



# Shipboard Marine Science

Learn how to motivate your students  
by taking them on a  
Shipboard or Shoreline Field Experience

Coordinated with the New York State Science Standards

March 8<sup>th</sup> to May 31<sup>st</sup> 2006

You will learn techniques for measuring many of the most commonly recorded parameters including:

|                                    |                        |                       |           |                          |        |
|------------------------------------|------------------------|-----------------------|-----------|--------------------------|--------|
| Cloud cover                        | Precipitation          | Temperature           | Humidity  | Wind speed and Direction |        |
| Salinity                           | Density                | Tide                  | Depth     | Transparency             | Oxygen |
| Nitrate                            | Nitrite                | Ammonia               | Phosphate | Avian populations        |        |
| Bacterial collection and culturing | Mero & Holoplankton    | Benthic invertebrates |           |                          |        |
| Ichthyological populations         | Nautical chart reading | Global Positioning    |           |                          |        |

Classroom, field and laboratory instruction will take place on eleven Wednesdays

3:30 pm to 6:00 pm, March 8<sup>th</sup> to May 31<sup>st</sup>, Lab sessions are at Oceanside High School

During this time all of the parameters listed above will be discussed and related to each other as well as the general ecology of an estuarine environment

Various methods of introducing and teaching the related concepts will also be discussed.

Two of the sessions will include field trips to explore sites in the local *South Shore Estuary Reserve* from the land and by kayak. The last session will be a cruise on an 80 foot vessel leaving from the Point Lookout Marina. On these trips participants will run through the measurement of each of the parameters outlined above as we discuss various environmental concerns including atmospheric, thermal, sewage, solid waste and industrial pollution, bulkheading, erosion, marsh preservation, zoning, population distribution and environmental regulation.

\*Two inservice credits will typically be granted by districts for the thirty hours.\*

Participants should be informal educators or secondary school teachers licensed in science. As indicated below, it is expected that teachers will have the cooperation of his or her district to take at least one shipboard or shoreline trip during the 2006-2007 school year.

When necessary, we will provide the loan of needed materials for the participants to carry out the measurement of the parameters discussed during the course.

Supported by

**An Environmental Education Grant from the U.S. E.P.A. \* Oceanside Teacher Center \* Dowling College  
South Shore Estuary Reserve Office New York State Marine Education Association**



[www.NYSMEA.org](http://www.NYSMEA.org)

Registration: Fee \$25.00

Send check (made out to "Oceanside Teacher Center") and this application to:

Lou Siegel, Science Coordinator  
South Shore Estuary Reserve Office  
300 Woodcleft Avenue, Suite E  
Freeport, New York 11520

Name \_\_\_\_\_ tel # \_\_\_\_\_ Email \_\_\_\_\_

Address \_\_\_\_\_ city \_\_\_\_\_ zip \_\_\_\_\_

For teachers:

School \_\_\_\_\_ District \_\_\_\_\_ License \_\_\_\_\_

Courses currently taught \_\_\_\_\_ planned for 2006-2007 \_\_\_\_\_

We support the concept of field trips in science classes and intend to facilitate at least one for this teacher during the 2006-2007 school year.

Supervisor \_\_\_\_\_

Title \_\_\_\_\_

Questions? Problems? Contact: Lou Siegel [LouSea@aol.com](mailto:LouSea@aol.com) 516 458 1747  
Or go to [www.NYSMEA.org](http://www.NYSMEA.org)

