

## The Science Scoop

### Coverage of:

- ✓ 2014 Membership Meeting
- ✓ Mini-award Presentation
- ✓ Member Benefits
- ✓ 2014 Student Scholarship Winners
- ✓ 2014 Joint Conference – Save the Date
- ✓ 2014 Joint Conference – Call for Presenters
- ✓ 2014 Joint Conference – Call for Sponsors and Exhibitors
- ✓ Science Writing – Articles, notes, and opinions
- ✓ Teachers in the News
- ✓ Miscellaneous
  
- ✓ **Wanted:** Articles and Seasonal Science Pictures
- ✓ **Wanted:** MDSTA Board Members at Large and Teacher Organizations Liaisons

*The purpose of this organization shall be to promote the professional growth of teachers of science at all levels and to improve the quality of science education in the Metropolitan Detroit area. (MDSTA bylaws)*

# 2014 MDSTA Membership Meeting

The general membership meeting took place on a stormy Tuesday, on May 13, 2014 on the campus of Lawrence Technological University (LTU), in Southfield.

## Welcome

The meeting was scheduled to start with a tour of the Green Roof of the Alfred Taubman Student Services center, “a living laboratory”. However, due to inclement weather the tour was canceled.



Members were welcomed to the event by Denise Hafner (left), MDSTA secretary and retired Detroit Public Schools science teacher. Thirty one participants gathered together for this event.



The agenda started with a social and refreshments provided through the work of Connie Eisenhart (right), MDSTA treasurer and science teacher at Guardian Angels Academy and the kind sponsoring of the LTU's Provost office. Participants socialized other members, exchanged ideas for organization of events and activities and enjoyed a relaxed conversation in the company of other attendees.



Current MDSTA President Jermaine Evans (science teacher at University Prep Science and Math Middle School) called the meeting to order and, together with Cassandra Cayce (president elect and science teacher from Detroit Community High School), conducted an icebreaker activity and introduced the board of directors to the membership.

The program continued with a first science activity conducted by one of the members, LaVetta Appleby, senior lecturer in chemistry and director of the Master of Science Education program at Lawrence Tech University and one of the first five “Real McCoy” educators (named in 2012 by the Detroit Area Pre-College Engineering Program - DAPCEP).

## Pickle Autopsy by LaVetta Appleby

Teachers had an opportunity to explore forensic techniques by performing a pickle autopsy. Attendees were given a crime scene scenario which stated that Mr. Pickle was found dead on his kitchen counter. The scenario indicated that Mr. Pickle



*Autopsy of a Pickle – LaVetta Appleby (left-standing)*

may have been murdered. As forensic scientists, teachers were asked to complete an autopsy report to determine the cause of death. The autopsy report was a lab handout that asked them to examine the corpse and record their observations. Preparation for the activity included placing copper shot into the dorsal body cavity to simulate a gunshot wound. Also, cuts were made on the pickle's thoracic body cavity, simulating stab wounds to the chest. Toothpicks were used for arms and legs. Some of the toothpicks were burned on the ends and broken in the middle, to simulate burns and fractured limbs. Some of the teachers were able to determine that Mr. Pickle died from a single gunshot wound.

Materials for this activity included: 1 large dill pickle, 4 toothpicks, 1 ruler, a scalpel (plastic knife), forceps (tweezers), a suture needle and thread (sewing needle and thread), dissecting pan (Styrofoam meat tray), dissecting pins (straight pins) and a dropper.

*For more information on the pickle autopsy or forensic science at LTU, please feel free to contact LaVetta Appleby at [lappleby@ltu.edu](mailto:lappleby@ltu.edu)*

David Bydlowski Science Consultant Wayne RESA, and MDSTA web administrator followed with a presentation about:

### **Family Engineering**

Family Engineering is a valuable resource for providing informal engineering learning experiences to elementary age children and their families. Developed with support from the National Science Foundation and modeled after the Family



*Family Engineering David Bydlowski (left standing)*

Science and Family Math programs, Family Engineering promotes 21st Century skills of inquiry, creativity, teamwork, and collaborative problem solving.

The Family Engineering Program is:

- Families engaged in fun, hands-on activities and events
- Families learning about what engineers do and the role engineering plays in everyday life
- Families discovering the many career opportunities in engineering

The Family Engineering program can be used by any individual or organization to plan and conduct successful community outreach events. Activities and event formats are accessible and inviting to diverse audiences, easy to implement with simple, inexpensive materials, and suitable for a variety of community settings.

*To learn more, please visit: <http://familyengineering.org>*

Marilyn Rands, MDSTA board member and associate professor of physics at Lawrence Tech University presented an optics activity.

### **Fun with Light by Marilyn Rands**

Attendees received two light toys: a fiber optics flashlight and a light “kaleidoscope”.

The flashlight is a fun demonstrator of total internal reflection of light which is used in fiber optics applications. The phenomena happens when the angle of incidence (the angle light makes with a line perpendicular to the surface it encounters) exceeds the “critical” angle. At the critical angle instead of the light being refracted, the light is reflected back to the medium from which it came. This helps guide the light through the fiber optics without large loss of energy.

The light “kaleidoscope” is a diffraction grating attached to a viewing tube. A diffraction grating is a series of closely spaced lines that cause white light to “break up” into its component colors. When the different waves interfere they create colorful images. Each color has its own angle of diffraction so the images are created at different positions.



*Fun with Light - Marilyn Rands*

The grating in the tube has crisscrossed lines – thus the 360° kaleidoscope-like patterns seen when viewing light through the grating-and-tube arrangement. The dark inside the tube allows for contrast and makes the faint lines of higher orders more visible.

**For more information please feel free to contact me at [mrands@ltu.edu](mailto:mrands@ltu.edu)**

## Guests and Sponsors

### STEM.Org



[STEM.org](http://STEM.org) was founded in 2001 by Andrew Raupp (on the right in the picture), executive director, with a mission of bringing cutting edge educational programming to schools and districts in his former neighborhood, Southwest Detroit. Since that time, we’ve had the privilege of serving over 100,000 students in more than 100 districts, schools, and organizations.

Our team has invested a great deal of effort into creating engaging, experiential educational programming for students that utilizes exciting activities to foster peer-to-peer student learning. Since 2010 we’ve partnered with schools throughout Michigan in a credentialing process that honors its current efforts in STEM education and helps build bridges to future goals. This process also includes an individual STEM Certification for teachers that recognizes their successful completion of the program. [STEM.org](http://STEM.org) is committed to connecting today’s students with the STEM careers of tomorrow by working closely with schools and districts to become leaders in STEM education.

Heather Miller, the Education Director, is a math and science certified teacher with more than 15 years teaching experience at Cranbrook Academy and in the Detroit Public School system. She ensures that our curriculum is aligned with CCSS and NGSS standards and objectives, that our teachers are meeting our high expectations of quality in the classroom, and that students are making measurable academic achievement. She is enthusiastic about bringing games and projects into the classroom that foster teamwork and problem-solving. Anyone interested in learning more about our curriculum and content offerings is encouraged to reach out to her via email at [Heather@STEM.org](mailto:Heather@STEM.org).

The Partnerships Director is Sean Sonneveldt. He helped pay for his graduate studies working for several years as a substitute teacher. Sean credits much of his academic success in Economics and Finance to early opportunities for mathematics enrichment activities and is a strong proponent of encouraging students to recognize the important roles of mathematics in the business world. If you would like to sit down for a brief chat to learn more about the cost and availability of STEM.org programming you can reach him at [Sean@STEM.org](mailto:Sean@STEM.org)

## Michigan Science Center

Two representatives of the **Michigan Science Center** were on hand to update on activities and events at the center. Meredith Gregory and Melissa Wilson (picture: right-to-left) informed the audience the Summer Group Guide is online at [www.mi-sci.org/educators-groups](http://www.mi-sci.org/educators-groups) and a fall guide is scheduled to be online during the month of July. They also reminded teachers they receive a free admission with ID. The Michigan Science Center is located on 5020 John R. Street, Detroit, Mi 48202. Flyers and brochures were distributed to attendees.

*For more information link to [www.MI-Sci.org](http://www.MI-Sci.org) or call the center at 313-577-8400*



## Past Awardees Share Experience

An introduction of MDSTA award winners in attendance and a brief description of the available awards was offered by MDSTA President Jermaine Evans. He invited to the podium Wildwood Elementary School's Katie Colligan and Erica Brown (right-to-left in picture), who were able to host a science night thanks to a \$500.00 mini-award received from MDSTA. The theme of the event was "Earth Heroes". The teachers commented on the success of the activity with students, parents and colleagues at their school. The hands on activities centered on ways that students and their families can protect the earth. About 200 parents and students attended and learned about water pollution, alternative energy, conservation, recycling, and natural resources. A pizza dinner was served. A presentation on the topic was also part of the 2013 Joint Math and Science Conference.

*You can contact Katie Colligan at: [ColliganK@wwcsd.net](mailto:ColliganK@wwcsd.net)*



## We Need You to Be a Mentor



Barbarose Syrian (left) MDSTA board member, retired Detroit Public School Science Instructional Specialist, Wayne State University and Wayne County Regional Educational Service Agency Science Coach, and Wayne County Community instructor, introduced the mentor program targeting new teachers and connecting them with education professionals.

### MDSTA Mentors

Are you someone who can develop a personal and developmental relationship with a less experienced teacher? Can you use your experience and knowledge to help and guide a less experienced person? Can you encourage and support a new teacher so they can maximize their skills and potential? Then we need **YOU**.

### NEW Teacher?

Could you use someone to talk too? Do you want someone to listen to your new ideas? Could you use someone with experience to help you decide which teaching methods might work best in your situation? Maybe you could use a mentor: **contact me!**

*If interested to participate in either of the above two programs, please contact Barb Syrian at [barbsyrian@gmail.com](mailto:barbsyrian@gmail.com) or 248-860-6657*

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## 2014 MDSTA Mini Award Presentation

### Big Buck Skeleton - Mike Mansour



*Allendale Archery Shop – picture credit Mike Mansour*

While visiting my granddaughter in Grand Rapids we attended an archery class. It was Nora's birthday and she received a compound bow. The archery shop is in Allendale and teaches for Grand Valley State University's Archery class. The shop turned out to be an outstanding experience for Nora and an unexpected surprise for me.

This is a big place with many taxidermy mounts all around the two rooms. On one wall there is a complete skeleton of a White Tail Deer, a buck with several antler points. It is completely reassembled and mounted on its pelt on the wall. I knew at once it would be a terrific model of instruction for the students and community who come to the Hawk Woods Nature Center. I spoke to the manager of the

archery shop asking him about the display. He said a man, not a formal taxidermist, had done the work. I asked him for the man's name and phone number expressing my interest in having one done for the nature center. Much to both of our surprises, within minutes, in walks Roger Dykes, himself, the artist who did the work. He is from Coopersville and was eager to help me with my own request. After some discussion he offered to do one for Hawk Woods for \$500 which I was most eager to form the contract. Potential Impact of this project is more than 3,000 students, teachers, community members and campers.

I need MDSTA's assistance with this expenses and support of this project with great educational potential.

*Mika Mansour is a retired teacher from Madison Heights school district and currently a naturalist at Hawk Woods Nature Center in Auburn Hills, MI. You can contact Mike at: [mmansour001@comcast.net](mailto:mmansour001@comcast.net)*

MDSTA executive director Pamela Callaway presented Mike Mansour (picture at right) with the \$500.00 MDSTA mini-award for the Big Bug Skeleton project.



## Come Work with the Board

Board member Kelvin Wise (Chandler Park Academy High School) discussed the need of **grade-level subcommittees** that pursue activities and programming at the annual fall conference and throughout the year, which will benefit teachers at the specific grade levels. Attendees were asked to submit their names if they are interested in participating or leading this effort.



## Newsletter

The membership was invited to send articles, teaching materials, photos, student work and other science and general education information to be included in the **MDSTA newsletter**. The letter is e-published during the months of February, June and October. Any news

should be sent to Valentina Tobos (right), MDSTA board member, newsletter editor and associate professor of physics and co-director of the Master of Educational Technology program at Lawrence Tech University. Please send all materials to [newsletter@mdsta.org](mailto:newsletter@mdsta.org)



## Save the Date

The 2014 Joint Math and Science Conference date (Saturday, November 8) and updates were discussed by Jermaine Evans and Pamela Callaway. The two MDSTA directors are also in leadership positions in the committee that started meeting and planning for the fall conference back in April. The committee meets every month until the November 8, 2014 conference. Presentation abstracts are received through summer and an invitation to speakers was shared with everyone (Questions about individual or group presentation and workshops? Send an email to Valentina Tobos, presenter's co-chair, at [newsletter@mdsta.org](mailto:newsletter@mdsta.org)). The audience was solicited to send suggestions for future conference sites: a large middle or high school with a parking lot for about 1,000 attendees is needed for 2015 and beyond.

The night finished with a raffle compliments of MDSTA, Marilyn Rands and Lawrence Tech University.

**See you all at the MDSTA-DACTM Conference**

**November 8, 2014**

**Woodhaven High School**

**24787 Van Horn Road, in Brownstown, MI 48134**

**The Science Scoop**

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## Membership Benefits

# MDSTA



# GRANTS

### Apply for the MDSTA-Mini Grants:

There are up to six mini-grants awarded annually based on applications. Mini-grant requests can be written for up to \$500. To review eligibility and to apply, please visit:

<http://www.mdsta.org/mini-grants>

### Nominate teachers for the MDSTA Outstanding Educator Award:

To apply for the Outstanding Educator Award, please visit:

<http://www.mdsta.org/awards>

### Nominate an educator for the Ellen Daniel-Jones Distinguished Service Award:

The qualifications for the Ellen Daniel-Jones Distinguished Service Award are leadership, service, and exemplary teaching for over 15 years. To nominate a teacher for this award, please send an email to MDSTA Board Membership Registrar [Debby Peters](mailto:awards@mdsta.org) at:

[awards@mdsta.org](mailto:awards@mdsta.org)

## 2014 MDSTA and DACTM Student Scholarship Winners



During scholarship night, MDSTA and DACTM awarded \$500 scholarships to each of two graduating seniors at Woodhaven High School, in Brownstown, the location of our fall conference. From left to right senior Mackenzie Schulte, DACTM math winner, Keith A. Weimer Woodhaven High School Mathematics teacher and Fall Conference Site Coordinator, and Katey Somers, MDSTA science winner.

We wish both recipients  
**GREAT SUCCESS** in  
continuing their education!



# 2014 Joint Science and Math Conference

## Saturday, November 8

...will take place again at Woodhaven High School, on 24787 Van Horn Road, in Brownstown, MI 48134

Last year's conference featured more than 120 math and science K-12 sessions and over sixty vendors.

If you are thinking to become part of this event as a presenter, exhibitor, sponsor or a combination of the above please contact [Valentina Tobos](mailto:Valentina.Tobos@mdsta.org) at [newsletter@mdsta.org](mailto:newsletter@mdsta.org) and [Pamela Callaway](mailto:Pamela.Callaway@mdsta.org) at [exhibits@mdsta.org](mailto:exhibits@mdsta.org)



**Note to members:** In planning for the future, the DACTM and MDSTA conference committee is extending a call to the members for ideas on locations for the conference. A large high school or middle school, college campus, etc. with convenient and spacious parking is needed (at least 1,000 parking spaces). Please contact us if you are aware of a location that would be interested in hosting such a wonderful annual event ([exhibits@mdsta.org](mailto:exhibits@mdsta.org)).



2013 MDSTA-DACTM Conference-exhibitor area

# Last Year's Conference Sponsors

We thank Metropolitan Detroit Joint Science and Math Conference supporters! We invite you to join us again this year for the annual conference in November.

If you are considering becoming a sponsor or an exhibitor for our upcoming November 2014 conference at Woodhaven High School, MI please contact [Pamela Callaway](mailto:Pamela.Callaway) at [exhibits@mdsta.org](mailto:exhibits@mdsta.org)



# Hands-on Science Labs

by Connie Eisenhart



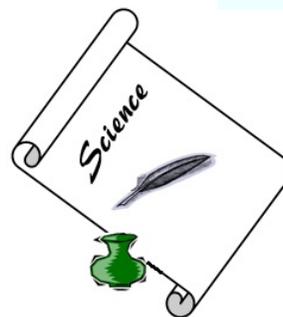
Dissecting a Flower and  
Rocks and Minerals Labs-

*Connie Eisenhart* is a science teacher at Guardian Angels Catholic School and the treasurer of the MDSTA Board of Directors. Contact Ms. Eisenhart at [eisenhartc@gaschool.com](mailto:eisenhartc@gaschool.com)

## WANTED: Articles for Upcoming MDSTA Newsletters

*The Metropolitan Detroit Science Teachers Association wants to publish your articles in an upcoming issue of the newsletter. We are interested in articles on various science and education topics that are appropriate for the Pre-K-12 classroom. Your favorite lessons, updates to sites for teachers or interactive lessons, conference participation and cool ideas for reading are just the beginning. Let us know of upcoming events and we will share with the community!*

Send articles to  
**Valentina Tobos** at  
[newsletter@mdsta.org](mailto:newsletter@mdsta.org)



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# Science Matters



## States That Have Officially Adopted Next Generation Science Standards (NGSS)

Rhode Island; Kentucky; Kansas; Maryland; Vermont; California; Delaware; Washington; District of Columbia; Nevada; Oregon; Illinois

## New Tool Released to Help Educators Assess Alignment of Materials to NGSS

To aid the search for resources that support the Next Generation Science Standards (NGSS), NSTA and Achieve have been working with science educators across the country to develop a rubric to determine if resources address the letter and spirit of the standards. The Educators Evaluating the Quality of Instructional Products (EQuIP) Rubric for science provides criteria for measuring the alignment and overall quality of lessons and units with respect to the NGSS. The purpose is to provide constructive criterion-based feedback to developers, review existing instructional materials to determine what revisions are needed, and identify exemplars/models to be used by teachers. Visit: <http://ngss.nsta.org/nsta-products-and-services/> to view and download the rubric and other resources from the NGSS@NSTA Hub, or view it on the official NGSS site. Read more about the rubric and what it means for teachers in a blog post:

<http://nstacommunities.org/blog/2014/04/25/equip/> by Joe Krajcik, professor of science education and director for the CREATE for STEM Institute at Michigan State University. Krajcik was one of several educators who helped write the NGSS and develop the EQuIP Rubric for Science. NSTA has formed a group of 55 curators who are using the rubric to identify resources that support the standards. These resources will be one of many features of the NGSS@NSTA Hub, a new digital destination to support educators' implementation of the NGSS.

*Included with permission from David Bydlowski Michigan Coordinator—Science Matters Network [bydlowd@resa.net](mailto:bydlowd@resa.net)*

## SCIENCE MATTERS



### Network in Michigan

Science Matters is an initiative from the National Science Teachers Association that promotes quality science education, resources, and professional development opportunities. Each state has a Science Matters Coordinator whose primary role is to be the point of contact for distribution of science resources and opportunities to the state network. Your state coordinator is David Bydlowski. You can contact him at: [bydlowd@resa.net](mailto:bydlowd@resa.net)

To subscribe to the Science Matters Network in Michigan e-blast, please visit:

<http://nsta.org/sciencematters>

Click on Teachers, and then click on Become a Point of Contact.

# Summer with the National Weather Services

## by National Weather Services Detroit/Pontiac



Dear Southeast Michigan Teachers,

The National Weather Service Detroit/Pontiac would like to offer you an

opportunity to participate in two different educational programs available to science teachers this summer.

The first program is our Teacher Externship Program, which will run from July 21st to July 24th. This exciting four day externship was designed to give teachers in southeast Michigan experience in weather and forecasting, allowing them to better integrate these topics into the classroom. As a participant in this program you will learn about National Weather Service forecast and warning operations, participate in a weather balloon launch, visit the Great Lakes Environmental Research Lab, meet with a local Emergency Manager to discuss severe weather operations, and take a trip with our electronics staff to a nearby airport. If we experience severe weather, you will have the opportunity to observe firsthand how we utilize Doppler Radar data and SkyWarn Spotter reports to issue warnings. We are also willing to work with your local ISD to award continuing education credits for participation in the externship program.

Activities are flexible, but a tentative schedule for the externship is included below. Severe weather may dictate additional adjustments to the schedule.

### Monday July 21<sup>st</sup>

Orientation and overview  
National Weather Service products and services  
Climate Program  
Teacher Resources

### Tuesday July 22<sup>nd</sup>

Visit an Emergency Operations Center for a county in Southeast Michigan  
Visit the NOAA Great Lakes Environmental Research Lab

### Wednesday, July 23<sup>rd</sup>

Watch a balloon release  
Shadow a forecaster while they prepare forecast products  
Meet with our Observation Program Leader  
Meet with our Meteorologist in Charge  
Hydrology Program

### Thursday July 24<sup>th</sup>

Short trip to a nearby airport with our electronics staff  
Warning simulation (if no severe weather)  
Week review

The second opportunity we are offering this summer is a two and a half hour tour that will run from 5:00 PM until 7:30 PM on Tuesday, August 12nd. Teachers who attend the tour will learn about National Weather Service products and services and observe a balloon release.

These opportunities are open to all teachers in southeast Michigan who will be teaching science classes during the 2014-2015 school year. Two teachers will be selected for the teacher externship this year, and 20 will be selected for the tour. To be considered for selection in either program, please email Sara Schultz at [sara.schultz@noaa.gov](mailto:sara.schultz@noaa.gov) no later than **Monday, June 2, 2014**. Please be sure to include your name, school, subjects taught, an email address, and whether you are interested in being considered for the externship, the tour, or both. Selections will be made by a lottery system and participants will be notified by Thursday, June 5th. Questions may be directed to the above email address, or you may call Sara Schultz ([248 620-9804](tel:2486209804)).

The National Weather Service Office Detroit/Pontiac is located in White Lake, MI. We have forecast and warning responsibilities for all of southeast Michigan, including adjacent marine areas. We issue public forecasts, warnings/watches/advisories (such as severe thunderstorm warnings and winter storm watches), aviation and marine forecasts, hydrological forecasts, and fire weather forecasts.

For more information about the National Weather Service Detroit/Pontiac, please go to <http://weather.gov/detroit>

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# NGSS Galileo Educator Network PD Workshop

## Wayne RESA

June 17 - 18, 2014

8:00 - 4:30 PM

Wayne RESA Annex -- Room 1

<http://www.solutionwhere.com/WayneResa/cw/showcourse.asp?3116>

In partnership with the Astronomical Society of the Pacific (ASP) and NASA, the Challenger Learning Center invites you to the Galileo Educator Network (GEN) Professional Development Workshop on June 17th and 18th. Become a NASA Galileo Educator through this 15-hour workshop for pre-service and in-service teachers K-8, and learn about implementing the Next Generation Science Standards (NGSS) in your teaching. Within the context of astronomy and space science, you will experience hands-on inquiry activities, reflect on the nature of science, and even practice integrating NGSS into your existing science lessons.

Additionally, the first 15 educators to sign up will receive GEN materials to take back to their classrooms, including a copy of the ASP's "Universe at Your Fingertips 2.0" DVD-ROM of activities and resources.

For further information contact David Bydlowski at (734) 334-1455 or [bydlowd@resa.net](mailto:bydlowd@resa.net)



## When Will I Ever Use This?

### Wayne State University and Ypsilanti New Tech HS

Paid summer professional development opportunity, **AMP21—Applied Mathematics Practices in the 21st Century**. This will take place at Ypsilanti New Tech High School June 30th through July 3rd, 2014 for high school and college mathematics teachers. Participants who complete the entire PD will receive a \$400 honorarium.

See the website below for additional information: <http://www.appliedmathpractices.com/>

Questions? Contact [j.johnson@wayne.edu](mailto:j.johnson@wayne.edu)

<https://dactm.memberclicks.net/assets/documents/ypsilanti%20flyer1.pdf>

# Jing: Free and Easy-to-use Screen Capture Software

by *LTU eLearning Staff*

March 18, 2014



eLearning has shared tips on how to create videos on phone or tablet, but this month we are taking it one step further.

How can you create a short (2 minute) step-by-step instructional video instead of sending text instructions to students? Oh, and did I say accomplish this on the “cheap” or even free?

One of our own Michigan-based companies provides a solution that will blow your socks off! TechSmith (headquartered in Okemos MI) developed Jing and it’s FREE!

You download and install Jing and it waits for you. You can capture screen shots that can saved locally and short videos that can be saved and shared with a web link.

To start, you need to download Jing (<http://www.techsmith.com/jing.html>) and install it.

Once it’s installed you can begin creating videos that can be saved locally or published on TechSmith free (yes, also free!) web link site, Screencast.com. Upload Jing to Screencast.com with one click. Then, share your videos with audio using the link Screencast.com creates automatically send this link in an email or post in Blackboard (or Facebook, Twitter, your blog, or anywhere).

Although Screencast is a free web service, you do have to register and create an account – but it is a quick and easy process. Using the free site does limit you to 2 GB of storage space and monthly 2 GB bandwidth usage – but this is more than adequate since the quick videos are short (don’t use Jing for long or detailed videos) and can be deleted when the video has served its purpose. You can register for a Screencast account here: <http://www.techsmith.com/screencastcom.html>.

Still not convinced? Check out the quick beginning tutorial:

<http://assets.techsmith.com/Videos/ua-tutorials-jing/take-first-capture.mp4>

<http://www.ltu.edu/blogs/elearning/?p=330>

*Included with permission from Lawrence Technological University eLearning Services*

# STEM Leaders Stress Job Market Awareness

by Andrew B. Raupp

The U.S. has gone on for so long without an adequate emphasis on STEM education that many colleges and universities are now doing whatever they can to churn out STEM graduates as quickly as possible. While this approach is certainly an improvement on the way things once were, some STEM advocates are insisting that higher education should now spend more effort on areas of need than on STEM overall.



Copyright 2013 by STEM.ORG

## *Focus On Shortages*

"It is not enough to simply produce STEM graduates anymore", says Woodrow Wilson National Fellowship Foundation president Arthur Levine. Universities need to look closer at the current job market and identify the areas where there are shortages to best serve communities and the nation as a whole. There is no shortage of elementary school teachers, for instance, but physics teachers are still needed desperately by schools all across the country. This focus on the real-world job market is important not only for businesses and education, but for graduates as well. Too many students are told that a degree in a STEM related area is a ticket to a good job, while in reality there are some degrees that are more valuable than others. Knowing before graduation that an emphasis on physics could mean the difference in a long job hunt or a quick career launch, many qualified students will choose the most bang for their buck.

## *Geographical Focus*

Another effective focus for degree guidance is geographic location. Michigan, for instance, is in need of STEM teachers in a big way. For students planning on living and working in the state, pushing for a STEM degree is an excellent way to ensure job security in a difficult job market – something every college should strive for. The need for STEM education has been recognized in many areas of the country. It is now time to focus on a more directed, informed approach to STEM education – for the good of students and the job market.

For more information contact [Andrew@stem.org](mailto:Andrew@stem.org) and visit <http://www.STEM.org>

# Teachers in the News

## High School Physics Competitions Results

In January of 2014, physics students from around the country entered the US Physics Team first round exam called “F=ma.” The top students in the country on this difficult multiple choice contest are then invited to participate in the next round of the competition. These outstanding students get to take an even more difficult physics exam testing their problem-solving abilities over the course of three hours. The state of Michigan placed 8 students in the top 400 from 3 different schools. These outstanding students (and teachers) are:

Jackie M. Bredenberg, and Aaron L. Zeng from Detroit Country Day High School in Beverly Hills, MI (teacher: **Dan Berger**)

Raghu P. Arghal, Raj K. Raina, and Apurva Shrivastava from Novi High School in Novi, MI (teacher: **James Didio**)

Stephen Z. Li, Omkar B. Shende, and Justin J. Xu from Troy High School in Troy, MI (teacher: **John Morrison**).

Congratulations to all and good luck in the next round!!

Contributed by **Michael C. Faleski**, Delta College and MI-AAPT and reprinted, with permission, from the Spring 2014 newsletter of the Michigan Section of the American Association of Physics Teachers <http://web.miaapt.org>

## Michigan Science Teacher Association 2014 Awards

Awards were conferred in March 2014 to the following teachers:

Elementary Science Teacher of the Year <b>Julee Cowher</b> Spencer Elementary School, Brighton	Lansing Community College, Lansing	Distinguished Service Award <b>David McCloy</b> MSTA Region 8 Director
Middle School Science Teacher of the Year <b>Mark Koschmann</b> St. John's Lutheran School, Midland	Informal Education Award <b>Paula Gangopadhyay</b> The Henry Ford, Dearborn	Distinguished Service Award <b>Mike Klein</b> Macomb ISD, Clinton Township
High School Teacher of the Year <b>Richard Eberly</b> New Buffalo High School, New Buffalo	Teacher of Promise <b>Kristy Butler</b> Forest Hills Central High School, Grand Rapids	The George G. Mallinson Award for Lifetime Achievement in the Field of Science Education <b>Joseph Krajcik</b> MSU – CREATE for STEM – College of Natural Science, East Lansing
College Science Teacher of the Year <b>Dr. Mary Brown</b>	Teacher of Promise <b>Nicole Jakubowski</b> Detroit Country Day Junior School, Bloomfield Hills	

For more information visit: <http://www.msta-mich.org/>

## Presidential Award in Excellence in Mathematics and Science Teaching

**Brian Peterson**, a fifth-grade teacher at Musson Elementary School in Rochester Community Schools and an instructor at Oakland University

**Emily Theriault-Kimmey**, lead teacher at Pattengill Elementary School in Ann Arbor Public Schools

For more information please visit: <http://www.freep.com/article/20140106/NEWS06/301060010/Michigan-teachers-honored-presidential-award> and <https://www.paemst.org/home/view>

## The 2014 DuPont Challenge Junior Division Honorable Mention

**Katie Sesi**, St. Francis of Assisi, Ann Arbor, MI

Sponsoring Teacher: **Elizabeth Allore Shurmur**

Essay: The Answer Comes From Within: Geothermal Energy

<http://thechallenge.dupont.com/winners/junior-division-winners.php>

## Michigan's 2014 Teacher of the Year

Third grade teacher Melody Arabo from Keith Elementary School (Walled Lake Schools) is Michigan's Teacher of the Year

For more information: <http://www.michigan.gov/mde/0,4615,7-140--328514--,00.html>

## White House 2014 Science Fair Exhibitors - Michigan

“...a Michigan robotics team who competed fiercely on a national stage at this year's FIRST Robotics Competition -- which challenges teams of 25 students or more to build and program robots that perform prescribed tasks. The Michigan team was recognized not just for its robot-building prowess, but also serving as a model for other teams to emulate and best embodying the spirit of the FIRST competition.”

For more information: <http://www.whitehouse.gov/blog/2014/05/27/meet-exhibitors-2014-white-house-science-fair>

## Ideas for GRANT Seekers

Are you starting to teach a new class or maybe you would like to include some new experiments in your next year's teaching? Then you are probably looking for grant opportunities. A few ideas tried and successfully used by teachers are to collaborate with your school librarian and look for foundations that support the grade levels you are teaching. Here are a few of these organizations that sponsor K-12 teachers:

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

[www.Kickstarter.com](http://www.Kickstarter.com)

<http://www.pasco.com/STEMawards/>

<http://www.vernier.com/grants/>

[www.dow.com/education](http://www.dow.com/education)

<http://msta-mich.org/smn>

<http://www.msta-mich.org/images/pdfs/2014%20Mini%20GrantApplication.pdf>

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# The “Reading” List

How to Select and Design Materials that Align with the Next Generation Science Standards; NSTA Blog: <http://nstacommunities.org/blog/2014/04/25/equip/>

From the NSTA Store: <http://www.nsta.org/store/>  
Using Physical Science Gadgets and Gizmos, Grades 6-8: Phenomenon-Based Learning (e-Book); By: Matthew Bobrowsky, Mikko Korhonen, and Jukka Kohtamäki

Inquiring Scientists, Inquiring Readers: Using Nonfiction to Promote Science Literacy, Grades 3–5; By: Jessica Fries-Gaither and Terry Shiverdecker

Chemical Reactions; National Science Teachers Association

Mayim Bialik from the hit TV series *The Big Bang Theory* drew thousands of teachers to the NSTA General Session at our National Conference on Science Education in Boston on Thursday, April 3, 2014. Watch her presentation: <https://www.youtube.com/watch?v=J2E5brNOzg8&feature=youtu.be>

A Scientific Experiment: Field Trips Just For Teachers  
<http://www.npr.org/2014/04/20/301957120/a-scientific-experiment-field-trips-just-for-teachers>

“More teaching, less tech-ing - Welcome to a preview of Classroom, a new tool coming to Google Apps for Education. Classroom weaves together Google Docs, Drive and Gmail to help teachers create and organize assignments quickly, provide feedback efficiently, and communicate with their classes with ease.” Retrieved from <http://www.google.com/edu/classroom/> on May 12, 2014



Read a bounty of science news and watch video clips at:

<http://science.nasa.gov/>

## Let Your Students Know.....Summer Camps!

Robofest will be hosting several one day summer camps in July and August.

Robofest will provide instruction, robots, and laptops.

July 8, and 10: BottleSumo for Beginners

July 22, 24, and Aug 19: RoboParade for Beginners

There will also be a week long Robotics & Music Summer

Camp July 14 - 18. For more information, visit

[www.ltu.edu/summercamps](http://www.ltu.edu/summercamps)

(Scholarships available)

Summer Camps for Kids 2014

<http://www.wmta.org/summer-camps-for-kids-722/>

Kids STEM camps and programs:

<http://www.trumba.com/calendars/esd-calendar-youth-events-kids-camps>



Cranbrook summer camps:

<http://www.cranbrook.edu/summer-camp-2014>

Detroit Zoo summer camps:

<http://detroitzoo.org/education/safari-day-camps>



26~27, Maker Faire at Henry Ford Museum. WRO Regular Category (similar to FIRST Lego League) Michigan Tournament will be held in August. Location is TBD. For more information, visit: <http://wroboto.us/>

**August 3 – 7, 2014: Biennial Conference on Chemical Education at Grand Valley State University. Please visit: <http://www.bcce2014.org>**

September 30, 2014: Deadline for teachers to apply for the MAEP Environmental Education Grants. Please visit: <http://www.maep.org/grants.html>

**RoboParade and Global Robotics Art Festival (GRAF) will be on Saturday October 25, 2014 with a**

**Halloween RoboParade theme. The event will be held at Macomb Community College**

November 8, 2014: MDSTA/DACTM Fall Conference at Woodhaven HS in Woodhaven, MI. Please visit: <http://mdsta.org>

**NABT 2014 Professional Development Conference, November 12-15, 2014, Cleveland Convention Center, Cleveland, OH**  
<http://www.nabt.org/websites/institution/index.php?p=12>

*Important Dates is an excerpt from the Michigan Science Matters Network and other sources. For a full list contact [David Bydlowski](mailto:David.Bydlowski@resa.net) Michigan Coordinator—Science Matters Network, MDSTA Web administrator and Wayne RESA liaison at [bydlowd@resa.net](mailto:bydlowd@resa.net)*

## Upcoming Meetings and Conferences

### ACS

2014 Summer Meeting in Bethesda, MD June 17 - 19, 2014. Please visit: <http://www.acs.org>

### AAPT

AAPT 2014 Summer Meeting in Minneapolis, Minnesota. July 26 - 30, 2014. Please visit: <http://www.aapt.org/Conferences/sm2014/>

### MESTA

Annual Conference August 12 – 16, 2014. Please visit: <http://mestarocks.org>

### NABT

NABT 2014 Professional Development Conference, November 12-15, 2014, Cleveland Convention Center, Cleveland, OH. Please visit: <http://www.nabt.org/websites/institution/index.php?p=12>

### MSTA

February 26 – 28, 2015: MST A 62 Annual Conference in Grand Rapids, MI. Please visit: <http://msta-mich.org>

### NSTA

The National Science Teacher Association conferences coming up:  
2015 Chicago National Conference (March 26–29). For more information: <http://www.nsta.org/conferences/>



# 2014 MDSTA Board of Directors

**Pamela Callaway-**  
*Appointed Executive Director*

**Cassandra Cayce-**  
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## Come Join the MDSTA Board of Directors Team!

Are you interested in joining a team of dynamic professionals from the metropolitan area? Become more involved by considering being on the board of directors of the MDSTA. We are looking for all levels of teacher education, from pre-school to higher education, both teachers and administrators. All professionals from the tri-county public, charter, or private schools may participate. Home school educators are welcome.

Submit your name and contact information to:

**Pamela Callaway**  
**exhibits@mdsta.org**

**Liaisons NEEDED:** we are looking for individuals that can play a liaison role between MDSTA and other local and regional teacher organizations such as: ACS, DACTM, MABT, MACUL, Michigan Science Center, MSEL, MSTA, MESTA, and AAPT. Contact [exhibits@mdsta.org](mailto:exhibits@mdsta.org) if interested.

**Metropolitan Detroit Science Teachers Association**

**P.O. Box 2279, Detroit, MI 48202**

Email us at: [newsletter@mdsta.org](mailto:newsletter@mdsta.org)

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