

Student Summit 2010 Activities

Science Can Be A Day At The Beach



Student Activities Overview*

Introduction to *Limulus*

A brief discussion about one of New Jersey's unique and ancient marine animals, the horseshoe crab (*Limulus*). Students learn about the life history of this species that pre-dates the dinosaurs, the myths about this animal, its role in the ecosystem, the biomedical and economic importance to humans, and how we have impacted the species. Students will be shown the proper way to hold and handle the horseshoe crab so they can get a closer look at this interesting species.

Activity Roundtable: Environmental Extravaganza

An interactive series of work stations with a variety of hands-on activities for students to learn about the environment. Some of the topics covered may include meteorology, marine invertebrate anatomy and identification, nonpoint source pollution, and solar energy.

Field Workshops

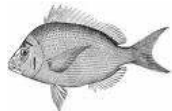
Schools and classes will be divided and students will participate in one of the field activities. The goal is that each school will have students who have attended all field workshops. Examples of workshops include*:

Marine Water Quality Monitoring

Monitoring of surface water quality is an important source of information used by scientists and environmental managers to characterize water resources, identify water quality problems and trends, and develop water quality management strategies. Participating students will learn about the water quality approach to aquatic resource assessment by collecting and analyzing water samples.

Barrier Beach Profiling

Waves, wind, and currents shape New Jersey's barrier beaches. As a result of these forces, beaches are dynamic, ever-changing environments. By making a beach profile, students will get a first-hand view of the shoreline, including sand distribution, beach zones, and tidal water levels. Graphing their results allows students to understand beach topography, as well.



Birds of the New Jersey Shore

New Jersey is within the Atlantic Flyway, providing a diverse viewing of coastal birds throughout the year. Students will join local birding experts in a survey and identification of coastal birds as part of their workshop.

Seining and Marine Animal Identification

New Jersey's estuaries offer a variety of habitats as important breeding, feeding, and nursery grounds for a diversity of fish and invertebrate species. Many of these species spend only a part of the year in area waters, while other species reside year-round within certain coastal habitats. Students will use seine nets and sieves to collect fish and invertebrates to capture, observe, and identify common marine animals found in the local bays.

Understanding Marine Debris

Marine debris includes trash and other objects that get into the marine environment as a result of careless handling and disposal. The problem of marine debris has emerged as a critical environmental issue worldwide. Debris in the marine environment is not only aesthetically unpleasant, but it can harm marine life and litter the shore. Students will learn about the types, quantities, and sources of marine debris plaguing our coastal region and participate in a cleanup.

**Activities are subject to change without notice.*

ABOUT CLEAN OCEAN ACTION

Clean Ocean Action (COA) is a broad based coalition dedicated to protecting the marine environment off the NY/NJ coast. Education has been the focus of the group since it was founded in 1984.

Clean Ocean Action

**18 Hartshorne Drive, Suite 2
Highlands, NJ 07732**

Telephone: 732-872-0111

Email: citizens@CleanOceanAction.org

Website: www.CleanOceanAction.org



Science Can Be a Day at the Beach

Free Program!

Clean Ocean Action
18 Hartshorne Drive, Suite 2
Highlands, NJ 07732

FREE PROGRAM

Clean Ocean Action's
22nd Annual
Student Summit

Central/Southern NJ
Middle Schools (grades 5-8)
October 7, 2010
Island Beach State Park
Seaside Park, NJ
9:00 AM - 12:30 PM



**Application
Inside**

**Deadline:
September 24, 2010**

2010 STUDENT SUMMIT APPLICATION

Teacher/Advisor Name _____

School _____

Email Address _____

Address _____ Town, Zip _____

County _____ Phone _____

Cell Phone (day of) _____ Fax _____

Number of Students (30 maximum) _____ Grade Level(s) _____

Number of Chaperones (1 per 10 students) _____

Describe how you integrate environmental education into your curriculum.

If environmental education is not a component of your curriculum, briefly discuss how the Student Summit could assist your educational needs.

What will you do with lessons learned at the Student Summit?

**Complete, clip, and return this application with \$100 refundable deposit by Sept 24 to:
Clean Ocean Action, Student Summit,
18 Hartshorne Drive, Suite 2, Highlands, NJ 07732**

Clean Ocean Action's 22nd Annual Spring Student Summit

About the Summit:

The Student Summit expands learning beyond the classroom. It is designed to provide middle school (Grades 5-8) students who come from different areas of the state with an opportunity to experience hands-on, marine environmental education at the Jersey Shore. The activities included in the Summit have been selected to present students with an interdisciplinary marine and environmental education experience that complements the New Jersey Science Standards.

Terms of Participation:

The program is **free** to all participants. However, **schools must provide their own transportation and lunches**. To ensure a commitment from your school, a **refundable deposit of \$100** must be sent with the application. The deposit will be returned upon your arrival at the Student Summit. Space is limited. Therefore, COA has established the following guidelines. In submitting this application, you understand and agree to the terms of participation:

- ◆ Participation is limited to **500** students each day.
- ◆ Maximum number of students from each school is **30**.
- ◆ Students, teachers, and chaperones are assigned to workshops in the Summit. Classes and chaperones will be separated and divided between all field trips so that each school will have students who have attended all activities. No changes will be allowed.
- ◆ Schools are responsible for their own transportation to and from the Summit.
- ◆ All students, teachers, and chaperones must bring their own lunch. Facilities to buy lunch are not available.
- ◆ **Arrival time is by 9:00 am sharp. Departure time is anytime after 12:30 PM. If schools are unable to arrive promptly at 9:00 am, schools should not apply. Late arrivals may be requested to return home.**
- ◆ Schools must bring **1** chaperone/teacher per **10** students. Chaperones will be required to assist in monitoring students from all schools during the Summit. Teachers, please pass along these terms to chaperones!
- ◆ COA reserves the right to exclude or limit participation to anyone whose behavior or dress (*see below*) is inappropriate or disruptive to any students' learning experiences.
- ◆ Teachers and students must demonstrate a desire to learn about the marine environment (*see application*).

Weather Advisory - No Rain Date

Appropriate outerwear is mandatory; noncompliance may result in the student's participation being restricted by staff. In the case of *extreme* wet weather, the Student Summit will take place primarily indoors with a modified program. Be advised that some limited activities will still occur outside.

How To Apply — Three Easy Steps

Who can apply:

Schools located in

Southern NJ Counties:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, & Salem

Summit Location:

Island Beach State Park - Seaside Park, NJ

Applications accepted

through **September 24, 2010**

Step 1: Agree to Terms of Participation

Carefully review the terms listed in this brochure. They work to ensure all participants have a productive day.

Step 2: Complete Application Form

Complete the application form. Mail form (with refundable deposit) to *be received by Clean Ocean Action by **September 24***.

Step 3: Send Application with

\$100 Refundable Deposit to: Clean Ocean Action, "Student Summit," 18 Hartshorne Drive, Highlands, NJ 07732. You will be advised about participation approximately one month prior to the event. In the meantime, we suggest you make bus reservations and arrangements and receive the necessary permission or approval from your school.

Costs:

The program and all materials are **free**. To ensure a commitment from your school, a refundable deposit of \$100 is required with your application. The deposit will be returned to you upon arrival at the Summit. Transportation and lunch must be provided by participants.

Dress Requirements:

Coastal locations are usually cold and windy. Advise the students to dress according to the weather, bring additional layers of clothes, and wear sneakers or hiking shoes. COA reserves the right to exclude or limit participation to anyone whose dress is inappropriate.