Using Non Formal Resources to Teach Science

New York University
Steinhardt School of Education
Department of Teaching & Learning
SciEd- GE. 2050 (3 credits)  Fall 2014

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Course Objectives:

In this course, students will explore a variety of non-formal settings in New York City. They will learn about available resources, consider their roles as teachers and learners, and link activities with inquiry, reflection and practice, through real world experiences in the field. The course is designed to expose formal and non-formal educators to field experiences and place based education. Students will learn and understand how to develop linkages between formal and non-formal learning.

Goals:

Students experience a variety of non-formal settings in our area that can be used to teach science and environmental issues and concepts.

Students will reflect on the relationship between formal and non-formal learning.

Students will develop field trip plans that can be used for teaching science or environmental science.
**Tentative Field Trip Schedule (Times Subject to Modification)**

- **Sept. 19** Orientation to Non-Formal Class (9:30-1:30) STEME Classroom
- **Sept. 26** * DEC – Citizen Science - The River Project (9:30 - 3:00)
  
  Guest Speaker, Chris Bowser, NYSDEC
- **Oct. 3** NYSOEA Conference NO CLASS
- **Oct. 15** Environmental Expo – Kimmel Center (5:00 p.m. -7:00 p.m.)
- **Oct. 17** ASTE NE Conference, Teachers College (CRISPS ONLY)
- **Oct. 17** Wildlife Conservation Speaker: Birutė Galdikas (ALL OTHER STUDENTS)
  
  19 University Pl. 11:00 a.m. -12:30 p.m.
- **Oct. 24** New York Botanical Garden 9:30 a.m. -12:30 p.m. 1:30 p.m- 3:30 p.m (independent exploration)
- **Oct. 31** Independent Site Visits
- **Nov. 7** New York Aquarium (TBD) (10:00-1:00)
- **Nov. 14** Independent Site Visits
- **Nov. 21** Central Park Zoo
- **Nov. 28** Thanksgiving (No Class)
- **Dec. 5** Final Class – Presentations Due (9-1:30) STEME Classroom

**Course Assignments:**

**Reflections:**

After each field trip a discussion forum will be set up on Blackboard where you can post your reflections on the visit from your vantage point (prospective teacher, environmental educator or classroom teacher). What did you learn from this non-formal organization? What impressed you about the site? What are some ways in which you might use the site to teach curriculum concepts in your area of focus? What questions did this experience raise for you? Include reflections on non-formal learning.

**Final Assignment:**

In teams you will design a short lesson plan unit that incorporates a non-formal setting that we have visited as a group or a site your group visits independently (approval required). Provide a brief

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description of the site and why you chose it. Identify the level of learners you are planning the unit for. Include a pre-trip, trip, and post-trip description demonstrating what you would do before the trip, during the trip and follow-up. How would you assess what the students have learned? You will present your field trip project on the last day of class. Be creative in how you present your field trip idea! Each member of the presentation team should have a role. You may include powerpoints, photos, video clips, or engage the class in a short activity that you might do prior to the visit. Sites must be pre-approved by Prof. Leou and Abder.

Grading

Class participation/attendance on all required trips 30%
Reflection on NYU classes after each visit 20%
Final Project – Field Trip Plan 40%
Group Presentation 10%

Additional Information

NEASTE Conference

The annual North East ASTE conference will be held at Teachers College. CRISP students are required to attend. CRISP students will present their work from their summer institute.

North East Association for Science Teacher Education  http://theaste.org/
http://theaste.org/meetings/2014-northeast-regional-meeting/

Wildlife Conservation Film Festival October 13-19, 2014, NYC

"Over 75 exceptional short and feature films. World premier screenings, celebrity guests, award winning film producers, with some of the world's most notable wildlife conservationists and scientists in attendance to speak with the audience."

Birutė Galdikas, is an anthropologist, primatologist, conservationist, ethologist, and author of several books relating to the endangered orangutan, particularly the Bornean orangutan.

"Born to be Wild" will be featured in the film festival. It documents orphaned orangutans and elephants and the extraordinary people who rescue and raise them saving endangered species one life at a time. Featured as IMAX 3D, 'Born to be Wild 3D' transports viewers into the lush rainforests of Borneo with world-renowned primatologist Dr. Birute Galdikas, and across the rugged Kenyan savannah with

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celebrated elephant authority Dame Daphne Sheldrick, and documents their efforts to rehabilitate and return these incredible animals to their habitat.

Environmental Education Advisory Council (EEAC) Annual Meeting will take place on Nov. Celebrating its 40th Anniversary this year! All are welcome.
http://www.eeac-nyc.org/about.asp

Useful Websites To The Following Sites

American Museum of Natural History www.amnh.org
The New York Botanic Garden http://www.nybg.org/
The River Project http://www.riverprojectnyc.org/
Black Rock Forest Consortium http://www.blackrockforest.org/
Solar One http://www.solar1.org/
NYU Wallerstein www.nyu.edu/wallerstein

Useful Books


Rubin, Laurie, (2013) To Look Closely: Science and Literacy in the Natural World, Stenhouse Publishers Portland, ME.

Sobel, David, (2004) Place-Based Education: Connecting Classrooms & Communities, Orion Society, Barrington, MA.

Other Policies

Accommodations for NYU Students with Disabilities

Any student attending NYU who needs an accommodation due to a chronic, psychological, visual, mobility and/or learning disability, or is Deaf or Hard of Hearing should register with the Moses Center for Students with Disabilities at 212-998-4980, 240 Greene St., www.nyu.edu/csd/

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Syllabus

While some portions of the syllabus are non-negotiable, it should be considered a working document that may adjust to fit the needs of the class community, of which we are all members. You will be alerted in person and/or via NYU Classes as changes are made.

Attendance Policy

Attendance is expected in this course. Material is presented in class that is unavailable in assignment readings. There are no texts or notes that can substitute for the discussion and interaction that will take place in class. Please be on time. You are responsible for turning in assignments when they are due and for knowing information announced in the class, whether you were present or not. It is your responsibility to obtain handouts, assignments, and information you missed when you are absent.

The following is adapted from the NYU Steinhardt Student’s Guide (p. 24) and form the policies and Procedures of the NYU Expository Writing Program:

The relationship between students and faculty is the keystone of the educational experience in the Steinhardt School at New York University. This relationship takes an honor code for granted. Mutual trust, respect, and responsibility are foundational requirements. Thus, how you learn is as important as what you learn. A University education aims not only to produce high quality scholars but also to cultivate honorable citizens.

Academic integrity

Academic integrity is the guiding principle for all that you do; from taking exams, making oral presentations, to writing term papers. It requires that you recognize and acknowledge information derived from others, and take credit only for ideas and work that are yours. You violate the principle of academic integrity when you:

• Cheat on an exam;

• Submit the same work for two or more different courses without the knowledge and the permission of all professors involved;

• Receive help on a take-home examination that calls for independent work;

• “Collaborate" with other students who then submit the same paper under their individual names.

• Give permission to another student to use your work for a class.

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Plagiarism

Plagiarism is one of the gravest forms of academic dishonesty in university life, whether intended or not, is academic fraud. In a community of scholars, whose members are teaching, learning, and discovering knowledge, plagiarism cannot be tolerated. Plagiarism is failure to properly assign authorship to a paper, a document, an oral presentation, a musical score, and/or other materials, which are not your original work. You plagiarize when, without proper attribution, you do any of the following:

- Copy verbatim from a book, an article, or other media;
- Download documents from the Internet;
- Purchase documents;
- Report from others’ oral work;
- Paraphrase or restate someone else’s facts, analysis, and/or conclusions;
- Copy directly from a classmate or allow a classmate to copy from you.

For a very helpful self-test on what constitutes plagiarism, please visit

http://www.indiana.edu/~istd/practice.html