MARCH 13-15, 2014
56TH ANNUAL CONFERENCE

The Wisconsin Society of Science Teachers
Promoting the Improvement of Science Instruction in Wisconsin

Follow or Join in the conversation on Twitter.
# WSST2014

Mark your calendar for the WSST 2015 conference.
Wisconsin Dells
March 5-7, 2015

Like us on Facebook
FREE Grant Award
WISCONSIN SOCIETY OF SCIENCE TEACHERS

School of award will receive a 12 month term school site license subscription for Principles of Engineering course by STEM 101. Enrollment for school of award faculty member to attend STEM 101 instructor training at Gateway Technical College (Summer 2014).

Instructor to qualify for (3) graduate credits from the University of Wisconsin. Course completing students with an end of course exam of 70% or greater can earn university college of engineering credits (3).

THIS AWARD IS THE FIRST STEP TO INITIATE A TRUE STEM PRACTICE WHILE ADDRESSING THE NEXT GENERATION SCIENCE STANDARDS.
General Information

Fieldtrips and Workshops
The location of the fieldtrip pick-up and workshop session for which you registered is indicated on your name badge. Please check your name badge to make sure you get to the session you selected. If you have any questions, please see a WSST staff member located at the registration desk or throughout the building.

Shuttles will be available for the fieldtrips on North Superior Street located on the east side of the building.

Cell Phones and Pagers
Please be considerate of your fellow audience members, as well as the presenters, by placing your cell phone or paging device on silent while in a session.

Wi-Fi Access
Free internet is available throughout the Radisson for use with your laptops and PDA’s.

No password necessary!

Meals & Receptions
Thursday, March 13, 2014
Exhibitor Preview and Social
4:00-6:00 PM
Grand Ballroom

WSST Member Social
6:30-9:30 PM
History Museum
Shuttle bus will be available to the museum.

Friday, March 14, 2014
Lunch will be at 11:50 in the Evergreen room
Speaker Oren Jakobson

Pre-Banquet Social
5:00-6:00 in the Empire room

Milton O’ Pella Banquet & Awards Ceremony
6:00-7:00 Meal in the Empire room
7:00-9:00 Awards Program & Keynote Speaker
– Dr. Joseph Krajcik
Everyone is Welcome

Saturday, March 15, 2014
Breakfast 7:30 a.m. Main Exhibit Hall

Course Credit
Earn graduate credit for attending WSST! One (1) graduate credit for $100 from UW-Oshkosh. See the registration booth for more information.
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Your Partner in Understanding and Implementing the Next Generation Science Standards

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“TWEET TO REPEAT”

Would you love to see a session again or recommend a session to a colleague? Session presenters with the Twitter logo agreed to repeat the sessions on Saturday. Tweet the session number to us at #WSST2014 that you would like to see on Saturday!

- **Thursday AM Sessions:** 103, 118, 123
- **Thursday PM Sessions:** 113, 114, 120, 121, 130, 133
- **Friday AM:** 229, 239, 242, 243, 244, 245, 249, 250, 262, 266, 267, 269, 279, 281, W10
- **Friday PM:** 204, 208, 226, 227, 233, 234, 240, 241, 246, 247, 254, 258, 264, 265, 270

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Are you ready for what’s next? McGraw-Hill Education has a long history of providing the highest quality curriculum materials for educators and offers a seamless solution to schools transitioning to the new Next Generation Science Standards (NGSS). Ease the transition into the NGSS with McGraw-Hill Education NGSS resources available at www.MHEonline.com/ngss
56th Annual Conference of the Wisconsin Society of Science Teachers

A Special Thank You to the Following For Their Continued Support:

The STEM Academy
Flinn Scientific
Fotodyne
Radisson Paper Valley Hotel
WSST Retired Teachers
Britannica Digital Learning
On behalf of the Board of Directors I would like to welcome you to the 2014 Wisconsin Society of Science Teachers 56th annual conference, "A River Runs Through It" in Appleton. The conference can mean something different to all of us. The chance to receive tips and tricks from other great teachers, share ideas, network, visit the exhibits for some great new products and opportunities, and visit with old and new friends are just some of the reasons I enjoy the conference. Please enjoy the many aspects the conference presents to you.

Don’t forget to visit our exhibitors and take a chance to talk with them. Be sure to thank them for their support towards the WSST Conference. Without them, having such a wonderful conference would be difficult. Please also give a special thanks to the conference committee when you see them. They have volunteered countless hours to make sure our conference is another fantastic one! I want to personally thank our Conference Chairs, Shelly Rudnick-Peterson and Dick Seng as well as their committee for their hard work.

There are many ways you can volunteer to help our organization. We are looking for volunteers for many different aspects of WSST including committee members, resource developers, and future conferences. Please stop by the booth and sign up to let us know you are willing to help.

Enjoy your conference!

Kathy Cady, President (2013-2015)
Winneconne High School

THE FANTASTIC FOUR

March 5-7 2015

Biology / Chemistry / Earth and Space / Physics

Kalahari Waterpark Resort and Convention Center
1-877-525-2427

Wisconsin Dells
Shelly Rudnick-Peterson and Dick Seng, 2014 Conference Co-Chairs

The 2014 WSST Conference Committee would like to take this opportunity to welcome you to beautiful downtown Appleton! We have been working hard to bring you a great conference filled with exciting field trips, interesting workshops and informative sessions. We know that each of you will find something to take home to your classrooms, and hope that you are able to use this time to build relationships with fellow teachers as well.

This year’s conference includes almost 140 sessions, nine workshops, and over a dozen field trip options. Many sessions and workshops focus on the Next Generation Science Standards (NGSS), a topic that is at the forefront in many districts in the state this year. Whether you are just learning about the standards, or are already implementing in your classroom you are sure to find a session that will help you accomplish your NGSS goals.

Our exhibit hall is full of vendors with ideas and products to enhance your teaching. The Exhibitor Preview on Thursday from 4:00-6:00 will be a great chance to get to know the vendors who are supporting our conference, while enjoying hors d’oeuvres and refreshments. The exhibitor challenge is back this year with a “Shoot the Rapids” theme. Fill in your card during the social and again during Exhibit Hall hours from 8:00 – 3:00 on Friday for a chance to win fabulous prizes!

On Thursday evening the collaboration continues with a member social at the History Museum from 6:30-9:30 pm. Enjoy music from the wind quartet Chalumeau Winds while socializing and taking in museum exhibits. Refreshments and hors d’oeuvres will be provided compliments of the conference. As always Friday brings a full slate of sessions, the Exploratorium, rock raffle, and the opportunity to hear two fascinating keynotes speakers at lunch and dinner.

This year we are experimenting with an expanded Saturday schedule, starting off with a complimentary continental breakfast. We have a full schedule with sessions running from 8:00 am to 2:00 pm. We know that many times you aren’t able to get to all the sessions you’d like to see, so we are offering repeats on Saturday. Throughout Thursday and Friday we encourage you to share which sessions you’d like to have presented again on Saturday.

Our conference is only as good as the members who attend, participate and present, and we thank you for taking the time to make this a great conference!
WSST Information

Board of Directors

Kathy Cady, President
Kevin Niemi, Retiring President
Kristin Michalski, Secretary
Tammy Huenink, District Director Representative
Ed Mueller, Executive Director
Brian Bartel, Asst. Executive Director

WSST Committee Chairs

Conference Committee Co-Chairs
- Shelley Rudnick-Peterson and Dick Seng

Awards and Recognition
- Jason Brazzale and Brad Wysocki

Document Review
- Tim Cox and Jim Huhn

Foundation
- Steve Bowler

Membership
- Michelle Griffin-Wenzel

Public Relations
- Kelley Hoffman

Publications
- Brian Bartel

Strategic Planning
- Kathy Cady, Kevin Niemi and Karen Mesmer

District Representatives

Steve Gustafson, District 1 (CESA 11 & 12)
Matt Lindsey, District 2 (CESA 9 & 10)
Tammy Huenink, District 3 (CESA 7 & 8)
Megan Litster, District 4 (CESA 3 & 4)
Scott Stankowski, District 5 (CESA 2 & 5)
Shelly Rudnick-Peterson, District 6 (CESA 6)
Karyl Rosenberg, District 7 (CESA 1)

Do you know someone deserving of a WSST Awards?

Nominate now: http://www.wsst.org/awards
Featured Keynote Speakers

Friday Lunch Speaker
Oren Jakobson

Oren Jakobson's brainchild is Riverview Gardens; A former 115 year-old country club in Appleton purchased by Community Outreach Temporary Services (COTS), an Appleton based group which helps the city’s homeless. Jakobson has begun to transform the 70 acre site into a bustling source of organic, locally grown produce for the Fox Cities Community. By pairing the community outreach of a work program with savvy skills and background in sustainable agriculture, Riverview Gardens provides opportunities for local schools and community members by providing job training, volunteer opportunities and a mobile source for local food. By doing an intensive land survey and study of the toxins which had been present from the property’s former life as a golf course, Jakobson and his team have started soil remediation and trail projects to allow the community to have a place to grow food, enjoy nature and participate in the transformation. In the process they are trying to live up to their goals of being sustainable, while ending poverty, homelessness and unemployment in the Fox Valley.

Jakobson used the skills he developed as a part of Sustainable Lawrence University Gardens (SLUG) to vault into the realm of social justice warrior. In doing so, Jakobson has used his knowledge and resources to become a purveyor of sustainable technologies to allow extended growing seasons and to continue to provide a future for the urban agriculture program which is his passion.

Friday Evening Keynote Speaker
Dr. Joseph Krajcik

Dr. Joseph Krajcik is a faculty member in science education at Michigan State University and the director of the CREATE for STEM Institute.

He began his career in Milwaukee as a high school chemistry and physical science teacher before receiving his Ph.D. from the University of Iowa in 1986. Throughout his career he has focused on improving the teaching and learning of science by designing, developing, implementing, and testing innovative environments that match what is known about the how students learn.

He has served as the lead writer of the Physical Science Design Team to identify and describe the core ideas in physical science for the National Research Council Framework for K–12 Science Education and as a lead writer to develop the Next Generation Science Standards.

He was a principal investigator on the National Science Foundation’s Investigating and Questioning our World through Science and Technology Project (IQWST), a National Science Foundation (NSF) project through which he helped develop and test middle school curriculum materials to engage students in obtaining deep understandings of science content and practices.

Published in 2011 Supporting Grade 5-8 Students in Constructing Explanations in Science: The Claim, Evidence, and Reasoning Framework for Talk and Writing, Dr. Krajcik’s foundational book, co-authored with Katherine L. McNeill, has successfully generated discussions of scientific explanations in classrooms across the United States.

In addition to his work in the development, implementation, and assessment of the Next Generation Science Standards, Dr. Krajcik has authored and co-authored curriculum materials, books, software, and over 100 manuscripts. He makes frequent presentations at international, national, and regional conferences. Dr. Krajcik is a fellow of the American Association for the Advancement of Science, the American Educational Research Association, and has served as president of the National Association for Research in Science Teaching (NARST), from which he received the Distinguished Contributions to Science Education Through Research Award in 2010. He was honored to receive a Distinguished Professorship from Ewha Womans University, Seoul, South Korea in 2009 and Guest Professorship from Beijing Normal University in Beijing, China in 2002. The University of Michigan also recognized him in 2010 for his work in graduate student education by presenting him with the University of Michigan Faculty Award for Distinguished Graduate Mentoring. In 2011, along with his colleagues, he received the University of Michigan Provost’s Teaching Innovation Prize.
Please visit and support the companies and organizations that support WSST.

**Thursday 4:00-6:00** Exhibit Preview & Social complimentary Hors d’oeuvres and Refreshments

**Exhibit Hours:** Friday 8:00-3:00

### Exhibitors

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<thead>
<tr>
<th>Exhibitors</th>
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<tr>
<td>ACHIEVE 3000</td>
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<td>Bitwixt Software Systems</td>
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<td>Capital Microscope Services Inc</td>
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<td>Flinn Scientific</td>
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<td>Fotodyne</td>
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<td>Houghton Mifflin Harcourt</td>
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<td>It's About Time Publishing</td>
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<td>McGraw-Hill Education</td>
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<td>Moose Moss Press</td>
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<td>Nasco</td>
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<td>National Geographic</td>
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<td>Pearson</td>
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<td>Sangari Active Science &amp; IQWST</td>
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<td>The Scope Shoppe, Inc</td>
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<td>UW- LaCrosse –ME-PA</td>
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<td>Vernier Software &amp; Technology</td>
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<td>Britannica Digital Learning</td>
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### Non-Profit Exhibitors

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<th>Non-Profit Exhibitors</th>
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<tbody>
<tr>
<td>Aldo Leopold Nature Center</td>
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<tr>
<td>BTC Institute</td>
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<td>Department of Natural Resources</td>
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<tr>
<td>eCybermission (NSTA)</td>
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<td>House in the Woods</td>
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<td>Outdoor Education Center</td>
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<td>Project Lead the Way</td>
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<tr>
<td>Saint Mary’s University of Minnesota</td>
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<tr>
<td>Save the Rainforest</td>
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<td>The Einstein Project</td>
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<td>The STEM Academy</td>
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<td>Trees for Tomorrow</td>
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<tr>
<td>Wisconsin Farm Bureau – Ag. in the Classroom</td>
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<td>Wisconsin Geological and Natural History Survey</td>
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<td>Wisconsin Media Lab</td>
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<td>Wisconsin Water Association</td>
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<tr>
<td>WSST 2014 Conference</td>
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<td>WSST</td>
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<td>Wisconsin Science Olympiad, Inc.</td>
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<td>UW - Eau Claire</td>
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<td>UW- LaCrosse</td>
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<tr>
<td>- Institute for Professional Studies in Education</td>
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<tr>
<td>UW-Madison Science Alliance</td>
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<td>UW-Milwaukee School of Education</td>
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</tbody>
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General Conference

Thursday, March 13, 2014

7:30 a.m. – 5:00 p.m.  On-site Registration
8:00 a.m. – 3:50 p.m.  Workshops and Sessions
1:00 p.m. – 4:00 p.m.  Field Trips
4:00 p.m. – 6:00 p.m.  Exhibit Preview and Social (Start Exhibitor Challenge)
6:30 p.m. – 9:30 p.m.  Members’ Social – History Museum (Shuttle Available)
9:00 p.m. – 10:00 p.m.  Stargazing Field Trip (Weather Permitting)

Friday, March 14, 2014

7:00 a.m. – 5:00 p.m.  On-site Registration
8:00 a.m. – 4:50 p.m.  Workshops and Sessions
7:30 a.m. – 4:30 p.m.  Field Trips
8:00 a.m. – 3:00 p.m.  Exhibit Hall Open
12:00 p.m. – 1:00 p.m.  Lunch with Keynote Speaker – Oren Jakobson
1:00 p.m. – 2:00 p.m.  No Sessions – Visit Exhibitors and Finish Passport Challenge
1:00p.m. – 2:00 p.m.  Town Hall Meeting – Linden Room
1:00 p.m. – 3:00 p.m.  Rock Raffle
1:00 p.m. – 3:00 p.m.  MACSTEP Exploratorium – Exhibit Hall Main Entrance
5:00 p.m. – 6:00 p.m.  Pre-Banquet Social Hour
6:00 p.m. – 9:00 p.m.  Milton O. Pella Memorial Banquet
                        Keynote Speaker Dr. Joseph Krajcik
8:30 p.m. – ??        Explore downtown Appleton
9:00 p.m. – 10:00 p.m.  Stargazing Field Trip (if not held Thursday evening)

Saturday, March 15, 2014

7:00 a.m. – 9:00 a.m.  On-site Registration
7:00 a.m. – 9:00 a.m.  WSST Member Appreciation Breakfast and Elementary Teachers’ Social
8:00 a.m. – 1:50 p.m.  Workshops and Sessions
2:00 p.m. – 4:00 p.m.  WSST Spring Board Meeting

Note: All keynote speaker sessions, awards ceremony, exhibit hall, vendor social, member social, and Saturday continental breakfast are free to conference registrants.
<table>
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<tr>
<th>Thursday</th>
<th>Event</th>
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<tr>
<td>7:30</td>
<td>On-Site Registration Opens</td>
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<td>3:00</td>
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<tr>
<td>4:00-6:00</td>
<td>Exhibit Preview and Social</td>
<td>Grand Ball Room</td>
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<tr>
<td>6:30-9:30</td>
<td>WSST Member Social Shuttle Available</td>
<td>History Museum</td>
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<thead>
<tr>
<th>Friday</th>
<th>Event</th>
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<tr>
<td>7:00</td>
<td>On-Site Registration Opens</td>
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<tr>
<td>8:00</td>
<td>Exhibit Hall Opens</td>
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<td>11:00</td>
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<tr>
<td>11:50</td>
<td>Pre-Paid Lunch</td>
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<td>12:00-1:00</td>
<td><strong>Keynote: Oren Jakobson (Everyone is Welcome)</strong></td>
<td>Evergreen</td>
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<td>1:00-3:00</td>
<td>Town Hall Meeting</td>
<td>Linden</td>
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<td></td>
<td>Finish Exhibitor Challenge &amp; WESTA Rock Raffle</td>
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<td>2:00</td>
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<td>4:00</td>
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<td>5:00-6:00</td>
<td>Pre-Banquet Social</td>
<td>Empire</td>
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<td>6:00-7:00</td>
<td>Milton O’Pella Memorial Banquet</td>
<td>Empire</td>
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<td>7:00-9:00</td>
<td>Awards Ceremony <strong>Keynote: Dr. Joseph Krajcik</strong></td>
<td>Empire</td>
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<td></td>
<td><strong>Everyone is Welcome! Open Seating Available</strong></td>
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<tr>
<th>Saturday</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00</td>
<td>On-Site Registration Opens and Breakfast at 7:30</td>
<td>Main Exhibit Hall Area</td>
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<tr>
<td>8:00</td>
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<td>9:00</td>
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<td>12:00</td>
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</table>
Each attendee should obtain an ink stamp on their Exhibitor Challenge form from each exhibitor category below. Be sure to complete the challenge by filling out your name, school and phone number and depositing your completed form at the designated container in the exhibit hall. The drawing will be held in the exhibit hall on Friday afternoon about 3:00. Winners will be able to pick up their prizes at the conference registration desk.

<table>
<thead>
<tr>
<th>College/Higher Education</th>
<th>Optics</th>
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<tbody>
<tr>
<td>Exploratorium</td>
<td>WSST</td>
</tr>
<tr>
<td>State/Government</td>
<td>Electronics</td>
</tr>
<tr>
<td>Textbooks</td>
<td>Supply Company</td>
</tr>
</tbody>
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Thank You to WSST Prize Donors!

Capital Microscope
Flinn Scientific
Wisconsin Farm Bureau
ACHIEVE 3000
BTC Institute
Save the Rainforest
WSST Conference Committee
<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exhibitor Social - Thursday</strong></td>
<td>4:00-6:00 p.m.</td>
<td>Grand Ballroom - Radisson</td>
<td>Begin Exhibitor Challenge</td>
</tr>
<tr>
<td><strong>Member Social - Thursday</strong></td>
<td>6:30-9:30 p.m.</td>
<td>History Museum - Shuttle available</td>
<td>Music by Chalumeau Winds Woodwind Quintet</td>
</tr>
<tr>
<td><strong>Stargazing Field Trip - Thursday</strong></td>
<td>9:00-10:00 p.m.</td>
<td></td>
<td>Weather Permitting</td>
</tr>
<tr>
<td><strong>Town Hall Meeting - Friday</strong></td>
<td>1:00-2:00 p.m.</td>
<td>Linden Room</td>
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</tr>
<tr>
<td><strong>Luncheon Speaker</strong></td>
<td>11:50 a.m. - 1:00 p.m.</td>
<td>Evergreen Room</td>
<td>Oren Jakobson</td>
</tr>
<tr>
<td><strong>Rock Raffle - Friday</strong></td>
<td>1:00-3:00 p.m.</td>
<td>Grand Ballroom</td>
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<tr>
<td><strong>Pre-Banquet Social Hour - Friday</strong></td>
<td>5:00-6:00 p.m.</td>
<td>Empire Room</td>
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<tr>
<td><strong>Milton O. Pella Banquet</strong></td>
<td>6:00-7:00 p.m.</td>
<td>Empire Room</td>
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</tr>
<tr>
<td><strong>Keynote Speaker and Awards</strong></td>
<td><strong>EVERYONE IS WELCOME</strong></td>
<td>Empire Room</td>
<td>Dr. Joseph Krajcik</td>
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</tbody>
</table>
**Special Events**

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**Sluggers, Suds and Science**

**Milwaukee Brewer Baseball & WSST**

Brewers vs. Cardinals

- **When:** Sunday, July 13th
- **First pitch:** 1:10 p.m. Tailgating will begin at 11:30 pm in the Molitor parking lot (north of the stadium).
  - Look for the WSST flag or call Ray at 414-460-0746

- **Cost:** $25.00 Loge Bleacher Seats

- **Cost includes:**
  - Commemorative T-shirt (WSST members only)
  - Food (subs and snacks) and Beverages (soda/water)
  - (1) Bleacher ticket

- **Registration deadline:** We have 25 tickets—get them while supplies last!!!!

Please complete the information below. Detach and send to:

WSST-Brewer Game  
c/o Ray Scolavino  
135 N. Elias St.  
Wales, WI 53183

For more information contact rscali3@yahoo.com or call 414-460-0746

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<table>
<thead>
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<th>WSST Member Name(s)</th>
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<tr>
<td>Address</td>
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<td>City/State/Zip Code</td>
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<td>Email (please print clearly)</td>
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<tr>
<th>Number of Adults _________</th>
<th>Number of Children _________</th>
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<tr>
<td>T-Shirt Size (WSST Members Only) ________</td>
<td>Amount Enclosed ____________</td>
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</table>

*Please make check payable to WSST*
The Milton O. Pella Banquet is named in memory of the individual responsible for the birth of the Wisconsin Society of Science Teachers during the 1957-1958 academic year at University of Wisconsin-Madison. Not only did Dr. Pella bring together enthusiastic science-minded individuals to start the organization, he cultivated it with people called “Pella Fellas.” This was to ensure continued programs designed to “Improved Science Education in Wisconsin.” He willed nearly $200,000 to the WSST Foundation to provide grants to individuals for academic pursuits, individual science initiatives, attending professional conferences, purchasing science equipment, special school science programs and the Front and Center Grants.

Dr. Pella, a native of Wisconsin, was born in Wilmont in 1914 and lived his entire adult life in the Madison area. He attended elementary and high school in Burlington, earned his B.E. Degree at the Milwaukee State College and both his M.S. and Ph.D. at the University of Wisconsin-Madison. After completing his Master of Science degree, Dr. Pella spent three years in the military. Starting in 1939, Dr. Pella (known as “Doctor” by his students) taught at Wisconsin High School on the campus of the University of Wisconsin-Madison. In 1948, Dr. Pella became a member of the university faculty and retired as a full professor in 1980. While teaching at the university, Dr. Pella was much sought after as an education consultant and teacher. He served as Science Education Consultant to Turkey, Lebanon, Jordan, Syria, Egypt, Nigeria, Costa Rica, Mexico, and India. In addition, he was active as a consultant and board member to a variety of federally funded science programs during the 1960s and 1970s.

Milton Pella was an active professional educator involved in many organizations such as the National Association for Research in Science teaching. He also authored science textbooks and A History of the North Central Association of Math and Science Teachers (also known as The Association of Science and Math Teachers). His many achievements and publications are outlined in different editions of Who’s Who. Milton Pella was at the forefront of modern science curricular design, his students were constantly reminded not to embrace change without a critical eye.

The Wisconsin Society of Science Teachers was one of Dr. Pella’s major professional interests. After providing the impetus that launched WSST, he has provided years of advice and support to the organization. In addition, many of his former students have occupied positions of influence within WSST, keeping it pointed at its goal of improving science education in Wisconsin.

We are very proud to celebrate Dr. Pella’s devotion to science education and his contributions to WSST by naming our annual spring conference banquet in his memory.
# Field Trips

*All fieldtrips will board on North Superior Street on the EAST SIDE entrance of the Hotel*

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Thurs</td>
<td>1:00 – 4:00 High Cliff State Park – Niagara</td>
<td>$12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Escarpment</td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>Thurs</td>
<td>1:00- 4:00 Riverview Gardens/Stone Cellar</td>
<td>$15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brewery - Also F14</td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>Thurs</td>
<td>1:00-4:00 National Weather Service</td>
<td>$10</td>
</tr>
<tr>
<td>F4</td>
<td>Thurs</td>
<td>1:00-4:00 Holsum Dairy Biodigester</td>
<td>$10</td>
</tr>
<tr>
<td>F5</td>
<td>Thurs</td>
<td>CANCELLED Bubolz Nature Center – $14</td>
<td></td>
</tr>
<tr>
<td>F6</td>
<td>Thurs</td>
<td>2:30-4:00 Neenah Paper Mills</td>
<td>$10</td>
</tr>
<tr>
<td>F7</td>
<td>Thurs</td>
<td>9:00 p.m. Night time Star Party Telescope</td>
<td>$5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viewing Event - Cost: $5</td>
<td></td>
</tr>
<tr>
<td>F8</td>
<td>Fri</td>
<td>7:30-11:30 Fox Valley Technical College</td>
<td>$17</td>
</tr>
<tr>
<td>F9</td>
<td>Fri</td>
<td>8:00-11:00 Barlow Planetarium/Weis Earth</td>
<td>$20</td>
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<tr>
<td></td>
<td></td>
<td>Science Museum - Cost: $20</td>
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</tr>
<tr>
<td>F10</td>
<td>Fri</td>
<td>CANCELLED Experimental Aircraft Association</td>
<td>$25</td>
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<tr>
<td></td>
<td></td>
<td>(EAA) - $25</td>
<td></td>
</tr>
<tr>
<td>F11</td>
<td>Fri</td>
<td>CANCELLED Lawrence University &amp; Houdini</td>
<td>$15</td>
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<tr>
<td></td>
<td></td>
<td>History Museum - $15</td>
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<tr>
<td>F12</td>
<td>Fri</td>
<td>CANCELLED Baseball, A Scientific Look</td>
<td>$10</td>
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<tr>
<td></td>
<td></td>
<td>(Timber Rattlers Stadium) - $10</td>
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</tr>
<tr>
<td>F13</td>
<td>Fri</td>
<td>CANCELLED Kaukauna Utilities/Eagle Watching</td>
<td>$10</td>
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<tr>
<td></td>
<td></td>
<td>– $10</td>
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<td></td>
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<td>Brewery - See F2</td>
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<tr>
<td>F15</td>
<td>Fri</td>
<td>1:00-4:00 Kimberly School Forest and Vernier</td>
<td>$10</td>
</tr>
<tr>
<td>F16</td>
<td>Fri</td>
<td>1:00-4:00 The Chemistry, Physics and Art of</td>
<td>$35</td>
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<tr>
<td></td>
<td></td>
<td>Glass (Bergstrom Mahler Museum of Glass)</td>
<td></td>
</tr>
<tr>
<td>F17</td>
<td>Fri</td>
<td>1:00-4:00 Quarry Tours</td>
<td>$10</td>
</tr>
</tbody>
</table>
Thursday Workshops

Workshop W1: Cast a Line - Scientific Discovery through Fishing!
Thursday 8:00-11:50am   Rosewood
Target Audience: Elementary, Middle, High School (Max 30)
Presenter: Theresa Stabo

Explorations of fish and their habitats can lay the foundation for understanding the scientific method. Free materials reinforce Common Core and Next Generation Science Standards. Cost: $15.00

Workshop W9: Project Learning Tree Activities for Secondary Students: Thinking Critically About Forest Issues
Thursday 9:00-11:50am   Briarwood
Target Audience: High School (Max 20)
Presenters: Nicole Filizetti

Get hands-on experience using Project Learning Tree’s acclaimed secondary module, “Focus on Forests.” Participants receive a free copy of the activity guide. Cost: $0

Workshop W2: If They Make It, They Will Learn: The Maker Movement & STEM
Thursday 1:00-2:50pm   Briarwood
Target Audience: General (Max 20)
Presenter: Jack Samuelson

In this hand-on workshop, learn how "Making" can facilitate STEM in the classroom, and develop confidence, curiosity, and creativity in your students. Cost: $10.00

Workshop W3: NanoFab Lab ... in a Box!
Thursday 1:00-3:50pm (may repeat on Saturday)   Rosewood
Target Audience: High School (Max 32)
Presenter: Mike Zach

Electroplate and Lift Lithography kit makes patterned nano/microwires without a cleanroom. Developed in Wisconsin, this is new cutting-edge micro/nanotechnology for our Wisconsin high school students. Cost: $0

Don’t forget to “TWEET TO REPEAT” your favorite session for Saturday!
Workshop W10: Supporting Elementary and Middle Students in Constructing Models of Matter to meet NGSS
Friday 8:00-9:50am (may repeat on Saturday)  Lawrence
Target Audience: Elementary, Middle School (Max 100)
Presenters: Emily Miller, Joe Krajcik

How can you support elementary and middle school students in constructing and revising models that rely on evidence and explain phenomena that students experience to meet NGSS? Cost: $0

Workshop W4: Putting the Pressure on Evolution Misconceptions
Friday 8:00-10:50am  Ebony
Target Audience: Middle, High School (Max 25)
Presenters: Deborah L. Rook, Kristin Jenkins, Chloe Drummond, Michael Johnson, Andrew Hasley

Join presenters from the UW Crow Institute for the Study of Evolution to learn about resources for identifying and addressing student misconceptions about evolution. Cost: $5.00

Workshop W5: Engineering is Elementary Workshop: Designing Windmills
Friday 9:00-11:50am (Max 20)  Briarwood
Target Audience: Elementary
Presenter: Jack Samuelson

In this hands-on workshop, participants will learn how to bring STEM to their classrooms using the Engineering is Elementary® (EiE) "Designing Windmills" unit. Cost: $10.00

Workshop W6: Modeling, CCSS and the NGSS for Elementary Teachers
Friday 2:00-3:50pm (may repeat on Saturday)  Lawrence
Target Audience: Elementary & Middle School (Max 50)
Presenters: Emily Miller, Forrest Schultz, Seth Marie Westfall

What is the crossover between NGSS and CCSS? What are some teacher tested ways to bring GRR and close reading into the science block and scientific modeling and argumentation into my literacy block? Cost: $0

Saturday Workshops

Workshop W7: Student Authored Graphic Narratives to Increase Student Engagement
Saturday 8:00-9:50am  Rosewood
Target Audience: High School (Max 30)
Presenter: Jen Grant

Participants will discuss strategies for incorporating the graphic narrative project for their science classroom. The website (beta version) for this project will see its debut. Cost: $0

Workshop W8: Utilizing Internet Technology in the Classroom: What’s Current? What’s Free? What Works?
Saturday 10:00-11:50am  Oaktag
Target Audience: General (Max 50)
Presenters: Joseph Esquibel, John Lukesh, Kenneth Rubert-Nason

Learn how to use current internet technologies and apps as educational resources to easily create interactive modules and supplement your instruction. Cost $0
## Thursday Morning Concurrent Sessions at a Glance

### 8:00–11:50 a.m.

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
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<td>HS</td>
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<td>109</td>
<td>9:00-9:50</td>
<td>What's Next with Next Gen</td>
<td>Linden</td>
<td>G</td>
</tr>
<tr>
<td>117</td>
<td>10:00-10:50</td>
<td>Spark The Assessment: Google Drive and Forms</td>
<td>Oaktag</td>
<td>G</td>
</tr>
<tr>
<td>123</td>
<td>10:00-10:50</td>
<td>Be a STAR</td>
<td>Crown</td>
<td>G</td>
</tr>
<tr>
<td>129</td>
<td>10:00-11:50</td>
<td>Wisconsin Science Olympiad Event Exhibition</td>
<td>Lawrence</td>
<td>MS,HS</td>
</tr>
<tr>
<td>103</td>
<td>10:00-10:50</td>
<td>Inquiry-based Modules to Study Effects of Environmental Agents on Health</td>
<td>Ebony</td>
<td>HS</td>
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<tr>
<td>111</td>
<td>10:00-10:50</td>
<td>Standards Based Learning</td>
<td>Linden</td>
<td>MS,HS</td>
</tr>
<tr>
<td>112</td>
<td>11:00-11:50</td>
<td>Using Climate Proxies to Learn About Earth's History</td>
<td>Linden</td>
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<tr>
<td>118</td>
<td>11:00-11:50</td>
<td>The Engineering is Elementary Suite of Programs</td>
<td>Oaktag</td>
<td>E</td>
</tr>
<tr>
<td>124</td>
<td>11:00-11:50</td>
<td>Preparing Secondary Teacher Candidates for the edTPA</td>
<td>Crown</td>
<td>MS</td>
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<tr>
<td>104</td>
<td>11:00-11:50</td>
<td>Connecting Educator Effectiveness to Student Achievement</td>
<td>Ebony</td>
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Target Audience (ES=Elem, MS=Middle, HS=High, G=General)

### Thursday Morning Concurrent Sessions

**W1 8:00-11:50 Rosewood**

**Cast a Line - Scientific Discovery through Fishing!**

Presenter: Theresa Stabo

Explorations of fish and their habitats can lay the foundation for understanding the scientific method. Free materials reinforce Common Core and Next Generation Science Standards.

**W9 9:00-11:50 Briarwood**

**Project Learning Tree Activities for Secondary Students: Thinking Critically About Forest Issues**

Presenter: Nicole Filizetti

Get hands-on experience using Project Learning Tree's acclaimed secondary module, “Focus on Forests.” Participants receive a free copy of the activity guide.
Thursday Morning Concurrent Sessions

109  9:00-9:50  Linden
What’s Next with Next Gen
Presenter:  Pearson
Come and explore NGSS from its roots to the present and beyond. We will see how to dissect and make sense of the standards and look at what Pearson is doing to help you prepare.

117  10:00-10:50  Oaktag
Spark The Assessment: Google Drive and Forms
Presenter:  Chris Fitzgerald
A guide to getting started and being efficient with Google Drive especially Forms for assessment, activities, and communication for all students.

123  10:00-10:50  Crown
Be a STAR
Presenter:  Beth Allcox
A program that allows you to spend two weeks working in a DOE National Laboratory with researchers. Find out about the experience of a lifetime.

129  10:00-11:50  Lawrence
Wisconsin Science Olympiad Event Exhibition
Presenters:  Forrest Schultz
            Kevin Hugo
Join Wisconsin Science Olympiad State Directors, Events Supervisors and Coaches as they exhibit many of the exciting events associated with Science Olympiad.

103  10:00-10:50  Ebony
Inquiry-based Modules to Study Effects of Environmental Agents on Health
Presenters:  Craig Berg
            David Petering
            Daniel Weber
            Henry Tomasiewicz
            Michael Carvan
            Renee Hesselbach
Effectively Using Inquiry-based Modules to Study the Effects of Environmental Agents on Human Health.

111  10:00-10:50  Linden
Standards Based Learning
Presenter:  Jennifer Scianna
Sick of feeling bogged down by standards or standards-based grading? See how portfolios, learning targets, specialized assessments and online learning transformed a middle school classroom.

112  11:00-11:50  Linden
Using Climate Proxies to Learn About Earth’s History
Presenter:  Darin Christianson
Come investigate how can scientists tell what Earth's climate was like thousands of years before human measurements? This activity is from the climate unit of EDC Earth Science, a Brand new NSF-supported high school Earth science program aligned to NGSS frameworks that uses an active (more than 60 labs and activities!) approach to the study of Earth science and Earth systems.

118  11:00-11:50  Oaktag
The Engineering is Elementary Suite of Programs
Presenter:  Jack Samuelson
Engineering is Elementary offers 20 units for classroom use, and a free curriculum for out-of-school time STEM programs in elementary and middle schools.

124  11:00-11:50  Crown
Preparing Secondary Teacher Candidates for the edTPA
Presenter:  Liesl Hohenshell
This presentation describes the development, implementation, and findings from a Field Study Seminar designed to prepare secondary teacher candidates for the Teacher Performance Assessment (edTPA).

104  11:00-11:50  Ebony
Connecting Educator Effectiveness to Student Achievement
Presenters:  Julie Branner
            Sean Butler
            Cathy Green
            Jodie Schenk
How to write a SMART goal, what to do with it, and proof needed according to the new effective educator model? Connecting goals to NGSS?
### Thursday Afternoon

#### Concurrent Sessions at a Glance

**12:00-3:50 p.m.**

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
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<td>12:00-12:50</td>
<td>Technology and Personalized Learning</td>
<td>Briarwood</td>
<td>G</td>
</tr>
<tr>
<td>105</td>
<td>12:00-12:50</td>
<td>Demonstrate Evolution With “Man’s Best Friend”</td>
<td>Ebony</td>
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<td>110</td>
<td>12:00-12:50</td>
<td>Teaching the Scientific Method through Real World Exploration</td>
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<tr>
<td>113</td>
<td>12:00-12:50</td>
<td>Genetics - from Counselor to Genetic Engineer</td>
<td>Linden</td>
<td>MS, HS</td>
</tr>
<tr>
<td>119</td>
<td>12:00-12:50</td>
<td>When it is Good to be a Space Cadet.</td>
<td>Oaktag</td>
<td>E, MS</td>
</tr>
<tr>
<td>125</td>
<td>12:00-12:50</td>
<td>Fungi: The Forgotten Kingdom</td>
<td>Crown</td>
<td>MS, HS</td>
</tr>
<tr>
<td>130</td>
<td>12:00-12:50</td>
<td>UW MRSEC RET’s</td>
<td>Lawrence</td>
<td>MS</td>
</tr>
<tr>
<td>W2</td>
<td>1:00-2:50</td>
<td>If They Make it, They Will Learn: The Maker Movement &amp; STEM</td>
<td>Briarwood</td>
<td>G</td>
</tr>
<tr>
<td>106</td>
<td>1:00-1:50</td>
<td>Use STRs to Determine Whooping Crane Paternity</td>
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<td>HS</td>
</tr>
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<td>W3</td>
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<td>NanoFab Lab in a Box!</td>
<td>Rosewood</td>
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<td>114</td>
<td>1:00-1:50</td>
<td>Flipping for Success</td>
<td>Linden</td>
<td>HS</td>
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<td>120</td>
<td>1:00-1:50</td>
<td>Do you See What I See?</td>
<td>Oaktag</td>
<td>E</td>
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<tr>
<td>126</td>
<td>1:00-1:50</td>
<td>Invasive Species Fun</td>
<td>Crown</td>
<td>MS, HS</td>
</tr>
<tr>
<td>131</td>
<td>1:00-1:50</td>
<td>STEM Branching into the community</td>
<td>Lawrence</td>
<td>MS</td>
</tr>
<tr>
<td>107</td>
<td>2:00-2:50</td>
<td>PLTW Launch for K-5 STEM</td>
<td>Ebony</td>
<td>E</td>
</tr>
<tr>
<td>115</td>
<td>2:00-2:50</td>
<td>Force and Motion - Fast and Furious</td>
<td>Linden</td>
<td>MS</td>
</tr>
<tr>
<td>121</td>
<td>2:00-2:50</td>
<td>Incorporating Current Research into Inquiry-Based Classrooms</td>
<td>Oaktag</td>
<td>MS, HS</td>
</tr>
<tr>
<td>127</td>
<td>2:00-2:50</td>
<td>Biofuels: Engaging Students with Cutting-edge Science and Engineering</td>
<td>Crown</td>
<td>MS, HS</td>
</tr>
<tr>
<td>132</td>
<td>2:00-2:50</td>
<td>Rolling Out NGSS K-12 Grade</td>
<td>Lawrence</td>
<td>G</td>
</tr>
<tr>
<td>102</td>
<td>3:00-3:50</td>
<td>Science Education for Global Citizenship</td>
<td>Briarwood</td>
<td>MS, HS</td>
</tr>
<tr>
<td>108</td>
<td>3:00-3:50</td>
<td>Overview of PLTW Curriculum - What’s new?</td>
<td>Ebony</td>
<td>G</td>
</tr>
<tr>
<td>116</td>
<td>3:00-3:50</td>
<td>STEM Racing Challenge – PBL That Does Not Forget the Learning!</td>
<td>Linden</td>
<td>MS, HS</td>
</tr>
<tr>
<td>122</td>
<td>3:00-3:50</td>
<td>Teaching Elementary Life Science Through Engineering Problems</td>
<td>Oaktag</td>
<td>E</td>
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<tr>
<td>128</td>
<td>3:00-3:50</td>
<td>Using Case Studies and Lab Practicals in the Anatomy and Physiology Classroom</td>
<td>Crown</td>
<td>HS</td>
</tr>
<tr>
<td>133</td>
<td>3:00-3:50</td>
<td>Gravity (the Movie) Corrections Using Science Demos</td>
<td>Lawrence</td>
<td>G</td>
</tr>
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Target Audience (ES=Elem, MS=Middle, HS=High, G=General)
Thursday Afternoon
Concurrent Sessions

101  12:00-12:50  Briarwood
Technology and Personalized Learning
Presenter: Pearson
From eTexts to Virtual Labs, we’ll look at some of the new technology Pearson is introducing to personalize learning for your students. We’ll provide samples and demos you can take back and try with your class.

105  12:00-12:50  Ebony
Demonstrate Evolution With “Man’s Best Friend”
Presenter: Theresa Dlugi
Evolution can be challenging to teach, but this hands-on activity facilitates presentation of evolution at the board AND at the bench!

110  12:00-12:50  Rosewood
Teaching the Scientific Method through Real World Exploration
Presenters: Haley E. Frater
            Charles Bomar
            Natalie Pollack
Discover a curriculum to teach the scientific method through water quality testing. Kits and curriculum will be provided.

113  12:00-12:50  Linden
Genetics - From Counselor to Genetic Engineer
Presenter: Darin Christianson
Let’s make genetics more meaningful and relevant to students through an issues based approach to genetics. Come join us and take home some great genetics activities.

119  12:00-12:50  Oaktag
When it is good to be a space cadet.
Presenter: Daniel W. Bateman
Learn the opportunities available through Spaceport Sheboygan and the Wisconsin Space Grant Consortium. Learn exciting hands-on activities available to your classroom.

125  12:00-12:50  Crown
Fungi: The Forgotten Kingdom
Presenter: Samuel Kutzler
What the fungi is growing at Centro Hispano High school, an alternative school located on the south side of Milwaukee. Are those gourmet oyster mushrooms cultivated by a high school classroom? You betcha!

130  12:00-12:50  Lawrence
UW MRSEC RET’s
Presenters: Ben Shrago
            Ashley Adams
            Katie Leary
The ever present and growing interest in STEM careers mandates that students gain hands on exposure to cutting edge research and development.

130  1:00-1:50  Briarwood
If They Make It, They Will Learn: The Maker Movement & STEM
Presenter: Jack Samuelson
In this hand-on workshop, learn how “Making” can facilitate STEM in the classroom, and develop confidence, curiosity, and creativity in your students.

130  1:00-3:50  Rosewood
NanoFab Lab In a Box!
Presenters: Mike Zach
            Dr. Daniel Albert
            Kasmier Wawrzaszek
Electroplate and Lift Lithography kit makes patterned nano/microwires without a cleanroom. Developed in Wisconsin, this is new cutting-edge micro/nanotechnology for our Wisconsin high school students.

Use STRs to Determine Whooping Crane Paternity
Presenter: Theresa Dlugi
Just like an ecologist, you will use Short Tandem Repeat (STR) analysis by gel electrophoresis to determine paternity and to help save the Whooping Cranes.

When it is good to be a space cadet.
Presenter: Daniel W. Bateman
Learn the opportunities available through Spaceport Sheboygan and the Wisconsin Space Grant Consortium. Learn exciting hands-on activities available to your classroom.
Thursday Afternoon
Concurrent Sessions

114  1:00-1:50  Linden
Flipping for Success
Presenter:  Ann Moffat
The how’s and why’s of flipping science classes. Comparing a 1st year and 2nd year flipped class and the successful outcome of flipping AP Chemistry.

120  1:00-1:50  Oaktag
Do you See What I See?
Presenters:  Lynn Weber
VeAnn Tilson
This session will provide hands-on activities using our senses to interact with the environment in a way that naturally introduces students to scientific practices. This session will engage in observations, discussions and argumentation as called out in the NGSS.

126  1:00-1:50  Crown
Invasive Species Fun
Presenters:  Christal Campbell
Kelly Kearns
Brock Woods
Bernadette Williams
Ever teach with live plants/critters or wonder what a crazy worm is? Come learn about invasive species, their impacts, and how to prevent their spread.

131  1:00-1:50  Lawrence
STEM Branching into the community
Presenter:  Cindy Solinsky
The STEM Branching science class will connect concepts studied directly to on-going community projects. Students will be able to collect and analyze data that will impact decision-making within community organizations.

107  2:00-2:50  Ebony
PLTW Launch for K-5 STEM
Presenter:  Patricia Deibert
Grade specific modules aligned with grade level NGSS, and CCSS. What an exciting new way to engage student learning using the Engineer Design Process!

115  2:00-2:50  Linden
Force and Motion - Fast and Furious
Presenter:  Darin Christianson
Come Explore Newton’s laws through a sustainable Real World issue -motor vehicle safety. Teaching through issues is a great way to provide motivation and Context for teaching Force and Motion. Come design and conduct an investigation and take home some great activities.

121  2:00-2:50  Oaktag
Incorporating Current Research into Inquiry-Based Classrooms
Presenters:  Katie Leary
Ashley Adams
Incorporating scientific research into an inquiry-based classroom. How to develop successful hands-on, lab-based modules that will engage students and that expose them to current research.

127  2:00-2:50  Crown
Biofuels: Engaging Students with Cutting-edge Science and Engineering
Presenters:  D. Leith Nye
John M. Greenler
Learn about current sustainable biofuels research and discoveries, get NGSS-aligned classroom materials for your students, and explore related summer professional development opportunities at UW-Madison.

132  2:00- 2:50  Lawrence
Rolling Out NGSS K-12 Grade
Presenters:  Laura Cerletty
Kathi Glick
Jay Gullickson
Our district has made a commitment to NGSS. We'll share the steps we've taken to roll out a new K-12 science curriculum.

102  3:00-3:50  Briarwood
Science Education for Global Citizenship
Presenter:  Steve Krings
Discover interdisciplinary, hands-on activities to prepare all students to think critically and creatively about global challenges to the planet and human well-being.
Thursday Afternoon
Concurrent Sessions

133 3:00-3:50  Lawrence
Gravity (the Movie) Corrections Using Science Demos
Presenter: Alan Peche
When science fiction is more fiction than science, this presentation will use science demonstrations to critically analyze the events from the blockbuster film “Gravity.”

108 3:00-3:50  Ebony
Overview of PLTW Curriculum - What's new?
Presenter: Patricia Deibert
PLTW continues to enhance their STEM programming. The Middle School – Gateway To Technology and High School – Pathway To Engineering and Biomedical Sciences Programs will be discussed during this session.

116 3:00-3:50  Linden
STEM Racing Challenge – PBL that does not forget the Learning!
Presenter: Darin Christianson
The Student Racing Challenge STEM curriculum was developed around the themes of motorsports and sustainable, safe transportation. Motorsports is the only sport won or lost in real time with the application of STEM. Drivers only have a chance to win because the team as a whole makes good decisions. Join us for some hands on activities and learn more about the flexible options to implement this engaging curriculum in your district and prepare students for a future as engineers, scientists, business, marketing and creative professionals.

122 3:00-3:50  Oaktag
Teaching Elementary Life Science Through Engineering Problems
Presenters: Kevin Mason
Brian Mc Allister
Anne Wallisch
Charles Bomar
Adam Kramschuster
Discover how elementary teachers are using engineering problems to deepen their students’ understanding of life science concepts and science and engineering practices.

128 3:00-3:50  Crown
Using Case Studies and Lab Practicals in the Anatomy and Physiology Classroom
Presenters: Nicole Williams
Case studies and lab practicals can be used to make real world connections and assess student understanding in the anatomy and physiology classroom.

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Visit us at the FOTODYNE booth to see equipment and kits for bringing molecular biology into your classroom.

Enter our drawing for a free kit at booth # 59!

Join Our Hands-On Workshops

- Demonstrate Evolution with Man's Best Friend
  Thursday, March 13
  12:00 - 12:50 pm, Ebony

- Use STRs to Determine Whooping Crane Paternity
  Thursday, March 13
  1:00 - 1:50 pm, Ebony
  Friday, March 14
  8:00 - 8:50 am, Aspen

- Assay Gene Expression Differences with PM/PC?
  Friday, March 14
  9:00 - 9:50 am, Aspen

www.fotodyneclassroom.com
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<td>Putting the Pressure on Evolution Misconceptions</td>
<td>Ebony</td>
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<td>W10</td>
<td>8:00-9:50</td>
<td>Supporting Elementary and Middle Students in Constructing Models of Matter to Meet NGSS</td>
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<td>201</td>
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<td>Wisconsin's Oldest Rocks</td>
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<td>209</td>
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<td>229</td>
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<td>Sensational Science Demonstrations</td>
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<td>242</td>
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<td>249</td>
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<tr>
<td>260</td>
<td>8:00 -8:50</td>
<td>Chromebook, Android, and BYOD with Vernier</td>
<td>Pippin</td>
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<tr>
<td>262</td>
<td>8:00 -8:50</td>
<td>Every Student Has A Device...Now What?</td>
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<td>273</td>
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<td>W5</td>
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<td>216</td>
<td>9:00-9:50</td>
<td>The Ancient Seas and Mass Extinctions of Tropical Wisconsin - Our Paleozoic record of sedimentary rocks</td>
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<td>223</td>
<td>9:00-9:50</td>
<td>Engaging Students in Astronomy Research</td>
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<td>230</td>
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<td>Structure and Properties of Matter from Middle to High School</td>
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<td>243</td>
<td>9:00-9:50</td>
<td>NGSS Leadership in Your District</td>
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<tr>
<td>250</td>
<td>9:00-9:50</td>
<td>Building Student Learning Objectives (SLOs) in Science</td>
<td>Hickory</td>
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<tr>
<td>255</td>
<td>9:00-9:50</td>
<td>STEM Projects for the Secondary Science Classroom</td>
<td>McIntosh</td>
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<tr>
<td>261</td>
<td>9:00-9:50</td>
<td>Integrate iPad® and BYOD with Vernier Technology</td>
<td>Pippin</td>
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<tr>
<td>267</td>
<td>9:00-9:50</td>
<td>Dialogues for the Earth and Physical Science Classroom</td>
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<td>274</td>
<td>9:00-9:50</td>
<td>Assay Gene Expression Differences with PAPER?!?!</td>
<td>Aspen</td>
<td>HS</td>
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</tbody>
</table>

Target Audience (ES=Elem, MS=Middle, HS=High, G=General)
Putting the Pressure on Evolution Misconceptions

Presenters: Deborah L. Rook, Kristin Jenkins, Chloe Drummond, Michael Johnson, Andrew Hasley

Join presenters from the UW Crow Institute for the Study of Evolution to learn about resources for identifying and addressing student misconceptions about evolution.

Elementary and Middle Students in Constructing Models of Matter to meet NGSS

Presenters: Emily Miller, Dr. Joseph Krajcik

How can you support elementary and middle school students in constructing and revising models that rely on evidence and explain phenomena that students experience to meet NGSS?

Climate Change and Rainforests

Presenter: Bruce Calhoun

International efforts to Reduce greenhouse Emissions from Deforestation and forest Degradation (REDD) are presented, along with a teaching unit on Climate Change and the Rainforest.

Wisconsin’s Oldest Rocks

Presenter: Esther Stewart

This session considers evidence for geologic events including volcanism and mountain building that shaped Wisconsin’s Precambrian past and created the potentially minable metallic mineral deposits in today’s news.

Turning Grass into Gas

Presenter: Marin Dobson

Cellulosic Biomass into Ethanol - a comprehensive lab series that capstones biology units of photosynthesis, cell respiration and fermentation.

ABC’s of NGSS

Presenter: Chad Janowski

Do you feel a little uncertain about the new science standards? This introductory session will help you feel more comfortable with the Next Generation Science Standards.
Sleeping Seeds
Presenter: Greg Bisbee

By re-creating a famous seed longevity project, students learn about how science works while conducting original research. Real research can be simple and inexpensive!

Use STRs to Determine Whooping Crane Paternity
Presenter: Theresa Dlugi

Just like an ecologist, you will use Short Tandem Repeat (STR) analysis by gel electrophoresis to determine paternity and to help save the Whooping Cranes.

Hawaii Marine Science Seminar
Presenter: Dennis A. O'Rourke
Steve Makurat

This is an opportunity for teachers to learn how to recruit and escort their students to Hawaii for a two week program which mainly focuses on Marine Science.

The ancient seas and mass extinctions of tropical Wisconsin - our Paleozoic record of sedimentary rocks.
Presenter: Jay Zambito, PhD

Our Paleozoic sedimentary rocks tell a story of ancient tropical environments. These rocks make up our major groundwater aquifers as well as serve as important sources of construction aggregate and industrial sand.

Dialogues get students out of their seats, into a two-person conversation about concepts in Earth Science and Physical Science. Students love it! Free take home.

Integrate iPad® and BYOD with Vernier Technology
Presenter: Michael Crofton

In this hands-on workshop, you will use Vernier’s digital tools to conduct an investigation with either Graphical Analysis for iPad, or Vernier Data Share for tablets, Chromebooks, and BYOD environments.

Assay gene expression differences with PAPER?!?!?
Presenter: Theresa Dlugi

With this paper activity, you will understand the biology behind microarray biotechnology and compare gene expression in cells of a smoker and a former smoker.
**Friday Morning Concurrent Sessions**

W5  9:00-11:50  Briarwood
**Engineering is Elementary Workshop: Designing Windmills**
Presenter: Jack Samuelson
In this hands-on workshop, participants will learn how to bring STEM to their classrooms using the Engineerin is Elementary® (EiE) "Designing Windmills" unit.

255  9:00-10:50  McIntosh
**STEM Projects for the Secondary Science Classroom**
Presenters: Diane Bellin
Leone Lewis
Two of the problems with integrating STEM into the science or math classroom are the lack of intentionality and finding great ideas. This session will look at what make good STEM project, different projects for the middle school classroom that intentionally include all areas of STEM. The projects include Life, Earth and Physical Science areas and truly incorporate Engineering Design, Application of Technology, Mathematical Skills for Analysis and the related Science Application. And finally a series of beneficial resources will be examined with teachers in mind. Teachers will leave with the projects that they can use in their classrooms.

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**School of Education • University of Wisconsin-Milwaukee**

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Curriculum & Instruction

Additional Graduate degrees in
- Educational Psychology
- Administrative Leadership
- Cultural Foundations of Education
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robert@uwm.edu

uwm.edu/soe
### Friday Morning Concurrent Sessions at a Glance 10:00-11:50 a.m.

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<td>207</td>
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<td>What’s New in McGraw Hill Digital for Science and</td>
<td>McIntosh</td>
<td>MS, HS</td>
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<td></td>
<td></td>
<td>STEM Classes.</td>
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<tr>
<td>211</td>
<td>10:00-10:50</td>
<td>Take Your Students Ice Fishing</td>
<td>Rosewood</td>
<td>HS</td>
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<tr>
<td>217</td>
<td>10:00-10:50</td>
<td>Wisconsin’s Ice Age History and its Effect on the Landscape</td>
<td>Linden</td>
<td>MS, HS</td>
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<tr>
<td>231</td>
<td>10:00-10:50</td>
<td>Microbes and Nanotechnology-Classroom and Real World Applications</td>
<td>Crown</td>
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<tr>
<td>238</td>
<td>10:00-10:50</td>
<td>STEAM (Science, Technology, Engineering, the Arts, and Math) in the Elementary</td>
<td>Lawrence</td>
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<tr>
<td>244</td>
<td>10:00-10:50</td>
<td>NextGenSciWI.com - Your NGSS Web Portal</td>
<td>Redwood</td>
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<tr>
<td>251</td>
<td>10:00-10:50</td>
<td>Science &amp; CTE, Friends at Last?</td>
<td>Hickory</td>
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<tr>
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<td>10:00-10:50</td>
<td>Going Digital in Secondary Science</td>
<td>Pippin</td>
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<td>268</td>
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<td>Dialogues for Teaching Chemistry</td>
<td>Cortland</td>
<td>MS, HS</td>
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<td>275</td>
<td>10:00-10:50</td>
<td>Real Life CSI</td>
<td>Aspen</td>
<td>HS</td>
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<td>281</td>
<td>10:00-10:50</td>
<td>Science Education ... as the worms churn and ivies root!</td>
<td>Oaktag</td>
<td>MS, HS</td>
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<td>202</td>
<td>11:00-11:50</td>
<td>The Eyes Have It</td>
<td>Ebony</td>
<td>MS, HS</td>
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<td>212</td>
<td>11:00-11:50</td>
<td>Engage your Students in the Energy Cycle</td>
<td>Rosewood</td>
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<td>218</td>
<td>11:00-11:50</td>
<td>Groundwater and sustainable water supplies in Wisconsin</td>
<td>Linden</td>
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<td>232</td>
<td>11:00-11:50</td>
<td>Bring POGIL into your classroom</td>
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<td>239</td>
<td>11:00-11:50</td>
<td>Successful Process for Adapting Preexisting Science Units to Include Engineering</td>
<td>Lawrence</td>
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<td>245</td>
<td>11:00-11:50</td>
<td>NGSS Course Mapping Roundtable</td>
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<td>252</td>
<td>11:00-11:50</td>
<td>Academic &amp; Career Planning: Beyond HS as College Prep</td>
<td>Hickory</td>
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<td>257</td>
<td>11:00-11:50</td>
<td>Brown Bag It!</td>
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<td>269</td>
<td>11:00-11:50</td>
<td>I Got the Need to Read!</td>
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<td>276</td>
<td>11:00-11:50</td>
<td>Which Way Did the DNA Go? Fun with Electrophoresis!</td>
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<td>282</td>
<td>11:00-11:50</td>
<td>Wisconsin Fast Plants in the Classroom</td>
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</table>

**Target Audience (ES=Elem, MS=Middle, HS=High, G=General)**

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**Lunch Break is between 12:00-2:00 p.m.**

**Town Hall Meeting 1:00 p.m. in the Linden Room**
Presenters: Diane Bellin, Leone Lewis
As schools begin integrating STEM education in a more purposeful way into their classrooms, they are often looking for a way to integrate these materials digitally. This session will look at ways to use digital materials from McGraw-Hill Education in their STEM classes to effectively branch over from Math to Science to Technology to Engineering in a way that demonstrates to students the true integration of these areas of study and applications. Participants in the session will be able to explore the materials presented at no cost to themselves or the districts/schools they belong to and can be used by teachers in their classrooms. It is a great opportunity to see the development of digital materials for STEM education.

Take Your Students Ice Fishing
Presenter: Scott Stankowski
Find out how to get your students on the hardwater and enjoying science. Learn about the high school ice fishing tournament format.

Wisconsin's Ice Age History and its Effect on the Landscape
Presenter: Eric Carson, PhD
Wisconsin’s recent geologic past had the greatest impact on its landscape. As the climate changed, glaciers came and went; rivers grew and shrank and carved new courses; some even changed direction.
NextGenSciWi.com - Your NGSS Web Portal
Presenter: Chad Janowski

NextGenSciWi.com is designed to connect you with the resources you need as you work through aligning and implementing the NGSS. Come see what it can offer you!

Science & CTE, friends at last?
Presenters: Scott Gundrum
Russ Hermann,
Robin Kroyer-Kubicek

Science partnerships with CTE coursework can provide enhanced educational experiences for ALL students, if you can first overcome the turf wars.

Going Digital in Secondary Science
Presenter: Dave Kowal

Looking to enrich the student experience in your classroom through the increased use of technology resources? Join us and explore the cutting edge tech goodies from Holt McDougal/Houghton Mifflin Harcourt. Complimentary sample access!

Dialogues for Teaching Chemistry
Presenters: Craig Berg
Nancy Smith
Marian Schraufnagel

Chemistry dialogues get students out of their seats, into a two-person conversation about concepts in Chemistry. Students love it! Free take home.

Real Life CSI
Presenters: Ryan J Olson
Barbara Bielec

Learn how Genetic Identity testing is really done! Participants will learn to analyze an electropherogram to solve a human identity puzzle.

Science Education ... as the worms churn and ivies root!
Presenters: D. J. Huddleston
Jan Krueger

Learn how to replicate four teacher-tested, multifaceted, multidisciplinary, long-term, and cost efficient descriptive studies that foster authentic learning and help develop observation and analytical skills.

The Eyes Have It
Presenter: Dr. Lainna Callentine

Lecturer and Physician Dr. Lainna Callentine will take you through the wonders of vision as you dissect a sheep eye. This hands on workshop will give you plenty of ideas for simple classroom dissection projects that will fit your science curriculum.

Engage your Students in the Energy Cycle
Presenter: Michael Paltzer

This session will introduce you to a simple, yet effective, hands on and technology enhanced energy cycle field experience that your students bring back to the classroom.

Groundwater and sustainable water supplies in Wisconsin
Presenter: M. Carol McCartney

Learn about Wisconsin’s aquifers and the potential conflicts for clean, adequate water supplies. Is there enough water to sustain industry, mining, agriculture, recreation, and our cities? How can we know?

Bring POGIL into your classroom
Presenter: Melissa Hemling

Learn the basics of implementing a Process Orientated Guided Inquiry Learning (POGIL) activity in your classroom and how to use these activities to help meet the New Generation Science Standards or the new AP Chemistry or Biology framework learning objectives.
Successful Process for Adapting Preexisting Science Units to Include Engineering
Presenters: Emily Miller, Carmen Lombard, Kathy Huncosky
The Aristos Grant Project invited national and state experts to collaborate with MMSD 2nd - 8th grade teachers to create and implement grade-specific engineering extensions to FOSS, aligned with NGSS and CCSS. The resulting process of creating extensions is replicable and employed researched-based strategies (i.e., local connections to engineering) designed to increase engagement for underserved students. These 7 taught and refined extensions have district-wide and state-wide replicability.

NGSS Course Mapping Roundtable
Presenter: Eric Brunsell
Participants will share ideas related to turning the Next Generation Science Standards into a 6-12 course sequence. The presenter will also describe a mapping approach.

Academic & Career Planning: Beyond HS as college prep
Presenter: Robin Kroyer-Kubicek
ACP is required for all 6th-12th grade students beginning 2017-18. Not just a counselor’s job, science teachers can be a link to realizing the promise of ACP.

Brown Bag It!
Presenter: Dave Kowal
Take a break! Bring your brown bag lunch with you and join the Holt McDougal/Houghton Mifflin Harcourt crew for informal conversation over lunch. Try out some of the latest instructional tech and learn about HMH's involvement with NGSS. We'll bring the dessert!

I Got the Need to Read!
Presenter: Greg Bisbee
Need a fun way to get students to read while still hitting the content? This is it--Dialogues!!! Learn how to write your own!

Which Way Did the DNA Go? Fun with Electrophoresis!
Presenters: Barbara Bielec, Ryan Olson
Teachers Grades 6-12: This presentation will emphasize fundamental biotechnology concepts and techniques in a hands-on way! We will also share tips to help implement biotechnology.

Wisconsin Fast Plants in the Classroom
Presenter: Steve Gustafson
WFP have been around for decades, but maybe you haven’t heard of them or haven’t used them for awhile; find out what’s new.
# Friday Afternoon Concurrent Sessions at a Glance 2:00-3:50 p.m.

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<td>213</td>
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<td>219</td>
<td>2:00-2:50</td>
<td>Using Analogies to Elicit Middle School Students Ideas about Earth Science Topics</td>
<td>Linden</td>
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<td>222</td>
<td>2:00-2:50</td>
<td>Spark The Assessment: Google Drive and Forms</td>
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<td>226</td>
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<td>Using Robots to Teach Motion</td>
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<td>233</td>
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<td>Oldies But Solid Science Catchers</td>
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<td>246</td>
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<td>253</td>
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<td>Standards-Based Grading using NGSS</td>
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<td>Appy Hour...Getting the Most out of Google Apps, Tools and Extensions.</td>
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<td>Using Claims, Evidence, Reasoning to Enhance Student Learning</td>
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<td>277</td>
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<td>Pump It UP...Using Protein Modeling in Your Biology or Chemistry Curriculum</td>
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<td>Bats, Blood and the Biology of Iron</td>
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<td>W6</td>
<td>2:00-2:50</td>
<td>Modeling CCSS and NGSS for Elementary Teachers</td>
<td>Lawrence</td>
<td>E, MS</td>
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<tr>
<td>258</td>
<td>2:00-2:50</td>
<td>Fluids Frenzy</td>
<td>Pippin</td>
<td>MS, HS</td>
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<td>204</td>
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<td>The “Art and Science” of an European Vacation Experience</td>
<td>Briarwood</td>
<td>G</td>
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<td>214</td>
<td>3:00-3:50</td>
<td>Conservation Biology Projects for Middle and HS Students</td>
<td>Rosewood</td>
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<tr>
<td>220</td>
<td>3:00-3:50</td>
<td>Funtastic Earthy Activities</td>
<td>Linden</td>
<td>MS, HS</td>
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<tr>
<td>227</td>
<td>3:00-3:50</td>
<td>A Standard Based Grading Roundtable</td>
<td>Oaktag</td>
<td>G</td>
</tr>
<tr>
<td>234</td>
<td>3:00-3:50</td>
<td>Middle School Inquiry Based Classroom</td>
<td>Crown</td>
<td>MS, HS</td>
</tr>
<tr>
<td>247</td>
<td>3:00-3:50</td>
<td>Brining Engineering into Your Class Based on the NGSS</td>
<td>Redwood</td>
<td>G</td>
</tr>
<tr>
<td>265</td>
<td>3:00-3:50</td>
<td>Socrative-online Testing</td>
<td>McIntosh</td>
<td>G</td>
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<tr>
<td>271</td>
<td>3:00-3:50</td>
<td>High Quality STEM Trade Books for 2014</td>
<td>Cortland</td>
<td>G</td>
</tr>
<tr>
<td>284</td>
<td>3:00-3:50</td>
<td>From the Crime Scene to the Classroom: Blood Spatter Analysis</td>
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<td>254</td>
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<tr>
<td>278</td>
<td>3:00-3:50</td>
<td>Bioethics in the Classroom</td>
<td>Aspen</td>
<td>HS</td>
</tr>
</tbody>
</table>

**Target Audience (ES=Elem, MS=Middle, HS=High, G=General)**
Friday Afternoon Concurrent Sessions

203 2:00-2:50  Briarwood
Camp Badger for Teachers (CB4T) Introductory Engineering Workshop for Grades 4-10 Math and Science Teachers
Presenters: Sarah Adumat
            Kevin Niemi
            Kevin Anderson
            Michael Jones
An introduction to UW-Madison’s free, weeklong engineering program for teachers, which offers engagement in science and engineering practices to enhance understanding for teaching and learning.

213 2:00-2:50  Rosewood
Wolves, Moose, and Aldo Leopold
Presenter: Greg Bisbee
Learn about the long-running Isle Royale wolf-moose study, Yellowstone NP, the concept of ecological (trophic) cascades, and the ecological importance of predators.

219 2:00-2:50  Linden
Using analogies to elicit middle school student ideas about earth science topics
Presenters: Rachael Lancor
            Kirsten Webster
We will discuss how student-generated analogies can be a great tool for formative assessment, and focus on how students understand energy in earth science systems.

222 2:00-2:50  Ebony
Use of models to teach Physical Science
Presenter: Solomon Simon
This session will explore the use of mousetrap cars and balsa wood airplanes to teach kinematics to physical science students.

233 2:00-2:50  Crown
Oldies But Solid Science Catchers
Presenter: Dick Seng
A plethora of teacher demos and Hands on activities that have been successfully used since the last Millennium

246 2:00-2:50  Redwood
An Invitation: Moving Forward with The Next Generation Science Framework
Presenter: Dave Kreuzer
From crosscutting concepts to scientific and engineering practices, take away strategies and approaches that will bring the Next Generation Science Framework to life in your district.

253 2:00-2:50  Hickory
Standards-Based Grading using NGSS
Presenter: Scott Schaefer
Using NGSS, a 4-level rubric, and quality assessments to develop a standards-based grading system.

264 2:00-2:50  Mcintosh
Appy Hour...Getting the most out of Google Apps, Tools and Extensions
Presenter: Becky Peppler
Come and see how I have gone GOOGLE! I will demonstrate how Google Tools, Apps and Extensions can be used to help make you more efficient!

270 2:00-2:50  Cortland
Using Claims, Evidence, Reasoning to Enhance Student Learning
Presenters: Kirsten Wiesneski
            Greta Voit
Come see how we’ve used a Claim, Evidence, Reasoning structure to improve understanding of authentic scientific experiences and support the ACT College Readiness Standards.

277 2:00-2:50  Aspen
Pump It Up... Using Protein Modeling in your Biology or Chemistry Curriculum
Presenter: Bill Heeren
Jmol, a free resource, will be downloaded and then used in conjunction with data from the Protein Data Bank to model various proteins.
Friday Afternoon Concurrent Sessions

283  2:00-2:50  McIntosh

**Bats, Blood, and the Biology of Iron**
*Presenters: Jeeyon Jeong  
  Stefanie Chen*

A case study of illness in captive bats. Students roleplay relevant professionals to solve the mystery related to iron, an essential but potentially toxic micronutrient.

W6  2:00-3:50  Lawrence

**Modeling, CCSS and the NGSS for Elementary Teachers**
*Presenters: Emily Miller  
  Forrest Schultz  
  Seth Marie*

What is the crossover between NGSS and CCSS? What are some teacher tested ways to bring GRR and close reading into the science block and scientific modeling and argumentation into my literacy block?

258  2:00-3:50  Pippin

**Fluids Frenzy!**
*Presenter: Chick Westby*

Stop in for a boatload of fantastic demonstrations and lab ideas on the wonders of fluids (that's air too!!). You won't be disappointed! (handouts, prizes)

204  3:00-3:50  Briarwood

**The “Art and Science” of an European Vacation**
*Presenters: Cindy Smits  
  Leigh Kohlmann*

Do you have interest in inspiring your students by taking your own art and science based trip to Europe? The Best of Italy tour will include all major cities in Italy, transportation, most meals and hotels. We will be traveling to Rome, Florence, Venice and Pompeii before traveling back to Chicago. If you have interest in taking a twelve day tour of Italy, come see us for all the details.

214  3:00-3:50  Rosewood

**Conservation Biology Projects for Middle and HS Students**
*Presenters: Robert Welch  
  Kyle Mannel*

Learn how several long-term conservation biology projects have provided opportunities to secondary students in

220  3:00-3:50  Linden

**Funtastic Earth Activity**
*Presenters: Wendy Meyer  
  Eric Schmutzer*

This is a fun activity that gives a modern twist on observing and calculating the radius of the Earth using Science and Math.

227  3:00-3:50  Oaktag

**A Standards Based Grading Roundtable**
*Presenters: Brad Wysocki  
  Terry Schwaller  
  Joseph Connelly*

Hear from three teachers that currently using Standards Based Grading practices in their classrooms..Bring your questions, ideas and other topics you would like to discuss. We want to be a resource for you to get started or improve upon what you are already doing.

234  3:00-3:50  Crown

**Middle School Inquiry Based Classroom**
*Presenters: Katie Leary  
  Melissa Burgos*

Teaching middle school chemistry in an exploratory and inquiry based classroom. How to create long lasting connections for students before they move into high school.

247  3:00-3:50  Redwood

**Bringing Engineering into Your Science Class Based on the NGSS**
*Presenter: Kevin Anderson*

The Next Generation Science Standards includes engineering practices! Learn basic principles of integrating engineering and review examples at multiple grade levels - create a STEM classroom.

265  3:00-3:50  McIntosh

**Socrative-online testing**
*Presenter: Beth Allcox*

Socrative is an on-line app that allows for tests or quizzes. The many features will be discussed as well as how to navigate the app.
271  3:00-3:50  Cortland
High Quality STEM Trade Books for 2014
Presenters:  Tim Gerber
            Megan Litster
This hands-on session focuses on use of quality K-12 STEM trade books to meet Next Generation Science Standards and ELA Common Core Standards.

284  3:00-3:50  Ebony
From the Crime Scene to the Classroom: Blood Spatter Analysis
Presenters:  Vince Zaccardi
            Benji Wooten
Hands-on forensic workshop from The Mystery of Lyle & Louise. Explore types of blood spatter and how to interpret its presence at a crime scene.

254  3:00-4:50  Hickory
How to start a Robot Team
Presenters:  Jim Evans
            Ben Stien
            Sean Schrumf
This presentation is intended to introduce participants to the FIRST Robotics Suite of Programs. Give concrete examples of how to start a program. And to provide information and resources available rookie teams.

278  3:00-4:50  Aspen
Bioethics in the classroom
Presenters:  Kristin Dittenhafer-Reed
            Elon Roti Roti
Discussion-based classroom exercises focused on the bioethical issues surrounding cutting-edge biomedical research, including stem cells and oncofertility.

Preparation Students for the Global Economy

Project Lead The Way is the nation’s leading provider of K-12 science, technology, engineering, and math (STEM) programs.

Through world-class curriculum, high-quality teacher professional development, and outstanding partnerships, PLTW is helping students develop the skills to succeed in the global economy.

For more information, please visit PLTW.org.
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<thead>
<tr>
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<td>205</td>
<td>4:00-4:50</td>
<td>Conservation and the San Diego Safari Experience</td>
<td>Briarwood</td>
<td>MS, HS</td>
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<td>208</td>
<td>4:00-4:50</td>
<td>Wisconsin Ag in the Classroom-New Opportunities for Connections</td>
<td>Ebony</td>
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<td>215</td>
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<td>The Love Canal, Superfund and Phytoremediation</td>
<td>Rosewood</td>
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<td>221</td>
<td>4:00-4:50</td>
<td>Come Aboard!</td>
<td>Linden</td>
<td>MS, HS</td>
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<td>228</td>
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<td>Using Authentic Data-Rich Case Studies to Teach Physics</td>
<td>Oaktag</td>
<td>HS</td>
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<td>235</td>
<td>4:00-4:50</td>
<td>Online Chemistry Problem Sets</td>
<td>Crown</td>
<td>HS</td>
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<td>241</td>
<td>4:00-4:50</td>
<td>NGSS Diversity and Equity Writing Team, All Students: Making NGSS accessible to ALL students</td>
<td>Lawrence</td>
<td>E, MS</td>
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<td>248</td>
<td>4:00-4:50</td>
<td>NGSS Unit Design Using Modified UbD</td>
<td>Redwood</td>
<td>G</td>
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<tr>
<td>259</td>
<td>4:00-4:50</td>
<td>Active Learning: A Brain Changing Experience</td>
<td>Pippin</td>
<td>G</td>
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<tr>
<td>263</td>
<td>4:00-4:50</td>
<td>Schoology!?!?!?!</td>
<td>McIntosh</td>
<td>MS, HS</td>
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<td>272</td>
<td>4:00-4:50</td>
<td>But I’m not a reading teacher...Connecting Informational Text with Inquiry Based Science</td>
<td>Cortland</td>
<td>G</td>
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Target Audience (ES=Elem, MS=Middle, HS=High, G=General)

Give Dr. Juliana Texley, NSTA President-Elect, A WARM WSST WELCOME!
215  4:00-4:50  Rosewood
The Love Canal, Superfund and Phytoremediation
Presenter: Michelle Griffin-Wenzel
Learn how research and inquiry-based activities are used to educate students about superfund sites and the use of phytoremediation as a clean-up method.

248  4:00-4:50  Redwood
NGSS Unit Design Using Modified UbD
Presenters:  Suzy Zietlow
            Katie Kastenson Schmidt
            Eric Brunsell
All science educators are welcome to attend this session! Learn how to develop units of study based on NGSS using a modified UbD template.

221  4:00-4:50  Linden
Come Aboard!
Presenters:  Lynn Kurth
            Cindy Beyer
Discover ways to energize and engage students through NGSS based activities while learning about a unique opportunity to study the world’s largest fresh water lakes on board the EPA’s R/V Lake Guardian.

228  4:00-4:50  Oaktag
Using authentic, data-rich case studies to teach physics content and scientific practices
Presenters:  Rachael Lancor
            Brian Lancor
Testing the limits of wind turbines, breaking Olympic track records, examining art forgeries. We present lessons to explicitly teach scientific practices using data from real world examples.

235  4:00-4:50  Crown
Online Chemistry Problem Sets
Presenter:  Solomon Simon
This seminar will explore the use of a free online chemistry problem set offered by Indiana University: Computer assisted learning program (CALM), Calm.indiana.edu

241  4:00-4:50  Lawrence
NGSS Diversity and Equity Writing Team, All Standards All Students: Making NGSS accessible to ALL students
Presenters:  Emily Miller
            Susan Cohen
How can we ensure that NGSS is accessible for ALL students? Meet two of the teachers whose classrooms were featured in NGSS Appendix D and learn how they blended the three dimensions of NGSS with effective researched-based classroom strategies for diverse learners.

259  4:00-4:50  Pippin
Active Learning: A Brain Changing Experience
Presenters:  Dr. Thomas J. Saleska
            Dr. Sarah Lovern
This is a fifty-minute interactive presentation about how the brain impacts teaching and learning. Specific classroom examples will be given that will engage participants.

263  4:00-4:50  McIntosh
Schoology?!?!?
Presenters:  Wendy Dyrhaug
            Nadine Whiteman
            Heather Peterson
            Matthew Eastlick
What is Schoology? Is it easy to use? What are benefits for teachers/students? Find out how to manage your courses with this awesome technology!

272  4:00-4:50  Cortland
But I’m not a reading teacher… Connecting Informational Text with Inquiry Based Science
Presenters:  Matthew Vick
            Nancy Stevens
Strategies like Word Sorts and Harvey & Daniels’ Inquiry Circles will be featured as strategies to connect reading with inquiry based science.

Don’t forget to “TWEET TO REPEAT” your favorite session for Saturday!
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<td>301</td>
<td>8:00-8:50</td>
<td>Stellar Observations</td>
<td>Briarwood</td>
<td>HS</td>
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<tr>
<td>317</td>
<td>8:00-8:50</td>
<td>NGSS: What’s it all about?</td>
<td>Oaktag</td>
<td>G</td>
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<tr>
<td>322</td>
<td>8:00-8:50</td>
<td>Google Sites in Action</td>
<td>Crown</td>
<td>G</td>
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<tr>
<td>312</td>
<td>8:00-8:50</td>
<td>Phox Physical Science and Physics Share Group Session</td>
<td>Linden</td>
<td>G</td>
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<tr>
<td>W7</td>
<td>8:00-9:50</td>
<td>Student Authored Graphic Narratives to Increase Student Engagement</td>
<td>Rosewood</td>
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<td>Wisconsin’s Oldest Rocks—Evidence of Dramatically Changing Landscape in</td>
<td>Briarwood</td>
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<td>the Precambrian Rock Record</td>
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<tr>
<td>323</td>
<td>9:00-9:50</td>
<td>Technology in the Elementary Science Classroom</td>
<td>Crown</td>
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<tr>
<td>328</td>
<td>9:00-9:50</td>
<td>Problem-Based Learning in High School Biology</td>
<td>Oaktag</td>
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<tr>
<td>303</td>
<td>10:00-10:50</td>
<td>The Ancient Seas and Mass Extinctions of Tropical Wisconsin</td>
<td>Briarwood</td>
<td>MS, HS</td>
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<td>308</td>
<td>10:00-10:50</td>
<td>Claim Evidence Reasoning</td>
<td>Rosewood</td>
<td>MS</td>
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<td>313</td>
<td>10:00-10:50</td>
<td>Teaching One Dimensional Linear Flow Rate and Stress Strain Analysis in</td>
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<td>a High School Classroom</td>
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<td>324</td>
<td>10:00-10:50</td>
<td>Elementary Plant Labs</td>
<td>Crown</td>
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<td>W8</td>
<td>10:00-11:50</td>
<td>Utilizing Internet Technology in the Classroom: What’s Current? What’s</td>
<td>Oaktag</td>
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<td>Free? What Works?</td>
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<td>304</td>
<td>11:00-11:50</td>
<td>Wisconsin’s Ice Age History and its Effect on the Landscape</td>
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<td>309</td>
<td>11:00-11:50</td>
<td>Writing Research Papers in High School Science</td>
<td>Rosewood</td>
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<td>314</td>
<td>11:00-11:50</td>
<td>Super Science Giveaway FREE!</td>
<td>Linden</td>
<td>G</td>
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<td>325</td>
<td>11:00-11:50</td>
<td>So, You Collected Macròinvertebrates: Now What?</td>
<td>Crown</td>
<td>G</td>
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<tr>
<td>305</td>
<td>12:00-12:50</td>
<td>Groundwater and sustainable water supplies in Wisconsin</td>
<td>Briarwood</td>
<td>MS, HS</td>
</tr>
<tr>
<td>315</td>
<td>12:00-12:50</td>
<td>Nuclear-History Future</td>
<td>Linden</td>
<td>HS</td>
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<tr>
<td>320</td>
<td>12:00-12:50</td>
<td>Learning Through Stories</td>
<td>Rosewood</td>
<td>HS</td>
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<tr>
<td>321</td>
<td>12:00-12:50</td>
<td>Making the Most of Data Using Gapminder</td>
<td>Oaktag</td>
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<td>326</td>
<td>12:00-12:50</td>
<td>The Case of the Missing Babysitter; An Experience in the Science of</td>
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<td>Criminal Investigation</td>
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<td>306</td>
<td>1:00-1:50</td>
<td>Cycling through the Environment: Hands-on inquiry into the Nitrogen</td>
<td>Briarwood</td>
<td>HS</td>
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<td>Cycle</td>
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<tr>
<td>310</td>
<td>1:00-1:50</td>
<td>Integrating the NGSS with the CCSS Math and ELA</td>
<td>Rosewood</td>
<td>G</td>
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<tr>
<td>311</td>
<td>1:00-1:50</td>
<td>Swimming Upstream and About to Drown? Stop Fighting the Current!</td>
<td>Oaktag</td>
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<tr>
<td>316</td>
<td>1:00-1:50</td>
<td>Density-Life Preservers</td>
<td>Linden</td>
<td>MS</td>
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<td>327</td>
<td>1:00-1:50</td>
<td>Penny Electroplating Lab: Making Cents Out of Nickel Workshop</td>
<td>Crown</td>
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Target Audience (ES=Elem, MS=Middle, HS=High, G=General)
Stellar Observations
Presenter: Erik Tietyen
Using observations of the sky students can calculate the rotational speed of the Earth, and explore the relationship of apparent and absolute magnitude of stars.

NGSS: what's it all about?
Presenter: Kevin Niemi
The NGSS are based on the Framework for K-12 Science Education. This session will explore the philosophy and instructional intent behind the Framework and NGSS.

Google Sites in Action
Presenter: Kelley Hoffman
I will demonstrate the use of Google Sites as a classroom management tool, presentation tool, and, most recently, to develop student designed sites.

Phox Physical Science and Physics Share Group Session
Presenter: Terry Schwaller
Come join us and share your best labs, activities, and practices that are making a difference for your students. Then steal everyone else's ideas!

Student Authored Graphic Narratives to Increase Student Engagement
Presenter: Jen Grant
Participants will discuss strategies for incorporating the graphic narrative project for their science classroom. The website (beta version) for this project will see its debut.

Wisconsin’s oldest rocks - evidence of dramatically changing landscapes in the Precambrian rock record
Presenter: Eric Hiatt, PhD
This session considers evidence for geologic events including volcanism and mountain building that shaped Wisconsin’s Precambrian past and created the potentially minable metallic mineral deposits in today’s news.

Technology in the Elementary Science Classroom
Presenters: Suzy Zietlow, Katie Kastenson Schmidt
Elementary teachers WANTED! You CAN teach science AND technology CAN be a purposeful part of your instruction! Let's make science happen in our classrooms!

Problem-Based Learning in High School Biology
Presenter: Claire Waldhart
Learn ways to use a scenario about a genetic disease to teach concepts like protein synthesis, protein structure and function and membrane transport.

The ancient seas and mass extinctions of tropical Wisconsin - our Paleozoic record of sedimentary rocks.
Presenter: Joanne Kluessendorf
Our Paleozoic sedimentary rocks tell a story of ancient tropical environments. These rocks make up our major groundwater aquifers as well as serve as important sources of construction aggregate and industrial sand.

Claim Evidence Reasoning
Presenters: Lucy Rothstein, Zach Shackleford
"Constructing Explanations and Designing Solutions" Let's break it down into 3 smaller, manageable, and teachable components for middle school students: claim, evidence, reasoning.
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<th>Session Title</th>
<th>Presenter(s)</th>
<th>Description</th>
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<tr>
<td>313</td>
<td>10:00-10:50</td>
<td>Teaching One Dimension Linear Flow Rate and Stress Strain Analysis in a High School Classroom</td>
<td>John Kozicke, David Cusma</td>
<td>Presenters will share their experience and the high school physics curricula they developed as participants in UW-Milwaukee's Research Experience for Teachers.</td>
</tr>
<tr>
<td>324</td>
<td>10:00-10:50</td>
<td>Elementary Plant Labs</td>
<td>Rodney Dymesich</td>
<td>This is a series of plant labs for elementary teachers on a very limited budget. These plant labs are for all ability levels.</td>
</tr>
<tr>
<td>W8</td>
<td>10:00-11:50</td>
<td>Utilizing Internet Technology in the Classroom: What’s Current? What’s Free? What Works?</td>
<td>Joseph Esquibel, John Lukesh, Kennedy Rubert-Nason</td>
<td>Learn how to use current internet technologies and apps as educational resources to easily create interactive modules and supplement your instruction.</td>
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<td>304</td>
<td>11:00-11:50</td>
<td>Wisconsin’s Ice Age History and Its Effect on the Landscape</td>
<td>William Mode, PhD</td>
<td>Wisconsin’s recent geologic past had the greatest impact on its landscape. As the climate changed, glaciers came and went; rivers grew and shrank and carved new courses; some even changed directions.</td>
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<td>309</td>
<td>11:00-11:50</td>
<td>Writing Research Papers in High School Science</td>
<td>Amy Zientek</td>
<td>There is power in reading and in writing science. This session focuses on integrating both reading and writing into science classes through integration of the University of Wisconsin - Milwaukee's SEPA modules. Participants in the session will walk away with handouts that guide students through the process of writing science and integrating APA citations into their work based on research.</td>
</tr>
<tr>
<td>314</td>
<td>11:00-11:50</td>
<td>Super Science Giveaway FREE!</td>
<td>Don Vincent, Steve Bower</td>
<td>With over 100 years of collecting, making and creating science stuff for our science classes, workshops and seminars, we are wanting to pass it on to you!</td>
</tr>
<tr>
<td>325</td>
<td>11:00-11:50</td>
<td>So, you collected macroinvertebrates: Now what?</td>
<td>Patrick Koss</td>
<td>This session will present additional application activities for instructors who already use macroinvertebrates in their classroom or would like to start.</td>
</tr>
<tr>
<td>305</td>
<td>12:00-12:50</td>
<td>Groundwater and Sustainable Water Supplies in Wisconsin</td>
<td>Maureen Muldoon, PhD</td>
<td>Learn about Wisconsin’s aquifers and the potential conflicts for clean, adequate water supplies. Is there enough water to sustain industry, mining, agriculture, recreation, and our cities? How can we know?</td>
</tr>
<tr>
<td>315</td>
<td>12:00-12:50</td>
<td>Nuclear History to Future</td>
<td>Beth Allcox</td>
<td>Look at the history of the atomic age from its beginning to the present day situation. We will also discuss the future of waste processing.</td>
</tr>
<tr>
<td>320</td>
<td>12:00-12:50</td>
<td>Learning Through Stories</td>
<td>Amy Zientek</td>
<td>Keep your students’ attention with a captivating story. Cystic fibrosis &amp; Kalydeco, XIAP &amp; Nic Volker, The Beery Twins &amp; Sepiaterin Reductase, Influenza &amp; HIV stories will be explored - as well as how to thematically integrate them into your lesson plans. Ideas originated from the Milwaukee School of Engineering's Teacher's FIRST Program.</td>
</tr>
</tbody>
</table>
## Saturday Morning Concurrent Sessions

### 321  12:00-12:50  Oaktag
**Making the Most of Data Using Gapminder**  
**Presenter:** Shannon Glenn  
Gapminder provides teachers with vetted data to show students relationships in the data that allows inquiry, can be incorporated into groupwork and allows true collaboration.

### 310  1:00-1:50  Rosewood
**Integrating the NGSS with the CCSS Math and ELA**  
**Presenter:** Kevin Anderson  
Build lessons that meaningfully connect the Next Generations Science Standards to the Common Core in a PBL framework.

### 326  12:00-12:50  Crown
**The Case of the Missing Babysitter; An Experience in the Science of Criminal**  
**Presenters:** Charles Hatfield, Julie Srenaski, Ann Mathu, Kathy Fabry, Mary Gillis  
This classroom-tested unit places students in the middle of a criminal investigation using scientific inquiry, hands-on lab work, and exciting but disciplined sleuthing.

### 311  1:00-1:50  Oaktag
**Swimming Upstream and About to Drown?**  
**Presenter:** Michelle Regan  
Stop Fighting the Current! Feel like you’re fighting an upstream battle and drowning in a classroom full of behavior issues? Learn how to reroute the current in your classroom.

### 306  1:00-1:50  Briarwood
**Cycling through the Environment: Hands-on inquiry into the Nitrogen Cycle**  
**Presenter:** Erin Parker  
The Nitrogen Cycle is complicated, complex, and really, really important. Learn how to make it hands on, meaningful, and relevant to your students.

### 316  1:00-1:50  Linden
**Density- Life Preservers**  
**Presenter:** Tammy Huenink  
This lab will involve engineering and science in the designing of life preservers for army men that will not only keep them floating but floating with their faces out of the water.

### 327  1:00-1:50  Crown
**Penny Electroplating Lab: Making cents out of a nickel workshop**  
**Presenters:** Lynette Jackson, Kan Pai  
Participants will receive 2-3 weeks unit work of lessons on nanotechnology and nanoparticles, including activities, projects, video links, demonstrations, and labs for a chemistry class.

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**THE FANTASTIC FOUR**

**March 5-7 2015**

**Kalahari Waterpark Resort and Convention Center**

**Wisconsin Dells**

**Biology / Chemistry / Earth and Space / Physics**

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Did you know that WSST has money for you? Do you have an idea or project in mind that you just can’t find extra money for? The WSST Foundation Committee is your answer!

Here are available grants:

**WSST Milton Pella Grant (up to $1000 each)**
Proposals may include:
- Costs of attending professional conferences (including sub reimbursement, registration etc.)
- Purchase of technology and its innovative use in the classroom
- After school (informal science) programs
- Innovative curriculum development
- WSST programs (Science Futures and Adventures)
- Winners are expected to present their results at the next WSST conference

**Deadlines: any time between the fall equinox and winter solstice**

**Wisconsin Science Partnership Project Grant ($500-$1000)**
The Foundation offers WSST members grant opportunities for classroom projects and activities through the Wisconsin Science Partnership Program (WSPP). WSPP grants are from Wisconsin corporations administered through the WSST Foundation.

The Wisconsin Science Partnership Grant is in cooperation with Xcel Energy.
Xcel has provided WSST with funds to support grants to science teachers who teach in an Xcel Energy service area. Grants are $500 - $1000. Projects may be for classrooms or larger groups of students and could include community involvement. Please complete application thoroughly including details of timeline, budget and project goals.

**Deadlines: any time between the fall equinox and winter solstice**

**Founders Grant Applications:** (Maximum of $1,000) Reimbursement for course work.
- May include graduate work, PD, or other professional development.

**Deadlines: any time between the fall equinox and winter solstice**

**Byerly Grant Applications:** ($500) Awarded in this order of preference:
The Byerly Grant is a memorial to Don Byerly. Don was instrumental in developing and sustaining Science World. The grant, in the amount of $500 is to be used to improve the science classroom experience for students. Any WSST member is eligible for this grant, however the following order of preference is used to award the grant:
- Teacher or school is north of Highway 8,
- Science World or Science Futures staff member,
- Science World or Science Futures teacher participant,
- WSST member with a worthy project

**Deadlines: any time between the fall equinox and winter solstice**

**Front and Center Grant** ($150 per grant)
- Special grants awarded at WSST conference
- Grants are applied for at the WSST conference
- Grants are awarded at banquet
**WSST Awards and Recognition**

**Ron Gibbs Award**
This is the WSST’s most prestigious award. The award is given annually to honor a person who has made outstanding contributions in science education over a long and distinguished career in Wisconsin. Those eligible would include elementary, secondary or college teachers and any other active supporter of science education.

This year’s award recipient will be announced at the Milton O. Pella Banquet.

**Excellence in Science Education Award**
This award is designed to foster excellence in science instruction and to recognize that excellence. The award is given annually to persons who have made outstanding contributions to the improvement of science education in Wisconsin. This would include elementary, secondary or college teachers and any other active supporters of science education.

Please acknowledge this year’s recipients:

- Stephen T. Franklin
  Appleton West High School

- Kathryn Eilert
  Middleton High School

- David Bergerson
  Wisconsin Rapids High School

**Friends of Science Awards**
This award is to recognize outstanding contributions to the support of science teachers by individuals, groups, corporations, foundations, etc. outside the science education community. The recipient of this award shows support to education through the sharing of time, talents, funds, knowledge, and multiple other ways.

Please acknowledge this year’s recipient:

BioPharmaceutical Technology Center Institute (BTCI)
K–12 Science

At Pearson, we understand how rapidly the landscape of education is transforming. Each day brings new advances in technology, research on best practices, challenges in funding, heightened concerns with standards and testing. As you look for support in this rapidly changing world, we want to be your partner, helping you adapt, grow, and take advantage of new opportunities. As you change, we are committed to changing with you—offering ever-evolving products and services that meet your real-time needs.

Learn How Pearson Can Help You Make the Transition to the Next Generation Science Standards

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