



Environmental
Education
Advisory
Council of
New York City

EEAC

Spring 2018

NYC's School Gardens Are Growing!

By Kristin Fields,
Grow to Learn



In October, a third grade student told us the story of growing sweet potatoes in her school's rooftop garden, planted before summer break and harvested in early fall.

"We had to dig them up," she explained, "and break the roots because they were so buried."

When asked how many potatoes there were, she told us "a lot." Ninety pounds to be exact, all grown on a rooftop no larger than a swimming pool.

Seven years ago, GrowNYC recognized the need to support existing school gardens in New York City and saw the potential schools had to boost citywide greening efforts, and cultivate the next generation of environmental stewards.

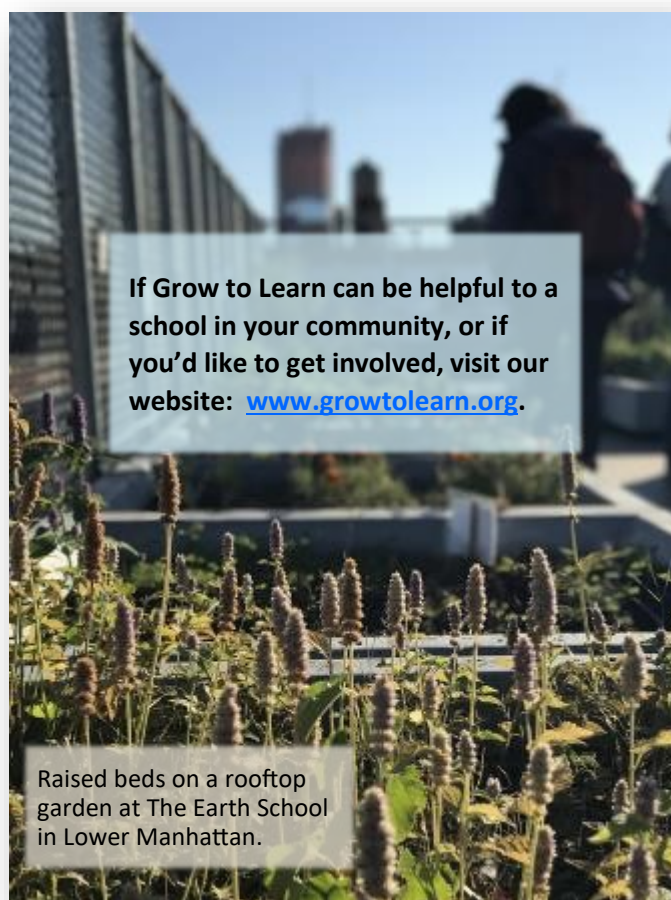
Grow to Learn, the citywide school gardens initiative of GrowNYC, was founded in partnership with GrowNYC, the Parks Department's Green Thumb Program, and the Department of Education's Office of School Food to assist the development of new and existing school gardens.

Grow to Learn's mission is to support a garden in every school that wants one. To date, Grow to Learn has reached over 715 school gardens in all five boroughs.

School gardens aren't necessarily new to New York City. They've been around since 1902 when Frances Parsons, a teacher in Hell's Kitchen, started the Children's School Farm on a plot of abandoned land. As the city expanded and farmland and greenspace shrank, Parsons recognized the need to connect students to nature, food, and farming. While the city today is very different from Parsons' New York, the fundamental desire to connect urban students to the natural environment is just as pressing in 2018 as it was in 1902, if not more so.

Grow to Learn gardens come in many shapes and sizes. With schools often surrounded by pavement and open space at a premium in urban places, finding room to grow is often challenging. Schools in our network have rooftop gardens, raised beds in courtyards, potted plants on window sills, green walls in school cafeterias, or partnerships with local community gardens. Grow to Learn provides material, technical, and financial support all the same.

While growing edible plants and flowers, school gardens transform empty spaces into sensory gardens, meditation spots, or outdoor classrooms, open to students, parents, and teachers. Schools use their gardens for everything from nutritional education to career readiness programs and experiential STEAM



If Grow to Learn can be helpful to a school in your community, or if you'd like to get involved, visit our website: www.growtolearn.org.

Raised beds on a rooftop garden at The Earth School in Lower Manhattan.

(continued page 5)

EEAC NEWS

Steering Committee Meetings

Please visit the EEAC website at www.eeac-nyc.org for meeting locations or contact an EEAC Steering Committee member. Steering committee meetings are open to anyone interested in learning about environmental education in New York City and sharing information about special programs and projects.

Newsletter Deadlines

If you would like to submit an article for the newsletter, please email it as a Microsoft Word attachment to KimE@dep.nyc.gov.

The newsletter deadline is the first Monday of Feb., May, and September. We would love your ideas!

Newsletter Committee

Lynn Cole
Joy Garland

Kim Estes-Fradis
Editor: Mary Most

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The Environmental Education Advisory Council of New York City, EEAC-NYC, is the only nonprofit organization with the sole purpose of promoting and supporting outstanding environmental education in New York City Schools and other centers for learning.

ENVIRONMENTAL EDUCATION ADVISORY COUNCIL

Judith Hutton
The New York Botanical Garden
Teacher Training
2900 Southern Boulevard
Bronx, NY 10458
www.eeac-nyc.org

This newsletter is a publication of the Environmental Education Advisory Council (EEAC), a voluntary organization of educators, classroom teachers, administrators and other professionals in active support of quality environmental education.

EEAC Officers

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Judith Hutton, Treasurer and Membership
Vacant, Secretary

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STAY IN TOUCH!

Members, keep up with the latest EEAC news on EEAC-NYC@googlegroups.com
If you would like to join the listserv contact Carol Franken at carolfranken@gmail.com



EEAC NYC



@eeacnyc



CHAIR'S MESSAGE

After moving to NYC almost four years ago, nothing has been more beneficial to building my professional network than getting involved with EEAC and I'm excited to see how the organization grows and develops in the coming years. In 2016, a member survey was conducted and one thing we learned was that members really value opportunities to network and learn about other environmental organizations in the city. To that end, if your organization is interested in hosting an EEAC event where members can socialize with each other and learn about your programs, I'd love to hear from you! Send me an e-mail and I'll connect you to our programs committee.

Beyond networking events, the steering committee is taking on many projects we hope will strengthen the organization and provide better services to our members but none of it would be possible without our volunteers. I want to thank the entire steering committee for all the work they've put into EEAC and I want to invite you to join us. Whether you are at the beginning of your career and looking to develop a particular skill or you want to offer your seasoned expertise, we'd love for you to be more involved. Our steering committee meets every month at New York University and anyone is welcome to join us or volunteer in other ways. Feel free to reach out to me at brittany.dileo@gmail.com and I'd love to chat about how to get involved.



Educator Make-and-Take EEAC at The Horticultural Society Greenhouse

Wed., March 21, 2018

4:30-6:00pm



THE HORT
THE HORTICULTURAL
SOCIETY of NEW YORK
Cultivating Plants, People & Purpose

Join us at The Hort's new greenhouse and education center in Denny Farrell Riverbank State Park.

- * plant and harvest fresh veggies
- * make delicious appetizers
- * explore student plant-based nutrition activities.
- * Stroll thru our permanent collection
- * learn about upcoming special events, hands-on workshops, and conferences.

Come learn and network!

[679 Riverside Dr.](#) @ West 145th St.
(917) 902-3940

Information and directions

www.thehort.org/nydigs [Click here to register](#)

Eventbrite

Sofrito
Puerto Rican cuisine,
cocktails & music



Riverbank State Park
Huge park with
loads of amenities
27 min drive - home

**Riverbank State
Park Outdoor Pool**
Lap pool perched...

Join us afterward for
sunset on the Hudson
& a taste of Puerto
Rico at Sofrito
(www.sofritony.com).

SUSTAINABILITY: In for the long run
by Ray Pultinas, on retiring from DeWitt Clinton HS

AS THE GARDENING and sustainability initiatives and projects have continued to flourish and prosper at DeWitt Clinton High School in the Bronx over the past several years, I have often been asked, “What about when you leave, what will happen then?” (As if I could ever know.)

Along with these questions came predictions: “You know once you go, this garden will be growing weeds so fast...” and “Just wait until you leave, nobody can replace you.” Like so many great ideas they’ve seen in schools over the years, people assumed our project was somehow doomed to end after I retired.

These types of expectations can provoke a fear that the work we do for sustainability in schools will not survive us. When the champions go, so do our projects. It’s the nature of the system, they might say, always changing.

As for me, I took these questions and predictions to



Work Study Interns (from left) Giovanni Flores, Angela Squitieri, Juan Sanchez, and Kelvin Hilario on the Farm with Ray Pultinas

heart. Anything I did towards sustainability would have to last. “Make it too big to ignore,” I began to tell people. “If it really means something, it won’t be swept under the rug, or be covered with asphalt.” And so I set out to prove the doubters wrong!

Now that I’ve retired from teaching I’ve gained a new perspective. For one thing — and I know this seems quite simple — I realize that I have not gone anywhere; nor do I have to. In fact, NOW is when it really starts. Now is the time to focus. Aside from starting a non-profit to continue on the work we’ve started, I’m still at work, at school, three days a week. I’ve crossed over to the beloved status I once envied, that of an informal educator. I help some teachers in our building carry on

a sustainability program that I helped initiate. I have plenty of time to listen to students and spend quality time working together. I help students recycle in the student cafeteria, and in the spring I’ll be in the gardens most of the time, observing, teaching, growing, healing. I never left and our projects are still getting too big to ignore.

And it’s not only me. Since 2014, I have had the privilege of working with a fine team of educators, students, environmentalists, architects, artists, and members of the community to plan the James Baldwin Outdoor Learning Center, a community hub and gathering space for all things sustainable in the Northwest Bronx.

Our team is also planning the Baldwin Trail, a walking path that will connect numerous planned programming spaces (or nodes) along its way and, in so doing, create circularity and accessibility around our campus that has never truly existed. We share a dream of transformation as we work to realize a unique school space on our sprawling campus.

We believe that forging an identity around food, the environment, and accessibility positively contributes to a well functioning community school. Becoming mindful of where our food comes from, how it is grown, how it is prepared, its health benefits, the science of nutrition, and the basic human right to have access to healthy food for everyone are vital to community welfare and at the core of our shared values.

The work continues. Sustainability never ends. It feels great to be a part of something that never ends.

Last year we planted 35 fruit trees donated, by the Fruit Tree Planting Foundation, to establish our edible forest. This season we will establish tree guilds through rigorous companion planting.



(Grow to Learn continued from page 1)

learning. It's not about the size or use of the garden space, but the community it creates in return.

Twice annually, Grow to Learn offers a mini grant program to schools, where they can apply for \$500 to \$2,000 to fund gardening projects. Grow to Learn is just one of many greening programs available to schools. In addition to providing financial and material support, Grow to Learn streamlines the process of navigating the multitude of available resources through our partner organizations.

Throughout the school year, we offer workshops for school gardeners. This spring, we're giving away seeds, seed starting kits, grow lights, tools, pollinators, soil, and lumber. There is also a Beginner Gardener Intensive in June at GrowNYC's Governor's Island Teaching Garden, where school gardeners of any ability can learn more about growing food alongside urban garden experts.



At that same rooftop farm that harvested over ninety pounds of sweet potatoes, metallic streamers are tied to the fence to keep birds away, but one family of hawks is welcome in their space. In fact, the children have named them, and parents are working on a series of children's books about the hawks who live above a school garden on the Lower East Side.



Sunflowers and artwork, STAR Academy and The Neighborhood School's collaborative 3rd St. Garden.



TEEP UPDATE

By MIKE ZAMM

EEAC's Teacher Environmental Education Preparation (TEEP) committee organized the workshop, "Building Teacher's Capacity in Environmental and Sustainability Education (ESE)" on

December 14th, 2017, at NYU. Thirty-six ESE educators from all over the city attended and reviewed progress made since last year's TEEP workshop held at Teachers College in October 2016.

The session on "Improving Sustainability Education in NYC's Schools" reviewed the successful sustainability coaches program run by the National Wildlife Federation (NWF) in four schools in Greenpoint, Brooklyn; presented an analysis of efforts to strengthen the mandated sustainability coordinator position in the city's schools; and discussed micro-interventions that can improve ESE in schools.

Students from Teachers College described their survey of current research on ESE in NYC schools. There were also presentations on the Teen Advocacy Sustainability Corps (TASC) run by the Wallerstein Collaborative on Urban Environmental Education at NYU; and on the ESE Clearinghouse that was proposed at last year's TEEP workshop. The current status of the NYS Environmental Literacy Plan was also discussed.

One highlight of the day was State Senator Brian Kavanagh's address. He raised the possibility of state support for a pilot project to place full-time sustainability coordinators in 20 schools.

Going forward there was general consensus that the coalition of organizations involved in organizing the workshop would investigate Senator Kavanagh's idea on the sustainability coordinator project, continue to develop the Teachers Clearinghouse, and also work with colleges of education to directly incorporate ESE into teacher preparation.



DSNY Zero Waste Schools Awards

The **DSNY Zero Waste Schools Awards**, once called the Golden Apple Awards, reward NYC public schools grades K -12 with cash prizes for creating new, outstanding programs in recycling, sustainability, reuse, gardening, or cleanup. Schools are invited to enter in these competitions:

- RCP Super Recyclers: best school recycling program
- MFTA Reduce & Reuse Challenge: most creative reuse projects
- CCNYC Team Up to Clean Up: best cleanup and beautification projects
- DSNY Commissioner's Cup: DSNY Commissioner awards best sustainability efforts in all DOE schools
- DSNY Zero Waste Schools Challenge: awards participation for the first 100 Zero Waste Schools

Award levels may change year-to-year based on available funding. Only DOE schools can receive cash prizes.

Winners will be announced between May 28 & June 1, with a celebration the week of June 18.



2018 contests deadline:
Friday, May 11th

NYC Department of Environmental Protection Education Programs



Wastewater Treatment & Food Waste-to-Energy Professional Development Workshop

Join DEP as we host a workshop on understanding wastewater treatment and innovative food waste-to-energy initiatives on **Wednesday, March 28, 2018** from 5:00 PM to 7:00 PM at the [Visitor Center at Newtown Creek](#). Learn about the process of wastewater treatment, as well as DEP's food waste-to-energy and renewable biogas-to-grid projects that are taking place at the Newtown Creek Wastewater Treatment Plant. Teachers will also be able to tour the facility. To register, click [HERE](#).

City that Drinks the Mountain Sky

Trace the path of life's quintessential liquid from mountain-top to New York City tap. Learn about the New York City water supply as told through mask and puppet theater. Two school performances are scheduled for **Tuesday, April 10, 2018** from 10:30 - 11:30 AM and 12:00 - 1:00 PM at [LaGuardia Performing Arts Center](#). For more information click [HERE](#).

Harbor Water Quality Teacher Workshop

DEP's Education Office along with the South Street Seaport Museum invite you to set sail for a free professional development workshop on the [Schooner Pioneer](#) during the month of May and June (four workshop dates available). You will have an opportunity to learn about the history of New York City's Harbor, the NYC water supply system, watershed protection, local ecology, and water quality during this 90-minute sail. To register, click [HERE](#).



To learn more about the professional development opportunities for educators and school performance of "City that Drinks the Mountain Sky" please email educationoffice@dep.nyc.gov.



NYC Department of Environmental Protection's 32nd Annual Water Resources Art and Poetry Contest

We are excited to announce the launch of the NYC Department of Environmental Protection's (DEP) 32nd annual Water Resources Art & Poetry Contest. Students in 2nd through 12th grades attending public, independent, charter, or parochial schools (or home-schooled) in New York City and East and West of Hudson Watersheds are invited to create original art and compose poetry that reflect an appreciation for our shared water resources. Entries accepted online until **Friday, March 9, 2018**.

Last year, about 1,800 New York City and Watershed students' submitted poetry and artwork, including paintings, collages, three-dimensional models, photography, animation, and videos of dance performances, public service announcements, and songs. View some of the 2017 Water Champion winning entries on the [DEP Flickr Page](#).

Please click here – [2018 Art & Poetry Contest](#) – to view contest guidelines, water themes and topics, resource materials, and past winning entries, and to submit entries online. The 2018 contest will focus on five central themes that incorporate STEM and humanities disciplines:

Water, A Precious Resource: To recognize the importance of a clean and plentiful supply of water

NYC Water Supply System: To explore the history of the NYC Water Supply System and its present-day source, operation, delivery, protection, and maintenance

NYC Wastewater Treatment System: To examine our sewer infrastructure; and the purpose of, and process for, cleaning wastewater in New York City and in the East and West of Hudson Watersheds

Harbor Water Quality and Healthy Marine Ecosystems: To discover the richness of our marine life, and opportunities for recreation and commerce on local waterbodies; and to understand the work that is being done to monitor and ensure healthy water quality

Water Stewardship and Climate Change: What Can We Do To Help?
To consider our influence on the environment and how we can address and help resolve environmental issues that impact our neighborhoods, our city, and beyond

Art and poetry entries will be judged (in grade categories) on creativity in interpreting one or more of the contest themes, accuracy of information, originality, and skill. In April, we will announce our contest winners, called Water Champions.

Please visit our [website](#) to learn more about the 32nd annual Water Resources Art and Poetry Contest; contact educationoffice@dep.nyc.gov with questions. We look forward to receiving all of the wonderful entries from your students this year!



By Lacey and Ya Ling



By Brian



By Lily

Sample Compost Activity - The New York Botanical Garden

Exploring Cycles by Sifting and Applying Compost

Materials

- Finished compost
- Compost screen
- Two wagons
- (4-6) trowels
- (4-6) pairs of gloves

Steps

Decide which area of the garden you will apply finished compost. Compost can be used as a top-dressing applied thinly to the top of a garden plot; more heavily to build up an area that has lost a layer of soil over time or in a new area that is being prepared for planting.

Gather your class and explain/review/explore the compost cycle and how compost is made.

Invite students to examine the compost pile. Identify the elements of the pile that need to be sifted out. With an understanding of the compost cycle, students should be able to identify why certain items (plastic, stones, etc.) are present in the pile. Use this time to review the life cycle of compost being created.

To sift compost, lay compost screen on top of 1 wagon, while keeping another wagon free to accept un-composted items that will not pass through the sifter. Have students take turns putting compost through the screen, sifting, removing un-composted items to a separate pile, and harvesting finished compost to apply to the garden plot.

Points to review throughout activity

- What is compost?
- What breaks down in a compost pile?
- What agents (bacteria, fungi, insects, animals) help make compost happen?
- What elements are necessary in a compost ecosystem to make compost happen (details about water, air, temperature)?
- What is the step-by-step compost process?
- What role does compost play in the garden?
- What role does compost play in our edible food crops?

Optional

Develop a pre or post worksheet activity that asks students to write down their compost cycle observations, as multiple choice, step-numbering, illustrating or essay form.

Ask students to hypothesize various outcomes in the composting process depending on different variables such as: temperature/seasonal change, compostable input change, water variation, etc.

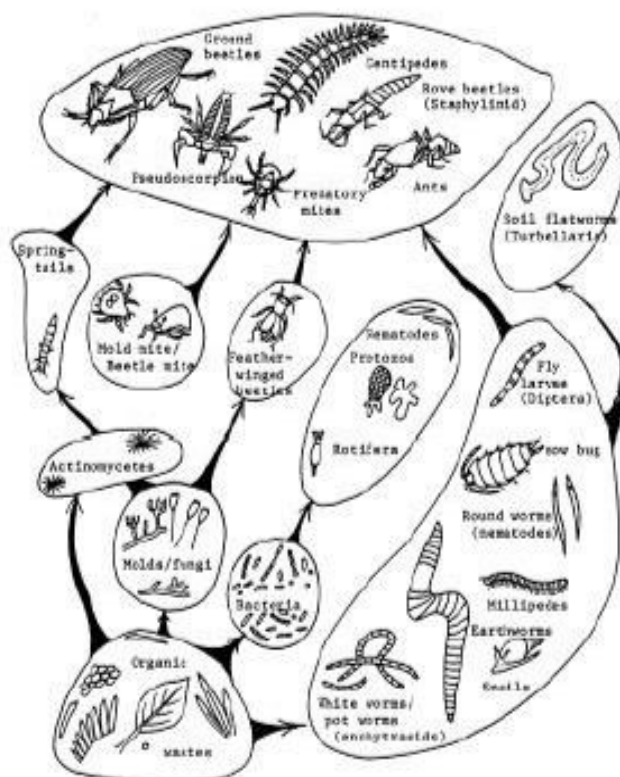


Garden Maintenance (Late Winter/Early Spring)

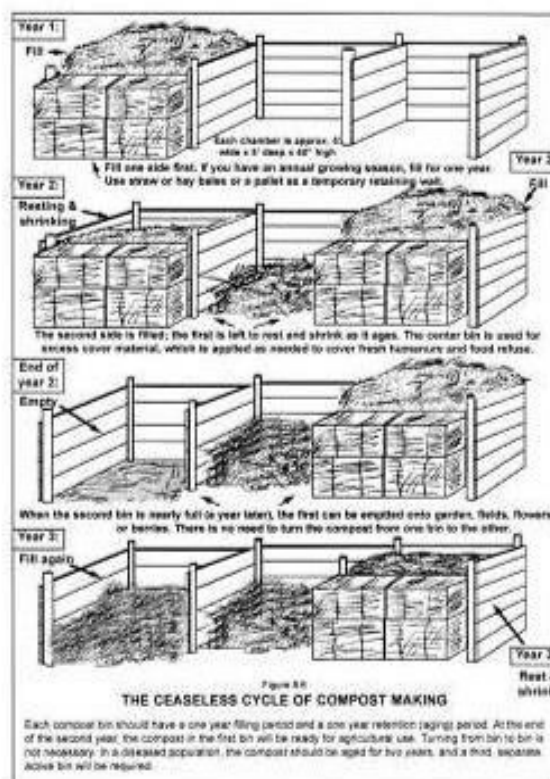
Curriculum Connections \ The New York Botanical Garden

Compost is a rich area for curriculum connections. In addition to being a great hands-on activity, compost connects to classroom based lessons in life cycles, nutrient cycles, forming hypothesis, building narratives, and mathematical concepts such as ratios, percentages and probability.

Compost can be viewed as an ecosystem:



Or as a model of action over time:



Or as an example of a “lifecycle” (produce to soil, and back again):



Additionally, as a hands-on activity and during classroom follow-up, students will be able:

- ...To form a hypothesis, conduct observations, and measure results.
- ...To measure quantities in various metrics, and create percentages, ratios and fractions.
- ...To see cause-and-effect in action.

Thank you Mary Ting for sharing these beautiful and clearly organized guidelines on What To Compost!

If you drop off your organic scraps for composting with the city or some other organization, ask for their requirements for what they can handle. Composting systems do vary somewhat.

One third of what New Yorkers throw away is yard waste and food scraps, also known as organics. Composting turns this "waste" into soil or renewable energy.

More information here:

nyc.gov/organics



WHAT TO COMPOST?

GREENS (fresh, moist, nitrogen-rich materials)



FRESH CUT FLOWERS



GREEN TRIMMINGS



WEEDS W/O SEEDS



MANURE FROM PLANT EATERS



COFFEE GRINDS, TEA



FRUIT/VEGETABLE SCRAPS

BROWNS (dead, dry, carbon-rich materials)



DRY LEAVES



TWIGS, POTTING SOIL



EGG(calcium)& NUT SHELLS



STALE BREAD/GRAINS
Limited Quantities



SOILED PAPER PRODUCTS



TREE BARK, SAW DUST
Limited Quantities, Untreated

Mary Ting, Certified Master Composter, NYC Compost Project with LES Ecology Center

© Mary Ting 2017 maryting.com



SCONYC
Science Council of New York City



40th Annual
Conference

**SCIENCE:
SHIFT INTO NEW
DIMENSIONS**

Saturday

March 24, 2018
8:00 AM – 4:00 PM

Stuyvesant High School
345 Chambers Street
New York, NY 10282
*Easy access via many major
subway lines and the NJ PATH*

Tickets: tinyurl.com/SCONYC2018

CONFERENCE HIGHLIGHTS

- CTLE CREDIT available for selected workshops
- Keynote Address: Michael DiSpezio, "Reengineering NYC Science Instruction for the 21st Century Classroom"
- 4 workshop sessions; select workshops of your choice for each session
- Special workshops planned for new and in-service science teachers on understanding of current assessment systems and instructional strategies
- Informal educational resources available for NYC including museums, zoos, aquariums, environmental organizations, and city, state, and federal government agencies
- Information about textbooks, educational materials, programs, and ideas
- Commercially developed educational workshops
- Exhibition Hall featuring books, programs, and classroom materials
- Hot buffet luncheon available

SCHEDULE FOR THE DAY (New Format This Year)

7:45 - 9:30 am	Registration
7:45 - 9:00 am	Networking (complementary coffee, tea & muffins)
8:15 - 9:15am	Session A
9:15 - 12:00	Exhibition Hall & Free Materials
10:30 - 11:30am	Session B
11:45am - 12:45pm	Keynote Address
12:45 - 1:45 pm	Luncheon Buffet (Tickets \$15)
1:45 - 2:45	Session C
3pm - 4pm	Session D
4pm	Certificate of Completion for 6 hours of PD and Door Prize Giveaway



NY State Marine Educators
Association Host 39th
Annual Conference

CALLING ALL OCEAN LOVERS! Please join us for the 39th Annual Conference of the New York State Marine Education Association (NYSMEA), May 19, 2018 at Kingsborough Community College in Brooklyn. Get your feet wet – literally and figuratively as you seine in Jamaica Bay, participate in a navigation simulation with a ship captain, explore the "magic" of marine science, and engineer new solutions in the STEM lab. Whether you are looking to enhance your science content knowledge, find new instructional resources, or meet other marine science enthusiasts, it is sure to be a fun and educational day as we explore the theme of "Marine Explorations: From the Hudson Canyon to the Shores of New York."

NYSMEA is a state-wide 501(c)(3) nonprofit organization that promotes marine awareness and encourages the growth and exchange of instructional resources within the scientific, commercial, and educational communities. We are an active chapter of the National Marine Educators Association. NYSMEA members include Pre-K-12 teachers; informal educators from museums, aquaria, nature centers, and other nonprofits; college professors; government professionals; scientists; students; and other marine enthusiasts.

Our Annual Conference is a full-day event that brings our members together to network, learn, share ideas, and have fun! CTLE credits will be available through the Mercy College Center for STEM Education. We will begin the morning with a buffet breakfast, exhibitors, and keynote speaker Dr. Mercer Brugler, followed by three concurrent sessions which will include hands-on workshops, simulations, and tours. After a networking lunch and awards ceremony, there will be four field trip options including the New York Aquarium, water quality investigation and plankton tow, horseshoe crab walk, and "oyster mania" session. An evening cocktail reception and dinner will be followed by the evening keynote speaker, Dr. Vincent Guida, and our always-lively live auction.

Saturday,
May 19, 2018

Register at
nysmea.org

At
Kingsborough
Community College

MEMBERSHIP APPLICATION



☐ New member ☐ Renewal Date _____

Name _____

Title _____

Organizational Affiliation _____

Home Address _____

City _____ State _____ Zip _____

Organization Address _____

City _____ State _____ Zip _____

Home phone _____

Business phone _____

Email _____

MEMBERSHIP CATEGORY

☐ \$30 Individual ☐ \$75 Organization

☐ \$250 Individual Life Membership

Please make checks payable to "EEAC."

Mail completed form and check to:
Attn: Judith Hutton
The New York Botanical Garden
Teacher Training
2900 Southern Boulevard
Bronx, NY 10458

Members are welcome at EEAC Steering Committee meetings, held every 3rd Wednesday of the month. Check our website for these and other events.

www.eeac-nyc.org

EEAC is a 501-(c)3 organization.



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