



NMEA Survey

The National Marine Educators Association is investigating why many regional chapter members don't join NMEA. If you are currently not a NMEA member, please take a few minutes to fill out this on-line survey and help NMEA determine ways to increase its membership and thus increase its efforts to promote marine and aquatic literacy. The survey period will be January 1 - March 1, 2006.
<http://www.surveymonkey.com/s.asp?u=954431533540>

Helping Our Sister Organization

MAMEA has made a donation to the Southern Association of Marine Educators (SAME) for Katrina relief to be used as needed.
<http://lamer.lsu.edu/resources/same/> In addition to \$200.00 donated during the annual conference, MAMEA added another \$250.00 approved by the board. Amy Sauls included a \$100.00 donation from program receipts. Our treasurer sent the total of \$550.00 to SAME.

Captain's Quarters

Welcome to the New Year! I certainly hope that everyone is happy and healthy and gearing up for a fantastic year in Marine Education. This past year certainly left its mark with historic storms and new discoveries, both beyond our belief.

I want to welcome all new members that have joined or re-joined us in the past few months. We are certainly glad to have you with us and hope you find that we are a fun, resourceful group and stay with us. Some of our longtime members can certainly attest to this, and we thank them for their longevity.

In the coming year, I want to challenge everyone to plan a trip, an encounter or journey that will take you to a marine place of wonder, whether it is a new place or an old place, to renew your spirit and refresh your mind. Often I think that many of us get so caught up in sharing with others that we forget to build on our experiences. We of course then go and share these with others! Make this year a great year for yourself. Then pass along your trek to us and we can include snippets in the Masthead so others can go find the good places.

Most of my recent "short breaks" have been to some of the local sound islands near my home around Bogue Sound. The water now is clearing, as it always does in the winter, so we can see the bottom really well, which is great. Several different colors of sea whip are obvious now, and the ever-present sea squirts, oysters and the occasional flounder or killifish can be seen. Since we were abused by Hurricane Ophelia, there is the occasional sink or piece of dock still around. It usually takes about a year to get most of the debris out of the way. It is always interesting to see what turns up after the summer season.

Enough of my rambling - share your "marine experience" or favorite place to visit - and don't forget to HAVE FUN!

Amy
President, MAMEA

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(www.MAMEA.org)

A Note from the Newsletter Committee

In our never-ending quest for the best in marine and aquatic education information, it becomes a challenge to "wade" through all the curricula, activities and programs that exist in the real and cyber worlds. This is where we need your help. Have you tried a new activity lately, used a neat resource or attended an exciting workshop? Well, how about sharing with your fellow MAMEAns. All we need is an ever-so-brief description (who, what, where, when, how, etc.) to get your name in the Masthead as a "contributor." We greatly appreciate any contribution.

Kathy Siegfried – Committee Chair

Barry Fox – Masthead Editor

Margery Meisenheimer
2005 MAMEA Classroom Teacher of the Year

The MAMEA Classroom Teacher of the Year award for 2005 was presented to Margery Meisenheimer at the annual conference in Beaufort, NC. Margery has taught science in Carteret County, NC for 19 years. For the past few years she's been the lead science teacher for grades 6 - 8 at Smyrna Middle School and has earned National Board Certification.

Margery was the spark plug at the North Carolina Maritime Museum's Summer Science School for Children. She received a grant to engage her students with marine science students from the Duke Marine Lab in a trawler study of an estuarine ecosystem. The study includes summer camps, field trips during the school year and visits by Duke Fellows to her classroom. She recently trained at the University of California, Berkeley as an instructor for "Communicating Ocean Sciences" which will be presented in conjunction with Duke students.

Margery has been very active with the NC Coastal Federation for a decade, engaging her students in projects like salt marsh and oyster restoration and canoe trips. Some of the topics she's brought to her students have included the effects of fertilizers on salt marsh grasses, plant zones in the salt marsh, commercially important fishes, and subsistence whaling in Alaska. She aided in the production of a DVD that addresses water quality from the mountains to the coast for use in middle schools across the state. Likewise, she's been a regular presenter at state and regional conferences, including MAMEA. Margery Meisenheimer is everything we expect in an engaged marine science teacher and more. MAMEA is very proud to have her as our 2005 Classroom Teacher of the Year.



Margery Meisenheimer (right) was presented the 2005 MAMEA Classroom Teacher of the Year Award, accompanied by Susan Haynes, MAMEA Past President.



2005 MAMEA Election Results

If you weren't at the 2005 Fall Conference, here's the news you've been waiting for:

President Elect – Adam Frederick
Maryland Rep. – Mellie Lewis

Secretary – Kathy Siegfried
North Carolina Rep. – Ruth Schneider

Treasurer – Jackie Tacaks

Congratulations to our newly elected officers. Best wishes for a successful tenure.

Report Illustrates Importance of Environmental Education: A new report from the Environmental Education Association of Washington concludes that students in schools using environmental education (EE) consistently score higher on standardized tests than students in schools without it. In addition, the study showed young people exposed to environmental education tend to improve their overall grade-point average, stay in school longer, receive higher-than-average scholarship awards and display more responsible behavior in school and in the community. They also are generally better prepared for the job market. http://www.eeaw.org/EE%20Report/2004_WAEE_Report_Card.pdf

Important Alert

Giant African Land Snails (GALS) are being used increasingly in science lessons in schools. These snails are illegal in the continental United States because they are highly invasive, and can cause extensive damage to important food crops and other agricultural and natural resources. These snails can also pose a risk to human health (for information, see <http://www.cdc.gov>, or call your state health department). The U.S. Department of Agriculture's Animal and Plant Health Inspection Service is interested in finding these snails, and encourages those using these snails in classrooms, nature facilities or keeping them as pets to turn them in voluntarily without fear of penalty. "Giant African land snail" is the common name used to describe any of three snail species native to Africa and considered serious agricultural pests in the United States. The giant African snail (*Achatina fulica*), the giant Ghana tiger snail (*Achatina achatina*), and margies (*Archachatina marginata*) are large, terrestrial snails that reach up to 20 cm (8 inches) in length and 10 cm (4 inches) in maximum diameter. The following are web sites with more information on GALS and other invasive species; <http://www.invasive.org/>; <http://www.ceris.purdue.edu/napis/index.html>; and <http://invasivespecies.gov/>.

ANNOUNCING
Mid Atlantic Marine Educators Mini-Conferences

What: Maryland Teacher Overnight: Workshop and Sleepover

Who: Classroom and home schoolteachers grades K-12, and informal educators.

Where and When: National Aquarium in Baltimore

March 10-11, 2006, Friday evening through Saturday morning.

What: Pack your sleeping bag for the Mini-Conference and Sleepover at the National Aquarium in Baltimore. Spend an enriching evening exploring the sights, sounds and behavior of the Aquarium's inhabitants. The overnight promises to be filled with fun activities and valuable information.

Cost: \$60 per person, \$50 for Mid-Atlantic Marine Educators Association members (MAMEA), includes teaching materials, snacks, beverages, breakfast, and one-year membership in MAMEA.

To register, contact: Joe Harber, Conservation Education Department, National Aquarium in Baltimore, Pier 3, 501 East Pratt Street, Baltimore, MD 21202. (410) 659-4272. FAX (410) 659-0116 or Kathy Siegfried, MAMEA Secretary, at 410-576-3888 or email ksiegfried@aqua.org.



What: North Carolina Marine Educators Sleep with the Fishes!

Who: Classroom and home schoolteachers grades K-12, and informal educators.

Where and When: NC Aquarium at Fort Fisher

6:00 p.m. March 31 to Noon, April 1

What: Come for a mini-conference program focusing on using the NC Aquariums as an educational resource. Activities for classroom use and during on-site visits will be available. This will be a great opportunity to meet with teachers and educators from across the state! Snacks and breakfast will be included. Bring your pillows and sleeping bags and be prepared to have "fantastic" fun.

To register, contact: The NC Aquarium at Fort Fisher, (910) 458-7468. Pre-registration and a fee are required. \$10 for MAMEA members, \$20 for non-MAMEA members (includes a year long membership to the MAMEA).

Around the Association

North Carolina (Ruth Schneider)

The next **EstuaryLive** will be held May 2nd – 4th at a computer near you. This live, free, Internet field experience will include many topics including invasive species, estuarine ecology and more. Watch the Webpage for updates, including schedules and registration pages: www.estuarylive.org.

Count for the Birds in America's Great Backyard

Feb 17-20, 2006

No Fee or registration required and all ages and skill levels welcome. Track results in real time of the count in your backyard, balcony, schoolyard, park, or wildlife refuge. Join thousands of others to find out how many birds are being seen in your area and across the continent this winter. By participating in the Great Backyard Bird Count, you help document where birds are and track changes in their numbers compared to previous years. This will help scientists evaluate bird populations this winter. For more information, or to get started, go to <http://www.birdsource.org/gbbc/> or contact Andy Wood, Education Director, Audubon North Carolina; awood@audubon.org or (910) 686-7527.

COSEE SE Ocean Sciences Education Leadership Institute: Estuaries and Living Resources

Application Deadline: April 1, 2006

The Center for Ocean Sciences Education Excellence SouthEast (COSEE SE) invites middle and high school science teachers to participate in the fourth Ocean Sciences Education Leadership Institute. This Institute is designed to promote ocean sciences in formal and informal education and forge lasting relationships between ocean sciences researchers and educators. Twenty teachers (5th grade - 12th grade) will be selected from North Carolina, South Carolina and Georgia. In addition, five team leaders, participants from prior Institutes, will provide mentorship and group leadership.

The major science topics to be covered include:

- Introduction to the salt marsh and estuary,
- Harmful algal blooms,
- Coastal ocean circulation,
- Barrier island geology and shoreline dynamics,
- Living resources of the salt marsh and estuary,
- Coastal management issues,
- Effects of hurricanes on coastal waters,
- Barrier island habitats and their cultural connection.

Workshop activities begin Sunday, July 23rd at 1:00 p.m. and end Friday, July 28th at 1:00 p.m. Field excursions include a trip onboard the R/V Susan Hudson, and visits to the NC Aquarium at Pine Knoll Shores and the Rachael Carson National Estuarine Research Reserve in Beaufort, NC. For additional information about the institute and an application go to our website at:

http://www.scseagrant.org/se-cosee/teacher/06_leadership.htm.

Direct all questions concerning the Institute to Margaret Olsen at olsen@uga.edu.

Project Design and Evaluation for Coastal Resource Professionals, Extension Staff, Educators

February 13 - 14, 2006. Pre-registration required.

This course provides coastal resource management extension and education professionals with the knowledge, skills, and tools to design and implement projects that have measurable impacts on the audience they want to reach. This interactive curriculum can help you increase the effectiveness of your projects by applying valid instructional design theory to their planning. After attending the workshop, participants will be able to:

- Describe the context of project design and evaluation.
- Apply appropriate instructional design theory and practices to project development.
- Create logic models for project design and evaluation.
- Use performance measurement as part of project evaluation.
- Understand the types and levels of evaluation that can be applied to extension and education projects.

This workshop is provided by NOAA Coastal Services training staff and conducted at the North Carolina Aquarium on Roanoke Island. The agenda runs from 9:00 a.m. February 13 to 4:00 p.m. February 14. There is no charge for the workshop. To register for this professional development opportunity, contact the aquarium's registrar at: (252) 473-3494 x232 or email:

Wanda.M.Best@ncmail.net.

NC Aquarium at Fort Fisher's Exotic Aquatics Exhibit

A new gallery of exhibits at the North Carolina Aquarium at Fort Fisher includes some of the strangest and most beautiful marine animals. Visitors will discover venomous sea snakes from the tropical Pacific, visible from all sides of their 1,000-gallon cylinder. Fluorescent cuttlefish from the Mediterranean flash against the dark background of their special tank. Grotesquely beautiful Indo-Pacific lionfish and native scorpion fish flutter in their rocky lair and more than a dozen colorful reef fishes of the Pacific coral atolls, butterfly fish, long-nose hawk fish and clownfish, browse for morsels within their living-coral habitat. Interpretive technologies new to the North Carolina Aquariums help visitors learn about the gallery's many strange and interesting species. A flat-panel liquid-crystal display at each exhibit provides facts and photo IDs of the featured animals.

North Carolina Maritime Museum

The museum is hosting the Pepsi Americas' Sail event in Beaufort and Morehead City on June 30-July 5, bringing the race of tall ships to eastern North Carolina. From

January 21 to April 23 a special exhibit, *Life at Sea: The Sailor's View*, highlights life aboard ship of the 19th century sailor. Ship models, photographs, navigation instruments, engravings, and everyday items illustrate life aboard ship.

Family Day: Life at Sea is an event on Friday March 31 (local school holiday) to build excitement for the tall ships. Demonstrations and activities will focus on ships and life at sea and include sailor's skills, navigation, food, clothing and music. For information on Pepsi Americas' Sail see www.pepsiamericassail.com.

The museum also offers environmental experiences to barrier and estuarine islands, on-board collecting cruises, and seining for marine life. These programs are applicable for the NC Environmental Education Certification and can be arranged for teacher or student groups. Teachers must register groups to tour the museum. Call the museum for details and view the current Calendar of Events and Education Services Guide at www.ah.dcr.state.nc.us/sections/maritime and www.ncmm-friends.org (E-mail: maritime@ncmail.net, Phone: (252) 728-7317.

Ocean Awareness Day: The Build-A-Beach Workshop

Monday, February 20, 8 a.m. - 4 p.m., Discovery Place, Charlotte - Sponsored by the Center for Ocean Sciences Education Excellence SouthEast (COSEE SouthEast). Enjoy a day of Ocean Science Discovery! Learn how to read a fish, discuss seashell collecting and classifying, map the paths that rivers take to the sea, and read clues in the sand. Teachers will receive materials and resources to use in the classroom, as well as join a regional network of educators from North Carolina, South Carolina, and Georgia. Registration is limited. To register or for more information, contact Deb Emmans, (704) 372-6261, ext 226, debbie@discoveryplace.org or Larry Hollis, (980) 343-5006, larry.hollis@cms.k12.nc.us.

Ocean Awareness Day: Estuaries & Hurricanes

March 18, 2006, 9:00 am - 5:00 pm

North Carolina Museum of Natural Sciences, Raleigh, NC
Activities will include:

- Speakers on Hurricanes and their effects on estuaries.
- Hands-on/classroom sessions on estuary makeup and importance, effects of hurricanes, water relationships, tracking maps, water quality and ocean life.
- Latest technology and websites for locating and tracking hurricanes, productivity in the oceans and estuaries, water temperature measurements, ocean currents, wave actions, sea buoys, satellites; plus much, much more!

This event is FREE to all interested middle and high school teachers in the area. For registration information, contact Brenda Peake, 5026 Quail Hollow Dr. Raleigh, NC 27609. Peakeaboo10801@yahoo.com. The registration deadline is March 15, 2006 with space for 20 participants.

This summer the **North Carolina Aquarium at Fort Fisher** opened its new *Spadefish Art Gallery*. Art exhibits

generally rotate monthly. Shows featured to date include coastal landscapes, underwater images, and abstracts from photographers John Mauser, Julep Gillman-Bryan, and Susan and Clancy Thompson. Artists Dee Thonnard and Carrie Blye featured original prints. Special contests

provided shows of holiday and conservation kid's art. The upcoming show will feature a saltwater textile series by artist Kristin Gibson entitled ***Below the Surface***, February 14 through April 14.

Maryland (Mellie Lewis)

Chesapeake Teacher Research Fellowship

The ESEP Chesapeake Teacher Research Fellowship Program immerses 6th-12th grade teachers in Chesapeake research to advance their scientific inquiry skills and understanding of regional ecological and environmental topics and issues. Teacher fellows spend the summer working with scientists on a research project at one of our four laboratories. With support from our ESEP team, they also develop associated classroom applications that support state science standards and meaningful bay and stream outdoor experiences. The Teacher Research Fellowship Program is made possible with generous support from the NOAA Chesapeake Bay Office and the National Park Service National Capital Region. The dates for the 2006 fellowship are June 19-August 4th at the following sites: The Center of Marine Biotechnology (Baltimore, MD), The Appalachian Laboratory (Frostburg, MD), The Horn Point Laboratory (Cambridge, MD), and The Chesapeake Biological Laboratory (Solomons, MD). For more information and an application go to:

http://www.esep.umces.edu/inside.php?area_id=3 .

Aquaculture in Action Workshop

(<http://www.mdsg.umd.edu/Education/AinA/>)

The fifth Aquaculture in Action workshop is planned for July 24-28, 2006. The expansion of the workshop resources now includes partnerships with the UMCES Horn Point Laboratory (Cambridge, MD), the UMBI Center of Marine Biotechnology (Baltimore, MD) and the National Aquarium in Baltimore to illustrate the applications of aquaculture in a variety research and education settings. The Aquaculture in Action network now includes 40 participating classroom teachers and environmental education specialists and will expand to 50 at the conclusion of the 2006 workshop. For more information about the upcoming 2006 workshop, please contact Mr. J. Adam Frederick at (410) 234-8850 (frederic@mdsg.umd.edu) or Ms. Jackie Takacs at (410) 326-7356 (takacs@cbl.umces.edu).

The **ARMADA Project, Research and Mentoring Experiences for Teachers** is now accepting applications for the project. The ARMADA Project provides K-12 teachers an opportunity to actively participate in ocean, polar, and environmental science research and peer mentoring. For information, contact: Andrea Kecskes, Office of Marine Programs, University of Rhode Island, Narragansett Bay Campus, Narragansett, Rhode Island 02882, (401) 874-6524, email: akecskes@gso.uri.edu.

New Waterfront Park in Downtown Baltimore

Officially opened on December 16, the *Harry & Jeanette Weinberg Waterfront Park* provides a freely accessible, natural park for every visitor to downtown Baltimore. In addition to serving as a distinctive plaza entrance to the National Aquarium in Baltimore, the park provides a carefully conceived educational setting that explores Maryland's diverse ecosystems, from the ocean, coastal plains and Chesapeake Bay through the Piedmont region and west to the Allegheny Mountains. A Chesapeake Bay watershed map takes center stage and interpretive exhibits line the park, detailing the plant and animal life native to each of Maryland's regions. Hidden speakers plantings project the sounds of water and wildlife. Aquarium instructors set up portable learning stations, helping people learn more about the Chesapeake Bay watershed, the progression of ecosystems within the state and *Bayscaping* - landscaping using native plants.

Animal Planet Australia: Wild Extremes opened at the National Aquarium in Baltimore on December 16, 2005. Be sure to check out this new immersion exhibit featuring a freshwater river gorge in Australia's Northern Territory. More information can be found at www.aqua.org.

Fort McHenry Wetland Clean-Up 2006 Dates A Day in the Muck with the NAiB!

The National Aquarium in Baltimore invites the public to participate in a hands-on wetland restoration project! In partnership with the National Park Service, the Aquarium is working to restore, monitor and maintain a tidal wetland adjacent to the Fort McHenry National Monument and Historic Shrine, one of the few remaining in the lower Patapsco River watershed. In an effort to do so, the Aquarium will be hosting four Public Restoration Days during the year. These events are free of charge and will be held: **April 22, June 24, September 30, and December 2, 2006**. Each day is scheduled from 9:00 a.m.—1:00 p.m. During the restoration activities and debris removal, data will be collected to track the function of this created tidal wetland and monitor the amount and type of debris in our waterways. **Please notify us in advance if any special accommodations are needed, as access to the wetland is limited.** To receive a registration packet, simply contact the Conservation Department at (410) 659-4274 or conserve@aqua.org. **Please note:** Due to hazardous work conditions associated with urban debris and marsh waterfront features, the minimum age for this program is 14 years.

Virginia (Jane Brown)

For 30 years, the Virginia Association of Soil and Water Conservation Districts and local Soil and Water Conservation Districts have sponsored a weeklong summer conservation camp for Virginia high school students (grades 9-12) on the campus of Virginia Tech. The program brings together approximately 60 interested students for a week of learning about Virginia's natural resources from conservation professionals and faculty

from Virginia Tech. Most of the instruction is hands-on and outdoors. Highlights include: Ag Day, Claytor Lake Day, Mountain Lake Day, Water Quality & Canoeing Day, Cascades Day, Campus Tours, Swimming, Volleyball, Bowling and much more!!! Download applications from the website or contact your local SWCD: <http://www.vaswcd.org/youthcamp.htm>.

In The News

Invader of the Month – Canada Geese*

They may look innocuous, even elegant, but Canada geese are an invasive species doing serious environmental damage, according to state officials. The Maryland Department of Natural Resources has named the Canada goose the Invader of the Month. The geese litter lawns with feathers and droppings and can become aggressive while defending their turf. But they are capable of far more serious damage, including "destruction of wetlands, usually in the upper reaches of freshwater marshes," said Larry Hindman, waterfowl project manager for the DNR.

The Canada goose population in Maryland jumped from about 25,000 in 1989 to 90,000 in 1998. Today, it stands at about 86,500, according to the DNR. "The sheer numbers of these birds have become intolerable," Hindman said. Some may be derived from pets once used as live decoys in the 1930s for hunting. Others may be descendants of geese brought in to repopulate the Eastern Shore around that time. Canada geese like to return to their birthplace and want to nest and feed in the same places, and that "makes it hard eliminate geese once they become settled in a local area," Hindman wrote.

At the Jug Bay Wetlands Sanctuary in southern Anne Arundel County, the geese eat wild rice plants that are vital to other native species, said Chris Swarth, the

sanctuary's superintendent. The problem got so bad five years ago that workers put up four miles of wire fences to keep the geese out of sensitive areas. Greg Kearns, a Patuxent River Park naturalist who has also worked with Jug Bay, said he has seen fewer birds, such as sora rail, redwing blackbirds and bobolinks, nesting in the marshes, because the geese have taken over. "It's just been incredible," he said. "We never dreamed they would cause this much damage. They have changed the entire composition of the marsh."

The Maryland-National Park and Planning Commission, which oversees parkland in Montgomery and Prince George's counties, is using two border collies to keep the geese away. Officials are also adding, or shaking, goose eggs so that they don't hatch, said Marion Joyce, a commission spokeswoman. "If you remove or crush the eggs, the geese will either build another nest or produce more eggs," she said. With "egg addling, the geese are less likely to abandon the nest and make a new one." Egg addling or euthanizing geese require a permit from the U.S. Fish and Wildlife Service because the geese are protected under the Migratory Bird Treaty Act. During the proper season, licensed hunters in Maryland are also allowed to kill Canada geese. (*Excerpts from *Associated Press*, December, 2005)

NASA Says 2005 Was Warmest Year on Record*

Last year was the warmest recorded on Earth's surface, and it was unusually hot in the Arctic, U.S. space agency NASA said Tuesday. All five of the hottest years since modern record keeping began in the 1890s occurred within the last decade, according to analysis by NASA's Goddard Institute for Space Studies. In descending order, the years with the highest global average annual temperatures were 2005, 1998, 2002, 2003 and 2004, NASA said in a statement.

"It's fair to say that it probably is the warmest since we have modern meteorological records," said Drew Shindell of the NASA institute in New York City. "Using indirect measurements that go back farther, I think it's even fair to say that it's the warmest in the last several thousand years." Some researchers had expected 1998 would be

the hottest year on record, notably because a strong El Nino, a warm-water pattern in the eastern Pacific, boosted global temperatures. But Shindell said last year was slightly warmer than 1998, even without any extraordinary weather pattern. Temperatures in the Arctic were unusually warm in 2005, NASA said. "The rate of warming has been so rapid that this temperature that we only got when we had a real strong El Nino now has become something that we've gotten without any unusual worldwide weather disturbance."

Over the past 30 years, Earth has warmed by 1.08 degrees Fahrenheit, NASA said. Over the past 100 years, it has warmed by 1.44 degrees Fahrenheit. Shindell, in line with the view held by most scientists, attributed the rise to emissions of greenhouse gases such as carbon

dioxide, methane and ozone, with the burning of fossil fuels being the primary source. The 21st century could see global temperature increases of 6 to 10 degrees F, Shindell said. "That will really bring us up to the warmest

temperatures the world has experienced probably in the last million years," he said.

(* Excerpts, January 25, 2006, by Deborah Zabarenko, Reuters)



New Environmental Teaching Poster

New poster from The Global Education Project: "Earth: A Graphic Look at the State of the World" includes 15 Maps, 99 Charts and Graphs - one Big Picture. This compact and comprehensive resource presents essential data and commentaries on the condition of the world's natural and human environment. Graphic and accurate, this informative, up-to-date, and thoroughly referenced publication is sure to be of timely interest.

<http://www.theglobaleducationproject.org/index.shtml>

Elementary Science Teachers may find the following useful: a link to a PDF file that lists literature for children with an environmental emphasis. <http://dnr.wi.gov/org/caer/ce/eeek/teacher/pdf/Literaturelist.pdf>

Ocean Explorer CD-Rom

National Oceanic and Atmospheric Administration (NOAA) Ocean Explorer CD sets feature a series of ocean expeditions. CDs of the 2001-2003 ocean expedition seasons can be downloaded or viewed from the NOAA website. 2004 explorations are now available to explore online. <http://www8.nos.noaa.gov/oceanex/>

Sewage In Your Face

The City of San Diego's Metropolitan Wastewater Department children's Web site is targeted for students Grade 4-8. It features a virtual sewage treatment tour, resources for additional research, and classroom activities and lesson plans for teachers. <http://www.sandiego.gov/mwwd/kids/>.

The Fish Olympics

This interactive learning site provides background information on various fish based on camouflage, strength, eating, and speed. Click on one of the events, read about each contender and choose the winner of the Olympics. The site provides a summary, lists of books, magazines, clubs, and reference sites for additional research.

<http://www.liverpoolmuseums.org.uk/nof/fish/index.html>

Wyland Ocean Challenge

Exploring the natural world through art and imagination, the Wyland Ocean Challenge "Clean Water for the 21st Century" is a nationwide classroom program that uses an art-based, interdisciplinary approach to environmental education and conservation. <http://www.wylandoceanchallenge.org/>

Earth Science Visualizations

Watch the moon revolve around the earth. See what causes the seasons and the tides and much, much more. This site has just about everything for earth science instruction.

http://www.classzone.com/books/earth_science/terc/navigation/visualization.cfm

What Do You Know About Water Quality? is a new curriculum (grades 6 – 12) available for pilot testing that explores Virginia's watersheds, presents information on 17 water quality indicators and has ten *Jeopardy*-style review games. Educators interested in receiving a copy for review or classroom testing may send a blank CD to Barry Fox (Masthead Editor).

Fisheries Learning on the Web (FLOW)

This is a comprehensive curriculum about the Great Lakes ecosystem, geared toward upper elementary and middle school. Lessons are aligned with science and social studies standards. Much of it can also be used for other regions.

<http://eelink.net/cgi-bin/ee-link/newclick/232590>

The *Masthead* is the official newsletter of the Mid-Atlantic Marine Educators Association (MAMEA) and produced quarterly. The Association is an affiliate of the National Marine Educators Association and dedicated to the advancement of marine and freshwater education curricula, programs, and events that foster effective instruction, learning and environmental stewardship. Annual dues are \$10.00. For membership application, send your name, institutional affiliation, address, telephone/Fax numbers and e-mail address with payment to: Jackie Tacaks, PO Box 38, Solomons, MD 20688. For more information, contact any Board member.

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Be sure to:

- Submit an article with pictures to the Masthead (bfox@vsu.edu).
- Attend one of the MAMEA state conferences.
- Apply for a MAMEA mini-grant (www.mamea.org/minigrant.html).
- Nominate someone for a MAMEA award (www.mamea/awards.html).