

ENVIRONMENTAL EDUCATION

MES/MPA ELECTIVE, FALL QUARTER 2015

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 environmental 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: Fall Quarter, 2015. Nine Wednesdays 6-10 p.m. beginning September 30th. There will be an all-day field trip on Saturday, October 24th and *one additional class* (to prepare for the field trip) on Friday, October 23rd. **Classroom:** Seminar II E-3105

Special fees: \$9 for admission to Northwest Trek Wildlife Park on October 24th.

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—as well as the challenges in—fostering environmental and sustainability literacy.
- An introductory understanding of learning theory and of educational settings which foster meaningful, lasting learning and personal engagement.
- A deepened sensitivity to the role of “place” and “place consciousness” might play in fostering intimacy, affinity, and responsibility for the living world.
- 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

TEXTS AT THE EVERGREEN BOOKSTORE

- John Dewey, *Experience and Education*. Collier Macmillan, 1938.
- Richard Louv, *Last Child in the Woods*. Algonquin Chapel Hill, 2006.

ON THE WORDPRESS SITE FOR THIS COURSE

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

AT-A-GLANCE: COURSE SCHEDULE

Date	Class Emphasis
September 30	Opening class, introductions. Our beginning concept maps—and questions that they prompt. Forerunners to environmental education
October 7	The emergence of environmental and sustainability education. Evaluation: practice with defining learning outcomes
October 14	The learning process and what fosters significant learning.
October 21	Our relationships to place and the living world.
Friday, Oct 23	Environmental interpretation: history, principles, and practices
Saturday Oct 24	All-day field trip to Northwest Trek Wildlife Park
October 28	Discussion of NW Trek's approaches and practices in interpretation Challenges for the interpretive profession Evaluation, continued
November 4	Environmental and sustainability education in K12 schools
November 11	<i>Veterans' Day – no class</i>
November 18	Environmental issue analysis Critiques and attacks on environmental education
November 25	<i>Thanksgiving week holidays – no class</i>
December 2	Class presentations
December 9	Class presentations
December 11	Portfolios due by 6 p.m.
December 14-17	Evaluation Week

CLASS POLICIES:

Please do read the course covenant. Here is some additional information:

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 for all your MES papers.

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

Designated smoking areas: As of September, 2015, Evergreen has become a non-smoking campus. That means that all forms of smoking, including cigarettes, e-cigarettes, and vaping, are prohibited on campus except in designated areas. We ask that you abide by this policy, and help to ensure that we all respect the impact that secondary smoke has on others in our community. The college's no smoking policy can be found at <http://collab.evergreen.edu/policies/node/237>.

The designated areas for smoking are:

1. Behind the Library Building
2. Between the COM Building and the Central Utility Plant
3. Behind the Seminar I Building (near the Carving Studio)
4. Behind the HCC (student housing)
5. In the MODS area (student housing)

A fragrance free environment: Also, because roughly one of every fifteen U.S. residents says they are at least mildly chemically sensitive, we also ask that you refrain from wearing scented products to class (perfume, aftershave, clothes strongly scented with perfumed fabric softener or wood smoke, etc.) The college's indoor air quality policy can be found at <http://www.evergreen.edu/policies/policy/airquality>. More and more workplaces are going fragrance free — it's a good idea to know how to do this. And thanks for being inclusive!

CONTACT INFORMATION

Jean MacGregor

Phone: 360.867.6608.

E-mail: macgjean@evergreen.edu

Office: Seminar II E-3127 (in the E-wing directly across walkway from our classroom wing)

“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

(WP) means that the document is on the WordPress Site

WEEK 1, SEPTEMBER 30

Reading to do in advance:

(WP) “Environmental Literacy in America: What Ten Years of NEETF/Roper Research and Related Studies Say about Environmental Literacy in the U.S.” Kevin Coyle. 2005. Read Chapters 1-7, which is through page 106 in the PDF. Although this report came out 10 years ago, most environmental educators believe the results would be pretty much the same today.

Introductions to the class and to our learning community

- 1) Introductions to each other and the class
- 2) Our beginning concept maps—and the questions they prompt
- 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: (WP) “Concept Mapping” posted on The WordPress site for this week. This strategy can be useful for conceptualizing topics, for taking notes on your reading, as well as for planning papers. And, you will be asked to create another concept map at the end of the course.

WEEK 2, OCTOBER 7

Defining Environmental Education and Sustainability Education in the Shifting Landscape of Social Change, Educational Change and Environmental Needs and Imperatives, and Practice with Defining Learning Outcomes

CLASS EMPHASIS: *What are the comparative imperatives, the content and strategies for these intertwined field of environmental and sustainability education? What kinds of learning outcomes are possible?*

Read the following for Assignment #1:

Environmental Education’s roots

1. (WP) “The Roots of Environmental Education,” Ed McCrea. 2006.
2. (WP) *Across the Spectrum_Environmental Education*. 2013. Read Chapter 1, “Foundations of Environmental Education.” Biedenweg et al. Read through page 14 in the PDF.

More, next page

Environmental education's foundational documents

3. (WP) "The Concept of Environmental Education." William B. Stapp et al. 1969. *Journal of Environmental Education*, 1 (1): 22-24. 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. (WP) UNESCO Founding EE Documents:
 - a. The Belgrade Charter, UN Conference, 1975. The first international conference on EE.
 - b. Declaration of the Tbilisi Conference, 1978. An even bigger international event in United Nations circles. It produced the first formal definitions/recommendations for EE. The Belgrade and Tbilisi documents are still recognized as fundamental to the field and are often quoted.
5. (WP) Environmental Literacy writing by David Orr. Orr is a major writer on the importance of environmental and sustainability education. This PDF offers two chapters from one of his most seminal books (*Ecological Literacy: Education and the Transition to a Postmodern World*. SUNY Press, 1992. The chapters are: "What is Education For?" 141-148 and "Is Environmental Education an Oxymoron?" 149-152.

Sustainable Development, Sustainability and 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> As with the early U.N. conferences on Environmental Education in the early 1970s, this Rio Summit produced the first major statement on sustainability education. This is a key historical document.
2. (WP) "What is Sustainable Development: Goals, Indicators, Values, Practices" Robert W. Kates, Thomas M. Parris, and Anthony A. Leiserowitz. 2005. *Environment: Science and Policy for Sustainable Development*, 47 (3): 8–21, A seminal article in the field.
3. (WP) "Sustainability: What's the Big Idea?" Daniel J. Sherman. 2008. *Sustainability: The Journal of Record*. 1 (3): 188-195. (The author teaches at U. of Puget Sound and is an active leader in my Curriculum for the Bioregion initiative.)
4. (WP) "Towards a Sustainable Well-being Society: From Principles to Applications." 2015. The authors of this piece are with Sitra, a fund in Finland that reports to the Finnish Parliament. This is one of the most current statements about sustainability and implications for education.
5. (WP) The Earth Charter (2000) and (WP) Earth Charter History (2009). 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.

WEEK 3, OCTOBER 14

How People Learn and Implications for Designing Teaching and Learning Environments

CLASS EMPHASES

- *What makes learning meaningful and lasting? How should we be teaching?*

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

READING

John Dewey’s *Experience and Education*

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

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

(WP) “Notes on the Learning Process_MacGregor” This is a summary of what we know about learning.

WEEK 4, OCTOBER 21ST

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?*

You need to get started by this week on your research project; prepare to bring to turn in a short report (a couple of sentences) about what your focus will be for your research presentation. Also bring any questions you have at this point.

Assignment #3. Reflections on your own relationship to place and a “remembered landscape,” and response paper to the reading below, and on the next page.

1. (WP) The essay, “The Sense of Wonder.” Rachel Carson. Originally published in 1965.
2. (WP) “Eden in a Vacant Lot: Special Places, Species, and Kids in the Neighborhood of Life.” Robert Michael Pyle. 2002. In *Children and Nature: Psychological, Sociocultural and Evolutionary Investigations*. Ed. Peter H. Kahn and Stephen R. Kellert. MIT Press, 305-327.
3. The book, *Last Child in the Woods*, Richard Louv. (We’ll seminar on this book).
4. (WP) “Place-Based Education: Grounding Culturally Responsive Teaching in Geographical Diversity,” David A. Gruenewald. 2008. In *Place-Based Education in the Global Age: Local Diversity*. Ed. David A. Gruenewald and Gregory A. Smith. Lawrence Erlbaum, 137-153.
5. (WP) “A Newt Note,” by Brian Doyle. 2010. In *Moral Ground: Ethical Action for a Climate in Peril*. Ed. Kathleen Dean Moore and Michael Nelson. Trinity University Press, 167-168.

6. (WP) Two articles from the Journal, *Children Youth and Environment*:
 “Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism,” Nancy M. Wells and Kristi S. Lekies. 2006. *Children Youth and Environment*. 16 (1): 1-24.
 “Increasing Children’s Freedom of Movement: Introduction.” Lia Karsten and Willem van Vliet. 2006. *Children Youth and Environment*, 16 (1): 69-73.

OPTIONAL - IF YOU HAVE A SENSE OF LOSS RELATED TO YOUR SPECIAL PLACE

3. (WP) “The Ecology of Grief,” Phyllis Windle. 1992. *Bioscience* 42 (5): 363-366.

FRIDAY OCTOBER 23RD

Special Friday class session in preparation for October 24th 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 OCTOBER 23RD CLASS AND THE FIELD TRIP ON OCTOBER 24TH

Read the instructions for Assignment #4 (due October 28th) and the following:

FREE CHOICE LEARNING and INTERPRETIVE PRINCIPLES

1. (WP) “Free-Choice Science Learning: Framing the Discussion,” John H. Falk. 2001. In *Free-Choice Science Education: How We Learn Science Outside of School*. Ed. John H. Falk. Teachers College Press: 3-20.
2. (WP) Read carefully 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. (4th Edition, U. of North Carolina Press, 2007)
3. (WP) “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).

THE ROLE OF CONTEMPORARY ZOOS

4. (WP) “Defining the Good Zoo.” Maple and McManamon. 1995. *Ethics on the Ark.*, Smithsonian Institution Press, 219-232.
5. (WP) “Zoo Conservation and Ethical Paradoxes.” Norton, Hutchins, Stevens and Maple. 1995. *Ethics on the Ark*, Smithsonian Institution Press, 1-9.

SATURDAY, OCTOBER 24TH

Saturday field trip to Northwest Trek Wildlife Park. We will depart from Parking Lot C at Evergreen promptly at 8:15 AM and return by ~ 4:30 to 5:00 PM. Bring \$9 for the entrance fee at the gate. Dress for the weather and bring equipment for taking notes outdoors, and a camera or binoculars if you'd like to. Also bring a sack lunch, and a beverage or \$\$ to buy a beverage at the café on site. If work or family responsibilities prevent you from attending, please get in touch with me about fulfilling this assignment in another way.

WEEK 5, OCTOBER 28TH

Non-formal EE: Interpretive Principles in Action

Program Evaluation (continued)

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 suggestions we have for strengthening them.
- Challenges for the interpretative profession.
- Program evaluation (continued)

TO PREPARE FOR THIS CLASS:

- **Assignment #4, your analysis of the interpretive approaches at NW Trek.**

SUPPLEMENTARY, OPTIONAL READING

- (WP) "The Personal Context." John H Falk & Lynn D. Dierking. 2000. In *Learning From Museums: Visitor Experiences and the Making of Meaning*. Altamira/Rowman and Littlefield, 15-33.
- (WP) Excerpts from *Legacy* magazine's themed issue on Interpreting Controversial Issues:
 - "Walking in their Shoes: A Naturalist's Guide to Interpreting Controversy" A.J. Chlebnik and Trent Redfield. 2014. *Legacy* 25(1): 6-8.
 - "Talking back at Washita" Robert Pahre. 2014. *Legacy* 25(1): 32-34
 - "The Infernal Emotion: Anger and Interpretation." S. Marisol Asselta. *Legacy* 25 (1): 35-37

OPTIONAL READING/RESOURCES on EVALUATION

If you plan to go into the EE field, all three of these resources are essential.

1. (WP) "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 book can be ordered from the North American Association for Environmental Education.

WEEK 6, NOVEMBER 4TH

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: **Meredith Lohr, Director of Washington Green Schools (confirmed) and Dixie Reimer, Instructional Coach, North Thurston Schools (invited).**

ASSIGNMENT #5 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. (WP) "A Brief Overview of K-12 Public Schooling and Some Themes and Tensions Therein" Jean MacGregor.

EE with Younger Learners

2. (WP) "Place-Based Education: Connecting Classrooms and Communities." David Sobel. 2004, The Orion Society, Nature Literacy Series Number 4: 1-23.
3. (WP) "'This is More Like Home'" Knowing Nature through Community Mapping." Susan Jagger. 2013. *Canadian Journal of Environmental Education*. 18: 173-189.

EE with Middle and High School Learners

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

Report on Environmental Science Knowledge among Teens Worldwide:

5. (WP) "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.

EE and Test Scores

6. "Improving Test Scores through Environmental Education: Is it Possible?" Oksana Bartosh et al. 2006. *Applied Environmental Education and Communication*, 5: 161-169.

ADDITIONAL RESOURCES - FAMILIARIZE YOURSELF WITH 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>

Washington Green Schools: <http://www.wagreenschools.org>

WEEK 7

No class session – November 11th is Veterans Day

Please use this week to make significant progress on your research project. Contact me by email if you need advice. However, I will be out of town from November 5-9, and not on email much.

WEEK 8, NOVEMBER 18TH

How Environmental Education takes up Problems and Issues
and How the Profession has Faced Critics and Political Attacks

CLASS EMPHASES: *What prompted the critique of environmental education in the 1990s and 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 issue analysis and constructive controversy?*

Complete Assignment #6 using the following reading:

1. (WP) 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 The Story of Stuff website; click on this link <http://storyofstuff.org/movies/> and scroll down the page to “The Story of Stuff” (2007)
2. (WP) the PDF, “Story of Stuff in the News.”
3. (WP) “Constructive Controversy: The Educative Power of Intellectual Conflict.” David Johnson, Roger Johnson, and Karl Smith. 2000. *Change*, 28-37.

WEEKS 9 AND 10, DECEMBER 2ND AND DECEMBER 9TH

These two class nights will be devoted to your presentations, and perhaps some additional presentations by guest speakers.

Assignment #7: Your class presentation and handout on your research. Reading is on the next page.

FOUNDATIONAL 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. You will need to log into the website and register with a username and password to read the book and download resources from this informative and very useful website. A hard copy of this book is for sale on this website, if you want to have it for future reference.

FOUNDATIONAL READING ABOUT CITIZEN SCIENCE

1. (WP) “Citizen Science: Can Volunteers Do Real Research?” by Jeffrey P. Cohn. 2008. *BioScience*, 58(3):192-197. Published by American Institute of Biological Sciences.
2. (WP) “A New Dawn for Citizen Science.” By Jonathan Silvertown. 2009. *Trends in Ecology and Evolution*, 24 (9): 467-471.
3. (WP) “Overview of Citizen Science” and “Projects and Possibilities: Lessons from Citizen Science Projects,” Janis L. Dickinson and Rick Bonney. 2012. In *Citizen Science: Public Participation in Environmental Research*. Ed. Janis L. Dickinson and Rick Bonney, Cornell University Press, 19-57.
4. (WP) “Citizen Science as a Tool for Conservation in Residential Ecosystems.” By Caron B. Cooper et al. 2007. *Ecology and Society*, 12 (2).

PORTFOLIO DUE DATE AND EVALUATION

FRIDAY, DECEMBER 11TH: *Portfolios due at my office (Seminar II-E3127) before 6 p.m.*

Assignment #8. Your portfolio should include:

1. Your end-of-course cognitive map and reflection paper.
2. Your draft self-evaluation.
3. All your written assignments with my feedback.

WEEK OF DECEMBER 14

- Evaluation Conferences
- By the end of this week, please post your self-evaluation and your faculty evaluation on your “my.evergreen.edu” site. Posting your self-evaluation is optional, but the faculty evaluation is required. I cannot award you credit for this course until your faculty evaluation has been posted, so please do this the week of December 14th.

The future is not some place we are going, but one we are creating.
The paths are not to be found, but made. And the activity of making
them changes both the maker and their destination.

-- John Schaar --

Two Kinds of Intelligence

There are two kinds of intelligence: one acquired,
as a child in school memorizes facts and concepts
from books and from what the teacher says,
collecting information from the traditional sciences
as well as from the new sciences.

With such intelligence you can rise in the world.
You get ranked ahead or behind others
in regard to your competence in retaining
information. You stroll with this intelligence
in and out of fields of knowledge, getting always more
marks on your preserving tablets.

There is another kind of tablet, one
already completed and preserved inside you.
A spring overflowing its springbox. A freshness
in the center of the chest. This other intelligence
does not turn yellow or stagnate. It's fluid,
and it doesn't move from outside to inside
through the conduits of plumbing-learning.

This second knowing is a fountainhead
from within you, moving out.

Jalal Ad-Din Rumi (1207-1273)