

Request for Proposals

Curriculum Development Specialist for the Fenner Field School
Lansing, MI

Issue Date: April 28, 2011

Deadline for submissions: May 6, 2011

Proposed Schedule

April 28, 2011	RFP issued and distributed
May 6, 2011	Deadline for submission of proposals All paper media proposals should be sent to: Fenner Conservancy Attn: Jason Meyer 2020 E. Mt. Hope Ave. Lansing, MI 48910 Proposals can also be sent by email to: meyerja4@gmail.com All email correspondence should have a subject line of: “Fenner Field School RFP Correspondence”
May 9, 2011	Selection of Contracting Curriculum Development Specialist
May 12, 2011	Project work begins upon acceptance of signed contract
May 23, 2011	Progress Report for Session I: Wetland Ecosystem and Native Americans
May 31, 2011	Final Curriculum Package for Session I: Wetland Ecosystem and Native Americans
June 13, 2011	Progress Report for Session II: Woodland Ecosystem and Early Settlers
June 30, 2011	Final Curriculum Package for Session II: Woodland Ecosystem and Early Settlers

All deadlines are 4:00 pm on the date indicated.

Introduction to Project

Organization History

Fenner Conservancy became a 501(c)3 nonprofit in 1980 to raise money and perform service in support of Fenner Nature Center, which is a city park in Lansing, Michigan. In 2008, the city-employed director retired and the city budget could not support the hiring of a replacement. To avoid the closing of the nature center, Fenner Conservancy entered into an agreement with the city and is now the managing entity that keeps the facility staffed and is responsible for programming and raising the funds required to operate the center. This organization ensured that the community did not lose this vital resource for environmental education that reaches a large underserved population and hired its first executive director in 2010 to lead the organization through the change from a volunteer support group to the managing entity of the nature center. Innovative programming, like the Fenner Field School, must continue to be developed and implemented to sustain the positive momentum that is building.

Background Information

We believe that a deeper understanding of the environment, and the role that humans play in shaping it, can only come from in-depth, hands-on personal experiences. The Fenner Field School will allow students to forge a richer connection with the environment over a longer period of time than traditional day camps by offering substantial academic learning not found in other types of camp experiences. While many nature centers offer camps, the idea of a field school with substantial academic learning is new. This program aims to significantly contribute to individual academic achievement as well as enhance environmental citizenship and aspiration towards environmental careers.

Appreciating the whole in nature requires an examination not just of the parts, but also of how those parts all fit together, so we want to go several steps further with our offerings than other typical camps. We want students to move from simply experiencing nature to intellectual understanding of nature. Students will develop knowledge and research skills through environmental learning modules that integrate science, mathematics, reading, writing, art, and cultural studies. Students will explore our human history in the environment, while personally reflecting on ways that they can make a tangible difference in the future of the environment on a local level. Unlike other camps in our area, we will offer young people a chance to actually make a difference by leading service learning projects such as habitat improvement, trail maintenance, having opportunities to develop interpretive materials, and more.

Through their experience at the Fenner Field School, students will begin to piece together the web of life and to understand the meaning of community on various levels as they study nature and history, evoking a sense of discovery and wonder about our place on earth. They will learn to recognize the changes in our fascinating landscape over the seasons and the centuries, identify native and invasive plants, birds and animals, work to control invasive species, and rehabilitate denuded habitats. In addition to the subject areas referenced above, students will also develop their critical thinking, teamwork, and artistic skills, all while hiking, fishing, and exploring the largest tract of urban green space and natural area that the city of Lansing has to offer.

Need and Benefit of Fenner Summer Field School

Need: The greater Lansing area, which has a population of nearly 500,000 people, has very few organizations that offer summer academic programs for children in grades K-8, and none that offer an academic experience focusing on the environment. Summer school is available beginning at the middle school level for students who have failed courses and there are private tutoring programs such as Kaplan Academic. The nearby university offers a few week-long academic experiences with limited enrollment. While there are a variety of camps in the area, none of these programs involve any reading, writing or any content learning in areas such as science and mathematics.

Academic benefit: During the course of a summer, children typically lose two months of academic competence and return to school with fewer skills than when they left in June. While summer learning in general is important, learning that integrates nature and outdoor classrooms produces particularly high gains. Studies show that schools that use outdoor classrooms and other forms of experiential education produce significant student gains in social studies, science, language arts, and math. One 2005 study by the California Department of Education found that students in outdoor science programs improved their science testing scores by 27 percent. The Fenner Field School can help children not only maintain but gain academic skills during the summer months, and link these skills to hands-on experience with natural spaces in their hometown.

Self-esteem, problem solving, and motivation: The benefits go beyond test scores. According to a range of studies, children in outdoor-education settings show increases in self-esteem, problem solving, and motivation to learn. Yet, a 2010 longitudinal study by Hofferth and Sadberg found that children under 13 living in the United States spend on average only about half an hour of unstructured time outdoors each week. In a typical week, only 6 percent of children ages 9 to 13 play outside on their own. “Natural spaces and materials stimulate children’s limitless imaginations, and serve as the medium of inventiveness and creativity,” says Robin Moore, an international authority on the design of environments for children’s play, learning, and education. Studies of children in schoolyards with both green areas and manufactured play areas found that children engaged in more creative forms of play in the green areas, and they also played more cooperatively. Recent research also shows a connection between the length of children’s attention span and direct experience in nature. Studies at the University of Illinois show that time in natural settings significantly reduces symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in children as young as age five. The research also shows the experience helps reduce negative stress and protects psychological well-being, especially in children experiencing the most stressful life events.

Physical and emotional development: Richard Louv's 2005 book The Last Child in the Woods: Saving Our Children from Nature Deficit Disorder presents an extensive body of research showing that experiences in nature are essential for a child's healthy physical and emotional development and that such experiences are increasingly infrequent among the current generation of children. What Louv calls "nature-deficit disorder" has contributed to rising incidence of a host of disorders in the young: ADD/ADHD, teen depression and suicide, and obesity. On the other side of the coin, he offers an impressive list of creative thinkers whose formative years were shaped by a deep fascination with nature and wildlife, including Thomas Edison, Jane Goodall, and Cesar Chavez.

Future citizens must be environmentally literate: Louv suggests that, having missed the chance to interact and bond with nature as children, the next generation of adults may neither know nor care about such things as the environment, biodiversity, or sustainability. At a moment in history when mankind is urgently called upon to become more sensitive to the needs of the planet, nature deficit disorder could produce a whole generation of future adults who may be unprepared to rise to the challenge.

Childhood nature experiences contribute to natural science-based career choices: Since the 1970s, undergraduate enrollment in traditional conservation and natural resource programs fell by half, according to research conducted by Terry Sharik, a professor at Utah State's College of Natural Resources. Sharik points to decreased physical involvement of children in nature as one of the prime reasons. Conservation agencies have had a particularly hard time attracting more culturally diverse employees and members from inner cities and small towns. For all the recruitment shortcomings, Sharik and Cheryl Charles, now president of the Children & Nature Network, who organized a conference last year on what she calls "the coming brain drain in government conservation agencies," point to decreased physical involvement of children in nature as a major factor.

There is a particular shortage of diverse and minority candidates in environmental careers: The Lansing School District is comprised of nearly 70% minority school students and will be a major source of participants for the Fenner Field School. Some of the concerns among professionals in fields related to conservation is that minorities are either not aware of jobs in these fields or that they have not been engaged in the environment for cultural reasons. It is imperative that these growing segments of our population become knowledgeable about the environment, are able to make informed and critical decisions about it, and understand that they have the power as individuals to become stewards of the land through their own actions and career choices. Fenner Nature Center has developed a series of workshops called "Be an Earth Scientist for a Day," in which participants learn about various professions such as forestry, entomology, meteorology, and more through hands-on data collection and analysis with some of the tools used in the field by professionals. As we engage minorities in the Fenner Field School, the programming used through this "Be an Earth Scientist" initiative will dovetail perfectly as we raise awareness about environmental careers in this underserved population.

Activities Planned

The following section outlines the general structure of each day, as well as the major content/subject areas that will be addressed through hands-on and inquiry-based activities. These content areas have been chosen to reinforce the mastery of Michigan Grade Level Content Expectations.

Learning will occur across over 400 acres of urban green space that includes Fenner Nature Center and the natural areas surrounding it, as well as in our nature center. The area includes several habitat types, including forests, wetlands, meadows, a river, a lake, and several ponds. Fenner Nature Center houses an interpretive learning area, an environmental library, and a large community space will be adapted and improved for field school classroom use.

During the Summer 2011 pilot phase of this project, two sessions (3-weeks each) will be held with a maximum of 40 students in each session. During the learning experiences, students will be in groups of 10, providing a very low teacher to student ratio in order to enhance the learning environment. Each session will focus on a different theme, with content addressed through focused modules.

Daily Schedule:

9:00 - 9:30	Morning meeting
9:30- 10:30	Focused Group Science/Math Instruction
10:30-12:30	Hands-on field work in meadows, woods and wetlands
12:30-1:00	Lunch
1:00-1:30	Independent reading
1:30- 2:00	Focused Group History/Language Arts Instruction
2:00 -4:00	Hands-on and field-based History and Arts
4:00-5:00	Full group games

Core Inquiry: Historical Study

Students will use primary and secondary sources of information to explore the early settlers and history of Lansing, Michigan. They will begin by examining the work of historians and the types of questions they ask. Then, they will apply historical thinking skills to a study of American Indians in the Lansing area (Session I), as well as to European exploration and early settlement (Session II). The module provides a strong link to nature study as students analyze ways in which both Indians and settlers used, adapted to, and modified the environment. **These are some examples of learning opportunities that students will undertake:**

Overarching Themes

- Compare ways the physical environment was used to meet the needs of people at different periods of history
- Determine the effects of the Lansing area natural and geographical settings on the region's development
- Identify natural resources whose historical value has changed over time
- Analyze how the physical features of Michigan have affected settlement patterns

- Gain a sense of some of the daily and annual activities of the people who have lived here in early Michigan history
- Understand the cultural orientations, built-scapes, landscapes, structures, and artifacts representative of various periods of habitation

History Learning Sequence

- Thinking Like a Historian
- American Indians in Michigan and Lansing
- Traditional Stories of Michigan Indians
- Native American Archeology
- Migration and Settlement in Lansing after 1847 State Capital is Created
- Stories of Early Settlers
- Primary sources in the study of early settlers

Core Inquiry: Ecosystems, Biosphere and Plants

- Observe, record and analyze how energy moves through an ecosystem
- Predict and observe how organisms in a wetland and woodland community interact with their environment and each other
- Discover how adaptations, (structures, functions, and behaviors) help an organism to survive
- Infer and analyze the natural and man-made factors that affect the balance of an ecosystem
- Classify organisms according to type as well as living/nonliving, producer/consumer, predator/prey, herbivore/carnivore/omnivore/scavenger/decomposer, in order to understand the components of a food chain
- Synthesize information about adaptations, habitat, and classifying organisms
- Recognize the value of wetland and woodland ecosystems
- Understand the negative effect chemicals cause to wetland and woodland ecosystems
- Understand the negative effect of invasive species, such as reducing the water supply and crowding out other plants.

Conservation Module

- Discuss the differences between conservation and preservation
- Take a hike to a remote corner of the Fenner woods and discover examples of adaptations, food chains, diversity, nature's cycles, and succession
- Make a beaded bracelet and review these concepts through a Michigan Native American story

Weather Module

- Learn to identify cloud types and chart these daily
- Measure temperature and predict temperature changes
- Learn to observe wind and its role in weather change

Mammals Module

- Learn how animals are classified and study five different vertebrate classes
- Identify mammals in Fenner Nature Center and discover their amazing adaptations, and discover how they feel, where they live, what role they play in the ecosystem
- Study bats – examine a mammal with wings and play games to explore their unique adaptations
- Examine a variety of mammal skulls to discover the tooth structure of carnivores, omnivores and herbivores

Aquatics Module

- Explore 3 different aquatic ecosystems (pond, back channel and stream) and discover the wildlife species that live in each habitat
- Learn how we can determine water quality using the creatures we find
- Discover how animals use cool adaptations to survive in different aquatic environments

Fish, Reptiles & Amphibians Module

- Discover the similarities and differences between fish, amphibians and reptiles
- Become scientists and study the ecosystem that lives under a rotten log
- Discover how a snake sheds its skin and how a toad catches its prey
- Identify types of fish and their food
- Catch fish!

Birds Module

- Identify a variety of bird and study using a key as a guide
- Go ‘birding’ with real binoculars
- Climb to a Tree Top Vista to identify common birds by sight and sound
- Discover bird characteristics and adaptations using actual skulls and feathers

Insects Module

- Discover parts of an insect
- Explore the different habitats different insects live in, including pond, meadow and forest
- Use nets and collection jars to catch, examine and release a variety of insects
- Discover metamorphosis and observe different life stages in a live specimen

Goal

The goal of the Fenner Field School is to develop tomorrow’s conservation leaders today by delivering a high quality program that stresses multidisciplinary problem solving, personal reflection, leadership development, and civic responsibility related to the natural world..

This goal will be achieved by meeting several objectives, including:

- Developing a high-quality multidisciplinary curriculum that supports academic achievement.
- Providing career exploration opportunities for youth.
- Supporting leadership development in youth by helping them design and lead a conservation stewardship project with local volunteers of all ages.

Scope of Work for Curriculum Development Specialist

Tasks

The Curriculum Development Specialist shall:

1. Provide expertise in the area of multidisciplinary curriculum development resulting in a complete curriculum package for each of the two Fenner Field School sessions that includes:
 - a. A session overview that describes the overarching theme(s), core inquiry areas, and related learning modules
 - b. A schedule that shows general topics to be covered each day of the session
 - c. A daily schedule (example shown above)
 - d. A set of lesson plans that will guide instructors through each day. These lesson plans, while they may take any form, shall (at a minimum) include:
 - 1) Goal of lesson
 - 2) Materials required
 - 3) Time limit
 - 4) Basic background information
 - 5) An outline for instruction
2. Provide consultation either in person or via phone as needed to senior staff at Fenner Nature Center should questions arise during the implementation of the curriculum.

Associated Costs

1. Curriculum development work shall be paid on a “per project” basis.
2. Consultation as specified in Task #2 above shall be paid on a “per hour” basis.
3. Invoices shall be submitted to Fenner Conservancy upon completion of each session. Invoices for hourly consultation shall be submitted on a monthly basis.

Deliverables

The Curriculum Development Specialist shall:

1. Provide progress reports and completed curriculum packages per the “Proposed Schedule” on page 2 of this RFP via e-mail to the Executive Director of Fenner Conservancy.
2. Notify the Executive Director of Fenner Conservancy in advance of potential delays in the completion of tasks. Inability to complete tasks by the deadlines identified in the “Proposed Schedule” on page 2 of this RFP may result in termination of any contract awarded.
3. Maintain availability as a consultant until the end of the second session of the Fenner Field School.

For the contracted work to be considered complete, all tasks outlined above must be completed in a manner satisfactory for use by Fenner Conservancy staff.

Timelines

1. The period covered by this proposal shall cover three months from the date of the initiation of the contract.

Proposal Requirements

Questions regarding the proposal shall only be submitted via email to meyerja4@gmail.com.

Information Required

Each contract bidder shall supply the following:

1. Information about the consultant's background and experience, including:
 - a) A curriculum vitae, resume, or similar document
 - b) A brief statement of previous experience the consultant has in developing multidisciplinary curriculum and/or lessons related to conservation or environmental education. Experience conducting this type of work for grades 3 through 8 should be noted and discussed.
 - c) A list and brief description of other similar projects the bidder has worked on during the last five years.
 - d) Contact information for three references that can verify the statements made.
2. A completed Cost Worksheet, found in Appendix A. The Cost Worksheet is a description of fees described in this proposal. Additional notes or circumstances may be noted at the bottom of the Cost Worksheet.

Proposal Submission Guidelines

The proposal must be received by Friday, May 6, 2011 at 4:00 pm. All information must be submitted in person or via U.S. Postal Service or email. Proposals may not be submitted by fax. The bidder is responsible for confirming that the proposal has been received by the deadline.

All paper media proposals should be sent to:

Fenner Conservancy
Attn: Jason Meyer
2020 E. Mt. Hope Ave.
Lansing, MI 48910

Proposals can also be sent by email to: meyerja4@gmail.com. All email correspondence should have a subject line of: "Fenner Field School RFP Correspondence."

Basis of Award

The contract will be awarded on a time and materials basis. The contract will be awarded based on the following criteria:

1. Cost (50%)
2. Previous experience in multidisciplinary curriculum development activities (30%)
3. Information from previous clients (10%)
4. Previous experience in conservation/environmental education curriculum development for grades 3 through 8 (10%)

A final decision identifying a successful bidder will be made no later than May 9, 2011. Bidders are encouraged to carefully follow the instructions in the Proposal Requirements section.

Appendix A
Fenner Field School Curriculum Development Specialist
Cost Worksheet

Consultant Information

Contact Name: _____
 Address: _____
 City, State, Zip: _____
 Phone: _____
 Email: _____

Cost Estimate Explanation

Project Basis: Project Rate includes all costs necessary to complete curriculum development for each of the two sessions, including but not limited to travel expenses, supplies, personnel time, and equipment, etc.

Per Hour Consulting Basis: The Per Hour Consulting Rate includes all costs associated with providing assistance related to understanding and implementing the curriculum designed through this project. Hourly Rate will be billed for time spent attending training and coordination meetings if necessary, and does not include time discussing curriculum development with senior Fenner Conservancy staff as part of the "Project Basis." Travel time is not eligible for reimbursement.

Rate	Cost
<u>Project Basis</u>	
Per Session Rate (2 sessions)	/session
<u>Consulting</u>	
Hourly	/hr
<u>Add'l Costs:</u>	

Additional Comments (please justify any additional costs added to the matrix above):