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Mindfulness and the Environment: Engaging Teenagers in Conservation Education Introduction

Imagine sitting in the middle of a rainforest, entirely alone. There are no other people within eye or earshot, and there are no electronic devices to be found, including watches. To some people, this scenario might be frightening. To me, it is the moment I became the most captivated by nature. For four hours, in February 2003, I sat in one spot in an Australian rainforest, and for that moment, I was completely immersed in the sights, sounds, and experience of the world around me. All at once, I was both mindful of my surroundings and conscious of how little I knew about the world. I had just turned 21 years old, and it was the first time I actually felt truly connected to nature. One single afternoon shaped much of my experience and attitude of the environment from that day forward.

I am now a conservation educator, specializing in long-term classes for teenagers. While there are no rainforests in Pennsylvania, I aspire to provide a similar experience for my students: one that may inspire a feeling of nature connectedness that will carry with them throughout their lives. In an increasingly urban, technology dependant society, a connection with nature is becoming simultaneously less common and more important (Louv, 2011; Larson, Green, & Cordell, 2011). Through long-term conservation education classes, I seek to introduce teenagers to the natural world, foster their connection with nature, and hopefully, inspire the next generation of conservationists. By working within the local community and encouraging the kids to learn through inquiry, I already incorporate many principles of both community-based conservation and inquiry-based learning into the programs. Perhaps by incorporating mindfulness, as well, I can further increase my students' connection to nature.

Teenagers' Connection to Nature

Perhaps more than any generation in history, today's teenagers are reliant upon technology for a large portion of their daily routines. Everything from education to entertainment to communication and socialization can be done through an electronic medium. Though people of all age groups are currently exposed to technology and often use it on a daily basis, teens represent a unique demographic given that in addition to daily exposure to technology, electronic communication has been part of

their lives since the very beginning. They have never known a world in which they could not immediately speak with friends or family, find the answer to any question, or be electronically amused at a moment's notice. Perhaps this exposure to technology, while beneficial in many ways, could have its drawbacks.

In recent years, many concerns have been raised that the current generation of teenagers and children spend far less time outdoors and in nature than past generations (Louv, 2011). However, a study by Larson, Green, and Cordell (2011) suggests that this popular assumption may not be accurate. Children, in fact, are spending a significant amount of time outdoors, which may not actually differ from the amount of time previous generations spent outdoors as children. What has changed, however, is the amount of nature connectedness that occurs for the children playing outdoors. Modern children are faced with many more distractions than past generations, and while children may be in nature, they may not be experiencing nature through environmentally-based activities. A majority of children may actually spend their time outdoors using electronic media or simply hanging out with friends, rather than amusing themselves with, and involving themselves in, the outdoor world (Larson, et al., 2011).

While the study suggests that kids are not entirely removed from nature, they may not be experiencing nature in the same way their predecessors may have experienced it. Even though they may be physically present, by not engaging with nature, children may not be forming the connections necessary for building true concern for the environment (Nisbet, Zelenski, & Murphy, 2009). Simply being outside is not enough. They are not captivated, not mindful of their outdoor surroundings.

The question, then, becomes whether kids can truly care about something they are not fully experiencing. A recent study by Twenge, Campbell, and Freeman (2012), suggests that today's generation of teens and college-age individuals are less likely to place an importance on conservation and are less likely to have taken environmentally-friendly actions than past generations. It is possible that this decline in environmental action is due to societal pressures and other complex influences or values, but it is also reasonable to believe that the decline in pro-environmental attitude and acts is due to a lack of personal connections with nature (Twenge, et al., 2012). People love what they

know, and they protect what they love. If fewer children get to know and love the natural world, perhaps overall concern for the environment could decline in future generations.

People who feel more connected to nature tend to also rate higher in measurements of well-being, such as physical and psychological health (Howell, Dopko, Passmore & Buro, 2011). Therefore, it is essential not only for the future health of the planet, but also for the future health of children and society, for teenagers to become more engaged in environmental experiences. The challenge becomes discovering ways to reach students amid the distractions and ingratiate them to nature with positive experiences. When people have memorable, captivating experiences in nature, such as my own previously described scenario, they are more likely to place more importance on the source of that experience and form moral, actionable beliefs about protecting it (Cloke & Jones, 2003). Perhaps if environmental education programs purposely incorporate mindfulness into their curricula and activities, students may receive a more valuable education that will carry with them throughout their lives.

Mindfulness, Teens, and Environmental Education

Mindfulness is being fully present in the moment and conscious of one's surroundings and current happenings (Brown & Ryan, 2003). One's attention is enhanced, and the individual is completely open to experiences and present events (Brown & Ryan, 2003). In a culture of multitasking, constant networking through electronic media, and perpetual noise, mindfulness can be a means to becoming aware of the moment, connecting with the environment, and easing away some of the distractions (Cloke & Jones, 2003;Tingley, 2012). Though mindfulness is a concept traditionally tied to Buddhism, it is a state of consciousness and a technique that can be used by everyone on a daily basis, with very little effort (Brown & Ryan, 2003; Frauman, 2010). It is only a foreign concept to many people in our society because our culture does not value mindfulness the way it values multitasking. Fortunately, more and more scientists and educators are beginning to discuss the importance of mindfulness to both education and a healthy human experience.

Mindfulness in education is manifested by engaging students in interactive settings that can be controlled by, and are relevant to, the students (Frauman, 2010). Students become mindful when in control of their learning environment, and with this

mindfulness, students become more open to learning, enjoy novel experiences, and express greater satisfaction with, and retention of, the material (Frauman, 2010). Similarly, studies have demonstrated that direct engagement with nature in childhood contributes to well-being and positive attitudes about nature in adulthood (Louv, 2011; Larson, et al., 2011). Thus, engaging students in the environment can lead to mindfulness, which in turn, may lead to increased interest in, and care for, nature. Mindfulness and environmental education are ideally suited to work together, as one naturally begets the other.

Though mindfulness can be used by all educators to engage students and increase participation and retention, mindfulness in an outdoor environmental education setting seems to be a particularly natural fit. As discussed by Frauman (2010), outdoor settings allow for many opportunities of varied, interactive, and novel experiences for students, which can ultimately lead to mindful students and successful programs. By following "The Mindfulness Model for Outdoor Education Settings," environmental educators have a clear, intuitive method for creating or strengthening the mindfulness of their students. The model includes a flow chart instructing staff how to engage participants, suggesting that they tap into the students' prior knowledge to draw them in, encouraging them to provide a wide variety of interactive, personal, and novel experiences, and discussing how they can assess student interest throughout the program (Frauman, 2010). It is this model that I intend to employ with my own students.

Teen Programs at the Pittsburgh Zoo & PPG Aquarium: Community, Inquiry, & Mindfulness

At the Pittsburgh Zoo & PPG Aquarium, I coordinate two programs for teenagers, KidScience and Zoo U. As part of the KidScience program, a two-year conservation biology program for middle school students, teens utilize an off-site facility to partake in field experiences and activities. During the summer of their second year, KidScience students camp for four days at the Pittsburgh Zoo & PPG Aquarium's International Conservation Center (ICC) facility in Somerset County, Pennsylvania, approximately 90 miles away from the Zoo.

ICC Camp activities have included many field-based lessons, such as water quality testing, canoeing, fishing skills, map and compass course, animal tracking, and

forest ecology. Because the student groups consist of kids from all around Western Pennsylvania, the groups are typically made up of a range of personalities and background experiences, from those who have been camping since they were little to those who have never spent time outside of an urban area. One of the goals of ICC Camp is to allow the kids a safe way to step outside of their comfort zone and become immersed in nature as they may never have done before.

Throughout the camp week, students are introduced to the concepts of community-based conservation and inquiry. The students examine the issues facing the countryside surrounding the ICC, such as Marcellus Shale drilling, and discuss what the community response can and should be to those issues. Students also brainstorm ways they can become more involved in their own neighborhoods, schools, and families. Last year, as inspired by Earth Expedition field inquiry lessons, we incorporated field inquiry into the curriculum. The students were given access to an inquiry bag, and in small groups, they were allowed to explore and investigate comparative questions about their surroundings. Incorporating both topics has become an extremely successful addition to the program and both activities have been informed directly by my knowledge and experiences gained through the Global Field Program.

In just a few weeks, the next group of 2nd year KidScience students will be heading out to the ICC. This year, I will be incorporating yet another new lesson inspired by Earth Expeditions: mindfulness. Last month, in preparation for camp, students read and discussed, "An Unquiet Nation," by Julia Baird. The article, much like the Tingley (2012) article, discusses the disappearance of silent spaces or places entirely absent of human-induced sounds. The kids commented that they never realized how surrounded they are by human-created materials and noises, and many of them expressed anxiety at the idea of being without electronics for four days.

While at the ICC, I will remind the students of the article and discussion, as we will be in fairly quiet, remote countryside. We will savor the quiet together for a few minutes. Then, I will ask the kids to be aware of all human sounds they notice while in the field--airplanes, vehicles on far-away roads, farm equipment, et cetera. Later in the day, I will ask the kids to sit quietly in a field for approximately 10 minutes and focus on their surroundings. Students will record their impressions of each of the activities in their

camp journals. These activities will be done on the first day at the ICC, to introduce students to the camp experience and to ensure students are mindful of their surroundings throughout their week. Mindfulness will be a theme that will be present at all times, as not only will the kids be asked to be aware of their surroundings, but they will be fully engaged, involved, and asked to participate in every aspect of the program through techniques outlined by Frauman (2010). By its very nature, the camp provides novel experiences, and because it is a voluntary camp for long-term students, there will be some initial level of interest and familiarity with the course topics. I will build from these foundations to introduce the students to the concept of mindfulness, and I anticipate that though this is the fourth summer for the camp, this will be the most successful, memorable one yet.

By introducing students to community conservation issues, by allowing the students to explore on their own through inquiry, and now, by cultivating and fostering a mindful culture at the ICC, I hope to create an experience for my students that will stay with them into adulthood. Ideally, I will have some contribution in guiding them toward making informed, conservation-minded decisions in the future. Perhaps my students will learn to be mindful in other areas of their lives, as well. There are so many things vying for our attention all the time, it is easy to go through life without really experiencing it. Now that I've discovered mindfulness, I have attempted to incorporate it into my daily life and possibly my students will, as well. I aspire to be the pebble and my students, the ripples. Perhaps the next generation of conservationists will also become the next generation of mindful, engaged, and aware citizens.

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Discussion Questions:

- 1) Think of a time when you felt most connected to nature. Did mindfulness play a role in this experience? If so, were you aware of mindfulness at the time?
- 2) How can engaging students through inquiry-based learning foster mindfulness? How can you incorporate mindfulness in your classroom or workplace to increase productivity?
- 3) How can teenagers become more engaged in the environment on a daily basis? If they are using electronic media outdoors, is there a way educators can tap into this as a way to reach teens? Can teens be mindful while still using electronics?