



Academy for Environmental Studies Jefferson Township High School

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SUMMER FIELD EXPERIENCE AT NJSOC

The Academy for Environmental Studies attended a three day, two night trip to The New Jersey School of Conservation (NJSOC) in Stokes State Forest as an orientation program. NJSOC is the field campus for Montclair State University. The trip was held in June



The program was designed to build a community of learners in our cohort and to develop a baseline of understanding in the field of environmental studies.

Students were lead through classes designed to give them a foundation in the natural environment, historical connections and liberal arts. Stream studies, fish ecology, conservation photography and group initiatives were just some of the classes that filled the three day field experience.

Students worked with university professors, environmental educators, AmeriCorps volunteers and graduate students. A former Jefferson student, Ian Cantwell, provided us with an evening presentation on his Osprey research he is doing with Rhode Island DEP and his college, Salve Regina.



FRESHMAN YEAR: INTRODUCTION TO ENVIRONMENTAL SYSTEMS

Students will gain an understanding of how the physical, biological, and chemical processes operate in the natural environment of the Earth, and comprehend the complex connections and interactions among these processes. Students will learn the necessity of conserving our natural resources for maintaining and improving the quality of human life and students will develop a sense of service toward promoting environmental stewardship for future generations.

Topics that we will cover include: Principles of Science, Community Ecology, Population Studies, and Biodiversity.

Students will be assessed in both formative and summative means with summative grades accounting for 75% of their final grade.

As much as possible, assessments will resemble 'real world' applications of knowledge or at the very least test the skills needed for future success in the field of study.

Outdoor, hands-on, and practical field techniques will be woven throughout the year. Field journals, identification activities, and long-term monitoring projects will fill out the curriculum.

SOPHOMORE YEAR: ECOLOGICAL DESIGN & ENVIRONMENTAL RESEARCH

Sophomore year, for Academy students, is divided into two courses. First semester students will be enrolled in the *Ecological Design* course. This course will begin by looking at sustainable buildings. From the inside to the outside; flooring, energy and gardens. Students will examine what determines sustainability in building design. The culminating project for this unit will be to design and present a sustainable tiny house.

Our second unit will focus on food. Sustainable farming practices and eating habits will be the focus of this unit. Assessments will included designing, building, and maintaining an aquaponics system and developing a weekly menu for sustainable eating.

Finally we will end the course with a unit on packaging. Students will evaluate, re-design, and propose new packaging techniques. Students will also create a, 'buy this, not that' document as a guide for sustainable shopping.

Second semester students will be conducting independent research projects in the field of environmental science. Proper protocols, safety, and controlled research will form the foundation. Students will then be immersed in research and experimentation. Their final 'peer-reviewed' paper and poster presentation will serve as their culminating assessment.



'PRIDE' IN PUBLIC EDUCATION GRANT

In 1994 NJEA initiated PRIDE in Public Education, a campaign aimed at sharing the successes of New Jersey's public schools and building community support and involvement. The Academy for Environmental Studies is the proud recipient of a PRIDE in Public Education Grant. The grant will be used to host a student led environmental summit in early 2018. The theme of this year's summit will be "Sustainable Living". We are looking at dates in late winter, more to follow.

"The more clearly we focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction"

-Rachel Carson

WANT TO HELP?

Involved in something in your workplace or personal life that applies to one of our areas of curriculum? Consider coming in and presenting to our students, or working together to get a field trip arranged to your place of work. Maybe getting your workplace to partner with our Academy...email me if interested!

As renovations finish on the greenhouse we are in need of supplies. Perhaps you have some extra supplies on the list below that you would consider donating, or perhaps you love to shop...either way we will take them!

Here are some things that we would value:

- **Potting soil**
- **Black Oil Sunflower seed**
- Double "AA" Batteries
- Seed Packets (herbs, vegetables, native wildflowers)
- Small potting shovels
- Garden gloves
- Empty 2-liter soda bottles with lids
- Small stones– like those used in fish tanks
- Plastic or wooden outdoor table (not glass topped)
- Fish tank pumps/filters
- Fish tank tubing
- PVC pipes (any and all sizes)
- Home depot/ Amazon gift cards
- Flower pots
- Cotton Fabric Scraps (No smaller than 6 in x 6in)

PARTNERS

The Academy for Environmental Studies is proud to have the following partners to provide resources, information, classes, and research/internship opportunities!

- ◇ KEAN UNIVERSITY
- ◇ ROCKAWAY RIVER WATERSHED
- ◇ LAKE HOPATCONG FOUNDATION
- ◇ NEW JERSEY SCHOOL OF CONSERVATION
- ◇ RUTGERS UNIVERSITY



Academy for Environmental Science Parent Organization:

Please put your email/contact information on the form located at the front of the room. You will be contacted by Michelle Craig in the near future with news and information.

Thank you!

