The Newsletter of

Autumn 2013

Workshops & Conferences

Day of Garden Skills Workshops & Demonstrations for School Garden
Saturday, October 19, 2013
9 a.m. to 3 p.m.
NE Small Farm Inst., Belchertown
Free and open to all with registration.

Greening the School Conference
Saturday, November 9, 2013
8:30 a.m. to 3:30 p.m.
Clay Science Center, Brookline
Choice of 5 concurrent workshops in each of four sessions. Fee: $50

Annual Winter Conference
Saturday, March 8, 2014
8:30 a.m. to 3:30 p.m.
Baird Middle School, Ludlow
Choice of 8 concurrent workshops in each of four sessions
Fee: $50 . ($45 until Dec. 1)

More information on page 7.

Feature Topic: STEM Connections to Agriculture

Mission: Massachusetts Agriculture in the Classroom (MAC) is a non-profit 501 (c)(3) educational organization with the mission to foster an awareness and learning in all areas related to the food and agriculture industries and the economic and social importance of agriculture to the state, nation and the world.

MAC Celebrates 30 Years!

This year Massachusetts Agriculture in the Classroom celebrates our 30th year of bringing high quality agricultural educational resources to teachers. As we celebrate this achievement, and also look forward to the future, taking a look back to where we began seems only fitting.

MAC's President, Marjorie Cooper, has been involved since 1982. She was one of the founding members of this important educational organization that is celebrating 30 years in 2013.

John Block, the Secretary of Agriculture for U. S. D. A, planted the seed for Agriculture in the Classroom programs across the nation. Here in Massachusetts, Commissioner of Agriculture **Frederick Winthrop** called a meeting of representatives from fifteen of the state's agriculture and education related organizations in the spring of 1982, to discuss the idea of creating an Agriculture in the Classroom program for Massachusetts.

Believing that this new organization would fill a void in education, a committee was formally established that summer, chaired by State 4-H Leader **John Sterling**. Together they developed a model whereby MAC would work with teachers to incorporate agricultural concepts into the existing classroom instruction. This integration was formalized in the fall of 1982 when Commissioner Winthrop sought and received an endorsement from Commissioner of Education **John Lawson**, who delegated representatives to serve on MAC's committee.

With the partnership between the departments of agriculture and education established, the committee moved to the creation of lesson plans that teachers could use to integrate agriculture into their classrooms. **Dr. Barbara Garner Koech** of UMass Amherst was hired in 1983 to develop curriculum. Later that same year, **Governor Michael Dukakis** signed a "Declaration of Principles" for "Massachusetts Agriculture in the Classroom", officially establishing the organization as an entity in the Commonwealth. In 1984, U. S. D. A. made "Agriculture in the Classroom" a permanent program of their agency.

Throughout the 1980s MAC worked to develop instructional units for teachers to use in their classrooms and offered summer institutes for teachers. Through the 1990s and continuing today, MAC expanded program offerings and outreach to educators. Today, MAC annually provides resources and professional development training for thousands of educators across the Commonwealth, through our popular programs including: three annual conferences, a graduate course, workshops on the farm, three educational newsletters, mini-grants, garden-based resources and mentoring, teacher awards, manuals and more.

This small non-profit has had a big impact in classrooms across the state for thirty years. All program and operational support is raised annually through donations and grants. Make a donation today to celebrate our 30th year!

Mini Grants

In April of 2013, the MAC mini-grant committee awarded a $500 grant to science teacher **John Wilcox** at the **Horace Mann School for the Deaf** in **Boston.** The funds will support a new school garden program with materials for five garden beds. John and a certified horticulturist will develop the garden and connect the outdoor classroom to the life science, math and engineering standards. We wish them happy gardening!

Any Massachusetts teacher or school can apply for a mini-grant to support their agriculture in the classroom efforts. Each year MAC awards mini-grants, usually in the amount of $300 to $500, to teachers for agricultural education projects. Proposals are due the first of April, September and November. To receive a copy of our mini-grant guidelines, visit our website or send a letter to MAC.

Educational Resources Available from MAC

School Gardens & Their Community Partnership Manual	**$10**
Farm Field Trip Manual	**$12**
8 Lessons about Agriculture & the Environment Manual	**$5**

2014 Massachusetts Agriculture Calendar

The 2014 MA Agriculture Calendar is now available. Show your enthusiasm for agriculture while you support MAC, recipient of all proceeds. Each calendar month features a photo portraying a farm or farm product, and offers agriculture and conservation facts and events. Calendars may be purchased from MAC for $10 each or at a discount of $5 each for 5 or more.

President's Message

During this past spring and summer, there was a flurry of activity for Mass. Agriculture in the Classroom. We initiated a new **Summer Conference** connecting the school garden to the classroom. It was held on July 18 at the **Holden Christian Academy** where the gardens and 'Food-for-Life' curriculum were on display. MAC Board member **Liz Ellis**, from Heifer International, led the group in harvesting and preparing their own lunch and even supplied accompanying lessons connected to the curriculum standards. The whole day received exceptional reviews.

Our **Summer Workshops on the Farm** were very popular, with an average of 17 teachers attending each of the eleven workshop days. Host farms and activities provided introduction to the diversity and richness of agriculture across the state. Eleven teachers participated in our three-credit **Summer Graduate Course,** sponsored in conjunction with **Fitchburg State University**. Participants attended eight workshops, kept a journal and developed new lessons for their classrooms. They also learned what it takes to remain viable in agriculture today.

Our school garden efforts continue to expand. MAC provided guidance for eight new school gardens this spring, and continued support for the 20 gardens we mentored last year. Twelve additional gardens will be added this fall. **Alice Posner** developed a garden blog to connect school gardens across the state. We also developed a new How-to-Guide for Fall Gardening and will soon release two additional guides on Getting Started and Summer maintenance. Agricultural extensions have been added to our garden-based lessons. We also held a spring and schedule a fall garden workshop day.

As we celebrate our 30th anniversary year, I look back to where we started in early 1980s. I am proud to have been a part of the conception of this important educational organization that offers such a depth and diversity of resources and trainings to help teachers bring agriculture to life for their students. I am also grateful to all the board members, volunteers, farm hosts, teacher educators and donors who have supported MAC all these 30 years.

Marjorie A. Cooper
President

2013 Teacher of the Year

Cyndi Jensen, our 2013 Massachusetts Agriculture in the Classroom Teacher of the Year.

MAC is proud to announce that our **Teacher of the Year for 2013** is **Cynthia Jensen**, Science Teacher at **Gateway Regional High School** in **Huntington,** where she teaches Biology, Biotechnology, Anatomy & Physiology and Forensics. Cyndi is such a huge fan and supporter of MAC, that she has taken our Summer Graduate Course for the past three summers and enlisted other teachers to take it as well. We have enjoyed the enthusiastic way that she can take any aspect of agriculture and adapt it for teaching her students, spinning out ideas for other teachers to use as well.

In 2012, she hosted one of our summer workshops on the farm at her home in Worthington - with a focus on fibers. Participants met her angora bunnies and had the chance to try spinning, weaving, and felting before touring a local fiber farm. She also taught a workshop on pollen in forensics for our 2012 Winter Conference.

Cyndi is an avid gardener at home and also helped start a garden at her school in 2004. In addition to her angora bunnies, she has raised bees and chickens. She received a BA in biological sciences and English language and literature from Smith College in 1996 and a MA in Biology from University of Nebraska-Kearney in 2011. She started teaching at Gateway Regional High School in 2001, where she has had a positive influence teaching her students with real life examples, including agriculture.

Congratulations Cyndi! Read more about Cyndi and her classroom agricultural efforts and our other past Teacher of the Year winners on MAC's website under Awards.

STEM Resources & Agricultural Connections

Massachusetts STEM Pipeline Fund
www.mass.edu/forinstitutions/preK16/pipeline.asp

Massachusetts. Office for Mathematics, Science and Technology Engineering
www.doe.mass.edu/omste/

Massachusetts STEM Resources, including Math Reading Library
www.doe.mass.edu/omste/instructional.html

Mass. Governor's Science, Technology, Engineering & Math Advisory Council
www.mass.gov/governor/administration/councilscabinetsandcommissions/stem/

4-H AgriScience Information
www.4-h.org/resource-library/curriculum/agriscience/

Agricultural Sustainability Lessons from University of California Davis
http://studentfarm.ucdavis.edu/edumat/saguides

Biology Corner Lessons
http://www.biologycorner.com

Iowa Governor's STEM Council Agricultural Activities
http://www.case4learning.com

Nat. Ag. in the Classroom STEM Resources
www.agclassroom.org/teacher/stem.htm

National Educ. Assn. STEM Resources
www.nea.org/tools/lessons/stem-resources.html

Nat. Environmental Educ. Week Activities
www.eeweek.org/resources/garden_curricula.htm

Next Generation Science Standards
www.nextgenscience.org

PBS STEM Educator Resources
www.pbs.org/teachers/stem/

Science Fair Project Ideas
www.ars.usda.gov/is/kids/AgSciProjects/ideas.htm

Science for Everyday Life
http://scienceof everydaylife.com

STEM Transitions Agricultural STEM Lessons
www.stemtransitions.org/ag.php

Dayton Reg. STEM Center Agri. Resources
http://daytonregionalstemcenter.org/curriculum/?grade=&content_area=&industry=agricultural-engineering

Univ. of Wisc. STEM Activities by Subject
www.uwex.edu/ces/4h/set/documents/STEMactivities.docx

Utah AITC "Food, Land, and People"
http://utah.agclassroom.org/htm/workshops/flpelstem/

Youth Learn "The Soil Around Us" Activity
www.youthlearn.org/activities/soil-around-us-project

Information for this Teacher's Resource was taken from the references listed above.

STEM & AGRICULTURE: A Perfect Fit for Your Classroom

In recent years there has been an increased emphasis on the teaching of STEM and this is changing the face of education in Massachusetts. Many of the jobs of the future require a high quality STEM education and it is increasingly more important that students see the practical applications of their science education. Due to the nature of agriculture, the connections to STEM can be very clear and make for interesting lessons. This article is intended to give you an overview of STEM education and to provide examples of how you can integrate agriculture into the study of the STEM topics.

WHAT IS STEM?

STEM refers to a curriculum based on the study of **Science, Technology, Engineering and Mathematics.** The Massachusetts Department of Elementary and Secondary Education has made the teaching of these subjects a priority, not only to improve science education but because of the benefits that the teaching of STEM provides for other subjects. The backbone of STEM education is a specific focus on engagement in inquiry, logical reasoning, collaboration and investigation. Students not only learn facts, they must put them to use and learn new facts in the process. The ultimate goal of STEM education is to properly prepare students for higher learning and the jobs of the future. Specific standards for curriculum for Math now come from the Common Core while for Science, Technology and Engineering the standards are being worked out based on the Next Generation Science Standards.

INQUIRY AND INVESTIGATION

Inquiry is one of the key elements of STEM education. Inquiry based lessons are centered on questions posed by students. The goal of this type of learning is for students to discover answers to questions on their own through project based investigations. Instead of teachers directly answering questions, teachers become more of a resource. Though the lesson is less structured and more driven by further questioning by students, inquiry based lessons can be more attractive to students who have difficulty processing lectures and thrive when investigating ideas for themselves. For all students this method encourages them to question what they think they know and find new solutions to problems. Inquiry is more than learning facts and concepts; it is about learning how to solve problems using lessons learned and prior knowledge.

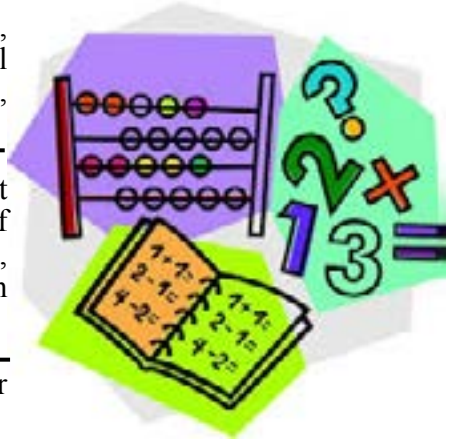
LOGICAL REASONING AND COLLABORATION

STEM based lessons, especially those that encourage engagement in inquiry, naturally help students with logical reasoning and collaboration. Inquiry based lessons allow students to follow processes whether they are defined or a product of the investigation. They learn to follow logical steps and use what they have learned to answer bigger questions. Collaboration is an essential characteristic as well. These types of activities call upon the different strengths of the students. The latent abilities of students can be drawn out further by allowing them to work together, and then students can bounce ideas off of one another and work together to find solutions. Collaboration among students also encourages the development of social skills and team work which is important for their future careers. Any STEM activity will encourage students to use logical reasoning and collaborate with fellow students but some activities that promote these concepts are listed on page 5.

AGRICULTURE & STEM EDUCATION

Agriculture is a science so it aligns itself perfectly with efforts to add more STEM education into your classroom. Yet agriculture is so much more, it surrounds us everyday and connects across the curriculum. It is part of our history and our culture. It provides the food that we eat and is connected to the air, water and soil that sustain us. It involves caring for living and growing things. It is a business that involves annual scheduling, growth and planning for the future, which easily supports math and economics lessons. Agriculture is constantly developing and changing through new ideas, equipment, varieties and technology. Whether you teach kindergarten or high school, there are many ways to integrate agriculture into your STEM curriculum. Below is a chart of just a small sampling of different ideas for connections to each grade.

Grade Level	Agriculture- STEM Possibilities
Kindergarten	Plants and their Ecosystems
Grade 1	Studying the leaves and structure of a plant. Study how plants shape helps its function
Grade 2	Plan and conduct an investigation to determine if plants need sunlight and water to grow.
Grade 3	Environmental changes and their effect on planting
Grade 4	Study how people use plants for energy
Grade 5	Interdependence between plants, animals and people.
Middle School Math	Geometry in nature, sunflowers and Fibonacci
Middle School Physical Science	Study agricultural products that are turned into synthetic materials.
Middle School Life Science	Competition for resources between living things and their need for adaptation. Study how to maintain biodiversity. Study how the environment effects the growth of plants and animals. Study the growth of animals such as chickens or fish.
Middle School Earth & Space Science	Water Cycle and Growing Season in Different Climate Zones. Human Impact on the Environment
Middle School Engineering	Design a hand pollinator, build an invention based on the shape of something natural, study how to minimize human impact on the environment
High School Math	Creating an Agribusiness Plan. Economics of Farm Life.
High School Life Science	Nutrition Analysis of Foods, Hydroponics, Genetics of Plant and Animal Cells, Chemical reactions during photosynthesis, Carbon Cycle, Reducing human impact on ecosystems.
High School Earth & Space Science	Develop possible solutions to human impact on biodiversity. Study how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
High School Engineering	Analyze and hypothesize solutions to a major problem facing agriculture.



Sample Activities

Elementary: Have the students study a mystery vegetable from seed to harvest. First investigate the seed, what do they think it will grow into? Then have the students plant and take care of the seed until it grows into a vegetable that can be harvested. Have the students keep a journal of the changes they see in their plants and ask them to hypothesize what they think will happen in the future. When the vegetable is ready to eat, have the students think of different ways to prepare it.

Middle School: Host an agriculturally focused Science Fair with your students. Have the students work independently or in group to hypothesize solutions to a problem in agriculture. Then have them develop a solution to the problem, whether it is further research or building small scale replicas. Encourage the students to be creative. Set up a small fair for them to present their work and invite parents and other students to attend.

High School: Create a school garden for your school. Have the student select the types of plants that would thrive in your climate in the location of your school. Research the proper soil composition and chemical fertilize necessities for these plants. Study their growth and different methods of cultivation. Hypothesize ways to allow for greater growth from the plants. Study the cells of the plants and compare them to one another. Discuss the reproduction of the plants and what you would expect from future generations. Take a look at the pollinators who visit the garden. What can you learn about those species from the pollinators that are present.

Sample Activities That Promote Inquiry & Investigation

- Explore soil conditions and amendments to add to soil to enhance plant growth
- Study the necessary tools for a successful dairy farm
- Observe a seed and determine what causes it to germinate
- Consider why cranberries are native to Massachusetts
- Determine what the causes of commodity price fluctuations are
- Calculate pi by measuring the diameter and circumference of circular food
- Use a coffee filter to demonstrate how water moves through leaves, have students make their own leaf.
- Have students study the life cycle of a butterfly and encourage them to guess what comes next at each stage.
- Have student keep a log of their food intake for a day and the ingredients. Then have them try to guess all the different kinds of plants that their food came from.

Supporting Logical Reasoning & Collaboration

- Experiment to find the appropriate amounts of ingredients for a recipe
- Discover the identification of a tree based on its leaf characteristics such as shape and venation
- Determine the appropriate combination of items for a functioning compost pile
- Observe animal behavior to try to catalog habits and communication between different species.
- Show students pictures of animal foot prints and have them research to determine what animal the print belongs to.
- Have students work with a partner to design a new farming invention. What problem will it solve? What would it do?
- Explore different varieties of flowers and the insects and animals that pollinate them. Can the students figure out what pollinator pollinates each flower based on their characteristics?

STEM Connections Across the Curriculum

It is easier than you might think to connect STEM to other parts of your curriculum. Math and Science have obvious relationships to one another, but there are other connections that may be less obvious. STEM can fit perfectly with Art -- whether it is mixing paints to create new colors, analyzing shapes in paintings, or making physical diagrams or models of math problems and engineering projects.

Math and Music make great partnerships as well, since counting is so important in music. There are also obvious pairings with English and STEM. Students can write stories based on scientific data they have collected or be encouraged to read books that touch on the topics they are discussing. Agriculture can be a great catalyst for these connections. Agriculture does not fit into one specific box, but instead is a cross curricular activity touching on many of the subjects taught in the classroom. A STEM Curriculum will be more interesting to students if they see clear connections between different areas of their studies and the real world. Below are some resources that are specifically geared to making these connections.

Southeastern Massachusetts STEM Network
http://www.connectsemass.org/stem/index.html

STEAM (Science, Technology, Education, Art, Mathematics) Lesson Ideas
http://steameducation.wordpress.com/tag/lesson-plan/

Teacher's Domain
http://www.teachersdomain.org/

National Geographic
http://education.nationalgeographic.com/education/lesson/?ar_a=1

STEM Collaborative
http://stemcollaborative.org/

Food Day 2013

Food Day is nationwide celebration and a movement for healthy and sustainable food where local groups and organizations hold activities specifically aimed at connecting people with their food. This annual event involves some of the country's most prominent food activists, united by a vision of food that is healthy, affordable and produced with care for the environment, farm animals and the people who grow, harvest and serve it.

Food Day's national priorities address concerns within the food system and provide common ground for building the food movement. Food Day aims to: promote safer, healthier diets, support sustainable and organic farms, reduce hunger and increase access to fresh local produce. Nationally, there is also momentum to reform factory farms and support fair working conditions for food and farm workers.

Food Day was created by the **Center for Science in the Public Interest.** In Massachusetts, this project is spearheaded by the **Massachusetts Department of Agricultural Resources.** Other organizations and companies include Whole Foods Markets, Stop & Shop, UMass, the City of Lawrence, Catholic Charities, Heifer International, Local Farmers' Markets and the Farm to School Project.

The most important element in Food Day is you. Use October 24 to start - or celebrate - eating a healthier diet and to make a meaningful and long-lasting difference for you, your family and your students.

FOOD DAY.ORG
OCTOBER 24, 2013

Massachusetts Agriculture in the Classroom
P.O. Box 345 Seekonk, MA 02771
www.aginclassroom.org

Food Day Activities

Another possible activity for engaging your students in STEM topics and agriculture is to have your students get involved in their local Food Day activity on or around **October 24.**

There are many events taking place around the State that have been planned to celebrate Food Day that focus on analyzing local foods, taking a look at agricultural entrepreneurial enterprises, and many other STEM topics. Events will range from community potlucks, "Eating Real" school challenges, film screenings, and farmers' markets -- to festivals, food demos, family dinners with food focused discussion, and so much more. Consider working with one or more local farmers to hold your own Food Day event where you invite the farmers to come in and explain the ways they use STEM in their daily lives on the farm. Here are some examples of Local Food Day events:

- **Cambridge: Harvard Square's 20 Mile Radius Restaurant Challenge:** On October 24th, they will be preparing meals as part of Food Day 20-Mile Challenge. Restaurants will create menus with all ingredients sourced within a 20 mile radius of Harvard Square.

- **Worcester: Main South Farmers' Market Food Day Celebration:** The Main South Farmers' Market will be the fabulous site of this exciting event! Purchase local produce; dine on delicious prepared foods, see live music; attend mini-workshops on gardening, composting, and cooking; get your blood pressure and glucose checked; learn about Worcester organizations related to food, nutrition, health, agriculture and more! This is a family friendly event with a whole "KidZone!" located in a beautiful park.

- **New Bedford:** Southeastern Massachusetts Agricultural Partnership Community potluck and film screening. SEMAP will partner with the International Church of the Nazarene and The Southeastern Massachusetts Food Security Network to present an afternoon of learning, sharing, eating and a movie viewing. Take a tour of the neighboring Serenity Gardens and talk to urban farmers, then return to the Church for children's activities, a community potluck and food drive and a screening of the documentary film, Ingredients (showing 6:30-8:00 pm).

- **Heifer International in Rutland:** Participate in the Global Harvest Festival on October 5 & 6. Tour the International homesteads, sample foreign cuisine, meet the animals and try your hand at roasting coffee and digging potatoes. Kids can hop a hayride to the pumpkin patch, get their faces painted and go for gold in the potato sack race. www.heifer.org

- **Let's Get Cooking with Food Day:** Cookbook, Recipe Cards, Nutrition Toolkit, Step by Step Guide, Classroom cooking registration and Jamie Oliver's Learn Your Fruits and Vegetable program can all be found at www.foodday.org/lets_get-cooking.

- For more information about Food Day and to find an event in your area visit www.foodday.org. You can also contact Rose Arruda, Massachusetts Food Day Campaign Coordinator, at rose.arruda@state.ma.us or 617-626-1849. She can also help you to coordinate a Food Day activity.

This educational newsletter on STEM Connections to Agriculture was written by Christopher Szkutak, MAC's Technical Associate and Certified MA Math and Political Science Teacher.

Garden Skills Workshops & Demonstrations for Schools

Spend an educational and fun day brushing up on your gardening techniques and learning new activity ideas for school gardens on **Saturday, October 19**, from **9 a.m. to 3 p.m.** at the **New England Small Farm Institute** in **Belchertown.** Twelve workshops and demonstrations to support successful efforts in the school garden will be held throughout the day, including soils tests, building coldframes and garden beds, fall crops, garlic, square foot beds, mulch and more. Free and open to all with registration. Thanks to **New England Small Farm Institute** for hosting this event and to the **Mass. Dept. of Agricultural Resources** for sponsoring the workshops.

Fall "Greening the School Conference" on November 9

Our 5th annual **Fall Conference for Educators** will be held **November 9th** at **Clay Science Center** of **Dexter & Southfield Schools** in **Brookline.** The theme is "**Greening the School."** All workshops will focus on composting & healthy soils; school gardening; natural resource conservation, and nutrition & local foods. The **$50 fee** includes breakfast snack, lunch, all materials and 10 professional development points with a related classroom activity.

FARM CREDIT EAST

Four concurrent sessions will be held throughout the day from **8:30 a.m. to 3:30 p.m.**, with a choice of five workshops in each session, offering how-to tips, specific lessons, hands-on activities, curriculum connections and much more. The conference is held in conjunction with Allandale Farm, which lies adjacent to the school.

The **Clay Center for Science and Technology** is a state-of-the-art astronomical observatory and learning center. **Allandale Farm** is Boston's last working farm. It practices growing methods that meet organic requirements, produces compost, offers CSA shares, a farm market and locally grown and artisan foods. Tours of the school and farm will be available during the day.

The **Chipotle Mexican Grill**, proud supporter of MAC's Greening the School conference, is changing the way people think about and eat fast food by serving food made from ingredients sourced with respect for the land, the animals, and the farmers who produce the food. **Whole Foods Market** has also provided sponsorship support. A limited number of registration **Scholarships** are available for new and urban teachers and farm educators thanks to **Northeast Farm Credit AgEnhancement.** Schedule, registration and scholarship form can be found on MAC's website.

CHIPOTLE MEXICAN GRILL

WHOLE FOODS MARKET

Annual Winter Conference

We are now working on the schedule of workshops for our **Annual Winter Conference** to be held at the **Baird Middle School** in **Ludlow** on **Saturday, March 8, 2014** from **9 a.m. to 3:30 p.m.** Send MAC to suggest a workshop that you would like to present, or give us an idea for a workshop you would like us to organize.

The conference provides background info., hands-on activities, resources and curriculum connections to support agriculture in the classroom and school gardens. Four concurrent sessions will offer a choice of eight workshops taught by teachers or farm educators with specific activities for elementary, middle or high school. The $50 fee ($45 for registrations received by Dec. 1) includes all workshops, lunch, materials and ten PDPs with a related classroom activity.

Summer Graduate Course

Visit MAC's website for information on our 3-credit 2014 **Summer Graduate Course** held in conjunction with **Fitchburg State University.** Participants must attend eight workshops on farms, keep a journal and develop three lesson plans, presenting one to their colleagues.

REGISTRATION ... DONATION.... MATERIAL ORDER FORM

Please fill out this form and return it to: **MAC, Inc. P. O. Box 345 Seekonk, MA 02771**

Name _____

School or Organization _____ Address _____

City _____ State _____ Zip _____

Phone Number (day) _____ (evening) _____ e-mail _____

I am registering for the Following Conference (Make Check payable TO MAC)

☐ Day of Garden Skills Workshop & Demos. on October 19, 2013, Belchertown ☐ Free ☐ Please send directions.

☐ Fall Conference for Educators on November 9, 2013 in Brookline ☐ $50 enclosed ☐ Please send directions.

☐ Winter Conference on March 8, 2014 in Ludlow; ☐ $50 enclosed ($45 prior to Dec. 1) ☐ Please send directions.

Please send information on: ☐ MAC Annual Report; ☐ Mini-Grant Guidelines; ☐ Farm Field Trip Manual $12;

☐ 8 Lessons about Agriculture & Environment $5; ☐ School Gardening Manual $10

Please send me # ___ of 2014 Massachusetts Agriculture Calendar (s) enclosed ___ $10 each or $5 each for 5 or more copies .

I'd like to make a tax-deductible donation in the amount of: ☐ $10; ☐ $25; ☐ $50 ☐ $100; Other donation _____

Calendar

- **Through Sept. 29 - The Big E: Eastern States Exposition,** West Springfield**,** visit www.thebige.com.
- **Sept. 30 to Oct. 4 - 7th Annual Mass. Harvest for Students Week 2013.** For info., visit www.massfarmtoschool.org/.
- **Oct. 4 to 14 - Topsfield Fair -** 10 a.m. to 11 p.m. daily. For information, visit www.topsfieldfair.org.
- **Oct. 5 & 6 - North Quabbin Garlic & Arts Festival,** Orange, 10-5, $5. Visit http://garlicandarts.org.
- **Oct. 6 - Boston Local Food Festival,** on The Greenway in Boston, 11-5, at www.bostonlocalfoodfestival.com.
- **Oct. 12 & 13 - 10th Annual Cranberry Harvest Festival,** Wareham, from 10-4, $10. Visit www.cranberryharvest.org.
- **Oct. 17 - Farm Based Educators Fall Gathering,** Moraine Farm, Beverly www.farmbasededucation.
- **Oct. 24 - National Food Day,** Visit www.foodday.org or sign up for blog at www.fooddayma.wordpress.
- **Oct. 25 to 27 - Bioneers by Bay Conf. Connect for Change** in New Bedford. Visit www.connectingforchange.org.

Resources

- **October is Farm to School Month, Activities Binder** on-line at www.farmtoschool.org/resources.php.
- **Apple Resources** from the New England Apple Growers at: www.newengland apples.org.
- **Cranberry Lessons & Resources** from Cape Cod Cranberry Growers Association at www.cranberries.org/cranberries/teachers.html.
- **Fall Planting Guide** from UMass at http://ag.umass.edu/fact-sheets/home-lawn-garden/.
- **Fall Gardening** & other How-to-Guides for the School Garden from MAC at www.aginclassroom.org and click on School Gardens.
- **Pumpkin & Squash Recipes & More from U.S.D.A.** can be found at http://recipefinder.nal.usda.gov/.
- **Pollinator Partnership Curricula and Useful Resources** at www.pollinator.org/education.htm.
- **2014 Mass. Envirothon Topic: Sustainable Agriculture.** For resources and information on how to sign up a high school team, visit www.maenvirothon.org.

- MAC is seeking nominations for our **2014 MAC Teacher of the Year Award.** Do you know a teacher who does an exceptional job of bringing agriculture to life for students in the classroom? Consider nominating him or her for this special award. Send a description of their agricultural classroom, and the reasons that you recommend them, to the address below. Applications are due **March 15, 2014.** The winner will be spotlighted in the Fall 2014 MAC newsletter and the award will be presented at MAC's Annual Fall Conference for Educators.

To receive more information, add a name to our mailing list or give us your comments:

Mass. Agriculture in the Classroom
P.O. Box 345
Seekonk, MA 02771

call Debi Hogan
at 508-336-4426
fax: 508-336-0682
e-mail to debi.hogan@earthlink.net

Website: www.aginclassroom.org

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in the Classroom
P.O. Box 345
Seekonk, MA 02771