

Wilderness 101: Structured Environmental Education on Backcountry Trips

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Abstract:

Environmental Education is a powerful tool that can be used to develop an understanding about the bigger picture in a natural environment. Literature suggest that it is the combination of multiple experiences and influences in nature that creates more environmentally informed citizens. By being exposed to formal and informal environmental education while on outdoor trips, people and participants can better understand the biological and environmental processes that occur in their landscape, why protecting ecosystems and landscapes are important, and how we as humans are impacting our landscape in positive and negative ways. In this study, I propose that adding structured environmental education on the College of Saint Benedict and Saint John's Universities pre-orientation Collegebound trip in the Boundary Waters Canoe Area (BWCA) can help people and participants develop a deeper appreciation and connection to their natural landscapes. This study analyzes existing literature on environmental education on and uses interviews conducted with adventure and environmental education professionals to identify proven methods of engaging and getting people outside and connected to their landscapes. Using those techniques, I developed an environmental education curriculum provided for this program that highlights topics and issues such as global climate change, landscape changes, water use/quality, and human impacts in the BWCA.

Methods: Collegebound Curriculum For BWCA

Topic	Curriculum Goals	Ways to Achieve Curriculum Goals
Climate Change	<ul style="list-style-type: none"> Identify how climate change is impacting the landscape in the BWCA specifically What changes can be made in our daily lives to help mitigate climate change 	<ul style="list-style-type: none"> Learn to identify 3 native coniferous species vs. 3 non-native deciduous species with a field guide book Talk about "Leave No Trace" principles and how they can transfer over from the backcountry to life at home to reduce our impacts on the environment
Landscape Changes	<ul style="list-style-type: none"> Identify what ways has the landscape of the BWCA been changed Are these changes good or bad? Develop an understanding of the local geology and lake formations of the BWCA 	<ul style="list-style-type: none"> Visit the burn area on the northern end of Seagull Lake and observe species that grow well in burned areas (i.e. blueberries) and aesthetics of the north vs south end of lake Read the article "It's written in the Rocks" to understand how the BWCA geology/lakes were formed and then stay at a campsite with granite outcrop on Seagull or Saganaga lake
Water Quality	<ul style="list-style-type: none"> Discuss how the water quality of the BWCA compare to other parts of Minnesota Compare how water quality of the BWCA compare to lakes at our home at CSB/SJU 	<ul style="list-style-type: none"> Use water clarity map created by the PCA of Minnesota to compare clarity of BWCA water vs water in central MN near CSB/SJU Have a discussion about what makes NE Minnesota have some of the cleanest lakes in MN compared to SE Minnesota Discuss how motorboats on Saganaga impact water quality
Human Impacts	<ul style="list-style-type: none"> Observe and discuss what kinds of ecological impacts humans have on the BWCA Discuss and reflect on how mining would affect the BWCA aesthetics and ecology of the landscape in the future 	<ul style="list-style-type: none"> Discuss while paddling what impacts creating campsites, portage trails, and outfitters have had on the landscapes ecology Have a debate around the fire to talk about the pros and cons of mining along the BWCA

Table 1: This table shows the four main topics of the environmental education curriculum developed for CSB/SJU's Collegebound program, as well as a simplified version of the curriculum goals and ways to achieve curriculum goals while in the backcountry of the BWCA.

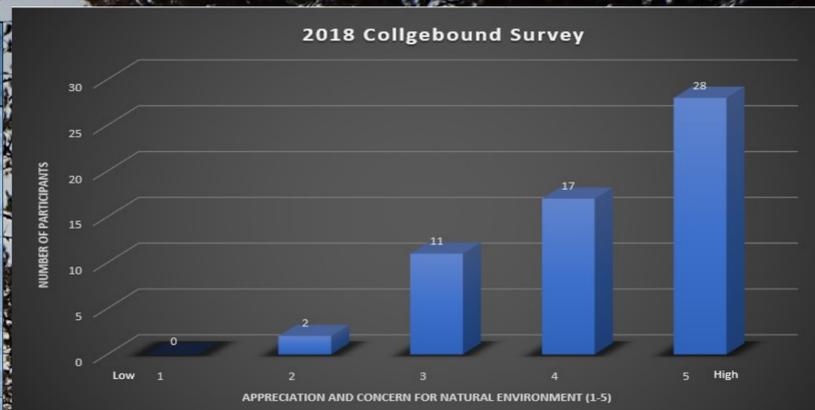


Figure 1: This graph shows the responses for CSB/SJU Collegebound participant's appreciation and concern for their natural environment in 2018 after their trip. 59 participants replied and their responses are shown on a scale of 1-5.

Collegebound Testimonies:

"I would recommend Collegebound to any incoming student no matter their personality or interests! It was such a wonderful trip!"

"My favorite part about Collegebound was getting to learn so many new things, as well as meeting so many new people going into freshman year!"

Environmental Education Benefits:

- Individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions
- Frequent and positive experiences in nature, especially in early childhood, have a major impact on the healthy growth of a persons mind, body, and spirit
- Environmental education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues
- Environmental education gets students outside and active, and helps address some of the health issues we are seeing in many people today, such as obesity, attention deficit disorders, and depression

Conclusion:

- Environmental education has proven to be an important aspect in developing deep connections with nature through continuous exposure, uses of senses to connect with surroundings, and place based education
- Connections with participants to their natural landscape is only going to happen if the effort is put in by participants, but by providing an environmental education curriculum for the Collegebound program in the BWCA, it can help guide them in making stronger connections with their local and natural landscapes



SJU Students on Collegebound (Photo By Author)

Effective Environmental Education Methods

- Teaching with place based Environmental education connects people with their landscape through cultural, natural history and real world problems happening locally.
- Environmental education curricula often uses all our senses when learning about a particular topic, which has been proven to be a more effective method of learning.
- Environmental education uses experiential and hands on learning such as field trips, nature walks, or projects to engage students within their local landscapes.