Powell, R.B., M.J. Stern, B.T. Frensley, and D. Moore (in prep). Identifying and measuring environmental education outcomes for the 21st Century. Intended journal: Environmental Education Research.

Environmental Education Outcomes for the 21 st Century (EE21)		
Outcome	Definition	Items
Enjoyment	Positive emotions toward an experience	1.How would you rate the program on a scale from 0 to 10?
Place connection	Appreciation and the development of personal relationships and meaning with the physical location and its story.	 Knowing this place exists makes me feel good. I want to visit this place again. I care about this place.
Learn	Knowledge regarding the interconnectedness and interdependence between human and environmental systems.	 How different parts of the environment interact with each other. How people can change the environment. How changes in the environment can impact my life. How my actions affect the environment.
Interest in Learning	Enhanced curiosity, as well as increased interest in learning about science, the environment, or civic	 Science. How to research things I am curious about. Learning about new subjects in school.

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engagement.

innovation.

Critical thinking and problem

collaboration; and creativity and

Individual purpose and identity as

solving; communication;

well as positive character traits. 2. Really made me think. Meaning/Self These may include a heightened 3. Made me realize something I never imagined before. Identity sense of purpose, gratitude, and 4. Made me think differently about the choices I make in my life. 5. Made me curious about something. optimism. Individuals' belief of their ability to: use critical thinking to solve 1. I believe in myself problems; make a difference in their Self-Efficacy 2. I feel confident I can achieve my goals community; address environmental 3. I can make a difference in my community. issues; and influence their environment. 1. I feel it is important to take good care of the environment Environmental Sensitivity, concern, and dispositions 2. Humans are a part of nature, not separate from it. towards the environment Attitudes 3. I have the power to protect the environment Intentions to perform behaviors Action 1. As a result of the program, do you intend to do anything relevant to the program's content or Orientation differently in your life? (yes/no) goals. Actions: 1. Help to protect the environment. Intentions to perform stewardship-Environmental 2. Spend more time outside. related behaviors. Stewardship 3. Make a positive difference in my community. 1. Listen more to other people's points of view. Actions: Cooperation and collaboration **Cooperation**/ 2. Cooperate more with my classmates. actions Collaboration 3. *Work together with other people to solve problems.* 1. Work harder in school. Actions: School Educational choices 2. Pay more attention in class.

1. Solving problems.

2. Using science to answer a question.

4. Knowing how to do research.

3. Listening to other people's points of view.

1. Taught me something **that will be useful to me** in my future.

[•] Optional item.

21st Century

Skills