely at every nook and cranny and feeling its texture, its bumps, and its cracks. I held it to my nose to smell it. I held it to my ear to listen to it. I held it to my heart as if I were feeling it deeply. The children were mesmerized, silent, and intent. I spoke up and said, “Nature has much to teach us if we are willing to listen.” I explained the basket is full of Nature's stories and challenged them to try to discover them. I asked the children to close their eyes and hold out their hands in a cupped position. I explained that each would receive a special artifact from nature and with care and respect to carefully unwrap it and get to know it as well as they can. I distributed the artifacts and asked the kids to open their eyes and begin the discovery process.... We continued the activity by carefully passing the objects around the circle so that each child could explore each artifact. Thirty minutes passed with few words—these artifacts became the teacher. I followed this activity up by reading the book

All I See Is Part of Me. We discussed how we are so deeply connected to the Earth because everything we see in the Earth can also be seen within us. I requested the children pick up their original item and asked them to think of how they are like that item. “I am the pinecone because I am small.” “I am the flower because I am colorful!” “I sparkle like the crystal.” These types of activities engage the children in such a way that they are able to look at nature differently. If they can make the connection that what makes a pinecone a pinecone is also what makes them who they are, then a sense of appreciation and protection of that pinecone and thus the tree will then live inside of them.

Through this activity, children learn through modeling how to experience awe and wonder for nature’s many artifacts. Curiosity is encouraged and cultivated through the detailed exploration and investigation of various artifacts as the children are asked to “get to know” their artifact. Nature is presented as a teacher, with whom children can engage and from whom they can learn. Interdependence is taught through an activity that assists children in making connections between characteristics of a pinecone and characteristics of themselves. The seeds of stewardship are planted as children begin to relate to nature, with the (school’s) aim that one day they will work to protect the natural environment.

Similar to the activity with the pinecone, children are consistently encouraged to draw connections between nature and themselves. One faculty member described how she uses language to help cultivate this connection:

And when the students say something like that flower is beautiful, and I would respond, I see that flower’s beauty in you. And it’s just a matter of changing your language so that they see that connection, the flower’s beauty and that connection with that flower. And especially, it’s most impactful for the little ones because then they’re just in awe because they recognize that the flower’s beauty is them, and they are the flower. And it’s really amazing just shifting the language just a teeny bit.

Through this language, children are taught to view themselves as similar to nature and as a part of nature.

The idea of nature as spiritual teacher, as well as how the various seven domains (including the natural domain) are integrated into the classroom environment, is further

exemplified through the kindergarten unit on butterflies. The kindergarten class raises a butterfly in the classroom and observes the butterfly at each stage of its development; eventually, the butterfly is released into nature. The kindergarten teacher described this process:

And it is, going into all of the details of the butterfly, of course, in every domain, so academically its just easy to talk about the science of it, of course, what that looks like in social studies, what it looks like in everything. And then bring in every domain, so of course we dive deep into the spiritual of what happens during metamorphosis. What happens during that change.... It's one of the most exciting, of course they see the butterflies go through that process right there in front of them...and then we dive deep into, even, the social/emotional...is this butterfly going to make it to Mexico? And does it make friends along the way? So tapping into all of those heart-felt pieces along with, why doesn't my dog migrate? And why does my dog stay here? And I really love this butterfly and it's leaving us. Going through that separation.

Through this unit on butterflies, curiosity is encouraged, and awe and wonder are cultivated through the exploration of the life cycle of the butterfly and witnessing the butterfly develop through the process of metamorphosis. As we know, exposure to and contact with nature is another influential factor in the development of personal spirituality (Kellert, 2006; Schein, 2014). These experiences can foster feelings of wonder and awe (Hart, 2006; Shiota et al., 2007), which can serve as gateways to spiritual experience for children and adolescents (Hart, 2006). The butterfly unit can therefore provide a strong foundation for the cultivation of individual spirituality in these kindergarteners as they directly witness and engage with one of nature's life cycles.

This academic study of the natural world, through integrating the natural domain into the school's curriculum, is further supported through direct immersion in nature. Direct immersion in nature is a focal point of Rocky Ridge's environmental education program and often occurs during the six required 1-hour learning blocks with the resident naturalist. For example, one of the second grade's required classes with the resident naturalist focused on tree structure, function, and general characteristics. After a centering exercise outside, the students were asked

to observe the trees on campus and look for signs of life. After some time, the students were then asked to feel the sand, rocks, and water in their hands and focus specifically on the feeling of each of these. The next prompt from the resident naturalist called for imaginative play, as students were asked to create words out of sticks on the ground that spread love and kindness to others. The class ended in a collaborative circle where students were asked to relate themselves to an assigned animal following the format, "I am like the turtle because I take my time."

As previously discussed, this direct immersion in nature can be spiritually formative for children and adolescents. By observing trees and specifically being prompted to look for signs of life, children are guided through a process of discovery where they come to learn and understand that trees are living, just like them. This second grade class also helped to exemplify how, in many ways, it is the faculty that help to cultivate this sacred relationship between students and the natural world through their intentional lesson plans and approach to environmental education. This is, in part, due to the training that teachers receive. In describing this training, one faculty member said the following:

A lot of our teachers are trained through a program that was created through Thomas Berry's work...and there's a place, like 240 acres, it's called the Center for Education and Imagination in the Natural World. And they have a beautiful program there that's called the Inner Life of a Child, that's a two-year program, that most of our veteran teachers took. And so they're very well acquainted with helping children to have a real deep, spiritual relationship with the natural world. You know, as well as stewarding it and understanding it scientifically.

Through academics and through direct immersion, students are able to form an authentic relationship with the natural world that can directly impact their spiritual development. A parent of a middle school student described the role of nature in her son's spiritual development:

My son is another middle school student who identifies as an atheist and was really adverse to anything spiritual at all and felt like he was kind of being forced into something. And I think, for him, what was developing appropriately was an openness

again to see what in him was the good in him. So for him, it was his connection with the natural world. And he was really closed to discussing that as part of his spirituality, and I would say that now he has a little bit of a different take on it.

This parent's reflection illustrated one way that nature can be spiritually formative for youth, in that for many children and adolescents, it is their relationship and felt connection with the natural world that serves as the foundation of their spirituality.

The natural domain is further integrated into classroom learning through the practice of centering. Centering is a key aspect of the Rocky Ridge curriculum that is consistent across grade levels:

Centering is a whole class activity that has an opening and closing secular ritual with an activity in between. Centering rituals vary from classroom to classroom, but the basic elements for the opening ritual involve the students gathering together in a circle and practicing mindfulness. As a centering begins, the classroom is filled with reverence—the space is set with intention and the lights are dimmed. A chime or bell invites silence; the invitation of fire through candlelight is summoned; and a pause is taken for audible breath work. Following the opening ritual is an activity. The activity extends into other aspects of spiritual learning beyond mindfulness, with experiences that can integrate with or enhance the academic curriculum, social/emotional learning, creativity, kinesthetic learning, and students' connection to the natural world.... After the activity, centering closes with a simple ritual that typically involves naming a word or concept for the day, taking three breaths together, and blowing out the candle. This begins the sacred work of the day.

Many centering practices focus on the natural domain. One faculty member described centering and provided examples of two centering practices that focus on the natural domain, completing a nature walk and observing leaves:

And a lot of people think of it as anchoring in one particular domain. Like that particular day they're going to do a silent nature walk or one of the exercises that we learned at the center for, at the inner life program, was where the kids are partners, and it's completely silent and if you're my partner, I will just completely silently, show you this leaf. And then you'll look at it too and then it will be your turn and then that could be a centering that just observing little things that you wouldn't notice otherwise, silently with a partner. Beholding.

Through this practice, when centering focuses on the natural domain, nature is used as a vehicle to assist students in grounding and connecting with themselves and their peers. Through this process, it can also simultaneously cultivate individual spirituality as well as community.

4.4.4 Connections to the Greater Community Through Nature

Rocky Ridge values community and takes intentional steps to foster community among its students, faculty, and parents. For faculty, the school often utilizes the natural environment as part of fostering this community. The school hosts an annual 2-day training at the start of the school year for faculty, which includes a 1-day retreat incorporating nature-based activities:

...and we do a retreat that is nature-based. That's a day. That's an overnight. And we always do a lot of outdoor stuff, we always have like a naturalist walk. It is so awesome, and then the school year starts.

Similarly, nature is used to help foster community among the student body through nature-based trips. One faculty member described the various locations of these trips:

Fourth grade is at Treemont, which is in the Smokies. It's an outdoor education facility in the Smokies. It's been around for decades. I went when I was a little kid. Fifth grade went to Mt. Trail Outdoor School, which is in Hendersonville, North Carolina.... Sixth grade will go to a place called Green River Preserve, which is also a nature-based summer camp. Seventh and eighth grade just got back from Charleston...a science, beach ecology-based trip, with some social studies involved.

Nature, and learning about the natural environment through academics, is also used as a tool to help students connect with their local community and the greater community of life. As described by one faculty member:

But I think they've studied every major animal phylum in the third. They've studied every biome. And so they've studied their local community and communities, it's about getting along and understanding one another. And indigenous people. Lots and lots of studies of indigenous people up through third grade.

Through this lens, the academic study of the natural world becomes a way for students to understand and connect with their local community as well as learn about communities that are rooted in various cultural backgrounds.

Similarly, learning about the natural environment through academics is a way for students to connect with their peers and simultaneously with the school community. One way that the natural domain is woven into the first grade academic curriculum is through the Africa unit. One faculty member described the Africa unit in more detail:

Like within the Africa unit, they each choose what animal they want to be an expert on. And so each child is researching their animal and doing pretty extensive, independent research on their animal and all the other, it's like a jigsaw, and all the other kids learning about the animals and they're so interested in them because it's their friend who is the cheetah expert. All throughout that unit, which is like three months long, that cheetah expert will be called on from time to time if something comes up that has to do with the habitat of the cheetah. And then, we'll study the different biomes in Africa. There's so many in Africa that they learn. They learn so much from studying Africa that applies to everywhere in the world.

This unit takes a communal approach to the curriculum and helps students connect with one another, and with their classroom community, while simultaneously assisting students to connect to the academic content all through nature.

4.4.5 Building Relationships with Plants

Rocky Ridge helps to cultivate an authentic personal connection between children and the natural environment by giving each first grader their "own" tree on campus that will be theirs until they graduate the school in eighth grade. Many students in eighth grade still have a relationship with that tree in a deep and meaningful way. As described by one faculty member, "Trees are really special here. I mean, they're special everywhere, but our kids have their own little relationships with the trees, and they're very good at talking to trees and speaking their language." The school invites the students to form real, lived, personal relationships with their

tree over a period of 8 years, thus helping to foster authentic connection between students and the natural environment.

4.4.6 Summary

Rocky Ridge fosters a connection between students and the natural environment through two primary pathways: (a) the natural domain of their holistic learning model, and (b) the environmental education program. Through these two pathways that often overlap, students are provided with multiple opportunities for authentic connection with the natural environment. These opportunities include nature-based grade-level trips, direct immersion in nature through required classes with the school's resident naturalist, opportunities to form personal relationships with trees, and learning about the natural environment through academic curricula. Nature is also used as a vehicle to help nurture individual spirituality, to foster school community, and to connect students with their local community and the greater community of life.

4.5 Cross-Case Analysis

Through cross-case analysis, the four cases were examined according to the common themes that emerged as a result of conducting the individual case studies and writing the individual case reports. Four themes were prominent: (a) right relationship with nature, (b) care for creation/service to the natural world, (c) cultivating spirituality through nature, and (d) fostering school community through experiences in the natural world. These themes were present to varying degrees across the four environmental education programs.

4.5.1 Right Relationships with Nature

Animals. Many environmental education programs incorporate animals to some degree. In the cases of Mapleton and Tabiona, the ultimate goal is to cultivate a relationship between the students and the animals, and this is primarily accomplished through assigning the student to

animal caretaking responsibilities. Through animal caretaking, the intended aim is that students will form a bond with their animal and learn important values such as responsibility, perseverance, trust, respect, and patience. Mapleton and Tabiona intentionally create the setting for students to form real connections with their animals through required programs that give students real responsibility. These programs go beyond ordinary caretaking in that they create the setting for students to learn not only that their animal depends on them, but that they too can depend on their animals.

For Mapleton, students are provided with the opportunity to build relationships with animals through their work at the on-campus zoo. Whether through their responsibilities of animal husbandry, preparing animal diets, assisting with zoo maintenance, or creating new zoo exhibits, students gain firsthand experience engaging in wildlife conservation work as part of a required community service rotation. The students' various animal caretaking responsibilities provide them with numerous opportunities to build relationships with animals on a daily basis. At Mapleton, the student takes on the role of caretaker in the student-animal relationship; however, these relationships help to inform the student's worldview.

For Tabiona, students are provided with the opportunity to build relationships with animals through the school's Stallion Program, which is required of all freshmen. Similar to Mapleton, Tabiona students do have certain caretaking responsibilities; however, the relationship between the student and the horse is more of a partnership, where each learns and grows from the other. Through their experiences with their horses, students learn about perseverance, responsibility, and patience. Horse Packing is another component of the school's Stallion Program. Through these experiences, students have the opportunity to form authentic personal relationships with their horses. Students learn the benefits of cultivating an intimate connection

with their horses. When this connection is strong, students feel as though they are able to communicate effectively with their horses while riding. They learn that putting energy and effort into their personal relationships with their horses benefits their riding relationships with their horses.

Nature. For Cedar Highlands, students are not given animal caretaking responsibilities or opportunities to form relationships with animals; however, this may in part be due to the school's more urban setting, compared with the rural settings of both Mapleton and Tabiona. Despite this, the school attempts to provide each student with an intimate relationship with nature through encounters with mountain, island, seashore, desert, or river environments. The Outdoor Service Learning trips at Cedar Highlands are intentionally designed to provide students with opportunities to connect with nature in a personal, spiritual way. The hope is that these opportunities for an intimate connection with nature will cultivate values of stewardship and service.

At Rocky Ridge, students are also not provided with animal caretaking responsibilities or opportunities to form personal relationships with animals; however, students are encouraged to form personal relationships with their "own" tree. In the first grade, students are given their "own" tree on campus that will be theirs until they graduate the school in eighth grade. This personal relationship with their tree teaches students about the interdependent relationship between humans and nature. Intellectually, students learn that trees provide the oxygen that keeps humans alive. Personally, students learn that they can take solace in their tree, just as they would with a friend or family member. Through inviting students to form a long-lasting personal relationship with their tree, students learn that one's relationship with the natural environment is not fleeting; rather, it is a lifelong personal relationship that is also interdependent.

Care for Creation: Service to the Natural World. Service to the natural world was a common theme across all four of the environmental education programs. For example, Mapleton fosters this service to the natural world through their zoo, farm, and recycling program, which are all required as part of the school's community service program. The school requires that all students participate in these services because Mapleton believes that stewardship and service to the natural world help to foster a student's individual spirituality and simultaneously cultivates connectedness to community. This active engagement in community helps students cultivate relationships and learn important values, such as respect, integrity, stewardship, service, and curiosity. The school believes that these values ultimately prepare students to live lives of meaning and consequence.

For Tabiona, service to the natural world is primarily cultivated through the school's Stallion Program. Students are assigned various caretaking responsibilities, which include mucking their horse's stall before class in the morning, learning riding skills and riding their horse in the afternoon, and feeding their horse every evening. Through the care of their own horse, the school hopes to teach students important lessons about life and cultivate self-reliance, concern for others, honor, fairness, kindness, and truth.

For Cedar Highlands, service to the natural world occurs during the Outdoor Service Learning trips, where students partake in stewardship activities to maintain or restore natural environments. As previously mentioned, students on the Outdoor Service Learning trip to Big Sur planted natives and removed invasives to maintain the health of the river bank and prevent erosion. Through this project, students learn about the interdependence of the ecosystem, given that the health of the ecosystem is dependent on the health of the river. Students also learn values of stewardship and service as they care take of the river and come to view themselves as

interdependent parts of the greater community of life. This work leads students to feel connected to the natural environment, and thus this deep connection to nature helps simultaneously cultivate individual spirituality. The school's other longer-term initiatives aim to teach students that their relationship with the environment is lifelong, and fueled by ongoing consistent stewardship of the natural environment.

For Rocky Ridge, service to the natural world is not as prominent compared to the other three schools, as the focus is more intentionally placed on teaching care for creation. Care for creation is cultivated through activities that emphasize curiosity, exploration, and observation of the natural environment as well as through activities and academic lessons that cultivate deep reverence and respect for nature. For example, the kindergarten unit on butterflies helps to cultivate care for creation by raising a butterfly in the classroom and having students observe it through various stages of metamorphosis. The school prioritizes cultivating the student-nature relationship before integrating service to the natural world into the academic curriculum. This supports the school's approach to child learning and development and the school's underlying philosophy that "children who have a relationship with nature will take care of it."

Spirituality. In many ways, the four schools utilize their environmental education programs as platforms to cultivate individual spirituality in their students. This is primarily achieved by creating opportunities within these environmental education programs for connection with self, peers, animals, the natural environment, the school community, the local community, and the greater community of life. Spirituality is conceptualized as a "deep way of being where one feels connected to all life and has awe and reverence for the universe." Thus, intentionally designing environmental education programs to allow for authentic and meaningful

connection across various constituents creates a strong foundation that can serve as the gateway to spirituality for children and adolescents.

For Mapleton, the natural environment is utilized as an ideal setting to cultivate individual spirituality in students. This is accomplished primarily through intentionally creating opportunities for deep and meaningful connection, not only through immersion in the natural environment but also through actively working to get students into the natural world, and into meaningful relationships with their peers and faculty members. This helps to cultivate authentic connections among students, the natural world, and those within their school community while also offering opportunities to experience awe, wonder, and peace.

For Tabiona, individual spirituality is cultivated through deep relationship with both nature and community. Students find spirituality through immersion in nature (on the school's campus and in the surrounding wilderness area), through the Stallion Program, during camping experiences, by learning about nature in the classroom as well as the school's close-knit community. As part of this spiritual development, students also learn how to become a part of nature rather than learn how to dominate it. This helps to strengthen individual spirituality as students experience a sense of connectedness between the self and the natural environment, thus coming to know themselves as one interdependent part of the greater community of life.

Much like Tabiona, Cedar Highlands believes spirituality is inherently experienced as connection to nature and to community. It is cultivated primarily through fostering a connection between students and the natural environment (through the school's experiential education and Outdoor Service Learning trips) and through cultivating connection to the school community while immersed in nature. In many ways, the trips are designed to allow students to experience the sacred through the natural environment and relationships, especially as these trips offer many

opportunities for students to connect with their peers and be in community while in a wilderness setting.

For Rocky Ridge, spirituality is cultivated by fostering an authentic relationship between students and the natural world and joining in centering practices. Through lessons and programming about nature and outdoor explorations in nature, children learn to approach nature with wonder and awe, are encouraged to be curious, and are given time each day to “commune” with nature. The school utilizes the environmental education program and the resident naturalist to cultivate this student-nature relationship. In this relationship, students learn about their deep connection to the Earth and are taught to view nature through a lens of discovery, which allows them to see connections between nature and themselves. Through centering practices, students practice grounding and are thus able to connect more deeply with themselves, their peers, their community, and the natural environment.

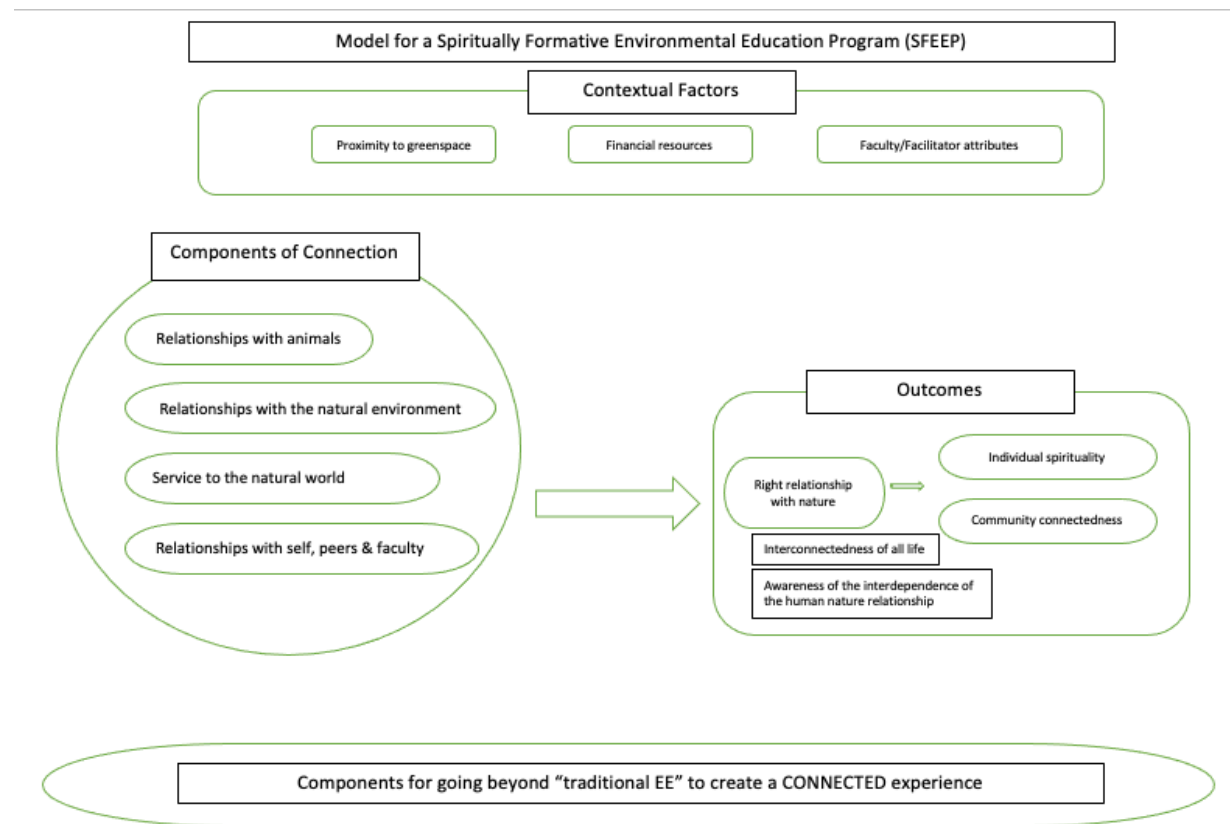
Fostering School Community Through Experiences in the Natural World. For all of the schools, community was a major component of the environmental education programs. For Mapleton, working at the zoo, the farm, and the recycling program were all ways that individuals could meaningfully contribute to their community and connect with other members of their school community. For Tabiona, the Stallion Program and the Outdoor Program were intentionally designed to cultivate school community through individual relationships and shared experiences in the wilderness. Similar to Tabiona, the experiential and Outdoor Service Learning trips at Cedar Highlands were also designed to cultivate community through itineraries that allowed for connection, vulnerability, and shared experiences in the wilderness. For Rocky Ridge, all of the activities conducted in the environmental education program were done in community. Ultimately, these four schools intentionally cultivated community to provide

students with opportunities for deep and meaningful connection to self, others, and the environment. This connection then provided a solid foundation for the cultivation of individual spirituality.

4.6 A Framework for a Spiritually Formative Environmental Education Program

Figure 1

The Spiritually Formative Environmental Education Program (SFEEP) Grounded Theory Model for Children and Adolescents



This section presents a framework for the creation of an environmental education program that is spiritually formative as a component of overall healthy development. Through analysis of the four case studies, four components of connection were identified as being

particularly significant to the design of an environmental education program that aims to foster individual spirituality in its participants.

4.6.1 Grounded Theory Findings

Through the analysis of the four case studies, the Spiritually Formative Environmental Education Program (SFEEP) model was developed to illustrate how schools can utilize their environmental education programs as platforms to nurture individual spirituality in children and adolescents. The model includes the basic paradigm features essential to grounded theory: strategies (referred to herein as components), outcomes, core category, and contextual conditions (Bowers & Creamer, 2020; Corbin & Strauss, 2015). Each feature of the model contains categories that emerged from the analysis of the data.

Overall Model. The overall SFEEP model indicates that environmental education cultivates individual spirituality and community connectedness by teaching students how to be in “right” relationship with nature; this includes an awareness of the interconnectedness of all life as well as an awareness of the interdependence of the human-nature relationship. For the children and adolescents attending one of the schools in this particular study, this is accomplished through the core category of connection, which includes connection to self, peers, the natural environment (including animals), the school community, and the greater community of life. Facilitating opportunities for deep and meaningful connection is best done through planned programming that incorporates the following components: (a) relationships with animals (through animal caretaking); (b) relationships with the natural environment (through immersion in nature and service to the natural world); (c) service to the natural world; and (d) relationships with self, peers, and faculty members. The overall model is impacted by certain contextual factors such as proximity to green space, financial resources, and faculty/facilitator attributes.

The overall structure of the SFEEP model was inspired by Bowers and Creamer's (2020) grounded theory model, the Implementation of Authentic Environmental Education Programs (IAEEP), which was used as a reference and guide when creating the SFEEP model.

Model Outcomes.

1. Individual Spirituality. The cultivation of individual spirituality for children and adolescents is one of the primary outcomes of the SFEEP model. Spirituality is conceptualized as a “deep way of being where one feels connected to all life and has awe and reverence for the universe.” It may include an inner sense of relationship to a higher power (i.e., God, nature, spirit, the universe, the creator) that is loving and guiding (Miller, 2015). Analysis of the data revealed that many times when students described moments of spirituality, they were often characterized by experiences of deep and meaningful connection to self, peers, nature, the school community, and/or the greater community of life. This connection, to nature and to community, served as a gateway to spirituality for the students at the schools in this study.

2. Community Connectedness. Community connectedness, defined as how school systems cultivate and promote networks and students' feelings of belonging within the school community (Dove et al., 2018), is another primary outcome of the SFEEP model. The data revealed that feelings of connectedness to the school community often occurred when students formed or cultivated existing relationships with peers and faculty members when immersed in nature, while also engaging in their school's environmental education programming. Often, the felt notion of engaging in a collective experience led students to feel more connected to their peers and to their school community. This felt sense of engaging in a collective experience seemed to be heightened while immersed in nature. This could in part be due to nature's ability to evoke wonder and awe, increased presence, and peace (Johnson, 2002).

3. Right Relationship with Nature. Analysis of the data revealed that the environmental education programs included in this study helped to cultivate an understanding of the interconnectedness of all life and an awareness of the interdependence of the human-nature relationship. This was accomplished primarily by providing opportunities for students to be in relationship with animals and the natural environment. This awareness of the interconnectedness of all life and of the interdependence of the human-nature relationship is referred to collectively as “right” relationship with nature. It is through these experiences of being in “right” relationship with nature that students often experienced individual spirituality and community connectedness.

Model Components. In this model, the outcomes of individual spirituality and community connectedness are sustained by the various components of connection, including relationships with animals; relationships with the natural environment; service to the natural world; and relationships with self, peers, and faculty members. These four pillars emerged from the data as the primary ways in which the schools in this study tried to intentionally provide students with opportunities for deep and meaningful connection within the context of an environmental education program.

Core Category. In grounded theory, the core category of the model is the concept with the “greatest explanatory power and the ability to link the other categories to it and to each other” (Corbin & Strauss 2015, p. 189; see also Bowers & Creamer, 2020). Throughout the analysis process, it became evident that the core category of the SFEEP model is *connection*. This was described in various ways by students and faculty members and was referenced as “connection; community; bonding; we’re all in this together; to look into the eye of a student you’re working with and feel that you’re really communicating,” among other descriptions. The idea of connection—including connection to self, peers, faculty members, nature, the school

community, and the greater community of life—was a prominent theme across all four cases and serves as the foundation for the SFEEP model.

Model Context. The outcomes and components of connection defined by the SFEEP model are continuously influenced by various contextual factors, including proximity to green space, financial resources, and faculty/facilitator attributes. For example, it became apparent that the students at Cedar Highlands engaged less frequently with the natural environment, when compared to the other three schools, due to their more urban location and less proximity to green space. Whereas students at Mapleton, Tabiona, and Rocky Ridge were immersed in nature on a daily basis due to their campus location, students at Cedar Highlands were immersed in nature only while on the school’s experiential education and Outdoor Service Learning trips. Financial resources also emerged as a contextual factor in the model. Various components of the environmental education programs in the four schools described herein require substantial financial resources. For example, staffing and running Mapleton’s on-campus zoo requires substantial financial resources, which may act as a barrier of implementation for other schools with fewer financial resources. Thus, the amount of funding that a school allocates towards environmental education directly impacts the opportunities that will be available for students. Faculty/facilitator attributes emerged as another contextual factor in the model. For example, Tabiona referenced the importance of hiring faculty who align with the school’s vision of environmental education programming. Cedar Highlands allocated significant time and resources to select the right individual to lead their Outdoor Service Learning trip program. Mapleton has a full-time zoo staff of adult faculty in addition to the students who work there. Rocky Ridge sends many of its teachers to a 2-year program dedicated to exploring the inner life of the child in

nature. Thus, the individuals leading these programs and the attributes of the other faculty members matter.

Chapter 5: Discussion

The aim of this study was to better understand how schools in the United States cultivate a connection between students and the environment by exploring the interplay between this connection and the school community and personal sense/belief about spirituality. A grounded theory multiple-case study approach was utilized to examine four different environmental education programs. The results illustrated that the environmental education programs described herein are intentionally designed to meet the developmental needs of children and adolescents. Specifically, these programs aim to nurture students' innate spirituality through providing opportunities for connection to the self, to others, and to the environment. These moments of intentional connection simultaneously help to foster connectedness to the school community while assisting in the process of student identity formation and development. Ultimately, students in these programs come to know themselves as part of nature and in relationship with nature.

Many environmental education programs are successfully designed to facilitate personal growth and to cultivate a relationship between students and the outdoors; however, these programs often lack the deep spiritual ethos that is at the forefront of the four aforementioned EE programs. Many programs lay the groundwork for the formation of individual spirituality through outdoor immersion programming but could deepen their approach to environmental education if certain concepts from these four cases were integrated into their existing programming. For example, in addition to immersion in the natural environment, these programs could prioritize creating opportunities for students to form meaningful relationships with their peers and faculty members, which may assist in spiritual growth and development as well as foster connectedness to the school community.

5.1 Fostering Student Relationships with Nature

Teaching students how to be in relationship with nature is one of the primary objectives of the four environmental education programs in this study. For these programs, this relationship is cultivated by providing students with opportunities to form meaningful connections with animals on a consistent basis and by providing students with opportunities to engage intimately with nature through planned excursions in the wilderness or immersion in the natural landscape that is on or around the school's physical campus. These programs continue to foster this relationship through required and voluntary stewardship activities embedded within the EE program models. These stewardship opportunities help to further cultivate connectedness between students and the natural environment and can lead students to view themselves as interdependent parts of the greater community of life. Ultimately, these four EE programs approach the cultivation of this student nature relationship through fostering feelings of interconnectedness and interdependence; however, many other EE programs care more about cultivating environmental literacy and improving pro-environmental behavior.

For example, previous literature on environmental education programs has focused largely on goals that are designed to enhance the environmental literacy of the program participants (Stern et al., 2014). Environmental literacy refers to the “knowledge, attitudes, dispositions and competencies believed to equip people with what they need to effectively analyze and address important environmental problems” (p. 581). With environmental literacy as the ultimate goal, the field has created guidelines and “best practices” to assist EE programs in achieving this (Stern et al., 2014). Thus, much of the research around environmental education has explored the effectiveness of these best practices in cultivating environmental literacy, among other outcomes, in program participants. Other prominent outcomes that are well

researched in the environmental education literature are environmental behavior and/or behavior-related outcomes (Leeming et al., 1993; Zelezny, 1999) and learning outcomes (Rickinson, 2001).

What is often missing from the EE research is evidence explaining how or why these EE best practices generate these outcomes. Prior research has explored the program elements (or best practices) that may influence particular program outcomes (Stern et al., 2014), but it has failed to explore what is occurring for these students as they engage in these “best practices.” This study addressed this gap in the research through the exploration of the psychological and spiritual processes that may be occurring for students as they engage in environmental education programming, and thus expands on the existing research in the field. Through the examination of these processes, this study provided the field with a new theory of environmental education that focuses on connection, as opposed to environmental literacy and pro-environmental behavior. It also provided the field with an EE model that addresses the developmental needs of children and adolescents, specifically the need for individuation and identity formation, spirituality, and connectedness to community. The model offers a pedagogical framework for environmental education where students have the opportunity to learn about themselves as part of nature and through relationship with nature through a process of spiritual development, community formation, and immersion in the outdoors.

The methods of connection found to be effective in the current study were also similar to those that emerged in prior research, including “interactions with animals and places, extensive group discussion and collaboration involving communities and real-world problems” (Stern et al., 2014, p. 601). Similarly, Frantz and Mayer (2014) suggested that fostering connectedness to nature should be a priority for any environmental education program. Prior research also

suggested another effective EE practice to be engagement in real-world environmental problems (Ballantyne et al., 2001; Stern et al., 2014). Similarly, the data from the current study also supported this finding. One way this was illustrated is through the service projects that Cedar Highlands incorporates into their environmental education programming. It is through these immersive experiences, where students have the opportunity to address real-world environmental problems, that students find value and meaning and inherently feel more connected to themselves, others, and the environment. The results of the current study also indicated that immersion in the natural environment is a critical component of any environmental education program. Prior research also supported this finding, suggesting direct contact with nature to be influential on EE program success (Ballantyne et al., 2001; Stern et al., 2014).

5.2 Connected Experience: A Theoretical Understanding of Environmental Education

This research yielded a model of connected environmental education and provided a theoretical framework that had previously been missing from the environmental education literature. The model utilizes connection as the fundamental approach to teach students about the interconnectedness of all life and to cultivate within them an awareness of the interdependence of the human-nature relationship. It is through these experiences of profound and meaningful connection, and through this felt awareness of being in “right” relationship with nature, that students often experience individual spirituality and community connectedness.

Although a theoretical model of connected EE may be a novel approach, grounded theory has long been utilized as a method of examination to explore the field of environmental education (Roczen et al., 2014; Smith-Sebasto & Walker, 2005). For example, Smith-Sebasto and Walker (2005) offered a grounded theory model for effective residential environmental

education. This model of grounded theory does address the psychology of adolescents in so much as it recognizes the importance of developing interpersonal skills (teamwork, friendship, cooperation, trust, respect, communication) and character attributes (self-confidence, courage, self-esteem, self-respect, perseverance, independence) as fundamental components of the “social” category of environmental education—one of the five central categories that emerged from the data (Smith-Sebasto & Walker, 2005). However, where this model falls short is in not fully addressing why the “social” category, including the development of strong interpersonal skills and character attributes, leads to a more effective environmental education program. It does not fully explore the psychological and spiritual processes that may be occurring for adolescents as they forge friendships, engage in team-building exercises, and partake in activities that improve their self-esteem, self-respect, and independence. The SFEEP model addresses this gap by examining the students’ internal experience as they partake in these activities. For example, the model illustrates how these activities can cultivate individual spirituality and community connectedness when the students’ internal experience reflects a felt sense of an awareness of the interconnectedness of all life and an awareness of the interdependence of the human-nature relationship. The model further illustrates that this awareness is primarily cultivated through experiences of profound and meaningful connection when partaking in EE programming.

Alternatively, Roczen et al. (2014) proposed a competence model for environmental education, with the aim being to promote a more ecologically friendly lifestyle. Similar to studies that measured environmental behavior (Tung et al., 2002; Zelezny, 1999), Roczen et al. explored the influence of one’s attitude toward nature on ecological behavioral engagement. Findings indicated that “attitude toward nature...was the crucial force behind the degree to which

adolescents embraced ecological lifestyles” (p. 986); however, the model did not address how this attitude towards nature is developed and cultivated. The SFEEP model addresses how this attitude towards nature is fostered through the lens of examining how the student-nature relationship is cultivated. The SFEEP model offers various components of connection that should be included in an EE program to provide students with numerous opportunities for a connected experience. This provides the field with a framework that schools can utilize as a guide to assess where their EE programming meets the developmental needs of their students and where their EE programming can be strengthened or expanded upon to better address these developmental needs. As the model indicates, to fully meet the developmental needs of children and adolescents, EE programming should provide students with opportunities to form relationships with animals through animal caretaking; form relationships with the natural environment; engage in service activities oriented towards the natural world; and receive opportunities to form meaningful relationships with their peers, faculty members, and themselves. By including these opportunities for a more connected EE experience, students are simultaneously provided with opportunities to experience individuation and identity formation, spirituality, and connectedness to community.

Overall, the SFEEP model expands on the existing literature base because it provides a theoretical framework of connected environmental education that meets the developmental needs of children and adolescents, specifically the need for individuation and identity formation, spirituality, and connectedness to community. Whereas other models of environmental education often focus on increasing environmental literacy and pro-environmental behavior, the SFEEP model prioritizes the cultivation of the student-nature relationship. Although environmental literacy and pro-environmental behavior are important outcomes, they are not the primary

objectives of the SFEEP model, which is oriented more towards providing an EE experience that supports healthy child and adolescent development.

5.3 Limitations

One potential limitation of the current study was the duration of the on-site school site visits. Data were collected by conducting 1- to 2-day site visits at each school. Thus, the research team was not immersed in the school and culture for a number of years, but rather for 1-2 days for a curated visit. In this regard, some nuances regarding the school's environmental education programming may not have been observed; however, sufficient data were still collected through these curated visits and through the strategic reports submitted by the school fellows.

Another limitation of the current study was selecting four privileged independent schools as the cases. These schools have greater access to financial resources, student bodies comprised of youth from higher-income households, and greater proximity to green space, compared with many under-resourced and high-poverty schools. Thus, findings from the current study may not be directly applicable to these under-resourced and high-poverty schools, where students face many structural barriers that promote racial and socioeconomic disparities in access to green space (Dai, 2011).

Another limitation of the current study pertained to systemic problems. It may be difficult to be open to experiences of connection and spirituality when other basic human needs are not being met due to systemic racism, poverty, experiences of trauma, and/or the loss of a parent or caregiver. The schools selected for the current study do not have to address these systemic problems in the same way that many under-resourced and high-poverty schools need to do so.

These systemic-level issues can largely impact child and adolescent functioning across multiple domains. Childhood poverty can negatively impact student academic performance and

may also contribute to atypical brain development (Hair et al., 2015). School absenteeism is also strongly associated with childhood poverty (Zhang, 2003). When children are chronically absent from school, they miss the educational and social opportunities that lay the foundation for experiences of profound and meaningful connection, which can be gateways to spirituality for children and adolescents.

Exposure to trauma is another significant systemic factor that can impact student learning and development. Trauma exposure among children and adolescents is common. In a study of 1,420 children and adolescents, more than two-thirds of the sample experienced at least one traumatic event by the age of 16 (Copeland et al., 2007). This finding was replicated in a national survey of adolescents aged 13 to 17, which found that 61.8% of those surveyed had experienced at least one potentially traumatic event (McLaughlin et al., 2013). Both studies assessed for the prevalence of various types of traumatic events, including violence, sexual traumas, injuries, and natural disasters. Although anyone can be exposed to a traumatic event, the risk of exposure is disproportionately higher for certain populations of children and adolescents, including children living in poverty, ethnic minority and immigrant youth, and polyvictimized youth (Santiago et al., 2018). Poor children may be more vulnerable to trauma exposure due to the multiple environmental risks that poor children encounter, compared to children who are more economically advantaged (Evans, 2004), including increased family violence (Berger, 2005; Rubenstein et al., 2020), increased neighborhood crime (Sampson et al., 1997), and increased likelihood to live in a family led by a single mother (Paschall & Bartlett, 2019). The majority of the children and adolescents attending the schools in this study were from more economically advantaged households and were thus less vulnerable to trauma exposure.

Similarly, systemic racism influences child and adolescent development. Research has demonstrated that experiencing racism can significantly impact child and adolescent mental health (Nyborg & Curry, 2003; Pachter & Coll, 2009; Slopen & Williams, 2014; Trent et al., 2019). Furthermore, Black and Brown youth in the United States are more vulnerable to parental unemployment and more likely to reside in families with significantly lower net wealth when compared to their White peers, thus establishing a barrier that prevents equal opportunities (Matthew et al., 2016; Trent et al., 2019). It is well known that although some children and adolescents attending the schools in this study have experienced systemic racism, many have not.

5.4 Implications for the Field of Environmental Education and Future Directions

Despite these limitations, the results from these four cases are promising and can be utilized by the field of environmental education that occurs within many K-12 school settings. These findings offer three major implications for the field: (a) an overall theory of environmental education that fosters and maintains connection; (b) an antidote to a child/adolescent culture of relating primarily through technology; and (c) the importance of systemic equity in access to green space.

The overall SFEEP model identifies critical components that should be included in the design of an environmental education program that aims to be spiritually formative as a component of overall healthy development. These critical components include fostering a personal relationship between students and nature; cultivating environmental stewardship through opportunities to provide service to the natural world; developing school community through experiences in the natural world; and nurturing a student's innate spirituality by intentionally creating opportunities for deep and meaningful connection to self, others, the natural environment, and the greater community of life. This framework provides schools with

an opportunity to leverage their environmental education programming to assist in student identity formation and development, nurture individual spirituality, and foster connectedness to school community. The entire model is built on the foundation of connection, and each component is included to provide students with opportunities to experience deep and meaningful connection across multiple domains.

In a digital culture where children and adolescents primarily relate to each other through their phones and social media, this framework provides a deeper way of connecting that is more authentic, meaningful, and developmentally appropriate. The model offers a pedagogical framework of connection that helps to cultivate relationality and address connection deprivation. Although technology has moved society forward in many ways, it has also changed the way in which children and adolescents connect with one another. Often, it also inhibits connection as it draws children and adolescents away from their present experience and who they are with. When they are no longer present with their peers and family members, they are not able to connect with them in meaningful and authentic ways. Furthermore, youth can also be disconnected from their own internal experience and often rely on extrinsic factors to validate their self-esteem and self-worth. The SFEEP model offers an antidote to this way of connecting (or disconnecting) by providing youth with experiences of authentic and meaningful connection in nature that do not involve technology. Often, these experiences also lead students to feel more connected to themselves and help nurture the process of individuation and identity development.

Furthermore, the findings from this study revealed the positive influence of nature on child and adolescent development. Immersion in nature, through environmental education programming, helps to cultivate individual spirituality and community connectedness through experiences of profound and meaningful connection. These findings further supported previous

research, which has demonstrated the many benefits of nature and access to green space for children and adolescents, including improved mental well-being and overall health and cognitive development (McCormick, 2017; Vanaken & Danckaerts, 2018). Unfortunately, equitable access to green space is nonexistent in today's world and is heavily influenced by race/ethnicity and socioeconomic status. For example, neighborhoods comprised primarily of racial/ethnic minorities and neighborhoods that are socioeconomically disadvantaged have significantly less access to green spaces (Casey et al., 2017; Dai, 2011; Jennings et al., 2019). Not surprisingly, disparities in access to green spaces are also apparent in education. Although this school-based perspective is understudied when compared to a more residential perspective, Baró and colleagues (2021) found that schools located in the wealthiest neighborhoods in Barcelona generally had more green space and, by proxy, those schools with more green space often organized more nature-based outdoor activities, compared to schools with less exposure to nature. This research suggested that children from particular groups may never experience the health-related and developmental benefits that accompany proximity to greenspace. These are also the children who are most vulnerable due to the aforementioned systemic-level risk factors. In this regard, inequitable access to green space is not only a public health issue but also a major developmental concern. The findings from the current study support a call for scalable, sustainable changes in equitable access to green space because not having green space access is a developmental deprivation for children and adolescents.

With this knowledge, particularly regarding the profound impact that green space access has on child and adolescent development, school and city budgets should be altered to reflect these findings. Schools should increase the amount of funding they are allocating towards cultivating safe green spaces around the school building and increase the amount of funding

allocated to the development and maintenance of their environmental education programming. City budgets should also increase the amount of funding that is allocated for the creation of green spaces near schools. Key stakeholders should invest in green space development and environmental education programming to be proactive in supporting healthy child and adolescent development, and as a preventative approach to improving school safety. Whereas increasing school security funding is a reactive approach to school safety concerns, investing in green space development and environmental education programming is an alternative approach that takes into account the developmental needs of children and adolescents. Access to green space is a developmental necessity, and ensuring equitable access to green space is essential for healthy child and adolescent development.

References

- Adam, K. (2014). *A day in the life of a voyageur outward bound instructor*. Voyageur Outward Bound School. <https://vobs.org/blog/day-life-voyageur-outward-bound-instructor/>
- Adams, K., Bull, R., & Maynes, M. L. (2016). Early childhood spirituality in education: Towards an understanding of the distinctive features of young children's spirituality. *European Early Childhood Education Research Journal*, 24(5), 760-774. <https://doi.org/10.1080/1350293X.2014.996425>
- Agar, M. H. (2008). *The professional stranger: An informal introduction to ethnography* (2nd ed.). Emerald Group.
- The American School in Switzerland (TASIS). (2016). Outward Bound, an integral piece of a TASIS education. TASIS Blog. <https://switzerland.tasis.com/page.cfm?p=1549&newsid=525>
- Angrosino, M. (2007). *Doing ethnographic and observational research*. Sage.
- Ballantyne, R., Fien, J., & Packer, J. (2001). Program effectiveness in facilitating intergenerational influence in environmental education: Lessons from the field. *Journal of Environmental Education*, 32(4), 8-15. <https://doi.org/10.1080/00958960109598657>
- Baró, F., Camacho, D. A., Del Pulgar, C. P., Triguero-Mas, M., & Anguelovski, I. (2021). School greening: Right or privilege? Examining urban nature within and around primary schools through an equity lens. *Landscape and Urban Planning*, 208, 104019. <https://doi.org/10.1016/j.landurbplan.2020.104019>
- Barrable, A. (2019). Refocusing environmental education in the early years: A brief introduction to a pedagogy for connection. *Education Sciences*, 9(1), 61. <https://doi.org/10.3390/educsci9010061>
- Benson, P. L. (2006). The science of child and adolescent spiritual development: Definitional, theoretical, and field-building challenges. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 484-497). Sage.
- Benson, P. L., Roehlkepartain, E. C., & Rude, S. P. (2003). Spiritual development in childhood and adolescence: Toward a field of inquiry. *Applied Developmental Science*, 7(3), 205-213. https://doi.org/10.1207/S1532480XADS0703_12
- Benson, P. L., Scales, P. C., Syvertsen, A. K., & Roehlkepartain, E. C. (2012). Is youth spiritual development a universal developmental process? An international exploration. *Journal of Positive Psychology*, 7(6), 453-470. <https://doi.org/10.1080/17439760.2012.732102>

- Berger, L. M. (2005). Income, family characteristics, and physical violence toward children. *Child Abuse and Neglect*, 29(2), 107-133. <https://doi.org/10.1016/j.chiabu.2004.02.006>
- Berry, T. (2003). The new story. In A. Fabel & D. St. John (Eds.), *Teilhard in the 21st century: The emerging spirit of earth* (pp. 77-88). Orbis Books. http://thomasberry.org/assets/attachments/Thomas_Berry-The_New_Story.pdf
- Bethelmy, L. C., & Corraliza, J. A. (2019). Transcendence and sublime experience in nature: Awe and inspiring energy. *Frontiers in Psychology*, 10, 509. <https://doi.org/10.3389/fpsyg.2019.00509>
- Bourdeau, P. (2004). The man-nature relationship and environmental ethics. *Journal of Environmental Radioactivity*, 72(1-2), 9-15. [https://doi.org/10.1016/S0265-931X\(03\)00180-2](https://doi.org/10.1016/S0265-931X(03)00180-2)
- Bowers, A. W., & Creamer, E. G. (2020). A grounded theory systematic review of environmental education for secondary students in the United States. *International Research in Geographical and Environmental Education*, 30(3), 184-201. <https://doi.org/10.1080/10382046.2020.1770446>
- Brinkmann, S., & Kvale, S. (2015). *Interviews: Learning the craft of qualitative research interviewing* (3rd ed.). Sage.
- Bryan, J., Osendarp, S., Hughes, D., Calvaresi, E., Baghurst, K., & van Klinken, J. W. (2004). Nutrients for cognitive development in school-aged children. *Nutrition Reviews*, 62(8), 295-306.
- Button, T. M., Stallings, M. C., Rhee, S. H., Corley, R. P., & Hewitt, J. K. (2011). The etiology of stability and change in religious values and religious attendance. *Behavior Genetics*, 41(2), 201-210. <https://doi.org/10.1007/s10519-010-9388-3>
- Byrne, D. (2009). Case-based methods: Why we need them; what they are; how to do them. In D. Byrne & C. C. Ragin (Eds.), *The Sage handbook of case-based methods* (pp. 1-10). Sage.
- Carter, S., & Henderson, L. (2005). Approaches to qualitative data collection in social science. In A. Bowling & S. Ebrahim (Eds.), *Handbook of health research methods: Investigation, measurement and analysis* (pp. 215-229). Open University Press. <https://tinyurl.com/y4davphw>
- Casey, B. J. (2019). Healthy development as a human right: Lessons from developmental science. *Neuron*, 102(4), 724-727. <https://doi.org/10.1016/j.neuron.2019.03.035>

- Casey, J. A., James, P., Cushing, L., Jesdale, B. M., & Morello-Frosch, R. (2017). Race, ethnicity, income concentration and 10-year change in urban greenness in the United States. *International Journal of Environmental Research and Public Health*, *14*(12), 1546. <https://doi.org/10.3390/ijerph14121546>
- Chapman, A., Foley, L., Halliday, J., Barth, K. & Miller, L. (n.d.). *Nurturing spirituality in K-12 education*. [Manuscript submitted for publication]. Department of Psychology, Teachers College, Columbia University.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.
- Charmaz, K. (2008). Grounded theory as an emergent method. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of emergent methods* (pp. 155-172). The Guilford Press.
- Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Sage.
- Clarke, A. E. (2007). Grounded theory: Critiques, debates, and situational analysis. In W. Outhwaite & S. P. Turner (Eds.), *The SAGE handbook of social science methodology* (pp. 423-442). Sage.
- Chicago Wisdom Project. (2015). *Chicago Wisdom Project Program Curriculum*. Author.
- Chicago Wisdom Project. (2020). Website. <https://chicagowisdomproject.org>
- Coles, R. (1990). *The spiritual life of children*. HmH.
- Collins, W. A., & Laursen, B. (2004). Changing relationships, changing youth: Interpersonal contexts of adolescent development. *Journal of Early Adolescence*, *24*(1), 55-62. <https://doi.org/10.1177/0272431603260882>
- Copeland, W. E., Keeler, G., Angold, A., & Costello, E. J. (2007). Traumatic events and posttraumatic stress in childhood. *Archives of General Psychiatry*, *64*(5), 577-584. <https://doi.org/10.1001/archpsyc.64.5.577>
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage.
- Corcoran, P. B., Wohlpart, J., & Hollingshead, B. P. (Eds.). (2008). *A voice for Earth: American writers respond to the Earth Charter*. University of Georgia Press.
- Cotton, S., Larkin, E., Hoopes, A., Cromer, B. A., & Rosenthal, S. L. (2005). The impact of adolescent spirituality on depressive symptoms and health risk behaviors. *Journal of Adolescent Health*, *36*(6), 529. <https://doi.org/10.1016/j.jadohealth.2004.07.017>

- Cotton, S., Zebracki, K., Rosenthal, S. L., Tsevat, J., & Drotar, D. (2006). Religion/spirituality and adolescent health outcomes: A review. *Journal of Adolescent Health, 38*(4), 472-480. <https://doi.org/10.1016/j.jadohealth.2005.10.005>
- Crabtree, B. F., & Miller, W. L. (Eds.). (1999). *Doing qualitative research* (2nd ed.). Sage.
- Creswell, J. W. (2016). *30 essential skills for the qualitative researcher*. Sage.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Dai, D. (2011). Racial/ethnic and socioeconomic disparities in urban green space accessibility: Where to intervene? *Landscape and Urban Planning, 102*(4), 234-244. <https://doi.org/10.1016/j.landurbplan.2011.05.002>
- D'Aquili, E. G., & Newberg, A. B. (1993). Religious and mystical states: A neuropsychological model. *Zygon®*, *28*(2), 177-200. <https://doi.org/10.1111/j.1467-9744.1993.tb01026.x>
- Davis, T. L., Kerr, B. A., & Kurpius, S. E. R. (2003). Meaning, purpose, and religiosity in at-risk youth: The relationship between anxiety and spirituality. *Journal of Psychology and Theology, 31*(4), 356-365. <https://tinyurl.com/y3o953vp>
- de Souza, M., & Hyde, B. (2007). Spirituality of children and young people: A consideration of some perspectives and implications from research contextualized by Australia. *International Journal of Children's Spirituality, 12*(2), 97-104. <https://doi.org/10.1080/13644360701467386>
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2005). *The Sage handbook of qualitative research* (3rd ed.). Sage.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research* (4th ed.). Sage.
- Desrosiers, A., Kelley, B. S., & Miller, L. (2011). Parent and peer relationships and relational spirituality in adolescents and young adults. *Psychology of Religion and Spirituality, 3*(1), 39-54. <https://doi.org/cqsn92>
- Dokecki, P. R., Newbrough, J. R., & O'Gorman, R. T. (2001). Toward a community-oriented action research framework for spirituality: Community psychological and theological perspectives. *Journal of Community Psychology, 29*(5), 497-518. <https://doi.org/10.1002/jcop.1033>
- Dove, M. K., Zorotovich, J., & Gregg, K. (2018). School community connectedness and family participation at school. *World Journal of Education, 8*(1), 49. <https://digitalcommons.georgiasouthern.edu/ecology-facpubs/104>

- Earth Charter Initiative International Secretariat. (2005). *An Earth Charter guidebook for teachers*. Earth Charter International Secretariat.
- Earth Charter International. (2020a). *About us: What is the Earth Charter?* <https://earthcharter.org/about-the-earth-charter/>
- Earth Charter International. (2020b). *IV Democracy, nonviolence, and peace*. Earth Charter. <https://earthcharter.org/read-the-earth-charter/democracy-nonviolence-and-peace/>
- Elliott, R., & Timulak, L. (2005). Descriptive and interpretive approaches to qualitative research. In J. Miles & P. Gilbert (Eds.), *A handbook of research methods for clinical and health psychology* (pp. 147-159). Oxford. <https://tinyurl.com/y3jxf3uu>
- Emmel, N. (2013). *Sampling and choosing cases in qualitative research: A realist approach*. Sage.
- Erikson, E. H. (1968). *Identity: Youth and crisis* (No. 7). W. W. Norton.
- Erikson, E. H., & Erikson, J. M. (1998). *The life cycle completed* (extended version). W. W. Norton.
- Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59(2), 77-92. <https://doi.org/10.1037/0003-066X.59.2.77>
- Farley, J. P., & Kim-Spoon, J. (2014). The development of adolescent self-regulation: Reviewing the role of parent, peer, friend, and romantic relationships. *Journal of Adolescence*, 37(4), 433-440. <https://doi.org/10.1016/j.adolescence.2014.03.009>
- Fjørtoft, I. (2001). The natural environment as a playground for children: The impact of outdoor play activities in pre-primary school children. *Early Childhood Education Journal*, 29(2), 111-117. <https://dx.doi.org/10.1023/A:1012576913074>
- Fjørtoft, I. (2004). Landscape as playscape: The effects of natural environments on children's play and motor development. *Children, Youth and Environments*, 14(2), 21-44. <https://www.jstor.org/stable/10.7721/chilyoutenvi.14.2.0021>
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. Harper Collins.
- Frantz, C. M., & Mayer, F. S. (2014). The importance of connection to nature in assessing environmental education programs. *Studies in Educational Evaluation*, 41, 85-89. <https://doi.org/10.1016/j.stueduc.2013.10.001>
- Freeman, M. (2011). From 'character-training' to 'personal growth': The early history of Outward Bound 1941–1965. *History of Education*, 40(1), 21-43. <https://doi.org/10.1080/0046760X.2010.507223>

- Fuller, R. C. (2006). *Wonder: From emotion to spirituality*. University of North Carolina Press.
- Ginsburg, K. R. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, *119*(1), 182-191. <https://doi.org/10.1542/peds.2006-2697>
- Glaser, B. (2012). No preconception: The dictum. *Grounded Theory Review*, *11*(2), 1-6. <https://tinyurl.com/y3a5dh2z>
- Greening, L., & Stoppelbein, L. (2002). Religiosity, attributional style, and social support as psychosocial buffers for African American and White adolescents 'perceived' risk for suicide. *Suicide and Life-threatening Behavior*, *32*(4), 404-417. <https://doi.org/10.1521/suli.32.4.404.22333>
- Guest, G., & MacQueen, K. M. (Eds.). (2008). *Handbook for team-based qualitative research*. Rowman Altamira.
- Hair, N. L., Hanson, J. L., Wolfe, B. L., & Pollak, S. D. (2015). Association of child poverty, brain development, and academic achievement. *JAMA Pediatrics*, *169*(9), 822-829. <https://dx.doi.org/10.1001%2Fjamapediatrics.2015.1475>
- Hamman, D., & Hendricks, C. B. (2005). The role of the generations in identity formation: Erikson speaks to teachers of adolescents. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *79*(2), 72-75. <https://doi.org/10.3200/TCHS.79.2.72-76>
- Hart, T. (2006). Spiritual experiences and capacities of children and youth. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 163-177). Sage.
- Hay, D., Reich, K. H., & Utsch, M. (2006). Spiritual development: Intersections and divergence with religious development. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 46-59). Sage.
- Hestbaek, L., Andersen, S. T., Skovgaard, T., Olesen, L. G., Elmose, M., Bleses, D., ... & Lauridsen, H. H. (2017). Influence of motor skills training on children's development evaluated in the Motor skills in PreSchool (MiPS) study-DK: Study protocol for a randomized controlled trial, nested in a cohort study. *Trials*, *18*(1), 1-11. <https://doi.org/10.1186/s13063-017-2143-9>
- Hills, A. P., King, N. A., & Armstrong, T. P. (2007). The contribution of physical activity and sedentary behaviours to the growth and development of children and adolescents. *Sports Medicine*, *37*(6), 533-545. <https://doi.org/10.2165/00007256-200737060-00006>

- Hodge, D. R., Cardenas, P., & Montoya, H. (2001). Substance use: Spirituality and religious participation as protective factors among rural youths. *Social Work Research, 25*(3), 153-161. <https://doi.org/fx65cc>
- Hoffman, A. J., & Sandelands, L. E. (2005). Getting right with nature: Anthropocentrism, ecocentrism, and theocentrism. *Organization and Environment, 18*(2), 141-162. <http://www.jstor.com/stable/26162005>
- Hoffman, E. (1992). *Visions of innocence: Spiritual and inspirational experiences of childhood*. Shambhala.
- Holder, D. W., DuRant, R. H., Harris, T. L., Daniel, J. H., Obeidallah, D., & Goodman, E. (2000). The association between adolescent spirituality and voluntary sexual activity. *Journal of Adolescent Health, 26*(4), 295-302. [https://doi.org/10.1016/S1054-139X\(99\)00092-0](https://doi.org/10.1016/S1054-139X(99)00092-0)
- Hollis, J. L., Collins, C. E., DeClerck, F., Chai, L. K., McColl, K., & Demaio, A. R. (2020). Defining healthy and sustainable diets for infants, children and adolescents. *Global Food Security, 27*, 100401. <https://doi.org/10.1016/j.gfs.2020.100401>
- Jennings, V., Browning, M. H., & Rigolon, A. (2019). Urban green space at the nexus of environmental justice and health equity. In *Urban green spaces* (pp. 47-69). Springer, Cham. https://doi.org/10.1007/978-3-030-10469-6_4
- Johnson, B. (2002). On the spiritual benefits of wilderness. *International Journal of Wilderness, 8*(3), 28-32. <https://ijw.org/december-2002/>
- Joseph, R. (2001). The limbic system and the soul: Evolution and the neuroanatomy of religious experience. *Zygon®, 36*(1), 105-136. <https://doi.org/fqd6pk>
- Kellert, S. R. (1998). *A national study of outdoor wilderness experience*. Yale University School of Forestry and Environmental Studies. <https://files.eric.ed.gov/fulltext/ED444784.pdf>
- Kellert, S. R. (2006). Building for life: Designing and understanding the human-nature connection. *Renewable Resources Journal, 24*(2), 8-24. <https://tinyurl.com/y6cj7ca2>
- Kelley, B. S., Athan, A. M., & Miller, L. F. (2007). Openness and spiritual development in adolescents. In R. L. Piedmont (Ed.), *Research in the social scientific study of religion, 18* (pp. 1-33). Brill. <http://ndl.ethernet.edu.et/bitstream/123456789/73482/1/42.pdf.pdf#page=18>
- Kendler, K. S., Gardner, C. O., & Prescott, C. A. (1997). Religion, psychopathology, and substance use and abuse: A multimeasure, genetic-epidemiologic study. *The American Journal of Psychiatry, 154*(3), 322-329. <https://doi.org/10.1176/ajp.154.3.322>

- Kennard, D., & Northcutt, P. (Directors). (2013). *Journey of the universe* [Film].
- King, P. E., Clardy, C. E., & Ramos, J. S. (2014). Adolescent spiritual exemplars: Exploring spirituality in the lives of diverse youth. *Journal of Adolescent Research, 29*(2), 186-212. <https://doi.org/10.1177/0743558413502534>
- King, P. E., & Roeser, R. W. (2009). Religion and spirituality in adolescent development. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology: Individual bases of adolescent development* (pp. 435-478). John Wiley & Sons. <https://doi.org/10.1002/9780470479193.adlpsy001014>
- King, S. (n.d.). *Journey of the Universe teacher's guide for secondary schools*. Journey of the Universe, Thomas Berry Foundation. <https://tinyurl.com/y49e3v7x>
- Koenig, L. B., McGue, M., & Iacono, W. G. (2008). Stability and change in religiousness during emerging adulthood. *Developmental Psychology, 44*(2), 532-543. <https://doi.org/10.1037/0012-1649.44.2.532>
- Kolb, S. M. (2012). Grounded theory and the constant comparative method: Valid research strategies for educators. *Journal of Emerging Trends in Educational Research and Policy Studies, 3*(1), 83-86. <https://tinyurl.com/y6tgmsq5>
- Kopasz, M., Loessl, B., Hornyak, M., Riemann, D., Nissen, C., Piosczyk, H., & Voderholzer, U. (2010). Sleep and memory in healthy children and adolescents—A critical review. *Sleep Medicine Reviews, 14*(3), 167-177. <https://doi.org/10.1016/j.smrv.2009.10.006>
- Korpela, K. M. (1992). Adolescents' favourite places and environmental self-regulation. *Journal of Environmental Psychology, 12*(3), 249-258. <https://tinyurl.com/y2c9c6fc>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24*(1), 120-124. <https://doi.org/10.1080/13814788.2017.1375092>
- Kroger, J. (2005). Chapter ten: Identity development during adolescence. In G. R. Adams & M. D. Berzonsky (Eds.), *Blackwell handbook of adolescence* (pp. 205-226). Blackwell. <https://academic.udayton.edu/JackBauer/Readings%20595/Kroger.pdf>
- Leave No Trace Center for Outdoor Ethics. (2021). *The 7 principles*. <https://lnt.org/why/7-principles/>
- Leeming, F. C., Dwyer, W. O., Porter, B. E., & Cobern, M. K. (1993). Outcome research in environmental education: A critical review. *Journal of Environmental Education, 24*(4), 8-21. <https://doi.org/10.1080/00958964.1993.9943504>

- Lerner, R. M., Alberts, A. E., Anderson, P. M., & Dowling, E. M. (2006). On making humans human: Spirituality and the promotion of positive youth development. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 60-72). Sage.
- Levy-Warren, M. H. (1996). *The adolescent journey: Development, identity formation, and psychotherapy*. Jason Aronson.
- Louv, R. (2008). *Last child in the woods: Saving our children from nature-deficit disorder*. Algonquin Books of Chapel Hill.
- Matthew, D. B., Rodrigue, E., & Reeves, R. (2016, October 19). *Time for justice: Tackling race inequalities in health and housing*. Brookings. <https://www.brookings.edu/research/time-for-justice-tackling-race-inequalities-in-health-and-housing/>
- McCormick, R. (2017). Does access to green space impact the mental well-being of children: A systematic review. *Journal of Pediatric Nursing*, 37, 3-7. <https://doi.org/10.1016/j.pedn.2017.08.027>
- McLaughlin, K. A., Koenen, K. C., Hill, E. D., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2013). Trauma exposure and posttraumatic stress disorder in a national sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 52(8), 815-830. <https://dx.doi.org/10.1016%2Fj.jaac.2013.05.011>
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation* (3rd ed.). Jossey-Bass.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage.
- Miller, L. (2015). *The spiritual child: The new science on parenting for health and lifelong thriving*. Macmillan.
- Miller, L., Davies, M., & Greenwald, S. (2000). Religiosity and substance use and abuse among adolescents in the National Comorbidity Survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39(9), 1190-1197. <https://doi.org/10.1097/00004583-200009000-00020>
- Miller, L., & Gur, M. (2002). Religiousness and sexual responsibility in adolescent girls. *Journal of Adolescent Health*, 31(5), 401-406. [https://doi.org/10.1016/S1054-139X\(02\)00403-2](https://doi.org/10.1016/S1054-139X(02)00403-2)

- Monahan, K. C., Oesterle, S., & Hawkins, J. D. (2010). Predictors and consequences of school connectedness: The case for prevention. *The Prevention Researcher*, 17(3), 3-6. <https://tinyurl.com/y49f7osd>
- Naderifar, M., Goli, H., & Ghaljaie, F. (2017). Snowball sampling: A purposeful method of sampling in qualitative research. *Strides in Development of Medical Education*, 14(3), 1-6. <https://doi.org/d5nd>
- National Academies of Sciences, Engineering, and Medicine. (2019). *Fostering healthy mental, emotional, and behavioral development in children and youth: A national agenda*. The National Academies Press. <https://doi.org/10.17226/25201>
- Nawaz, S. (2011). The relationship of parental and peer attachment bonds with the identity development during adolescence. *FWU Journal of Social Sciences*, 5(1), 104-119. <https://search.proquest.com/docview/904638092/fulltextPDF/4D6C62F88427412BPQ/1?accountid=41157>
- Newberg, A. B., & d'Aquili, E. G. (2000). The neuropsychology of religious and spiritual experience. *Journal of Consciousness Studies*, 7(11-12), 251-266.
- Newberg, A. B., & Newberg, S. K. (2008). Hardwired for God: A neuropsychological model for developmental spirituality. In *Authoritative communities* (pp. 165-186). Springer. https://doi.org/10.1007/978-0-387-72721-9_8
- Nyborg, V. M., & Curry, J. F. (2003). The impact of perceived racism: Psychological symptoms among African American boys. *Journal of Clinical Child and Adolescent Psychology*, 32(2), 258-266. https://doi.org/10.1207/S15374424JCCP3202_11
- Outward Bound. (2021a). Website. <https://www.outwardbound.org>
- Outward Bound. (2021b). *Typical expedition design*. <https://www.outwardbound.org/group-programs/designing-a-program/>
- Outward Bound. (2021c). *The course experience*. <https://www.outwardbound.org/classic/outdoor-trips/outdoor-education-courses/>
- Outward Bound International. (2020). Website. <https://www.outwardbound.net>
- Pachter, L. M., & Coll, C. G. (2009). Racism and child health: A review of the literature and future directions. *Journal of Developmental and Behavioral Pediatrics: JDBP*, 30(3), 255-263. <https://doi.org/10.1097/dbp.0b013e3181a7ed5a>

- Paruthi, S., Brooks, L. J., D'Ambrosio, C., Hall, W. A., Kotagal, S., Lloyd, R. M., Malow, B. A., Maski, K., Nichols, C., Quan, S. F., Rosen, C. L., Troester, M. M., & Wise, M. S. (2016). Consensus statement of the American Academy of Sleep Medicine on the recommended amount of sleep for healthy children: Methodology and discussion. *Journal of Clinical Sleep Medicine: JCSM: Official Publication of the American Academy of Sleep Medicine*, 12(11), 1549-1561. <https://doi.org/10.5664/jcsm.6288>
- Paschall, K., & Bartlett, J. D. (2019, September 12). Child poverty declines even as disparities persist among the nation's youngest children. *Child Trends*. <https://www.childtrends.org/blog/child-poverty-declines-even-as-disparities-persist-among-the-nations-youngest-children>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.
- Pearce, M. J., Little, T. D., & Perez, J. E. (2003). Religiousness and depressive symptoms among adolescents. *Journal of Clinical Child and Adolescent Psychology*, 32(2), 267-276. https://doi.org/10.1207/S15374424JCCP3202_12
- Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology*, 52(2), 137-145. <https://doi.org/frrxcx>
- Ragin, C. C., & Becker, H. S. (Eds.). (1992). *What is a case? Exploring the foundations of social inquiry*. Cambridge University Press.
- Rasmussen, M., & Laumann, K. (2013). The academic and psychological benefits of exercise in healthy children and adolescents. *European Journal of Psychology of Education*, 28(3), 945-962. <https://doi.org/10.1007/s10212-012-0148-z>
- Revell, L. (2008). Spiritual development in public and religious schools: A case study. *Religious Education*, 103(1), 102-118. <https://doi.org/10.1080/00344080701807544>
- Rew, L., Thomas, N., Horner, S. D., Resnick, M. D., & Beuhring, T. (2001). Correlates of recent suicide attempts in a triethnic group of adolescents. *Journal of Nursing Scholarship*, 33(4), 361-367. <https://doi.org/10.1111/j.1547-5069.2001.00361.x>
- Rickinson, M. (2001). Learners and learning in environmental education: A critical review of the evidence. *Environmental Education Research*, 7(3), 207-320. <https://doi.org/10.1080/13504620120065230>
- Ritt-Olson, A., Milam, J., Unger, J. B., Trinidad, D., Teran, L., Dent, C. W., & Sussman, S. (2004). The protective influence of spirituality and "health-as-a-value" against monthly substance use among adolescents varying in risk. *Journal of Adolescent Health*, 34(3), 192-199. <https://doi.org/10.1016/j.jadohealth.2003.07.009>

- Rockefeller, S. C. (2008). Crafting principles for the Earth Charter. In P. B. Corcoran & A. J. Wohlpart (Eds.), *A voice for Earth: American writers respond to the Earth Charter* (pp. 3-23). University of Georgia Press.
- Roczen, N., Kaiser, F. G., Bogner, F. X., & Wilson, M. (2014). A competence model for environmental education. *Environment and Behavior, 46*(8), 972-992. <https://doi.org/10.1177/0013916513492416>
- Roehlkepartain, E. C., Benson, P. L., King, P. E., & Wagener, L. M. (2006). Spiritual development in childhood and adolescence: Moving to the scientific mainstream. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence*, (pp. 1-15). Sage.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal, 100*(5), 443-471. <https://www.jstor.org/stable/1002279>
- Rowling, L. (2008). Linking spirituality, school communities, grief and well-being. *International Journal of Children's Spirituality, 13*(3), 241-251. <https://doi.org/10.1080/13644360802236482>
- Rubenstein, B. L., Lu, L. Z. N., MacFarlane, M., & Stark, L. (2020). Predictors of interpersonal violence in the household in humanitarian settings: A systematic review. *Trauma, Violence, and Abuse, 21*(1), 31-44. <https://doi.org/10.1177/1524838017738724>
- Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Sage.
- Saldaña, J. (2016). *The coding manual for qualitative researchers*. Sage.
- Salmón, E. (2000). Kincentric ecology: Indigenous perceptions of the human-nature relationship. *Ecological Applications, 10*(5), 1327-1332. [https://doi.org/10.1890/1051-0761\(2000\)010\[1327:KEIPOT\]2.0.CO;2](https://doi.org/10.1890/1051-0761(2000)010[1327:KEIPOT]2.0.CO;2)
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*(5328), 918-924. <https://doi.org/10.1126/science.277.5328.918>
- Sandelowski, M., & Barroso, J. (2006). *Handbook for synthesizing qualitative research*. Springer.
- Santiago, C. D., Raviv, T., & Jaycox, L. H. (2018). *Creating healing school communities: School-based interventions for students exposed to trauma*. American Psychological Association. <https://psycnet.apa.org/doi/10.1037/0000072-000>

- Schein, D. (2014). Nature's role in children's spiritual development. *Children, Youth and Environments*, 24(2), 78-101. <http://www.jstor.com/stable/10.7721/chilyoutenvi.24.2.0078>
- Schwandt, T. A. (2001). *Qualitative inquiry: A dictionary of terms* (2nd ed.). Sage.
- Seden, J. (1998). The spiritual needs of children. *Practice*, 10(4), 57-67. <https://doi.org/10.1080/09503159808411504>
- Shiota, M. N., Keltner, D., & Mossman, A. (2007). The nature of awe: Elicitors, appraisals, and effects on self-concept. *Cognition and Emotion*, 21(5), 944-963. <https://doi.org/10.1080/02699930600923668>
- Skamp, K. (1991). Spirituality and environmental education. *Australian Journal of Environmental Education*, 7, 79-86. <https://www.jstor.org/stable/44656077>
- Slopen, N., & Williams, D. R. (2014). Discrimination, other psychosocial stressors, and self-reported sleep duration and difficulties. *Sleep*, 37(1), 147-156. <https://doi.org/10.5665/sleep.3326>
- Smith, J., & McSherry, W. (2004). Spirituality and child development: A concept analysis. *Journal of Advanced Nursing*, 45(3), 307-315. <https://doi.org/10.1046/j.1365-2648.2003.02891.x>
- Smith, T. E., & Knapp, C. E. (Eds.). (2011). *Sourcebook of experiential education: Key thinkers and their contributions*. Routledge.
- Smith-Sebasto, N. J., & Walker, L. M. (2005). Toward a grounded theory for residential environmental education: A case study of the New Jersey School of Conservation. *Journal of Environmental Education*, 37(1), 27-42. <https://doi.org/10.3200/JOEE.37.1.27-42>
- Stake, R. E. (1995). *The art of case study research*. Sage.
- Stapp, W. B. (1969). The concept of environmental education. *Environmental Education*, 1(1), 30-31. http://www.hiddencorner.us/html/PDFs/The_Concept_of_EE.pdf
- Stern, M. J., Powell, R. B., & Hill, D. (2014). Environmental education program evaluation in the new millennium: What do we measure and what have we learned? *Environmental Education Research*, 20(5), 581-611. <https://doi.org/10.1080/13504622.2013.838749>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques* (2nd ed.). Sage.
- Swimme, B. T., & Berry, T. (1992). *The universe story*. Arkana.
- Swimme, B. T., & Tucker, M. E. (2011). *Journey of the Universe*. Yale University Press.

- Taylor, A. F., Kuo, F. E., Spencer, C., & Blades, M. (2006). Is contact with nature important for healthy child development? State of the evidence. In C. Spencer & M. Blades (Eds.), *Children and their environments: Learning, using and designing spaces* (pp 124-140). Cambridge University Press. <http://faculty.une.edu/cas/szeeman/GK-12/articles/FaberTaylorKuo2006.pdf>
- Taylor, S. J., Bogdan, R., & DeVault, M. (2015). *Introduction to qualitative research methods: A guidebook and resource* (4th ed.). John Wiley & Sons.
- Templeton, J. L., & Eccles, J. S. (2006). The relation between spiritual development and identity processes. In E. C. Roehlkepartain, P. E. King, & L. M. Wagener (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 252-265). Sage.
- Trent, M., Dooley, D. G., Dougé, J., Cavanaugh, R. M., Lacroix, A. E., Fanburg, J., ... & Wallace, S. B. (2019). The impact of racism on child and adolescent health. *Pediatrics*, *144*(2). <https://doi.org/10.1542/peds.2019-1765>
- Trigwell, J. L., Francis, A. J., & Bagot, K. L. (2014). Nature connectedness and eudaimonic well-being: Spirituality as a potential mediator. *Ecopsychology*, *6*(4), 241-251. <https://doi.org/10.1089/eco.2014.0025>
- Tucker, M. E. (n.d.). *Journey of the universe: Providing an integrating story*. Thomas Berry and the great work. <http://thomasberry.org/publications-and-media/journey-of-the-universe-an-epic-story-of-cosmic-earth-and-human-transformation>
- Tung, C. Y., Huang, C. C., & Kawata, C. (2002). The effects of different environmental education programs on the environmental behavior of seventh-grade students and related factors. *Journal of Environmental Health*, *64*(7), 24-29.
- United Nations Environment Programme. (1978). *Final report, Intergovernmental Conference on Environmental Education*. <https://unesdoc.unesco.org/ark:/48223/pf0000032763>
- Vanaken, G. J., & Danckaerts, M. (2018). Impact of green space exposure on children's and adolescents' mental health: A systematic review. *International Journal of Environmental Research and Public Health*, *15*(12), 2668. <https://doi.org/10.3390/ijerph15122668>
- Wane, N. N., Manyimo, E. L., & Ritskes, E. J. (Eds.). (2011). *Spirituality, education and society*. Springer Science & Business Media.
- Weiss, R. S. (1995). *Learning from strangers: The art and method of qualitative interview studies*. Simon & Schuster.
- Wells, N. M., & Evans, G. W. (2003). Nearby nature: A buffer of life stress among rural children. *Environment and Behavior*, *35*(3), 311-330. <https://doi.org/b6wh6j>

- Wheeler, G., Thumlert, C., Glaser, L., Schoellhamer, M., & Bartosh, O. (2007). *Environmental education report: Empirical evidence, exemplary models, and recommendations on the impact of environmental education on K-12 students*. Washington Office of Superintendent of Public Instruction. <https://files.eric.ed.gov/fulltext/ED499818.pdf>
- Wisdom Projects, Inc. (2021). Website. <https://wisdomprojects.org/index.html>
- Wright, L. S., Frost, C. J., & Wisecarver, S. J. (1993). Church attendance, meaningfulness of religion, and depressive symptomatology among adolescents. *Journal of Youth and Adolescence*, 22(5), 559-568. <https://doi.org/cwqn79>
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Sage.
- Yin, R. K. (2018). *Case study research and applications* (6th ed.). Sage.
- Zelezny, L. C. (1999). Educational interventions that improve environmental behaviors: A meta-analysis. *Journal of Environmental Education*, 31(1), 5-14.
- Zhang, M. (2003). Links between school absenteeism and child poverty. *Pastoral Care in Education*, 2

Appendix A

CSE Private School Fellows Report Template

As Fellows of the CSE, we invite you to engage with the following materials during the upcoming months: 1) the template (described in detail below) 2) addendum items and 3) the school culture survey.

When you attach addendum items, please label them with one or more of the headings listed below (Mission & Philosophy, Strategic Plan, School Culture, Community Building, Faculty & Staff Training, Approaches, and Curriculum).

This work plan is designed to support all of the materials that were harvested during the CSE school site visits. If you could return this work plan and all of its components by November 16, 2018 it would be greatly appreciated. We extend our sincerest gratitude for your work on this initiative.

CSE Fellows Work Template:

I. Mission & Philosophy

Mission

Please state your mission statement.

Please provide examples of how your mission statement is known and lived within your school community.

Philosophy

What do *students* at your school believe about spirituality's place in education?

Please give examples and stories

What do the *adults* at your school believe about spirituality's place in education?

Please give examples and stories

What do other *stakeholders* (parents, alumni, board members etc.) believe about

spirituality's place in education? Please give examples and stories

II. Strategic Plan

Please include any relevant areas of your strategic plan (public overview) and consider sharing any relevant information related to spirituality, ethics and/or service

Please share any initiatives and priorities related to spiritual development within your strategic plan (directly or tangentially).

How well is your strategic plan known and understood by all stakeholders?

III. School Culture

Please give a brief description of your school culture and climate.

Please describe the predominant place of spirituality within your school culture.

Please give relevant stakeholders the attached survey.

Please share any anecdotal materials in the addendum that would help us better understand your school.

IV. Community Building

Please share programs and practices that foster spirituality within your school community.

Please feel free to add details and/or attach additional materials in the addendum.

V. Faculty & Staff Training

Please describe any formal faculty and staff training at your school and attach relevant addendum items (agendas, handbooks, retreat schedules and activities, service days, professional development policies and practices).

Please discuss frequency of faculty and staff training.

Please describe any informal faculty and staff training/mentorship that occurs at your school if any.

VI. Approaches

With consideration to the individualized feedback sheet that you received, please include descriptions and relevant addendum items related to key programs, practices and approaches to the implementation of spirituality in education within your school community.

Please share how you directly support spiritual and ethical development in students.

How does your school handle conflict and mistake-making? Please add a story or anecdote.

VII. Curriculum

While many of your courses are spiritual in nature, we are particularly interested in curriculum that is specifically designed with spiritual awareness and growth in students as one of its primary purposes and has a spiritual pedagogical through-line

Please offer a brief description of any curricula you include and provide relevant addendum items specific to spiritually-infused curriculum (syllabi, unit plans, sample

lesson plans, etc.). Please be sure to include courses listed on your school's individualized site visit sheet.

Please ask faculty to share stories (of any length) where they are deeply moved by a spiritual moment, connection and/or relationship with students. Please disidentify these stories. The purpose of these stories is to help people understand the possibility for spirituality in relationship to education.

Appendix B

CSE Public School Fellows Report Template

As Fellows of the CSE, we invite you to engage with the following materials during the upcoming months: 1) the template (described in detail below) 2) addendum items and 3) the school culture survey.

When you attach addendum items, please label them with one or more of the headings listed below (Mission & Philosophy, Strategic Plan, School Culture, Community Building, Faculty & Staff Training, Approaches, and Curriculum).

This work plan is designed to support all of the materials that were harvested during the CSE school site visits. If you could return this work plan and all of its components by November 16, 2018 it would be greatly appreciated. We extend our sincerest gratitude for your work on this initiative.

CSE Fellows Work Template:

I. Mission & Philosophy

Mission

Please state your mission statement.

Please provide examples of how your mission statement is known and lived within your school community.

Philosophy

What do *students* at your school believe about spirituality's place in education?

Please give examples and stories

What do the *adults* at your school believe about spirituality's place in education?

Please give examples and stories

What do other *stakeholders* (parents, alumni, board members etc.) believe about spirituality's place in education? Please give examples and stories

II. District Strategic Plan & School Goals

Please include any relevant areas of your strategic plan (public overview) and consider sharing any relevant information related to spirituality, ethics and/or service. Please share any initiatives and priorities related to spiritual development within your strategic plan or school's goals (directly or tangentially).

How well is your strategic plan and/ or school goals (direction) known and understood by all stakeholders?

III. School Culture

Please give a brief description of your school culture and climate.

Please describe the predominant place of spirituality within your school culture.

Please share any anecdotal materials in the addendum that would help us better understand your school.

Please share reflections and comments about obstacles/resistance/challenges you encountered and how you addressed those concerns.

IV. Community Building

Please share programs and practices that foster spirituality within your school community.

Please feel free to add details and/or attach additional materials in the addendum.

V. Spiritually Oriented Faculty & Staff Training

Please describe any formal spiritually oriented faculty and staff training at your school and attach relevant addendum items (agendas, handbooks, retreat schedules and activities, service days, professional development policies and practices).

Please discuss frequency of spiritually oriented faculty and staff training.

Please describe any informal spiritually oriented faculty and staff training/mentorship that occurs at your school if any.

VI. Approaches

Please include descriptions and relevant addendum items related to key programs, practices and approaches to the implementation of spirituality in education within your school community.

Please share how you directly support spiritual and ethical development in students.

How does your school handle conflict and mistake-making? Please add a story or anecdote.

VII. Curriculum

While many of your courses are spiritual in nature, we are particularly interested in curriculum that is specifically designed with spiritual awareness and growth in

students as one of its primary purposes and has a spiritual pedagogical through-line

Please offer a brief description of any curricula you include and provide relevant

addendum items specific to spiritually-infused curriculum (syllabi, unit plans, sample

lesson plans, etc.). Please be sure to include courses listed on your school's

individualized site visit sheet.

Please ask faculty to share stories (of any length) where they are deeply moved by a spiritual moment, connection and/or relationship with students. Please disidentify these stories. The purpose of these stories is to help people understand the possibility for spirituality in relationship to education.

Appendix C

Interview and Focus Group Discussion Guide

1. What are the main educational challenges of our time and/or what are the biggest issues your school/system is facing?
2. What does the term spirituality mean to you?
3. Do you think schools should actively and formally nurture a child's spiritual development?
4. What concerns do you have?
5. How do you think the different stakeholders would respond to such an initiative?
6. Do active and intentional/moral development practices have a role in a formal school setting?