

Advanced Instructional Strategies for Place-based Environmental Education

CSS 563, Fall 2007



McCall Outdoor Science School
an experience for all learners

Instructor: Karla Bradley

Semester Credits: 3

Course Description:

This course will address concepts of outdoor science instruction for place-based experiential environmental education with students 9 – 13 years old. Field activities, in-class assignments, readings, journaling and modeling of teaching techniques make up the format of the course. The course focuses on methods for working with students in a field setting to help them develop understanding of ecological concepts and develop their sense of place.

Instructional Style:

This course assumes that each instructor at MOSS will bring a wealth of knowledge and experience in the fields of science, outdoor leadership and education. As such, interactions among peers are critical to the success of this learning experience. There will be opportunities for both individual and group work; collaboration among instructors will be actively encouraged in most projects. As instructor for this course, my aim is to serve as a resource for you in your personal development as a field instructor. Although I have outlined topics that I think are relevant and important to your development, I encourage you to bring me your ideas and negotiate content with me.

Course Goals:

- To give field instructors a foundation in instructional strategies appropriate for inquiry-based science in the outdoor classroom
- To provide opportunities for field instructors to build connections to this place
- To give instructors tools to help MOSS students make connections to their "places"
- To support a learning community that fosters the growth of reflective practitioners

Course Objectives:

At the end of this course and the teaching practicum, students will be able to

- use educational theory and philosophy to guide their teaching practice
- use educational theory and philosophy to interpret their teaching experiences
- think critically about the choices they make as educators
- act intentionally in their choices as educators

As part of this course, you will:

- Contribute to group discussions of course content and experiences in the field
- Share articles of interest to you and relevant to the course
- Complete in class projects and outside reading
- Complete an inquiry project
- Maintain a teaching journal
- Maintain a phenology journal
- Be observed by faculty and peers while teaching and receive feedback
- Create a portfolio that reflects your growth as a field instructor

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Course Content:

Theme 1: Survival skills (Orientation)

- Tips and tricks for taking kids outside
- "Classroom" management for the outdoors
- Using chaperones as allies
- 5th and 6th graders – cognitive and social development

Theme 2: The art and science of instruction:

- The process of learning: Constructivist learning theory
- Models of teaching
- Diverse Learners: Teaching to multiple intelligences and learning styles
- Questions: Stimulating thought through effective questioning strategies
- Assessment: Setting goals and measuring achievement

Theme 3: Place-based education:

- History of Environmental Education and MOSS' place within the continuum
- Philosophy of place-based education
- Connecting to place through service, art and science

Theme 4: The Reflective Practitioner:

- Field teaching observations and feedback
- Peer coaching
- Journaling
- Portfolio development

Evaluation:

- Teaching reflections (20%)
- Research project (20%)
- Participation in discussions and in-class projects (20%)
- Phenology (15%)
- Portfolio (25%)

* Grading is largely qualitative in this course. I will use rubrics for grading your journals, projects and discussions. These rubrics will be shared with you at the beginning of the course.

Texts:

- Into the Field (Leslie, Tallmadge, & Wessels, 1999)
 - Beyond Ecophobia (Sobel, 1996)
 - Other resources will be handed out in class
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| Meeting and Theme | Content | Assignments DUE |
|---|---|---------------------------------------|
| Orientation | • | |
| Orientation: "Classroom" management for the outdoors Theme: Survival skills | <ul style="list-style-type: none"> • circles, toasts, dumb games • team contracts • thinking about flow • wait time • discipline | Discussion of Last Child in the Woods |
| Orientation: Using chaperones as allies Theme: Survival skills | <ul style="list-style-type: none"> • Reflect on a situation where you have shared responsibility with another adult • Was the experience successful? Why or why not? • The importance of good communication with chaperones • The importance of establishing clear expectations from them, from you | |
| Orientation: Reflection tools Theme: The Reflective Practitioner | <ul style="list-style-type: none"> • Field teaching observations and feedback • Peer coaching • Journaling • Student interviews • Portfolio development | Start collecting portfolio items |
| Orientation: Phenology project Theme: Place-based education | <ul style="list-style-type: none"> • Introduction to phenology assignment | Choose a phenology topic |

Week 1

| Meeting and Theme | Content | Assignments DUE |
|--|--|---|
| Meeting 1: Monday (9:00 AM – 4:30 PM) | | |
| Housekeeping | <ul style="list-style-type: none"> • Introduction to the class • Setting up the Positive Learning Environment | |
| History of EE | <ul style="list-style-type: none"> • Philosophical foundations of environmental education • MOSS in the continuum | Read: Beyond Ecophobia |
| Becoming conscious Theme: The Reflective Practitioner | <ul style="list-style-type: none"> • Examining our assumptions about teaching and learning | Due during class: Object metaphor |
| Developing sense of place Theme: Place-based education | <ul style="list-style-type: none"> • Hike into PSP. Lineage maps, facilitating place-based, inquiry based education | Due during class: lineage map |
| Meeting 2: Tuesday (9:00 AM – 4:30 PM) | | |
| Models of teaching Theme: The art and science of instruction | <ul style="list-style-type: none"> • Group investigation and peer teaching of different models of teaching • Teach us something using this model • Feedback – how well was the model applied? | Read: handouts on models of teaching |

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| Meeting 3: Wednesday (9:00 AM – 4:30 PM) | | |
|---|---|---|
| Asking questions Theme: The art and science of instruction | Bloom's taxonomy Effective questioning strategies <ul style="list-style-type: none"> • What kinds of questions are there? • What kinds of questions do I ask? • Convergent vs. Divergent questioning • What kinds of questions get at different levels of cognition? • Review videos or observe field group | Read: Handout on questions (Chapter 9, Effective Teaching Methods) Due: Watch teaching video. In class: Reflection on your teaching video |
| Meeting 4: Thursday (9:00 AM – 4:30 PM) | | |
| Diverse Learners Theme: The art and science of instruction | <ul style="list-style-type: none"> • Multiple intelligences theory • Observation of a field group | Read: handouts Models of Teaching, Chapters 17 & 18 |
| Connecting to place through the arts Theme: Place-based Education | Multiple intelligences expedition <ul style="list-style-type: none"> • Drawing • Writing • Found art • Music? | Read: Into the Field (Leslie et al., 1999) |

Week 2

| Meeting 5: Wednesday (9:00 AM – 4:30 PM) | | |
|--|--|---|
| Individual inquiries Theme: The art and science of instruction | Presentations of individual inquiry projects | Due: Research project presentation |
| Social justice and EE Theme: Place-based education | Discussion of social justice and environmental education | Read: A Critical Pedagogy of Place (Gruenewald, 2003) |
| Service in our community Theme: Place-based Education | Preparing for our service project | |
| Meeting 6: Thursday (9:00 AM – 4:30 PM) | | |
| Assessing learning Theme: The art and science of instruction | How do I know they got it?? <ul style="list-style-type: none"> • Overview of assessment practices • Review of assessment at MOSS | Read: Carin & Bass, Chapter 6, handouts Due: Inquiry-day rubric (in class) |

Week 3 (presentation week)

| Meetings 7 & 8: TBD | | |
|--|---|--|
| Portfolio & Phenology presentations | Present final portfolios and phenology projects to the rest of the students | |

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Assessment

Separate rubrics will be given for each of these assignments

1. Teaching journal (20%)

You will be responsible for maintaining a daily teaching journal throughout the semester. The purpose of this journal is to reflect on your teaching experience and how what you are learning in class is informing your teaching.

Before your first teaching observation, I will ask to read your journal to date so I know what you have been thinking about. After your observation, you will complete another reflection that we will use as part of our debrief conversation. In these journal entries, I'm looking for:

- a) Quality / depth of reflection
- b) Use of theory / philosophy from class to interpret experiences
- c) Use of theory / philosophy from class and reflections from prior experience to guide new plans
- d) Use of reflection to guide new plans

2. Participation in discussion and in-class projects (20%)

We will use class time to discuss articles and readings and complete "learning projects" as a group. You will be assessed on:

- a) Your enthusiasm as a participant
- b) The quality (rather than quantity) of your contributions

3. Research project and presentation to peers (20%)

The purpose of this research project is to use scientific inquiry as a tool for learning more about how your students learn. You will use theory or philosophy that we have discussed in class to form a research question that can be investigated during your teaching week. You will be assessed on:

- a) The quality of your question
- b) The appropriateness of your methods
- c) The quality of reflection on your results
- d) How well you communicate your findings to the class

4. Phenology project (15%)

The purpose of the phenology project is to give you an excuse to go hang out in a beautiful spot, and to help you get in touch with the seasonal rhythms of a particular organism or phenomenon. You will be required to observe this organism or phenomenon over the entire semester, through both artistic and scientific methods. The form of your final product is flexible but must include (at a minimum) 3 pieces of writing, 2 pieces of "artistic" expression (drawing, photography, etc.), and 5 instances of data collection of some sort.

5. Portfolio (25%)