

# ENVIRONMENTAL EDUCATION

MES/MPA ELECTIVE, WINTER QUARTER 2014

JEAN MACGREGOR

Course description: It is widely agreed that an environmentally literate and concerned citizenry is crucial to environmental quality and long-term sustainability --but how and where is environmental and sustainability literacy fostered? And where “environmental education” occurs, is it effective? This class will explore the history, philosophical underpinnings, and current trends in environmental and sustainability education for both youth and adults, in both formal sectors (schools and colleges) and non-formal ones.

This class will provide a theoretical and practical introduction to the field of environmental education and interpretation. It will be useful to those of you who are interested in environmental teaching as a career, or to those whose environmental work might involve education or outreach components.

**Meeting Times:** Winter Quarter, 2014. Eight Mondays 6-10 p.m. beginning January 6<sup>th</sup>  
Classroom: Seminar II E-3105. There will be an all-day field trip on Saturday, March 1st and *one additional class* (to prepare for the field trip) on Friday, February 28<sup>th</sup> ; this class will be offered twice (late afternoon & early evening) to accommodate your schedules.

**Special fees:** \$8 for admission to Northwest Trek Wildlife Park on March 1<sup>st</sup>.

**OUTCOMES: AT THE END OF THIS COURSE, YOU SHOULD HAVE:**

- A theoretical grounding in environmental and sustainability education: its precursors and history, its various rationales, and the working principles to which professionals aspire.
- A heightened awareness of the importance of fostering environmental and sustainability literacy.
- An introductory understanding of learning theory, and of educational settings which foster meaningful, lasting learning and personal engagement.
- A working knowledge of several arenas in which environmental and sustainability education is practiced, with attention to both the opportunities and challenges for volunteer and professional environmental educators.
- A framework for evaluation of educational programs.
- An understanding of the increasingly politically charged nature of environmental and sustainability education and implications for professional practice.
- Your own construction of the promise of environmental and sustainability education as well as some of its shortcomings and tensions----and a more nuanced "concept map" of the field.

## READING

### AT THE EVERGREEN BOOKSTORE

- John Dewey, *Experience and Education*. Collier Macmillan, 1938.
- Richard Louv, *Last Child in the Woods*. Algonquin Chapel Hill, 2006.
- Goleman, Bennett, and Barlow, *Eco Literate: How Educators are Cultivating Emotional, Social and Ecological Intelligence*. Jossey-Bass, 2012

### ON THE EVERGREEN MOODLE SITE

- The rest of the course reading will be posted on the college's Moodle site for you to download or read online.

## AT-A-GLANCE: COURSE SCHEDULE

Date	Topic
January 6	Opening class, introductions. Defining the purpose of environmental education.
January 13	The multiple strands of environmental and sustainability education Frameworks for evaluating program effectiveness.
<i>January 20</i>	<i>Martin Luther King Holiday</i>
January 27	The learning process and what fosters significant learning.
February 3	Environmental education in formal K-12 education; force field analysis of trends.
February 10	Bias, controversy and critics.
<i>February 17</i>	<i>Presidents' Day Holiday</i>
February 24	Our relationships to place and the living world
February 28	Principles and practices of environmental interpretation: this Friday afternoon class will be offered twice: 2:00 - 5:00 p.m. and 5:30 – 8:30 p.m.
March 1	All-day field trip to Northwest Trek Wildlife Park in Eatonville
March 3	Discussion of NW Trek's approaches and practices in interpretation; a look at the growing profession of interpretation worldwide.
March 10	Engaging adults in behavior change, environmental research, and environmental care.
March 13	Portfolios due.

## CLASS POLICIES:

*Class attendance:* Because we are a group of interdependent learners, attendance is not a matter of elective choice, but rather of community responsibility. If unforeseen difficulty prevents your arriving on time for class or your attending at all, please leave a message on my voice mail before the start of class: my TESC phone number is 360-867-6608. If you know in advance that you will be unable to attend a class, please talk with me about this well in advance.

*Inclement weather:* If there is a college closure, you will hear of it via KGY radio (1240 AM) in the morning or on the campus website. If you are uncertain about whether classes are being held, check the campus homepage, or call the college switchboard (360-867-6000). For those commuting long distances, use your own best judgment. Please err on the side of safety.

*Individual accountability:* Our learning in class is collaborative, but you are individually accountable for the work on which you will be evaluated. Do your own work, and fully and properly cite all your sources, such as written documents, personal interviews, or information gleaned from websites.

Plagiarism is grounds for no credit. Note, read and use the handout provided on avoiding plagiarism and the proper citation of sources; it is an excellent resource in general.

*Incompletes: Note!* As with all courses taught by the part-time studies faculty here at Evergreen, "incompletes" are not awarded. So, please turn in all your written work on time: each class evening, your completed writing assignment is your "ticket to class."

## CONTACT INFORMATION

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*"When asked if I am pessimistic or optimistic about the future, my answer is always the same: if you look at the science about what is happening on earth and aren't pessimistic, you don't understand the data. But if you meet people who are working to restore this earth and the lives of the poor and you aren't optimistic, you haven't got a pulse."*

- Paul Hawken, 2009

## SYLLABUS AND DUE-DATES FOR ASSIGNMENTS

### **WEEK 1, JANUARY 6**

Except for the first class evening, reading should be completed before the class; exceptions will be noted in the syllabus.

#### **Introductions to the class and to our learning community**

- 1) Introductions to each other and the class
- 2) Concept maps, defining EE's purpose
- 3) Overview of the course and assignments
- 4) Lecture: Precursors to Environmental Education

*Follow-up to tonight's class:* Spend a few minutes reading through the handout: "Concept Mapping" posted on Moodle for this week. This strategy can be useful for conceptualizing topics, for taking notes on your reading, as well as for planning papers.

### **WEEK 2, JANUARY 13**

Defining Environmental Education and Sustainability Education in the Shifting Landscape of Social Change, Educational Change and Environmental Needs and Imperatives.

CLASS EMPHASIS: *What are the comparative imperatives, the content and strategies for these intertwined field of environmental and sustainability education? How do we measure success?*

Also, we will get further oriented to the assignments that will come later in the course.

#### **Read the following for Assignment #1:**

##### **Environmental Education**

1. (M) The Roots of Environmental Education, by Ed McCrea
2. (M) Across the Spectrum\_EE, Chapter 1, "Foundations of Environmental Education"

##### **Environmental education's foundational documents**

3. (M) "The Concept of Environmental Education." William B. Stapp et al. *Journal of Environmental Education*, 1 (1). This was the first formal attempt to define and conceptualize environmental education. Stapp is considered a major father if not "*the* father" of EE and an internationally recognized pioneer in the field. (Pardon the gender-biased language in this essay: it is definitely a product of its times!)
4. (M) UNESCO Founding EE Documents:
  - a The Belgrade Charter, UN Conference, 1975. The first international conference on EE.
  - b Declaration of the Tblisi Conference, 1978. An even bigger international event in United Nations circles. It produced the first formal definitions/recommendations for EE. The Belgrade and Tblisi documents are still recognized as fundamental to the field and are often quoted.

More recent reports and commentary

6. (M) "Environmental Literacy in America: What Ten Years of NEETF/Roper Research and Related Studies Say about Environmental Literacy in the U.S." by Kevin Coyle. Skim through this. This report is a bit dated but my educated guess is that the data would be no different today.
7. (M) Environmental Literacy writing by David Orr. David Orr is a prolific writer on the importance of environmental and sustainability education. This PDF offers two chapters of one of his most seminal books. "What is Education For?" David W. Orr. *Ecological Literacy: Education and the Transition to a Postmodern World*. Albany, NY: SUNY Press, 1992. pp. 141-148. "Is Environmental Education an Oxymoron?" David W. Orr. *Ecological Literacy: Education and the Transition to a Postmodern World*. Albany, NY: SUNY Press, 1992. pp. 149-152.

**Sustainability Education**

1. From the Rio UN Conference on Environment and Development: read Agenda 21, Chapter 36 <http://www.gdrc.org/sustdev/un-desd/c36-a21.html> Like the early U.N. conferences in the 1970s, this Rio Summit produced the first major statement on sustainability education.
2. (M) "The Birth of Sustainability" from *The Sustainability Revolution: Portrait of a Paradigm Shift*, by Andres R. Edwards. Gabriola Island, BC, New Society Publishers, 2005. pp. 11-27.
3. (M) "What is Sustainable Development: Goals, Indicators, Values, Practices" Robert W. Kates, Thomas M. Parris, and Anthony A. Leiserowitz. *Environment: Science and Policy for Sustainable Development*, 47: 3, pages 8–21, April 2005. Another seminal article in the field.
4. (M) "Climate Change and Sustainable Development: The Response from Education, The Recommendations from the Alliance of Leading Education Institutes." December 2009.
5. (M) The Earth Charter and (M) Earth Charter History. The Earth Charter is not only a statement of goals for global sustainability; it represents a landmark process of convening people from all over the world to lay out an achievable vision of the future.

**OPTIONAL READING/RESOURCES on EVALUATION**

1. (M) "What is Backward Design?" and "What is a Matter of Understanding?" from *Understanding by Design*, by Grant Wiggins and Jay McTighe. Prentice-Hall, 2001.
2. Website: My Environmental Education Evaluation Resource Assistant: <http://meera.snre.umich.edu/>
3. *Evaluating Your Environmental Education Programs: A Workbook for Practitioners*, by Martha C. Monroe and Bora Simmons, 2009. This can be ordered from the North American Association for Environmental Education.

*"Human history becomes, more and more, a race  
between education and catastrophe."*

- H.G. Wells, 1920 -

### **WEEK 3, JANUARY 20**

*No class session – Martin Luther King Holiday*

*“One of the great liabilities of history is that all too many people fail to remain awake through great periods of social change. Every society has its protectors of status quo and its fraternities of the indifferent who are notorious for sleeping through revolutions. Today, our very survival depends on our ability to stay awake, to adjust to new ideas, to remain vigilant and to face the challenge of change.”*

- Martin Luther King, Jr. -

Reading for this week: two contemporary works on environmental and sustainability education:

- Goleman, Bennett, and Barlow, *Eco Literate: How Educators are Cultivating Emotional, Social and Ecological Intelligence*. Jossey-Bass, 2012
- (M) Unit 1 (the first 43 pages) of the PDF, document “LinkingThinking.” This is a PDF of a robust sustainability education curriculum from World Wildlife Fund Scotland. Stephen Sterling is a leading sustainability educator in the UK.

### **WEEK 4, JANUARY 27**

How People Learn and Implications for Designing Teaching and Learning Environments

#### CLASS EMPHASES

- *What makes learning meaningful and lasting? How should we be teaching?*
- *How do the emphases of Eco-Literate and LinkingThinking reinforce or depart from the emphases of the different kinds of environmental and sustainability education that we started with this quarter?*

TO PREPARE FOR THE JANUARY 27<sup>TH</sup> CLASS:

**Assignment #2.** Reflective essay on learning, and “not learning” and Dewey’s *Experience and Education*.

OPTIONAL READING to do after the class, if you are interested.

(M) “The Personal Context” in *Learning From Museums: Visitor Experiences and the Making of Meaning*, by John H Falk and Lynn D. Dierking. Altamira/Rowman and Littlefield, 2000. pp 15-33.

(M) “Notes on the Learning Process\_MacGregor”

## **WEEK 5, FEBRUARY 3**

Fostering Environmental Literacy in School Settings: Enabling Curriculum Reform with Committed Teachers, Supportive Resource Professionals and Multi-School Projects

CLASS EMPHASES: *Are schools promising settings for fostering environmental literacy? How do EE professionals support teachers? What is pushing this forward and holding it back?*

Guest speakers: Kathy Jacobson, Chehalis Basin Education Consortium, and Stephanie Bishop, Coordinator, South Sound GREEN.

**ASSIGNMENT #3 TO BRING TO CLASS:** Bring questions (with discussion of why they are significant to you) that emerge from these readings. We will pose them to our speakers.

### READINGS:

1. (M) "A Brief Overview of K-12 Public Schooling and Some Themes and Tensions Therein," by Jean MacGregor

#### EE with Younger Learners

2. (M) "Place-Based Education: Connecting Classrooms and Communities." David Sobel. The Orion Society, Nature Literacy Series Number 4, 2004. pp. 1-23
3. (M) "Deepening Children's Participation through Local Ecological Investigations," Paul Krapfel, Excerpts from In *Ecological Education in Action: On Weaving Education, Culture and the Environment*. Ed. by Gregory A. Smith and Dilafruz R. Williams. Albany: SUNY Press, 1999. pp. 46-64.

#### EE with Middle and High School Learners

4. (M) "Reaching Mainstream Teachers with Social Issues Education A Primer from the Front Lines," Wendy Church, Facing the Future Informational Paper, July 2009.

#### Report on Environmental Science Knowledge among Teens Worldwide:

5. "Green at 15? How 15 Year Olds Perform in Environmental Science and Geoscience" – a recent headline referring to this 2009 report was "Students Least Informed about Environmental Science Are Most Optimistic." Organization for Economic Cooperation and Development. Read at least the Introduction and Chapters 1. and 4.

### ADDITIONAL RESOURCES - BROWSE THESE SITES

Leadership from the Washington Office of the Superintendent of Public Instruction

Explore this website: <http://www.k12.wa.us/EnvironmentSustainability/>

Skim through the Environmental and Sustainability Literacy Plan on this website.

Leadership from Eco-Schools International and Eco-Schools USA led by the National Wildlife Federation: <http://eco-schools.org/> and

<http://www.nwf.org/Global-Warming/School-Solutions/Eco-Schools-USA.aspx>

## **WEEK 6, FEBRUARY 10**

### How Environmental Education has Faced Bias, Controversy, Critics and Political Attacks

CLASS EMPHASES: *What prompted the critique of environmental education in the 1990s? What are reasoned responses to this critique? What will happen as issues become even more contested in future decades? How can teachers engage students in constructive controversy? Where the political attacks just a Clinton-years phenomenon or will they happen again?*

This evening, we will be making plans for research and presentations on the last class evening. **If you have one, bring a laptop computer to class.**

#### **Complete Assignment #4 using the following reading:**

1. (M) The collection of articles, "Critiques of EE"

#### **Also to prepare for class,**

1. View the original video, Story of Stuff, which you can access at <http://storyofstuff.org/>
2. (M) Read the PDF, Story of Stuff in the News
3. Read (M) "Constructive Controversy: The Educative Power of Intellectual Conflict." by David Johnson, Roger Johnson, and Karl Smith. *Change*, 2000. pp.28-37.

## **WEEK 7, FEBRUARY 17**

### *No class session – Presidents' Day Holiday*

Homework for this week: get started with planning your research project; prepare to bring to turn in a paragraph about what you plan to research on February 24<sup>th</sup>.

## **WEEK 8, FEBRUARY 24**

### Developing connections to the living world and to "a sense of place"

CLASS EMPHASES: *What is it about special places that have the impact that they do? Are there patterns to the power of place? What are the implications for environmental education programs?*

#### **READING TO PREPARE FOR THIS CLASS:**

**Assignment #5. Reflections on your own relationship to place and a "remembered landscape," and response paper to *Last Child in the Woods* and items 2-5 below.**

1. Book, *Last Child in the Woods*. We will seminar on this book.
2. (M) Two articles from the Journal, *Children Youth and Environment*:  
 "Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism," by Nancy M. Wells and Kristi S. Lekies.  
*Children Youth and Environment* (16) 1. 1-24.  
 "Increasing Children's Freedom of Movement: Introduction." By Lia Karsten and Willem van Vliet. *Children Youth and Environment* (16) 1 69-73.



3. (M) The essay, “The Sense of Wonder”, by Rachel Carson
4. (M) “A Child’s Sense of Wildness” in *The Geography of Childhood: Why Children Need Wild Places*, by Gary Paul Nabhan and Stephen Trimble. Beacon Press, 1994. pp. 3-14.
5. (M) “Eden in a Vacant Lot: Special Places, Species, and Kids in the Neighborhood of Life.” by Robert Michael Pyle. In *Children and Nature: Psychological, Sociocultural and Evolutionary Investigations*, ed. by Peter H. Kahn and Stephen R. Kellert. Cambridge: MIT Press, 2002. pp 305-327..

#### OPTIONAL ADDITIONAL RESOURCES

6. (M) Charlotte’s Webpage: Why Children Shouldn’t Have the World at their Fingertips.” by Lowell Monke. *Orion*, September-October, 2005. pp. 23-31.
7. (M) “The Ecology of Grief,” Phyllis Windle. *Bioscience* 42 (5). pp. 363-366.
8. The Washington Dept of Fish and Wildlife’s program, “Watchable Wildlife” at: <http://wdfw.wa.gov/viewing/wildview.htm> (Note resources on nature tourism.)

### **FEBRUARY 28:** *Special Friday class session in preparation for March 1 Field Trip*

#### Non-formal Environmental Education: Interpretive Facilities and Interpretive Principles

EMPHASIS: *How do interpretive facilities such as museums, zoos, and aquariums foster environmental literacy?*

TO PREPARE FOR THE FEBRUARY 28<sup>TH</sup> CLASS AND THE FIELD TRIP ON MARCH 1<sup>ST</sup>

**Read the instructions for Assignment #6, which is due Monday, March 3<sup>rd</sup> and these readings:**

#### INTERPRETIVE PRINCIPLES & FREE-CHOICE LEARNING

1. (M) Read carefully and think Chapter 1, “Principles of Interpretation” from *Interpreting our Heritage* by Freeman Tilden; though originally published over 50 years ago, Tilden’s book on interpretation remains a classic in the field. (4<sup>th</sup> Edition, U. of North Carolina Press, 2007)
2. (M) “Gifts of Interpretation\_Beck & Cable.” This PDF contains the first four chapters of *The Gifts of Interpretation* by Larry Beck and Ted T. Cable (Sagamore Publishing, 2011).
3. (M) “Free-Choice Science Learning: Framing the Discussion,” by John H. Falk, in *Free-Choice Science Education: How We Learn Science Outside of School*, edited by John H. Falk. New York: Teachers College Press, 2001. pp. 3-20.

#### THE ROLE OF CONTEMPORARY ZOOS

4. (M) “Toward a Responsible Zoo Agenda.” Terry Maple. *Ethics on the Ark*. Washington, DC: Smithsonian Institution Press, 1995. pp.20-30.
5. (M) “Defining the Good Zoo.” Maple and McManamon. *Ethics on the Ark*, Washington, DC: Smithsonian Institution Press, 1995. pp. 219-232.
6. (M) “Zoo Conservation and Ethical Paradoxes.” Norton, Hutchins, Stevens and Maple. *Ethics on the Ark*, Washington, DC: Smithsonian Institution Press, 1995. pp. 1-9.

## **MARCH 1**

Saturday field trip to Northwest Trek Wildlife Park. We will depart from Parking Lot C at Evergreen at 8:00 AM and return by ~ 4:30 to 5:00 PM. Please bring \$8 for the entrance fee at the gate. Dress for the weather and bring equipment for taking notes outdoors. Also bring a sack lunch, and a beverage or \$\$ to buy a beverage at the café on site.

## **WEEK 9, MARCH 3**

Non-formal EE: Interpretive Principles in Action

Interpretation as a Growing International Phenomenon

CLASS EMPHASES: *How do interpreters and interpretive facilities such as zoos, parks, nature centers, museums and aquaria foster environmental literacy and deepen environmental attitudes and values?*

- NW Trek's interpretive practices and ways we would strengthen them.
- The world-wide expanding field of environmental interpretation.
- The Interpretive Guide Project at parks and protected areas in Siberia.

TO PREPARE FOR THIS CLASS:

- **Assignment #6, your analysis of the interpretive approaches at NW Trek.**

SUPPLEMENTARY, OPTIONAL READING

- (M) "The Personal Context" in Learning From Museums: Visitor Experiences and the Making of Meaning In the Moodle reading for Week 4.

## **WEEK 10, MARCH 10**

**In addition to preparing your presentation, please do this reading:**

READING ON SOCIAL MARKETING

1. The online book, *Fostering Sustainable Behavior: An Introduction to Community- Based Social Marketing* by Doug McKenzie-Mohr and William Smith. This book is online at the official website for community-based social marketing: [www.cbsm.com](http://www.cbsm.com) You will need to log into the website with a username and password to read the book. A hard copy of this book is for sale on this website, if you want to have it.

READING ABOUT CITIZEN SCIENCE

2. (M) "Citizen Science: Can Volunteers Do Real Research?" by Jeffrey P. Cohn. *BioScience*, 58(3):192-197. 2008. (Published by American Institute of Biological Sciences)
3. (M) "A New Dawn for Citizen Science." By Jonathan Silvertown. *Trends in Ecology and Evolution*, 24 (9). 2009.
4. (M) "Citizen Science as a Tool for Conservation in Residential Ecosystems." By Caron B. Cooper et al. *Ecology and Society*, 12 (2), 2007.

TONIGHT WILL BE DEVOTED TO YOUR PRESENTATIONS

***Bring potluck food!***

**PORTFOLIO DUE DATE AND EVALUATION**

THURSDAY, MARCH 13: *Portfolios due at my office (Seminar II-E3127) before 6 p.m.*

Your portfolio should include:

1. Your end-of-course reflection paper (Assignment #8)
2. Your draft self-evaluation.
3. All your written assignments with my feedback.

MARCH 14,15, AND 17 (FRIDAY, SATURDAY, AND MONDAY):

*Evaluation Conferences*