### Why are environmental education field studies important?

#### Environmental education is a great experience!

Outdoor and environmental education experiences make a significant impact on students. Experiences like Wahsega tend to be something they never forget and often recall as some of the best times of their lives!<sup>1</sup>

**Environmental education has been found to increase student achievement in science.** EE connects knowledge that students gain in the classroom with real word situations, allowing students to make new discoveries and understand their world on a whole new level.<sup>2</sup>

### Environmental education has been found to assist students in other subject areas as well.

It's been shown that environmental education reduces discipline and class management issues, increases student engagement in the learning process, facilitates student pride and promotes ownership in achievements.<sup>3</sup>

## Environmental education has also been shown to facilitate critical thinking skills as well as social and basic life skills.

Studies have found that more time spent out in nature promotes emotional well being, creates healthier bodies, helps ease the symptoms of ADD and AD/HD, and increases self-discipline.<sup>4</sup>

Environmental education creates an environmentally literate student population that will be equipped to handle the environmental issues of the present and future.

Across the board students are becoming more and more detached from the natural world, and this will only perpetuate the environmental problems we are currently facing. An education with a solid environmental foundation will help students creatively and effectively deal with current and future challenges.<sup>5</sup>

# Environmental education field studies help teachers and students build and strengthen relationships.

On an EE field study students are pushed outside of their comfort zone and make new social connections they may not otherwise have made. Field studies also help strengthen relationships between teachers and students, as students (often for the first and only time) see their teachers in a new light and situation – outside of the classroom and sharing in new experiences.

#### The need for environmental education has been nationally recognized.

Nearly 20 years ago we identified the need for environmental education when Congress passed the National Environmental Education Act of 1990. According to the act, Congress found that:

"There is growing evidence of international environmental problems, such as global warming, ocean pollution, and declines in species diversity, and that these problems pose serious threats to human health and the environment on a global scale."

#### and

"Effective response to complex environmental problems requires understanding of the natural and built environment, awareness of environmental problems and their origins (including those in urban areas), and the skills to solve these problems."

Congress also stated in the act: "It is the policy of the United States to establish and support a program of education on the environment, for students and personnel working with students, through activities in schools, institutions of higher education, and related educational activities, and to encourage postsecondary students to pursue careers related to the environment."

#### There is widespread support for environmental education.

The 2005 NEETF report stated that "95% of American adults (96% of parents) think environmental education should be taught in the schools, and 90% believe that people in the workplace and in other places in adult society should receive environmental education too. The persistence and strength of America's belief in environmental education seem to come directly from the hope for a cleaner, greener, and more balanced future." The report also found that "Annually, an estimated 30 million K-12 students and more than 1.2 million teachers participate in environmental instruction." That's a lot, but there are still so many more students that need to be given the opportunities and experiences environmental education offers!

#### For more information on environmental education visit the following sites:

Environmental Education Alliance of Georgia: <u>http://www.eeingeorgia.org/</u> The National Environmental Education Foundation: <u>http://www.neefusa.org/</u> The US Environmental Protection Agency's webpage for environmental education: <u>http://www.epa.gov/enviroed/</u>

The No Child Left Inside Coalition: <u>http://www.nclicoalition.org</u> The North American Association for Environmental Education: <u>http://www.naaee.org/</u> 1. "Participants in wilderness-oriented programs routinely report these experiences as among the "best in their lives." When that question is revisited several years later, the memory has grown fonder and a higher percentage of participants identify these programs as among their best lifetime experiences."

- Coyle, Kevin. "Environmental Literacy in America". National Environmental Education and Training Foundation (NEETF), September 2005.

http://www.neefusa.org/resources/publications.htm#neetfpubs

2. "The SEER study found that environment based education stimulated science interest (Hoody, 2002). All educators who observed thousands of children in these programs perceived improvements in the learning of science in both its 1997 and 2002 studies. While most students in integrated environment-based programs show improvements across the board, science is the one educational subject where 100% of the students improved. Moreover, 89% of educators perceived improvements in understanding of complex scientific systems."

- Coyle, Kevin. "Environmental Literacy in America". National Environmental Education and Training Foundation (NEETF), September 2005.

http://www.neefusa.org/resources/publications.htm#neetfpubs

3. According to SEER (The State Education and Environment Roundtable), "The *Closing the Achievement Gap* study examined 40 schools that had been using the environment as a context for teaching science, history/social science, English/language arts and math. Data came from site visits to all 40 schools, four different teacher surveys, interviews with more than 400 students and 250 teachers and administrators. The primary results reported in Closing the Achievement Gap included:

- higher scores on standardized measures of academic achievement in reading, writing, math, science, and social studies;
- reduced discipline and classroom management problems;
- increased student engagement and enthusiasm for learning; and,
- greater pride and ownership in students' accomplishments."

#### http://www.seer.org/pages/research.html

"For many, the idea that environment-based education advances reading and language skills seems less obvious than that it supports science learning or investigative skills. But 93% of educators observing students in environment-based programs report that the children read and write better as a result of the exposure. And 94% of them say the children in these programs communicate with one another much better (Hoody, 2002)." - Coyle, Kevin. "Environmental Literacy in America". National Environmental Education and Training Foundation (NEETF), September 2005.

http://www.neefusa.org/resources/publications.htm#neetfpubs

4. "A recent study of the effects of environment-based education on students' critical thinking and achievement motivation in Florida high schools found a significant positive relationship with respect to several standardized tests (Athman & Monroe, 2004)."
Coyle, Kevin. "Environmental Literacy in America". National Environmental Education and Training Foundation (NEETF), September 2005. http://www.neefusa.org/resources/publications.htm#neetfpubs

"Environment based learning is interdisciplinary, collaborative, student-centered, and hands-on. Not only did the students' performance improve on traditional measures of competence – earning higher grades and scoring better in reading, math, and writing – but their interest and motivation were also enhanced."

- "Setting the Standard, Measuring Results, Celebrating Successes: A report to Congress on the Status of Environmental Education in the United States." The National Environmental Education Advisory Council, March 2005.

"Two surveys of parents of children with Attention-Deficit/Hyperactivity Disorder have shown that performing activities in green settings can reduce the symptoms of AD/HD." - The University of Illinois at Urbana-Champaign Landscape and Human Health Laboratory http://www.herl.uiuc.edu/adhd.htm

"Results indicate that children function better than usual after activities in green settings and that the "greener" a child's play area, the less severe his or her attention deficit symptoms."

- Taylor, Kuo, and Sullivan."Coping with ADD: The Surprise Connection to Green Play Settings." <u>Environment and Behavior</u> Vol. 33 No. 1, January 2001 54-77.

Visit the No Child Left Inside Coalition's website, <u>www.nclicoalition.org</u> for more information on studies that have found environmental education beneficial to students.

5. "Effective environmental education can provide individuals with the knowledge, skills, and tools needed to address concerns about our health and environment while also enabling people to integrate this knowledge into sustainable social and economic planning."

- Setting the Standard, Measuring Results, Celebrating Successes: A report to Congress on the Status of Environmental Education in the United States. The National Environmental Education Advisory Council, March 2005.

6. The entire text of the National Environmental Education Act of 1990 can be found online at: <u>http://www.epa.gov/enviroed/whatis.html</u>