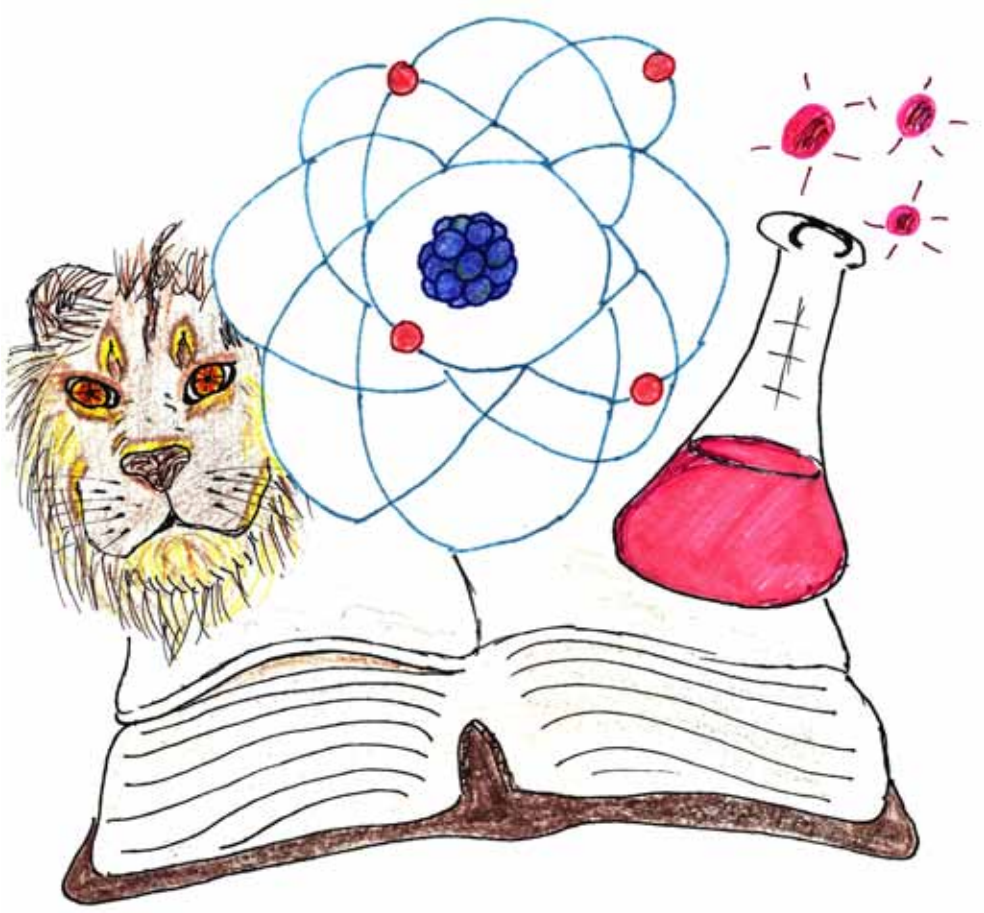
The 53rd Annual OSTA Conference

Building Science Through Literacy Across the State

October 12, 2012—Teacher Inservice Day



Leslie Middle School
Salem, Oregon

Block Schedule

ROOM	*8:35-9:25* SESSION 1	*9:40-10:30* SESSION 2	*10:45-11:35* SESSION 3	*1:00-1:50* SESSION 4	*2:05-2:55* SESSION 5
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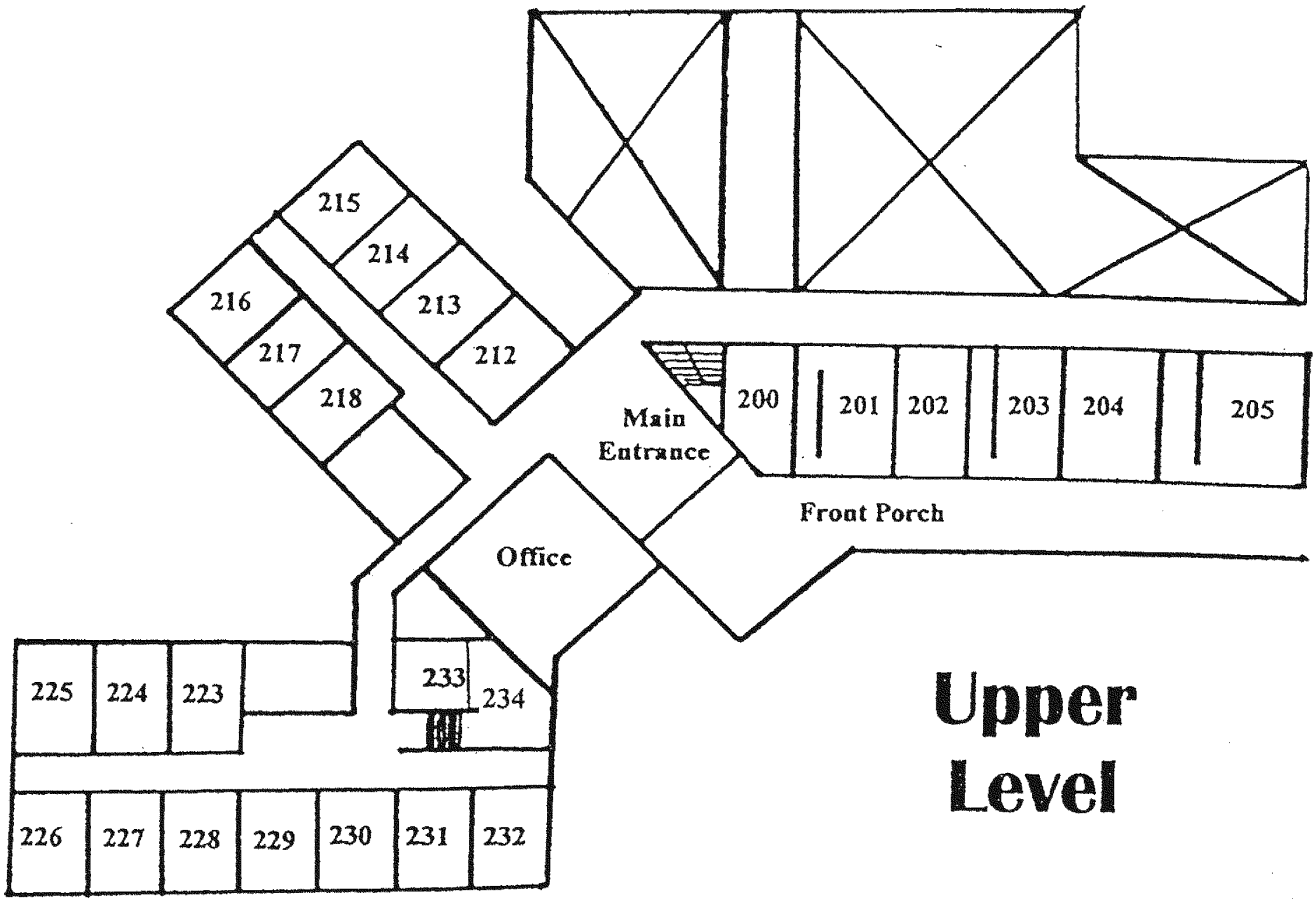

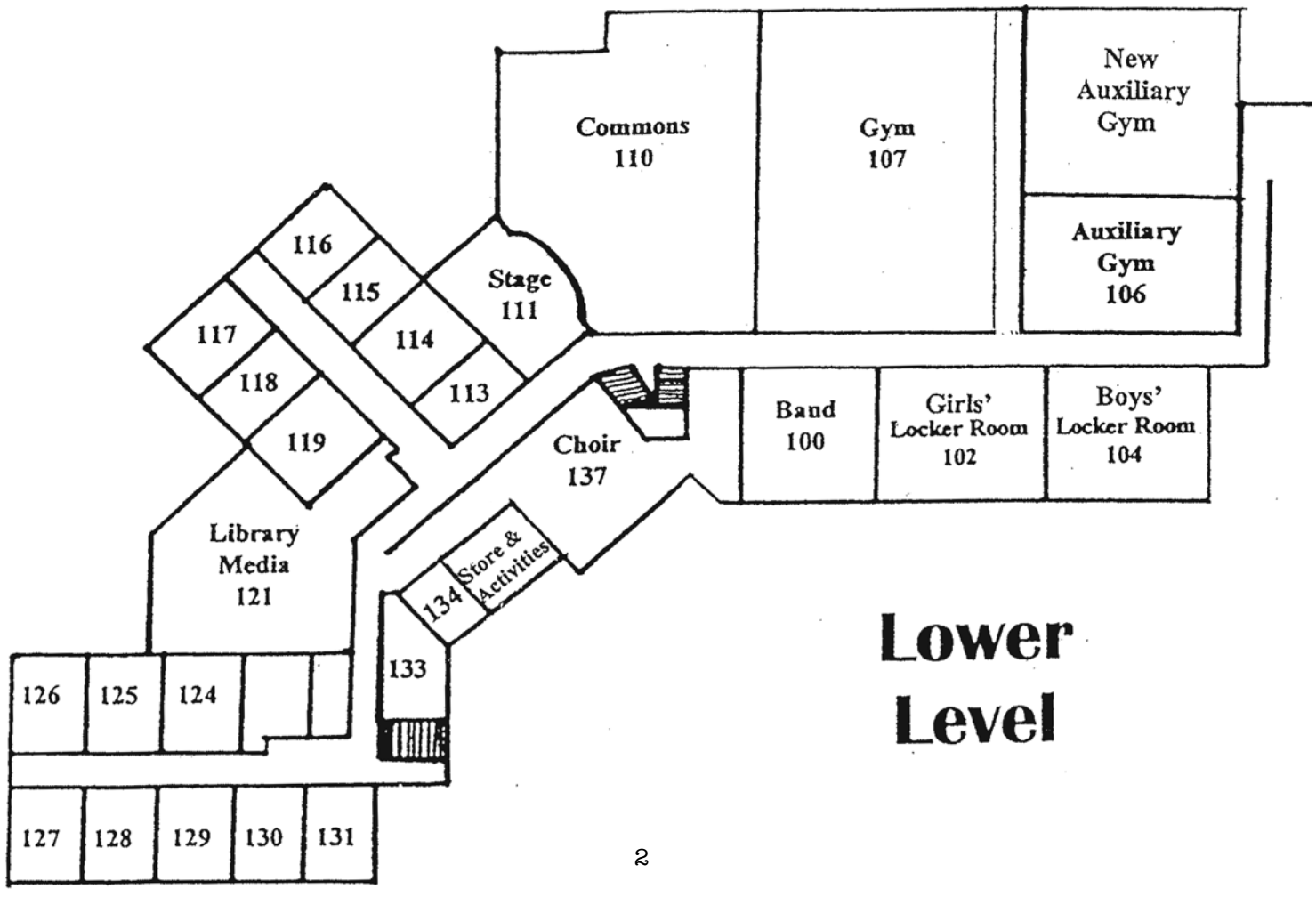

Oregon Science Teachers Association

OSTA President's Message

Lynda Sanders, President

Welcome to OSTA's annual conference. We hope you find the sessions engaging and they enable you to bring back some new ideas to your colleagues and students. In the past couple of years we have strived to bring literacy components into our sessions. We hope those additions have helped you with the new common core standards.

Spend time checking out the exhibit hall. Maybe you will make some great connections that you can use in the future.

The Next Generation Science Standards will shortly be out in their second draft form. Stephen Pruitt one of the lead developers will be our keynote. Don't miss this opportunity to find out more about the Framework for K-12 Science Education and how it serves as the underpinnings of the Next Generation Science Standards.

This is an exciting time in science as we look for ways to lead our students into the future. Students need to be able to analyze and explain what they experience and understand how science works to understand nature. We need to be leaders in our profession and collaborate with others to find the best way to do this. Use the opportunities you have at the conference to network with others and use what you've gained in the future.

Have a great conference and we hope to see you in Portland at the NSTA regional conference next year.

Lynda Sanders

Lynda Sanders

OSTA President 2012
National Board Certified Teacher
OSTA Past-President 2010-2011

Oregon Science Teachers Association

Welcome from the 2012 Conference Chair

Mike Rockow, OSTA Conference Chair

I am very happy to welcome all of my fellow teachers to this year's OSTA conference. As this year develops, there will be a lot of challenges and changes. New standards are on the horizon, and OSTA has incorporate sessions that I hope will prepare you for that. Engineering is becoming more prominent in science and math education, and OSTA has responded by including a number of STEM presentations that I hope will help you bring more engineering into the classroom. But most of all, I hope you find things at this conference that will help motivate you, inspire you, teach you or just recharge you. Welcome to Salem-Keizer and Leslie Middle School.
Michael Rockow

Conference Chair 2012
OSTA Past-President 2011-2012

2012 OSTA Officers

President	Lynda Sanders	sandsciosta@charter.net
President-Elect	Lori Lancaster	lori_lancaster@centennial.k12.or.us
Past-president	Mike Rockow	rockow42@q.com
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Professional Development.	Sue McWilliams	smcw@bendcable.com
Awards Chair	Cora Clark	clark_cora@salkeiz.kl2.or.us

2012 OSTA Regional Directors

Regional Directors - Region 1

Sherri Leeper ..... sleeper@scappoose.k12.or.us
Maureen Daschel ..... maureen.daschel@stmaryspdx.org

Regional Directors - Region 2

Nicole Duncan ..... nduncan@nsantiam.k12.or.us
Cora Clark ..... clark_cora@salkeiz.k12.or.us

Regional Directors - Region 3

Scott Stockert ..... scottst@coos-bay.k12.or.us

Regional Directors - Region 4

Holly Bensel ..... hbensel@smschool.us

(Position Vacant)

Regional Directors - Region 5

Lela Thieme ..... no email
Chris Schulze ..... cschulze@pendleton.k12.or.us

Regional Directors - Region 6

Sue McWilliams ..... smcw@bendcable.com

(Position Vacant)

Regional Directors - Region 7

Leslie Graham ..... Leslie.Graham@lagrande.k12.or.us

Web address : www.oregonscience.org

President's Dinner and Reception

October 12, 2012
4:30 – 7:00
Mission Mill Heritage Center
1313 Mill Street SE
Salem, Oregon

Please join us for a banquet honoring OSTA past-presidents and current OSTA award winners.

Tickets may be ordered at the same time you register for the conference or separately. Cost is $25 per person.

A No-host bar will be available.

Directions from Leslie Middle School:

Drive north on Pringle to Ewald Street. Turn left on Ewald and then turn right onto 12th street. Follow 12th street (which turns into 13th street) north past the Mission Street intersection, following signs to the State Offices. Turn right onto State Street and then turn right onto 14th Street. Mission Mill will be on the right.

Announcements

Door Prize Drawing!

The name badge you were given at registration this morning is your entry into our famous door prize drawing. Be sure to place your name badge tag into the door prize drawing box before 3:00 p.m. Please then join us in the Exhibit Hall at 3:00 p.m. to see if you have won. Our exhibitors and sponsors have donated wonderful prizes that you won't want to miss. ***YOU MUST BE PRESENT TO WIN!***

Please Return Your Badge Holder

Please deposit your clear plastic badge holder in the marked box at the front door in the Exhibit Hall when you leave. Keep your name card, however – it is your ticket for the door prize drawing at 3:00 p.m. sharp! Go Green and help OSTA by recycling your badge holder to be reused for years to come!

Conference Keynote

Please join us at 10:45 in Leslie Commons (lower level room 110) to learn about Next Generation Science Standards. Dr. Stephen Pruitt, Vice President for Content, Research and Development joined Achieve, Inc. as the Director of Science in July of 2010.

Achieve, Inc., is based Washington, DC. It is a leading voice for the college- and career-ready agenda, and has helped transform the concept of "college and career readiness for all students" from a radical proposal into a national agenda.

Achieve, Inc. is a bipartisan, non-profit organization that helps states raise academic standards, improve assessments, and strengthen accountability to prepare all young people for postsecondary education, work, and citizenship.

Keynote Speaker

Stephen Pruitt

Achieve, Inc.
Vice-President, Content, Research, and Development

Stephen Pruitt was named Vice President for Content, Research and Development in November of 2010. He joined Achieve as the Director of Science in July of 2010. In addition to his new role, he will continue to lead the development of the Next Generation Science Standards. Stephen began his career as a high school Chemistry teacher in Georgia, where he taught for 12 years.

In 2003, he joined the Georgia Department of Education (GaDOE) as the Program Manager for Science. He served in that role for four years before becoming Director of Academic Standards, where he oversaw the continued implementation of the Georgia Performance Standards in all content areas. In 2008 he became the Associate Superintendent of Assessment and Accountability, responsible for directing all state assessments and overseeing the No Child Left Behind accountability process.

In April 2009, Stephen became Chief of Staff to State School Superintendent Kathy Cox, coordinating the work of the agency and a variety of projects such as Georgia's third-ranked Race to the Top application. In addition to his state-level work, Stephen also served as President of the Council of State Science Supervisors and a member of the writing team for the College Board's Standards for College Success Science Standards.

Most recently, he served on the National Academies of Science's Committee on Conceptual Framework for New Science Education Standards, which is developing the framework for the Next Generation Science Education Standards.

A native Georgian, Stephen earned a bachelor's degree in chemistry from North Georgia College and State University, a master's in science education from the University of West Georgia, and a doctorate of philosophy in chemistry education from Auburn University.

Presidential Awards for Excellence in Science Teaching

Seven to 12 science teachers are eligible to be nominated for the 2012 Presidential Awards for Excellence in Science Teaching. Teachers must be nominated and the nomination forms must be received at the ODE by April 1st of each year. The following information is included on the nomination form which is available on the PAEMST website (http://www.paemst.org/applicationselection.cfm):

About the Awards

The Presidential Awards for Mathematics and Science Teaching were established in 1983 by an Act of Congress and are administered for the White House by the National Science Foundation. Each year the program recognizes outstanding mathematics and science teachers from across the United States and four U.S. jurisdictions for their contributions in the classroom and to their profession. In addition to honoring individual achievement, the goal of the Awards is to expand and exemplify the definition of excellent science and mathematics teaching. Awardees serve as models for their colleagues, inspirations to their communities, and leaders in the improvement of mathematics and science education.

Mathematics and science teachers from kindergarten through 12th grade are eligible for the award. In even-numbered years, the award is given to elementary teachers (grades K-6); in odd-numbered years, secondary teachers (grades 7-12) are recognized.

Why Apply?

Every year up to 108 recipients of the Presidential Awards receive:

- A citation signed by the President of the United States.
- An opportunity to join a dynamic network of Presidential Awardees.
- A $10,000 award from the National Science Foundation.
- A paid trip for two to Washington, DC, to attend a week-long series of recognition events and professional development opportunities.
- Gifts from sponsors of the program from around the country.

Who is Eligible?

Teachers must satisfy the following criteria to be eligible:

- They must be teachers in one of the 50 states or four jurisdictions.*
- They must be full-time employees of their school districts.
- They must have at least five (5) years of mathematics and/or science teaching experience prior to application.
- They must be assigned to teach mathematics and/or science during the current year at a public or private school.
- Elementary (K-6) teachers must be assigned, at least half time during the year, to classroom teaching of mathematics or science; or be grade K-6 teachers in self-contained classrooms.

Teachers compete in either the mathematics or the science category. Individuals who have received the Presidential Award in prior competitions in either category are not eligible.

Mary Koike 2012 Presidential Award for Mathematics and Science Teaching

The Presidential Awards for Excellence in Mathematics and Science Teaching is the pinnacle of achievement in instructional methods and activities to engage students in a scientifically demanding and changing world. It represents recognition by the President and teaching colleagues that the investment of time and effort one makes to perfect pedagogy is relevant and essential to our society. The Presidential Award demonstrates the priority of science to our Nation and its future generations.

Mary Koike has spent the last 12 years teaching at Isaac Newton Magnet School, where she teaches general science and Algebra I. Additionally, she teaches an International Baccalaureate Biology class at Newport High School.

Conveying a passion for science, Mary developed a school-wide Science Fair program in which scientists from Oregon State University's Hatfield Marine Science Center advised students on their research projects. The program culminated in a dynamic science fair during which all students presented their projects to parents, mentors, and community members.

Awardee Mary Koike, holding Presidential certificate, stands between U.S. Secretary of Education Arne Duncan and Deputy Director of the National Science Foundation, Cora Marrett.

Mary participates in the Oregon Coast Aquatic Marine Science Partnership in which teachers work with scientists to increase aquatic, ocean, and climate literacy. In this capacity, she presented a breakout session, titled "Partnering Teachers, Scientists, and Informal Science Educators to Improve Teaching and Learning," at the National Science Teachers Association conference in 2011.

Mary has a B.S. in agricultural and resource economics, a B.S. in science education from Oregon State University, and a Master of Curriculum and Instruction from Portland State University. She is certified in secondary sciences with endorsements in biology, health, and middle school mathematics.

2012 OSTA Science Education Awards

One of the most important functions of the Oregon Science Teacher Association is to recognize outstanding science educators across the state. Each year the OSTA Executive Board selects several individuals for statewide and regional awards, selected by committee from individuals nominated by members of OSTA. The awards are given in four categories. They are:

The Fred Fox Distinguished Service to Science Education Award.
This award is named in honor of Fred Fox, a distinguished and well-loved teacher educator now retired from Oregon State University. The award is intended to honor those individuals who have made outstanding contributions to mentoring and developing new teachers. It is intended for nominees involved in teacher training programs at the college level, ESD or district administrators or other administrative positions. The awardee will be selected based on career longevity, breadth of influence, enthusiasm for science and the profession of science education, and the demonstrated ability to motivate.
Award winner for 2012: Sue McWilliams

The Duane Marshall Special Service to Science Education Award.
Duane Marshall was an outstanding career teacher from Newberg High School, active in OSTA, and an important contributor to science education in Oregon. This award in his name is intended to honor those individuals who, as classroom teachers, have made significant contributions to science teaching in their own classrooms and beyond. The awardee will be selected based on career longevity and body of work, statewide and regional influence, enthusiasm for science, and the ability to motivate students and colleagues alike.
Award winner for 2012: Liliana Esheverria

The Thor Sabo Special Service to the Oregon Science Teachers Association Award.
This award is named in honor of Thor Sabo, a teacher at Hillsboro High School for many years who also served OSTA as President, Executive Director, and who was responsible for helping organize many annual conferences. This award will be given to an individual who has made significant and long-term contributions of time and effort to supporting the mission of OSTA and to facilitate excellence and continuous improvement in science education.
Award winner for 2012: Paul Zastrow

Sunrise Scholarship!

OSTA is proud to share a new opportunity directed at early career teachers of science. Teachers with fewer than 5 years of classroom experience are invited to apply for a scholarship that will cover registration for attendance at the fall OSTA conference. The following year, recipients again will attend with registration paid, but will be expected to participate in that conference by volunteering and/or presenting. Recipients also will be encouraged to attend OSTA Board meetings to learn more about the organization.

To be considered, applicants need to send a letter explaining their interest in science education and OSTA,

and one letter of recommendation from a principal, fellow teacher, or parent. Send this information to:

OSTA-Sunrise Scholarship
PO Box 80456
Portland, OR 97280

Applications must be received by May 30; Recipients will be notified by June 15. Please contact Cora Clark at Clark_Cora@salkeiz.k12.or.us if you have questions.

This scholarship is made possible by a generous donation by Lynn and Trudi Mitchell, long-time supporters of OSTA and science education.

Award winners for 2012: **Laurel Black, Stayton High School**
Teresa Sebert, St. Pius K-8 school

OSTA Regional and State Teacher Awards

These awards are meant to recognize and honor the work of outstanding classroom teachers. We award four of these awards in each region in the categories of Early Career (1-3 years of classroom experience), Elementary, Middle, and High School. From the regional awardees, the selection committee will select one in each category to be honored with state-level awards. Awardees will be selected based on their ability to motivate student achievement and excitement in science, community and administrative support, ability to support and mentor new and pre-service teachers, and overall contributions to the profession.

Award Winners for 2012

Early career outstanding classroom science teacher:
Nicole Pryor, Peterson Elementary

Region 1 Outstanding classroom science teacher
Elementary: **Carla Oesterle, Vestal K-8 school**
Middle school: **Joanne Fluvog, Lane Middle School**
High School: **Piroska Balogh, Centennial High School**

Region 2 Outstanding classroom science teacher
Elelmentary: **Cathy Griswold, Mari-Linn School**
Middle School: **Mark Madland, Leslie Middle School**
High School: **Tyson Gilmour, Stayton High School**

Region 3 Outstanding classroom science teacher
Elementary: **Helen Farr, Millicoma Intermediate school**
High School: **Norm Devereux, Coquille High School**

These awards are only as important and meaningful as the members of OSTA make them. Look around you; look at the colleagues in your school, district, and region. Which ones are the hardest working, the most passionate, and the most skilled at exciting students about science and the process of scientific discovery? Which ones contribute most to the profession of science teaching? These are the individuals you should be nominating. The process is simple but can be enormously meaningful. Fill out the nomination form online at www.oregonscience.org, attach a short (100 words or less) description of the nominees unique characteristics and/or accomplishments, and send the nomination to OSTA Awards Chair Cora Clark, North Salem High School, 765 14th St. NE, Salem, OR 97301. Clark_Cora@salkeiz.k12.or.us Nominations are open until April 30.

Personal Schedule 2012 OSTA Conference

TIME	EVENT	LOCATION	INSTRUCTOR'S INITIALS
7:45	Registration Opens		
7:00-8:30	Breakfast		
8:00	Exhibit Hall Opens		
8:35	Session 1		
9:25	Break		
9:40	Session 2		
10:30	Break		
10:45	SESSION 3: KEYNOTE	Leslie Commons	
11:35	Lunch Prep		
12 Noon	Lunch		
12:45	Break		
1:00	Session 4		
1:50	Break		
2:05	Session 5		
2:55	Break		
3:00	Door Prize Drawing		
4:00-7:00	President's Dinner Reception	Dye Room at Mission Mill Heritage Center	
7:00	Have a safe trip home!		

TIME	FIRST CHOICE	SECOND CHOICE
8:45		
9:45		
10:45		
1:00		
2:00		
3:00		

Use this page to plan out your day's schedule. If your administrator requires detail about the content of this professional development activity other than the PDU certificate contained in this book, have each presenter initial your schedule to show that you attended their session.

2012 OSTA Conference Sessions

1. Learning Science from Mr. Fluffy Mittens

Middle School (6-8) General Science; 1 session

In order to provide authentic writing opportunities for my Middle School students, I have them write children's books and read them to Elementary School students. I will show many samples of student work on a variety of topics, as well as share the various requirements, timelines, materials and modifications that I use.

Michael Rockow (rockow42@q.com) **Room 223 Session 1**

2. Rest Home Science

General (all levels) life choices; 1 session

Keeping your life busy in retirement via mind exercises keeps one much healthier - this session enables you another option for staying mind active

Paul Zastrow (pzastrow@gorge.net) **Room 131 Session 5**

3. Climate Change & Children's Books

Elementary (K-8) Environmental Science; 1 session

This session will highlight a recent NASA funded project at WOU to review and evaluate over 100 children's books on Climate Change. Sample books will be provided and lesson plan suggestions included. Preview a new website available for all teachers to access.

Susan McWilliams (smcw@bendcable.com) **Room 225 Session 5**

4. Questions are the Key: Taking Inquiry into the Field

Elementary (K-5) Earth Science, Environmental Science, Life Science, Literacy; 1 session

This session will provide strategies for developing and organizing scientific understanding and thinking through field investigations. Find out how to foster outdoor observation skills and guide students to develop, research and answer their own questions. Try it out for yoursefl at this active outdoor session.

Susan McWilliams (smcw@bendcable.com) **Room 127 Session 1**

5. Bridging the Gap: Inspiring the Next Generation of Engineers

Elementary (K-5), Middle School (6-8), High School (9-12) Engineering; 4 sessions

The Portland State University Section of the Society of Women Engineers (SWE PSU) is out to show kids that engineering is more than just math and science—it's creativity, innovation, and fun. With an educational and engaging presentation and captivating hands-on activities, SWE PSU is visiting classrooms and giving students the opportunity to explore one of the fastest growing fields in our world.

Society of Women Engineers—Portland State University Section (castelow@pdx.edu)

Room 117 Session 1, 2, 4, 5

7. Using Science as a Tool in Reading and Writing Instruction

Elementary (K-5), Middle School (6-8) Earth Science, General Science, Life Science, Physical Science/Physics; 1 session

Appropriate excerpts from several materials will be used to demonstrate how to simultaneously teach science and literacy to elementary and middle-schoolers. True differentiation and individualization lessons will be demonstrated.

Linda Linnen (lslinnen@aol.com) **Room 216 Session 2**

8. Are You Burned Out?

General (all levels) Classroom Management; 1 session

Are students running your classroom? Learn strategies that will give you back time to teach without having to deal with those distracting low-level discipline problems. Turn non-productive class time into additional instructional minutes using powerful behavior. Reignite your spark for teaching so you have a productive, happy, and healthy classroom.

Diane Dabney (ddabney@dabspark.com) **Room 224 Session 5**

9. STEM Benefits using FIRST Robotics

Middle School (6-8), High School (9-12) Physical Science/Physics, Technology, Engineering; 1 session

Using FIRST Robotics can be used by any school group(s). Come and listen to how we gave it a go. A great way to gain STEM benefits and have fun for adults and students.

Michael Holst, NASA Project Endeavor, FIRST Robotics (michaelarthur4@comcast.net)

Room 114 Session 4

10. Transgenetic Fly Lab

High School (9-12), College Life Science

Bring your own laptop with Shockwave installed. Welcome to the Virtual Transgenic Fly Lab. The lab will familiarize you with the science and techniques used to make transgenic flies. Transgenic organisms, which contain DNA that is inserted experimentally, are used to study many biological processes. In this lab, you will create a transgenic fly to study circadian rhythms. The fly glows only when a certain gene involved in circadian rhythms is activated. After making the glowing fly, you will use it to explore basic principles of circadian biology and genetics.

Michael Holst, Howard Hughes Medical Institute (michaelarthur4@comcast.net)

Room 116 Session 1

12. The Archive of Teaching Resources: A Digital Library of Free, Peer-Reviewed Life Science Materials

Elementary (K-5), Middle School (6-8), High School (9-12), College, General (all levels) Life Science; 4 sessions

This session will introduce you to the Archive of Teaching Resources, a collaborative digital library of life sciences led by the American Physiological Society (APS) and joined by partners such as the Northwest Association of Biomedical Research (NWABR). You will learn how to search within this digital library and how to use the available tools to save and share your searches. You will also learn how the Archive of Teaching Resources connects to other digital libraries including BioSciEdNet (BEN) and the National Science Digital Library (NSDL).

Miranda Byse (mbyse@the-aps.org) **Room 217 Sessions 1, 2, 4, 5**

13. 4-H Elementary Science: Experience the possibilities for school and field!

Elementary (K-5) Earth Science, Environmental Science, General Science, Life Science, 4-H Center Salem Field Trips 4 sessions; Two double sessions

The 4-H Program has a wide range of education materials schools can use at low or no cost. Come see samples and hands on activities that will support your science and inquiry teaching. Salem/Keizer 4th & 5th teachers can reserve our new School to Field Program, including an in-school kit.

V. Bourdeau, P. Willis, L. Black. J. Nagele (mombear@proaxis.com)

Room 213 Session 1 & 2, 4 & 5

14. Bike Wheels to Steering Wheels: Connecting the Dots Between Newton's Laws of Motion and Traffic Safety

Middle School (6-8) Earth Science, Engineering; 1 session

Discover how the Bike Wheels to Steering Wheels (B-2-S) curriculum illustrates for students the connection between Newton's laws of motion and traffic safety through projects based on the newest ODE science standards and expanded to include engineering projects. Includes: a modified “Trauma Nurses Talk Tough” presentation, product demonstration, handouts, question/answer opportunity. Additionally there are 10 B-2-S Curriculum Science Kits expanded to include engineering projects to give-away to Teachers OUTSIDE PPS and Beaverton School Districts! Be sure to attend the **workshop** to qualify for kit drawing!

Cathy Bowles (cbowles@lhs.org) **Room 115 Session 5**

15. Note-Taking and Report Writing Without Plagiarism - Yes, It Can Be Done!

Middle School (6-8) Literacy; 1 session

None Are your students' reports plagued by plagiarism? Discover how to teach note-taking and writing so they will be able to take information from multiple sources and create organized, original documents. Learn quick and easy ways to assess writing and provide concrete, constructive feedback.

Amanda Gronich (amanda1844@gmail.com) **Room 224 Session 1**

16. Elementary Hands-on Science 101

Elementary (K-5) General Science All Day, continuous

Adding engaging science activities to your classroom made FUN and EASY. Mad Science will share their expertise for presenting hands-on science to grade school students in a way that will leave them wanting more. Mad Science’s animated approach to presenting science to youth ensures that not only the students have fun while learning, so will you.

Sue Theissen (sue@madscienceportland.com) **Room 231 Continuous (all day)**

17. Teaching About Our Human-made World

Middle School (6-8), High School (9-12) Environmental Science; 1 session

None Take part in hands-on activities that explore how our species's population has expanded to dominate the Earth and remake the natural world in unprecedented ways. Engage in interdisciplinary games, role-playing and creative problem-solving. Free CD-ROM of activities.

Jon Yoder (yoder_jon@salkeiz.k12.or.us) **Room 126 Session 5**

18. National Board Certification: What's New?

Middle School (6-8), High School (9-12) Earth Science, Environmental Science, General Science, Life Science, Physical Science/Physics; 1 session

If you are considering seeking National Board for Professional Teaching Standards certification in science, there are changes coming! While the ink is not quite dry, there are resources available to help you start the process or just improve your teaching. NBPTS certification is considered one of the best professional development activities available--come see why!

Jodie Harnden (jodie.harnden@pendleton.k12.or.us) **Room 227 Session 4**

20. Teaching Science using Engineering Design: A Session on the What, Why and How of the Engineering Design in Oregon's Science Standards.

Elementary (K-5), Middle School (6-8), High School (9-12) Earth Science, Life Science, Physical Science/Physics, Engineering 2 sessions; One double session

This two-hour session will provide K-12 teachers with a review of Engineering Design (EngD) in the context of the 2009 Oregon Science Standards and the upcoming Next Generation Science Standards. We will provide samples from a soon-to-be-announced three-day workshop on EngD, including at least one hands-on activity. To conclude, presenters will support participants in considering how they would adapt existing EngD activities or developing their own. This session will consider how EngD can be used to teach science at any grade level including discussions of both the grade-level standards and crafting grade-level appropriate activities.

Stephen Scannell (Gresham Barlow SD) (sgscannell@gmail.com), Meagan Sternberg (North Clackamas SD) and Bruce Schafer (Oregon University System). **Room 115 Sessions 1 and 2**

22. Oregon Forests: A Place to Engage Students in Service-Learning

Elementary (K-5), Middle School (6-8), High School (9-12) Earth Science, Environmental Science, General Science, Life Science, Literacy; 1 session

None Are you looking for ways to energize your curriculum? Are you interested in Service-Learning as a teaching and learning strategy? Do you aspire to make more connections between your classroom and the field? SOLVE and the Oregon Forest Resources Institute have teamed up to provide an overview of environmental service-learning, ideas for and examples of partnerships with local community resources, and examples of service-learning instructional strategies.

Quintin Bauer (quintin@solv.org) **Room 118 Session 4**

23. Using NAEP as a Model for Science Literacy Activities

Elementary (K-5), Middle School (6-8) General Science, Literacy; 1 session

None The National Assessment of Educational Progress has released high quality science reading passages along with items that test literacy skills such as locate/recall, integrate/interpret, and critique/evaluate. This session will introduce participants to the free online NAEP Questions Tool and demonstrate how to locate science reading passages and traditional science items.

Beth LaDuca (beth.laduca@state.or.us) **Room 226 Session 1**

24. Using NAEP as a Model for Scoring Science Items

Elementary (K-5), Middle School (6-8) General Science, Literacy; 1 session

The National Assessment of Educational Progress has developed detailed materials for scoring constructed response items using rubrics and real student work as exemplars. This session will take participants through a mock scoring session using real NAEP rubrics and anchor sets of student work as a model professional development activity.

Beth LaDuca (beth.laduca@state.or.us) **Room 226 Session 5**

25. OSTA & the Pre-service Teacher: What's in it for me?

General (all levels), Pre-Service Teachers New Teachers; 1 session.

Come have a cup of coffee or tea and a pastry on us! Come learn how OSTA and its membership of veteran teachers can help you as you navigate your way towards your first teaching job. Talk to OSTA veteran teachers about what it's really like in the classroom. Learn about the nuts and bolts of the science teaching profession that nobody tells you about, but wish they had. This is a valuable face-to-face networking opportunity where you can talk to classroom teachers who are just starting their careers, and veterans who have been around the block a few times and are ready to help you.

Lori Lancaster and Moe Daschel (lancaster.ld@gmail.com) **Room 115 Session 4**

26. Imagine Tomorrow—a problem-solving competition bringing classroom lessons to life

High School (9-12) Environmental Science, Technology, Engineering; all subjects can compete in Imagine Tomorrow; 1 session

Motivate students like never before! Educators throughout the Pacific Northwest bring classroom lessons to life through the Imagine Tomorrow competition. "I am in my 30th year of teaching and have not seen anything that motivates, challenges, and encourages students academically like Imagine Tomorrow" said one educator whose school participated in 2012. The competition challenges 9th to 12th graders to seek solutions to the worlds energy issues. It presents opportunities in all subjects—not just the sciences. And it's free! Imagine Tomorrow organizer Tena Old discusses how your students can compete for $100,000+ in cash prizes and, at the same time, learn the power of their own ideas.

Tena Old (skeen@wsu.edu) **Room 215 Session 1**

27. Engaging students with streams and native gardening

Middle School (6-8) Earth Science, Environmental Science, General Science, Life Science; 1 session

As Oregon's state winner of the 2012 Disney Planet Challenge, I will share with you the process used to decide, research, design, and implement a real life project focusing on a current, local concern. Then, we will explore our project specifically, "One Stream at a Time." You will learn about stream system education, how to find and involve community members in your classroom, and how to create a native plant garden in your area.

Micki Halsey Randall (mickirandall@blanchetcatholicschool.com) **Room 224 Session 4**

28. Connecting Classrooms to the Community

Elementary (K-5), Middle School (6-8), High School (9-12) Environmental Science, Life Science; 2 sessions

This session will explain a process whereby teachers can contextualize student knowledge and skills. Specific examples and curriculum materials of this community-based approach will be presented. Free materials!

Jon Yoder (yoder_jon@salkeiz.k12.or.us) **Room 126 Sessions 1, 4**

29. Note-Taking and Writing Reports Without Plagiarism - Yes, it is Possible!

Middle School (6-8) Literacy; 1 session

Discover how students can research, take notes and write reports—all without plagiarizing. Let two experienced middle school teachers who have taught across the curriculum show you how it can be done.

Robbie Vala-Haynes and Amanda Gronich (contact@roadtowriting.com) **Room 116 Session 5**

30. Exploring the myth of "the" scientific method

Middle School (6-8), High School (9-12) General Science; 1 session

Is "the" scientific method how science really works? This session will examine the history of the scientific method, how it holds up to the scrutiny of past and current science, and alternative models to use in the classroom.

Ron Gray (ron.gray@science.oregonstate.edu) **Room 216 Session 1**

31. Using model-based inquiry in the classroom

Middle School (6-8), High School (9-12) Earth Science, General Science; 1 session

We will describe model-based inquiry and provide an example plate tectonics unit designed and implemented in a middle school earth science classroom. The unit was based on research in the Pacific Northwest and engaged students in the construction, revision, and testing of a scientific model of the Cascadia subduction zone.

Michael Krasilovsky and Ron Gray (ron.gray@science.oregonstate.edu) **Room 215 Session 5**

32. Teaching about Energy in your Classroom...Welcome to the World of the PowerWheel

General (all levels) Environmental Science, General Science, Technology, Energy; 2 sessions

Come get some great ideas on how to effectively teach about energy in your classroom...we will present the basics of energy, give you examples of inquiry and questioning strategies, provide ideas for lesson plans, and show you a great tool called the PowerWheel! A hands on, interactive **workshop**.

Roy Bentley of R-B Mfg (powerwheel@comcast.net) **Room 218 Sessions 1, 5**

33. G.L.A.D. Strategies for Integration of Science and Literacy

Elementary (K-5), Middle School (6-8) General Science, Life Science, Engineering, Literacy; 2 sessions

Guided Language Acquisition Design (G.L.A.D.) is a federally recognized program of excellence that integrates high level content with English language development and literacy. G.L.A.D. strategies are applicable to your T.A.G. students with ample scaffolding built in to make learning targets accessible for all students. Nationally certified G.L.A.D. trainers will provide an introduction to the G.L.A.D. model and a sampling of high leverage strategies to use with students.

Melissa Timm and Laura Mannen (blake-melissa@frontier.com) **Room 214 Sessions 2, 5**

34. Sky Basics

Elementary (K-5), Middle School (6-8) Astrophysics; Continuous (all day)

Visit my display table for quick training and lesson plans about Sun-Earth-Moon and other basic Astrophysics topics including Black Holes, Search for Exoplanets, and How Big is Space. Pick up lesson plan writeups and also some reading samples.

Rick Kang (epoguy@gmail.com) **Exhibit Hall Continuous (all day)**

35. Fostering Ecological Inquiry

Elementary (K-5), Middle School (6-8), High School (9-12) Earth Science, Environmental Science, Life Science; 1 session

Foster students' curiosity about the world around them and facilitate the development of meaningful investigations. Engage in hands-on activities for helping students develop field investigation skills. Grant opportunities to purchase equipment through the Diack Ecology Education Program will be discussed.

Jim Martin, Rebecca Martin, and
Norie Dimeo-Ediger (martinefork@hotmail.com) **Room 224 Session 2**

36. Soda Containers—What Are the Issues?

Middle School (6-8) Environmental Science, Physical Science/Physics; 1 session

Explore how using personal/societal issues create opportunities to incorporate engineering practices, core ideas of science, and literacy strategies. In this SEPUP Issues and Physical Science real life problem/issue scenario activity from LAB-AIDS, students evaluate soft drink container materials to determine the best material for a soft drink container, analyze the tradeoffs of the decision, and justify their choice with evidence. This activity reflects how SEPUP embeds literacy strategies, like using Material Cards for product information and drawing product life cycle diagrams. Participants receive module materials after the **workshop**!

Roger Groom (rgroom@pps.net) **Room 124 Session 4**

37. The Magic of Batteries - How Do They Work?

Middle School (6-8) General Science, Physical Science/Physics, Engineering; 1 session

Although we live a battery-powered lifestyle, most of us have no idea how batteries actually work. Here, participants engage in a SEPUP Issues and Physical Science activity from LAB-AIDS building a wet cell battery, exploring the effect of using different metal electrodes on battery output, and using a host of science inquiry and literacy components to explore the magic of batteries. Participants will walk away with a bag of goodies to perform the experiment later!

Roger Groom (rgroom@pps.net) **Room 215 Session 2**

38. Catching the Wind: Using video analysis to measure wind displacement, velocity and acceleration.

High School (9-12) Environmental Science, Physical Science/Physics; 1 session

The session will demonstrate the use of fog machines, video cameras and Vernier Video Analysis software in developing displacement, velocity, and acceleration concepts, as well as graphical analysis skills. The application of these

skills in student investigations of wind motion will be presented.
John McGinity (jmcginity@sherwood.k12.or.us) **Room 116 Session 2**

39. Teachers on the Leading Edge Earth Science Education Resources

Middle School (6-8), High School (9-12) Earth Science, General Science, Physical Science/Physics, Technology; 2 sessions

Teachers on the Leading Edge has developed inquiry-based lesson plans featuring: (1) Pacific Northwest plate tectonics and earthquakes; (2) earthquake seismology and tsunami science; and (3) how EarthScope science is advancing knowledge of active continental margin geology. This session will combine regional Earth science content with pedagogical approaches described by middle school teachers of Earth science. Attendees will receive teaching resources including computer animations of plate tectonic, earthquake, and volcanic processes and virtual field experiences featuring Cascadia tsunami geology and Pacific Northwest geologic hazards.
Bob Butler, Bonnie Magura and Roger Groom (magura@comcast.net) **Room 124 Session 5**

40. Classifying Space Objects- SEPUP

Middle School (6-8) Earth Science

Many kinds of objects in the sky can be observed with the naked eye and with telescopes. Come experience SEPUP curriculum and investigate objects in space, mostly those found in our own Solar System. SEPUP (The Science Education for Public Understanding Program) creates innovative science curriculum for use in 6-12 education. Issue-oriented science forms the core of SEPUP's curriculum materials. Every unit uses personal and societal issues to provide thematic continuity for student investigations and observations.
Carla Oesterle (coesterl@pps.net) **Room 218 Session 4**

43. Grounding Science Education in Place

Elementary (K-5), Middle School (6-8), High School (9-12) Environmental Science, Life Science;1 session

Place-based educators are finding ways to make science education engaging and meaningful by involving students in projects grounded in their own communities. After viewing film clips of two schools that demonstrate this approach, time will be devoted to brainstorming ways similar units might be developed in participants' schools.
Gregory Smith (gasmith@lclark.edu) **Room 131 Session 4**

44. No Engineers Left Inside!

General (all levels) Life Science, Technology, Engineering; 1 session

Come learn about BIOMIMICRY, a new science that studies nature's models and then uses these designs and processes to solve human problems. Explore new ways to engage students in inquiry and engineering design outdoors! Get information about the Biomimicry Youth Challenge (BYC), an annual contest for students of primary and secondary school age, a great STEM integration program.
Susan McWilliams (smcw@bendcable.com) **Room 116 Session 4**

45. I am Rover, stories from Mars and Beyond

Elementary (K-5), Middle School (6-8) General Science, Literacy; 4 sessions

"Join JPL Solar System Educator Don Brown for some imaginative writing ideas that are based on JPL's new Curiosity Rover and Cassini's Equinox Mission. Offered will be lesson ideas that integrate 6+1 trait writing, JPL resources, and a tour of the current Web presence for JPL Missions.
Don W. Brown, D.Ed. (drsgtbrown@gmail.com) **Room 125 continuous**

46. K-8 Science with Vernier

Elementary (K-5), Middle School (6-8) General Science; 1 session

Learn how easy it is to measure temperature, gas pressure, magnetic field, and more. Try experiments from our popular Elementary Science with Vernier and Middle School Science with Vernier lab books using sensors on our LabQuest 2, or on a computer using LabQuest Mini or our low-cost line of Go! products.
Mike Collins (mcollins@vernier.com) **Room 119 Session 2**

47. Introducing the Vernier LabQuest 2!

General (all levels) General Science; one double session

In this hands-on workshop, we will conduct experiments using various sensors as we explore the features of our new LabQuest 2. The LabQuest 2 is our most versatile interface ever and it supports data collection as a standalone device,

with a computer, and now with iPad® and other mobile technology.
Mike Collins (mcollins@vernier.com) **Room 119 Sessions 4 and 5**

48. Observe It! Discuss It! Read It! Write It!

Elementary (K-5) General Science, Literacy; 2 sessions

With limited time in elementary classrooms, it is imperative to efficiently integrate science and literacy. In this session, you will experience an instructional model that intentionally uses Common Core State Standards for Reading and Writing to enhance student learning of grade-level ODE Science Content Standards.

Desirae Demo, Michal Pitzl, and
Meagan Sternberg (sternbergm@nclack.k12.or.us) **Room 118 Sessions 1, 2**

49. The Nature of Science and Inquiry in your Classroom.

General (all levels) General Science; 1 session

In this session we clarify what is meant by the "nature of science" and relate it to science content and process skills. This presentation introduces a collection of classroom-tested inquiry activities that promote the nature of science and can be applied to all science content areas.

Tyler St Clair and Dr. Randy Bell (tls4s@virginia.edu) **Room 126 Session 2**

50. Literacy Projects - A Cornucopia of Activities from Seeds and Gardening to Apples

Elementary (K-5) General Science, Literacy; 2 sessions

This session will feature three books with interactive, hands-on activities. Your students will learn about interaction and change, scientific inquiry and engineering and design. Cross-curricular activities are designed to reinforce the message learned in each book. Teachers will make germination cups, explore program resources and receive classroom ready materials.

Agriculture in the Classroom Foundation (Tami.Kerr@oregonstate.edu) **Room 214 Sessions 1, 4**

51. Dancing Dixie Cups

Elementary (K-5) Physical Science/Physics, Engineering; 1 session

This engineering design lesson involves transferring knowledge of energy and circuits to build a motorized machine that draws shapes and patterns. A guaranteed hit with any kid.

Ali Berg, Aaron Parker and Bill Bailey (john_bailey@beaverton.k12.or.us) **Room 114 Session 1**

52. Construction Destruction

Middle School (6-8) Earth Science; 1 session

When is the last time you engineered a coastal breakwater? Heres your chance! Participants in this session will engineer a coastal breakwater (from Issues and Earth Science, "Erosion and Deposition" unit from LAB-AIDS) and analyze the trade-offs of the design. We will explore how the natural world is influenced by our engineered world, which in turn creates more societal issues we must solve through science and engineering practices. Activities exemplify "Next Generation Standards" and show how SEPUP embeds the engineering practices and uses real issues to powerfully deliver content learning.

Carla Oesterle (coesterl@pps.net) **Room 218 Session 2**

53. Teaching about Earth's changing landscapes using satellite imagery and Google Earth

Middle School (6-8) Earth Science, Environmental Science, Physical Science/Physics, Technology; 1 session

Learn how to teach about landscape change using Google Earth. This hands-on, inquiry-based session introduces computer-based exercises evaluating 25 years of changes to the forests of Oregon's Willamette Valley and Alaska's Bering Glacier. Exercises were developed during the Oregon State University Researcher-Teacher Partnership: *Making Global Climate Change Relevant In The Classroom*.

Peder Nelson, MS (peder.nelson@oregonstate.edu) **Room 225 Session 4**

55. Partners in science summer research grant for high school teachers.

High School (9-12) Earth Science, Environmental Science, General Science, Life Science, Physical Science/Physics, Engineering 2 sessions

$15,000 M.J.Murdock Partners in science grant for teachers. Followup grant for a highschool science project!

Leonard C."Chuck" Smith (chuckjoy@oregonsbest.com) **Room 223 Session 4, 5**

56. Great Ball of Fire! Rocks from Space

General (all levels) Earth Science; 1 session

Asteroids, Meteorites and Craters of Oregon. See and touch $10,000 worth of meteorites. Find out how to get a visiting exhibit and presentation at your school!

Dick Pugh **Room 114 Session 5**

57. Bringing STEM to K-2 Literacy

Elementary (K-5) General Science, Engineering, Literacy; 1 session

We would like to share the curriculum and outcomes of a course we taught for K-2 teachers. We utilized the NSTA Probes, Picture Perfect Science, More Picture Perfect Science, Science Formative Assessment, Engineering is Elementary, Growing Up Wild and many other resources to support teachers in developing Science/Literacy Units for K-2 students.

Nancy Lapotin and Erika Hansen (nlapotin@pps.net) **Room 225 Session 1**

59. Force and Motion- The Pendulum

Middle School (6-8) Physical Science/Physics

M. Jordan (medelia12jordan@gmail.com) **Room 124 Session 2**

60. Business and Education Partnerships thru Online School Enrichment.

General (all levels) Environmental Science; One double session

Learn the process in bringing the classroom and community together by blending online learning with classroom activities. Students learn how to use what they learn to add value to their community,.

Bob Craft (bob@yourclassroom.com) **Room 131 Sessions 1 and 2**

61. BPA Science Bowl

Middle School (6-8), High School (9-12) math, sciences; 1 session

Bonneville Power Administration presents a fun competition as a means for STEM incorporation at Portland State University. Come listen how to enter your students and have fun. A sample competition will be enjoyed by attendees.

Kristy McAdams, BPA and
Michael Holst, Chehalis School District (michaelarthur4@comcast.net) **Room 114 Session 2**

62. The Expert Level: Using the Science Olympiad Program to Support Science Literacy

Middle School (6-8), High School (9-12), College Earth Science, Environmental Science, Life Science, Physical Science/Physics, Engineering, Literacy; 2 sessions

Give your students a reason to reach for the expert level. Science Olympiad offers twenty-three engaging projects for middle school and twenty-three for high school. We'll show you how these support Common Core science literacy standards and how you can use Science Olympiad as a motivating extracurricular or classroom tool.

Jean Cavanaugh, Arianna Downard (statedirector@oregonscienceolympiad.com),
(ashley.dasilva@oregonscienceolympiad.com) **Room 226 Sessions 2, 4**

63. Literacy is Not New! Wm. Strunk, Jr.'s Elements of Style is almost 100 years old!

General (all levels) Literacy; 1 session

Elements of Style was written to simplify the rules of grammar and use and commonly misspelled words. This session will review briefly Elements of Style, and why it should become a part of every student's writing tools. As a part of this session, Parsons, the current publisher, has donated copies of the latest edition of Elements of Style, which will be raffled off.

Martha GK Dibblee (dibblee@hevanet.com) **Room 127 Session 2**

64. Tools and Tips for Implementing Literacy Standards in Science

Middle School (6-8), High School (9-12) General Science; 1 session

Strengthen your teaching of science content by learning specific strategies for incorporating the Common Core State Standards for reading and writing.

Jeff Gunn (OSU - SMED) (gunnjeff@comcast.net) **Room 227 Session 2**

65. Freshman Physics - A Patterns Approach that Will help Students Meet NGSS

High School (9-12) Physical Science/Physics; One double session

Session will present overview of BSD's new freshman physics course. Teachers will learn about key components which are aligned to NGSS and 4 patterns found in nature: Linear, quadratic, inverse, and inverse square. Attendees will experience the major components of the course and will be provided resource links to content.

Bradford Hill and Susan Holveck (susan_holveck@beaverton.k12.or.us) **Room 216 Sessions 4 and 5**

66. Finding Young Stars: Authentic Astronomy Research Experiences for Teachers through NITARP

High School (9-12) Physical Science/Physics, Astronomy; 1 session

Learn about identifying young stellar objects (YSOs or "baby stars") using infrared images from the Spitzer Space Telescope, how you can access Spitzer data from the Spitzer Heritage Archive for class or student research and learn about the NASA/IPAC Teacher Archive Research Program (NITARP) and how you can get involved.

John Gibbs (gibbsj@hsd.k12.or.us) **Room 225 Session 2**

67. Demonstrating Gas Laws through Cloud Formation

Middle School (6-8), High School (9-12) Earth Science, Environmental Science, General Science, Physical Science/Physics, Literacy; 1 session

This session will provide several cost-effective classroom demonstrations relating to cloud formation. We will explore the 'Cloud in a Bottle' demonstration, along with alternative methods of classroom cloud formation. We will consider simple ways of illustrating the gas laws and will provide examples of integrating literacy and differentiated instruction.

Jonathan Hill and Lynda Sanders (jonathanh@coos-bay.k12.or.us) **Room 223 Session 2**

68. Making the Connection - From Classroom to "I Get It!"

General (all levels) Environmental Science, Literacy, Marine Science; 2 sessions

Marine Discovery Tours in Newport offers dynamic hands-on ocean, estuary and river field trips aboard the Discovery, Oregon's floating classroom. With 18 years of student programs—find out how 7,000 students, annually, make the ocean literacy connection. Includes easy teacher fundraising models, coastal resource guide & 2013 Tide Books!

Fran Mathews, Marine Educator (groups@marinediscovery.com) **Room 127 Sessions 4, 5**

69. Exploring The Sun-Earth Connection

General (all levels) Earth Science; 1 session

The events and actions on the Sun are continually influencing conditions on Earth and in our solar system. This program uses free NASA based activities, study units, data, and images to promote student interest and achievement when teaching about space and solar science as well as the influence space weather has on humans.

Laura Orr (Laura.Orr@ukiah.k12.or.us) **Room 227 Session 1**

70. Science and Youth Robotics

Middle School (6-8), High School (9-12) Engineering; 1 session

Youth STEM activities are a powerful trend in education, and students now have access to many highly-publicized programs. One very popular type of STEM activity is building mobile robots and entering them in various competitions. This presentation will compare the scientific method and the use of a laboratory notebook, with the engineering process and the engineering notebook. Much of student robotics is empirical and based on tinkering, and we will explore how to encourage students to think of their engineering problem in scientific terms.

Rick Tyler (rick_tyler@roboticseducation.org) **Room 227 Session 5**

List of Exhibitors

The Exhibit Hall will be one of the favorite highlights of this year's conference. It is open all day, and finishes with the door prize drawings at 3:00 PM. Bring your conference name tag! It bears **SECRETS**

Exhibitors

1. Simply Science

A program updated by an Oregon teacher, Barbara Bannister, to meet all the current state science standards at the grade level suggested in the standards. Activities are fun for students and teachers. Learning builds year after year. Materials in the kit minimize prep time and last for several years. Inservice is available to support the successful implementation of the program.

Barbara Bannister **barbara@simplyscience.com** **503-231-0466**

2. Rice Northwest Museum of Rocks and Minerals

Rice NW Museum of Rocks and Minerals a 9,400 sq ft facility in Hillsboro, Oregon is available for school tours with an emphasis on earth science. Students will see over 20,000 specimens including gold, fossils and petrified wood. Come see minerals from the Pacific NW showcased in our NW Gallery

Melena Wallace, Lara O'Dwyer-Brown

www.ricenorthwestmuseum.org **503-647-2418**

3. Pearson

Pearson provides Pre-K-12 education solutions by connecting personalized, assessment-driven programs, services, school improvement strategies, and technology for improved outcomes in student performance and classroom instruction.

Teresa Kahrs **www.pearson.com** **800-653-1918**

4. Pemco Insurance

PEMCO Insurance has a heritage of being committed to education. School employees have received discounted prices for auto insurance since 1949. PEMCO also sells discounted home insurance.

Terry Smith **www.pemco.com** **206-628-5892**

5. Vernier Software and Technology

Stop by the Vernier Software and Technology booth to see our cutting-edge technology such as LabQuest, LabPro, Go!Link and Logger Pro software. Find the perfect solution for your labs and see how versatile Vernier technology is. Let us show you why we are consistently teachers' top choice for probeware.

Verle Walters **www.vernier.com** **503-277-2299**

6. Carolina Biological Supply Company

Carolina has results driven, research-based K-8 math and science curriculum, including The STC Program, GEMS, and Math Out of the Box, plus new literacy resources.

Pam Chiodo **www. carolina.com**

7. O M S I

The Oregon Museum of Science and Industry (OMSI) is a scientific, educational, and cultural resource center dedicated to improving the public's understanding of science and technology. OMSI strives to make science exciting and relevant through exhibits, programs, and experiences that are entertaining and hands-on. We will bring information about our educational programs, upcoming exhibits, and teacher resources.

Jenn Dawson, Katie Keller **www.omsi.org** **503-797-4000**

8. Opal Creek Ancient Forest Center

Photos, promotional materials and brochures for outdoor education programs in the Opal Creek Ancient Forest

Katie Ryan, Tucker Lee, Gabbi Haber **opalcreek@opalcreek.org** **503-892-2782**

9. Oregon Department of Education

The National Assessment of Educational Progress (NAEP) is the largest nationally representative assessment of what our nation's students know and can do. Learn about the results from the NAEP science assessment, including released test items.

Rachel Aazzerah, Beth LaDuca **www.oregon.gov/ODE/** **503-947-5836**

10. American Chemical Society

The local chapter of the American Chemical Society supports high school chemistry teachers with monthly meetings during the school year. Cutting edge speakers inspire students and teachers with topical research subjects. Chemistry Matters, The Journal of Chemical Education, and other ACS material will be presented.

Martha Dibblee, Rosa Hemphill **http://portland-or.sites.acs.org/** **503-775-3843**

11. Bonneville Power Administration

Bonneville Power Administration's educational offerings:
LAPTOP DISPLAYING VIDEOS
PRINT MATERIALS
HANDS-ON ACTIVITIES

Christy Adams, Michael Holst, Cheri Benson **cfadams@bpa.gov** **503-230-3913**

12. LAB-AIDS

SEPEP Middle School Life, Earth & Physicsl Program—A Natural Approach To Chemistry—Lab-Aids Equipment & Single Concept Kits

Gail Vaughn **www.lab-aids.com** **631-737-1133**

13. Donate Life Northwest

Donate Life Northwest is a non-profit organization dedicated to saving and enhancing lives through education about organ, eye and tissue donation and transplantation. We offer free teaching materials and in class presentations to Oregon teachers, which emphasize the social & personal context of donation science.

Valerie Egan **eganv@ohsu.edu** **503-418-4035**

14. C P O Science

CPO Science provides high-quality, inquiry-based teaching and learning systems for science in grades 6-12. CPO Science offers a wide range of materials and services including innovative science textbook programs that integrate with high-quality lab equipment and nationally recognized professional development programs.

Dan Stone **Dan.stone@schoolspecialty.com**

15. Delta Education

Science manipulatives and kits for grades K-8 including FOSS (Full Option Science System) and DSM (Delta Science Modules) as well as Seeds of Science/ Roots of Reading

Kathy Albrecht, Carolyn Clontz **Kathy.albrecht@schoolspecialty.com**

16. Frey Scientific

Frey Scientific offers a complete line of lab equipment, supplies, and technology products for K-12 science classrooms and labs, including Inquiry Investigation and software from Neo/SCI.

Jim Bryan **Jim.bryan@schoolspecialty.com** **503-249-1770**

17. Mad Science of Portland & Vancouver

Exciting hands-on material with interactive displays.

Sue Theissen **sue@madscienceportland.com** **503-230-8040**

18. California Casualty

Auto and Home Insurance - Discounted and exclusive to OEA members

Brian Goodman, DeeDee Templeton **dtempleton@calcas.com** **360-356-5838**

19. McGraw-Hill Education

McGraw-Hill Education is a leading global provider of educational materials, information and solutions for the Pre-K through 12th grade and Assessment–Instruction markets. Additionally, McGraw-Hill Education has a long-standing reputation for partnering with educators to ensure that students achieve academic gains and that these gains are long-lasting and consistent.

Tracy Shrock, Marie Rennekamp **www.mheonline.com** **614-430-4699**

20. Texas Instruments

Supporting each educator's vision of student success in math and science, TI's versatile education technology, curricular support materials and professional development can help enhance teaching and learning. Visit education.ti.com.

Richard Tunstall **www.education.ti.com** **214-567-5684**

21. Oregon Forest Resources Institute

Materials, resources and information on programs for K-12 teachers and students related to forestry/natural resources education.

Peter Matzka **www.oregonforests.org** **971-673-2956**

22. Our Ocean

Our Ocean will share information about smart ocean planning in Oregon, including an informational display board and paper and-outs for guests to take home.

Laura Schmidt **laura@ouroregonocean.org** **503-422-3246**

23. Hatfield Marine Science Center

Come over and talk. I'll have a 3 panel graphic display and a laptop with a power point presentation of the school-age appropriate activities at the HMSC. Brochures are available.

Bill Hanshumaker **Bill.hanshumaker@oregonstate.edu** **541-867-0167**

24. It's About Time Publishing

IT'S ABOUT TIME's middle school and high school programs are Oregon State Approved Curricula. We develop and publish research-based science programs that feature the use of Scientific Inquiry, Engineering Design and Assessments throughout every unit/chapter. In doing so, students: (1) DESIGN their experiments, simulations and models, (2) EXAMINE their data from observations, (3) PLAN & RETEST experiments, (4) USE evidence to answer Big Question and to solve Project Challenge.

Matt Elisara **melisara@its-about-time.com** **360-623-9594**

25. Bonneville Environmental Foundation

The Solar 4R Schools program strives to support the teaching of the fundamental precepts of science, technology, engineering and math through the application of renewable energy technology , which provides a vehicle for helping students to understand critical and relevant energy concepts.

Craig Collins **www.solar4rschools.or** **503-553-3950**

26. WSU Imagine Tomorrow Organizer

Motivate students like never before! The Imagine Tomorrow competition challenges 9th through 12th graders to seek solutions to global energy issues. Students and their schools vie for $100,00+ in cash prizes-66 cash awards in all-many for the first-time participating schools. The competition connects classroom lessons to the real world. It presents opportunities in all subjects- not just the sciences. And it's FREE! Stop by our booth to find out how your students can compete.

Janet Herrlinger **www.imagine/wsu.edu** **509-335-1467**

27. Diack Ecological Foundation

The Diack Family Oregon Ecology Education Program provides a system of grants, awards, and resources that are distributed to teachers and other youth leaders in Oregon to encourage field based ecology. Emphasis is placed on field study of living things, using scientific-based processes at an easily accessible site. Children will see that their work is important to their community. An on-line application is the first step.

Shaela Williams, Don Jeffery **http://www.diack-ecology.org/default.htm**

28. R E C FOUNDATION

The Robotics Education and Competition Foundation connects students, mentors, and schools to a variety of successful and engaging technology-based programs. Our largest program is the VEX Robotics Competition (VRC), which provides a sustainable, accessible co-curricular STEM activities for middle and high school students. The VRC now serves 4,800+ teams in 22+ countries, including Oregon, Washington, California, Idaho, and nearly every US state.

Rick Tyler **www.roboticseducation.org** **425-457-9154**

29. Educational Travel Services, Inc

Educational Travel Services, Inc is a student group educational tour provider. Materials will be provided regarding science related tour packages for students accompanied by their teachers.

Valerie Hubbard **judi@etsi.com** **503-653-3988**

30. Oregon Astrophysics Outreach (Pine Mtn)

1. Free mini lessons in basic astrophysics. Paper, packets, laptop, 2. Literature/posters about visits to classrooms statewide. 3. Literature (handouts), photos, description of outreach resources available to teachers visiting the Pine Mtn Observatory.

Rick Kang **epoguy@gmail.com** **541-683-1381**

31. Oregon Science Olympiad

In Science Olympiad, competitive teams of students collaborate in various knowledge, laboratory, and engineering events. While Science Olympid events cover all of the State of Oregon science teaching standatds, they go beyond the basics to teach students what it really means to be a scientist or to be an engineer.

Arianna Downard **http://oregonscienceolympiad.com/** **541-602-1665**

32. Teachers on the Leading Edge

Teachers on the Leading Edge has developed inquiry-based lesson plans featuring: (1) Pacific Northwest plate tectonics and earthquakes; (2) earthquake seismology and tsunami science; and (3) how EarthScope science is advancing knowledge of active continental margin geology. The exhibit will feature classroom activity resources demonstrated in the TOTLE conference sessions. Free DVDs provide teaching resources including computer animations of plate tectonic, earthquake, and volcanic processes and virtual field experiences featuring Cascadia tsunami geology and Pacific Northwest geologic hazards.

Bonnie Magura, Roger Groom, Bob Butler **http://orgs.up.edu/totle/** **503-638-4207**

33. SOLV

SOLV provides support for environmental service-learning projects throughout Oregon. SOLV also offers hundreds of community service opportunities throughout the school year.

Quintin Bauer **www.solv.org** **503-844-9571**

34. Northwest Science Expo System

Science Fair opportunities for 5th - 12th grade students

Stephanie Jones **www,nwse.org nwse@pdx.edu** **503-703-3590**

35. Portland Metro STEM Center Collaboratory

The STEM Collboratory brings together higher ed, out-of-school, non-profit, and other non-school based resources in support of K-12 students. The mission of the Collaboraory is to facilitate complementary opportunities with community partners and provide resources for all students to engage in STEM-based investigations and explorations.

Susan Shugerman **infor@pdxstem.org** **503-494-5103**

36. Oregon Health Science University

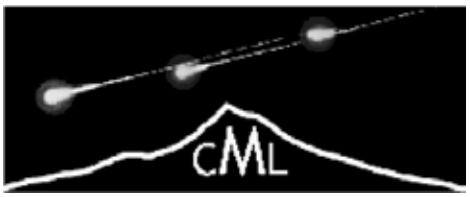
The Office of Science Education Opportunities at Oregon Health Science University serves the community and OHSU students and employees as we work to develop and mobilize OHSU's unique resoources to increase science literacy throughout the region.

Susan Shugerman **scied@ohsu.edu** **503-494-5103**

37. Nerduds

Embroidered apparel. Nerduds offers quality embroidered apparel that celebrates people who have made lasting contributions to society. Our current products feature: Mark Twain, Marie Curie, John Philip Sousa, Albert Einstein, Charles Darwin.

Anne & Vern Beeson **vern_anne@comcast.net** **603-324-8485**



38. Cascadia Meteorite Laboratory

The Cascadia Meteorite Laboratory, located at Portland State University, is a nationally recognized program that promotes astronomy and space science in the public schools.Teachers may request visitations by experts who can inspire and instill young people with a desire to learn more about Space and our planet.

Dick Pugh **www. meteorites.pdx.edu** **503-701-370039.**

Oregon National Primate Center

This exhibit will feature descriptions of educational outreach programs that are available at the Oregon National Primate Research Center (including tours, a Speakers Bureau, and apprenticeship opportunities for students and teachers). Information about current research projects, and brochures and literature describing the critical need for biomedical research will be available.

Diana Gordon **www.ohsu.edu/onprc** **503-690-5201**

Pacific University Oregon

40. Pacific University

Pacific is a small comprehensive liberal arts university located in Forest Grove, Oregon. It offers over fifty majors in a range of disciplines to 1600 undergraduate students and encompasses eleven graduate programs. Pacific focuses on applied learning, small classes, and an education for the individual.

Dr. Kevin Johnson **www.pacificu.edu** **503-352-3180**

CENGAGE Learning

41. National Geographic Learning (CENGAGE Learning ®)

National Geographic Learning provides K-12 materials for any and all classrooms, content literacy and ELL. Inspiring people to care about the planet (www.cengage.com) CENGAGE Learning

Abbe Neal, Linda Linnen **abbe.neal@comcast.net** **503-819-1553**

PowerWheel™ Instruct. Inspire. Guide our future.

42. RB-MFG PowerWheel RB-MFG is proud to present the PowerWheel.

A micro-hydro generator that can be used in the classroom to educate students about the different types of energy. It is a great visual way to inspire, instruct, and guide your students' future.

Ken Crawford, Roy Bentley **www.rb-mfg.com** **360-671-5158**

South Slough National Estuarine Research Reserve

43. South Slough NERR

Discover the world of estuaries with your students! Browse information and activities from the South Slough NERR in Charleston. Learn about the Oregon Coast Education Program (OCEP), teacher professional development opportunities and available resources. Win a coastal education kit in the door prize at the end of the day.

Jenna Kulluson **www.southsloughestuary.org** **541-888-5558**

44. Oregon Department of Geology and Mineral Industries

Oregon's geological history, earthquake/landslide/tsunami preparedness, mapping with lidar, web-based lidar viewer, flood/natural hazards web tool, Earth Science week teaching packets

Peter Ovington **www.oregongeology.org** **971-673-1543**

45. Klamath Outdoor Science School

Come over and talk. We'll have a display board, brochures and flyers that promote the outdoor school activities at KOSS.

Bill Hunt, Marj Glass **kossreservations@gmail.com** **541-660-4222**

46. US Fish and Wildlife Service

Celebrate the US Fish & Wildlife Service by visiting a national wildlife refuge during National Wildlife Refuge Week, October 14-20. Learn about clean water, clean air, and unusual and abundant wildlife. The Refuge System provides and protects it all on 150 million acres of land and water. Discover, learn, engage!

Berk Moss, Glenda M. Franich **www.fws.gov/refuges** **503-872-2705**

47. LifeSource Natural Foods

Information about LifeSource and organic foods. Health snacks provided! LifeSource is Salem's only independently owned full-service organic and natural grocery store!

Helen Shafran **www.LifeSourceNaturalFoods.com** **503-361-7973**

48. Oregon Agriculture in the Classroom Foundation

Agriculture is a real-world theme for teaching science, math, history, geography, literature and art. AITC provides standards-based, hands-on curriculum and resources at no charge to educators in grades K-12. AITC's website and Free Loan Library offers hundreds of books, DVD's, and lessons on plants, animals, food, nutrition and conservation.

Tami Kerr, Adriene Koett-Cronn **http:aitc.oregonstate.edu** **541-737-2256**

49. American Lung Asspciation in Oregon

Radon education materials, brochures, fliers, displays, and DVD's. Also, hand-out information about air quality.

Tiffany Belser **tbelser@lungoregon.org** **503-718-6141**

50. National Science Teachers Association

National Conference information, Stuff from the NSTA Store

Jennifer Thompson **http://www.nsta.org/**

51. Oregon Sea Grant

Highlights include teacher professional development, school programs, and science kits.

Maureen Collson **maureen.collson@oregonstate.edu** **541-867-0159**

52. Northwest Aquatic and Marine Educators

N A M E is a charter member of the National Marine Educators Association. Our membership includes both formal and informal educators from Alaska, British Columbia, Washington, and Oregon who recognize that marine and aquatic ecosystems, environments, and issues are linked together. We are hosting the NMEA conference in Anchorage in June 2012. Please join us.

Joy Tally, Fawn Custer **www.pacname.org** **541-270-0027**

53. Oregon Department of Energy

The Oregon Department of Energy Nuclear Safety Division will display information about the cleanup at the Hanford Nuclear Site and discuss outreach opportunities with Oregon's science teachers.

Ken Niles, Becky Rubenstruck **ken.niles@state.or.us**

503-378-4906

54. O S T A

The Oregon Science Teachers Association will be passing out information about the Portland Regional NSTA Conference coming next October, 2013

Lori Lancaster **www.oregonscience.org** **503-534-9112**

55. American Scientific

Microscopes, balances, eletric stirrers

Hal Leader **hal@amersci.com** **503-255-8224**

56. OSU College of Engineering

College of Engineering at Oregon State University information of STEM programs

Ellen Momsen **ellen.momsen@oregonstate.edu** **541-737-9699**

57. Pacific Northwest Clean Water Assn

Pacific Northwest Clean Water Association (PNCWA) is a Member Association of the Water Environment Federation (WEF), the non-profit technical and educational organization for water environment professionals active in 39 countries.

Karen DeBaker **DeBakerK@CleanWaterServices.org** **503-681-3643**

58. Horace Mann/DonorsChoose.org

Horace Mann, one of the nation's leading insurers focusing on the needs of educators, is a national sponsor of **DonorsChoose.org.** Since 2000, DonorsChoose.org has made it possible for more than 250,000 classroom projects to receive more than $100 million dollars in funding. And since partnering with DonorsChoose.org in 2011, Horace Mann has donated more than $1.5 million to projects on the website.

Rachell Bui **Rachell.Bui@horacemann.com** **503-317-2343**

59. Evergreen Aviation and Space Museum

Our exhibit will include all the Evergreen Aviation & Space Museum and the Wings and Waves Waterpark Educational programs. These materials include video, photos, brochures, handouts, program descriptions and other flyers.

Hilda Pereyo **hilda.pereyo@sprucegoose.org** **503-434-4185**

60. Saturday Academy

Saturday Academy engages motivated 2-12 grade students in hands-on, in-depth learning and problem solving by connecting them with community experts as instructors and mentors in classes, camps and internships

Mattie Courtright **mattie@saturdayacademy.org** **503-200-5861**

61. Oregon Public Health Division (AWARE).

Oregon Alliance Working for Antibiotic Resistance Education (AWARE) mission is to encourage the appropriate use of antibiotics and aims to reduce the problem of antibiotic-resistant bacteria in Oregon. The coalition's goals are to raise public awareness about the importance of using antibiotics wisely.

Tamara Peterson **tamara.g.peterson@state.or.us** **971-673-1100**

62. Oregon Sea Grant: StreamWebs

StreamWebs is an online platform that links students with hands-on watershed stewardship projects and provides a showcase for project and data reports. By providing students and teachers tools for data management and analysis, StreamWebs supports STEM educational opportunities and helps students and teachers demonstrate their role as contributors to watershed sustainability.

Megan Kleibacker, Ryan Johnson **www.streamwebs.org** **541-737-8715**

Acknowledgements

Countless individuals and businesses have assisted in making this conference a success! Among them, special thank yous go out to:

Steve Nelson, Principal, Leslie Middle School, for allowing us to host the conference at our school

Leslie Middle School Staff, for allowing us to use their classrooms

Terry Carstensen and Kent Walcott—Site Coordinators

Steven Pruitt, Achieve, Inc.—Keynote Speaker

Achieve, Inc.—for paying his way to our conference

Horace Mann, for sponsoring the middle school science teachers breakfast

Vernier Software, for sponsoring the President's Dinner Reception

Evergreen Aviation Museum, for sponsoring the conference

Kettle Foods, for providing chips for our attendees

LifeSource Foods for sponsoring the snacks in the exhibit hall

Pan American Berry Growers, for sponsoring the conference

Bruce Reiter - OSTA Conference Program Chair and Awards Chair

Martha Dibblee, for putting together the program book for this conference

Bernie Carlsen-OSTA Executive Director and Exhibits Coordinator

Lynda Sanders – OSTA President

Paul Zastrow-OSTA Registrar

Allan Bruner - OSTA Comptroller

Cora Clark – OSTA Awards chair

Jodie Harnden - TOST Editor

OSTA Board Members- for their thoughtful input and tireless work!

All of the presenters-who prepared sessions and still had to pay registration fees to attend!

Our Wonderful Exhibitors—Thanks for your displays and donating items for the door prize drawing!

Civil Air Patrol cadets, for helping set up and take down of the tables and chairs Leslie Middle School Students and South Salem High School students – Thanks for your help the day of the conference as tour guides and student helpers!

Thank you for all that you have done to help make this conference a success!

Sponsors

*We wish to thank the **following sponsors** for their **generous support** of the 53rd Annual Oregon Science Teachers Association Conference:*

Gold

Vernier Software and Technology

Silver

Evergreen Aviation and Space Museum

LifeSource Natural Foods

Kettle Brand®

Horace Mann

Bronze

Pan American Berry Growers

Thermo Scientific

Pearson

Horace Mann and DonorsChoose.org bring school supplies to classrooms

Most business people aren't expected to bring their own office supplies to work, yet average teachers spend $40 per month on classroom supplies in order to teach our kids, according to DonorsChoose.org. DonorsChoose.org is a nonprofit organization that connects public school teachers in need of classroom materials and experiences with individual donors who want to help.

Charles Best developed the website that became DonorsChoose.org in 2000. At the time, he was teaching in a Bronx high school where teachers experienced first-hand the scarcity of learning materials in public schools. Best, then a social studies teacher, sensed that people would like to help, but were frustrated by a lack of influence over their donations. So, along with his students, he created a website that allowed individuals to connect directly with classrooms in need.

Today, any public school teacher can post classroom project requests on DonorsChoose.org. Requests range from crayons for art class, to computers for individual learning, to incentive items for an achievement program. The site includes an e-school mall which connects teachers to traditional education vendors such as Lakesshore Learning and ABC School Supply. Specialty stores like Sporttime and Frey Scientific are also included.

Once a project is live on the site, donors can browse requests and give any amount to the one that inspires them. Donors can give as little as $1 and get the same level of choice, transparency, and feedback that is traditionally reserved for someone who gives millions. They call this "citizen philanthropy."

Once a project reaches its funding goal, DonorsChoose.org delivers the materials to the school.

Donors then get a thank-you letter from the teacher and a cost report showing how each dollar was spent.

The DonorsChoose.org blog is filled with comments from grateful teachers. One new teacher writes: "I am thankful for an organization that provides such support for teachers. As a first year teacher, the expenses are so great. I keep buying supplies for my classroom. This is my first time using this organization, but it was recommended by another teacher that has gotten great results. Thank you so much for your support."

Another posted: Even after having several projects funded, I am still amazed that complete strangers are so generous to me and my students. I am always recommending DonorsChoose to my colleagues! And, because so many donors have helped me, I have chipped in on some projects to help other teachers. It feels so great to get funded. I want more teachers to experience that!

Horace Mann, one of the nation's leading insurers focusing on the needs of educators, is a national sponsor of DonorsChoose.org. Since 2000, DonorsChoose.org has made it possible for more than 250,000 classroom projects to receive more than $100 million dollars in funding. And since partnering with DonorsChoose.org in 2011, Horace Mann has donated more than $1.5 million to projects on the website.

On a local level, Horace Mann representative, Rachell Bui, is highly committed to DonorsChoose.org's mission as well. "Our partnership empowers educators by making it possible for them to find the teaching tools they need, from vital basic supplies to cutting edge technology that can make learning exciting for students," Bui said. "The resources educators can acquire through DonorsChoose.org are only limited by their imagination."

Rachell Bui and her staff are available to show teachers how to post projects on DonorsChoose.org and give them ideas for promoting those projects. Rachell can be contacted at 503-317-3343 or by email at Rachell.Bui@horacemann.com.

AM-C03797(8/12)

Publishing in TOST

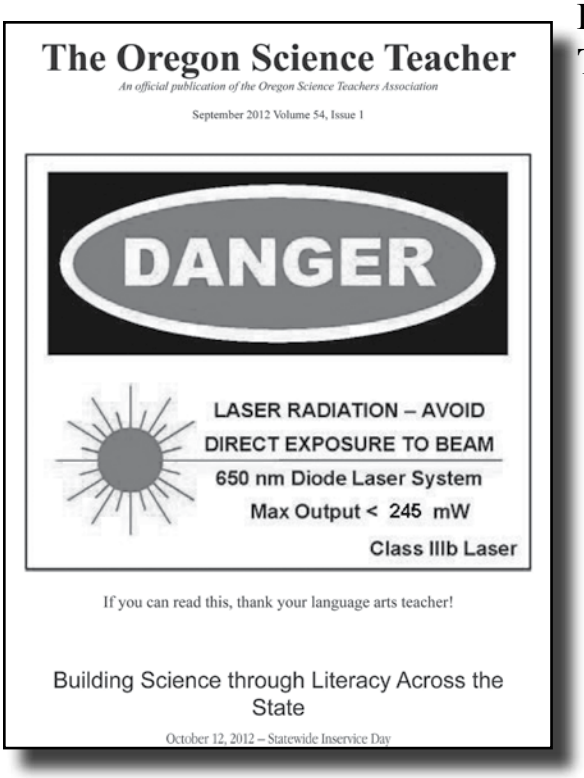
General Information

Jodie Harnden, TOST Editor

The journal publication **The Oregon Science Teacher (TOST)** serves as a forum for disseminating science activities for the classroom, research position statements, announcements, successes in the classroom, and other articles including evaluations of programs, curriculum reviews, articles.

TOST adds to what we know about science teaching and learning but, most importantly, serves as a catalyst for thoughtful discussion concerning the improvement of teaching and learning in science.

TOST is published five times a year and is included as part of the OSTA membership package. Contents of **TOST** may be reprinted without permission, however, acknowledgement is requested. Views and opinions expressed by authors throughout **TOST** do not necessarily reflect those of the OSTA or its Executive Board.



For more information or to submit articles to **TOST**, please contact:

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Jodie.Harnden@pendleton.k12.or.us.

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2012-2013 Science Assessment
UPDATE

Oregon Department of Education
Office of Assessment and Information Services
255 Capitol St NE Salem, OR 97310

OAKS SCIENCE 2012-2013-

***No Content or Cut Score Changes for OAKS in 2012-2013*:** The content standards and achievement standards will continue to be the same in 2012-2013. The 2012-2013 OAKS Science will be based on the content standards adopted in 2009. The adopted 2012-2013 Achievement Standards (http://www.ode.state.or.us/search/page/?id=3319):

Achievement Level	Grade 5	Grade 8	High School
Nearly Meets	216	229	235
Meets	226	235	240
Exceeds	239	247	252

***Reduced Testing Opportunities for 2012-2013*:** Based on feedback received from over 2,500 respondents, including Oregon teachers, test administrators, test coordinators, principals, superintendents, and parents, students in grades 3-8 would have **two annual test opportunities** starting this year (the 2012-2013 School Year) instead of three. High school students will continue to have up to **three annual test opportunities per year** for Science.

***2012-2013 Science Test Specifications and Blueprints-New and Improved*:** The 2012-2013 Science Test Specifications and Blueprints are posted on the ODE website **(http://www.ode.state.or.us/search/page/?id=496).** The Test Specifications is a valuable tool for educators because it not only states assessable content and vocabulary, but it also explains how the test is designed and developed (i.e. standards breakdown percentages). New this year, will be additional new sample items (with solutions) especially in the areas of Scientific Inquiry and Engineering Design.

***2012-2013 OAKS Online Sample Tests*:** The current Science practice test blueprint was revised so that each student who takes the practice tests will have the opportunity to experience all of the different item types and the new 2009 content standards. Students now have multiple-choice questions from not only each of the content areas (Life, Physical and Earth/Space), but also that fall under Structure and Function, and Interaction and Change. The students also have sample Scientific Inquiry and Engineering Design questions, as well as examples of machine-scored graphic response items (grid items). (www.oaks.k12.or.us)

***OAKS Onscreen Calculator*:** Students can access the OAKS calculator outside of the testing environment. The OAKS Onscreen Calculator for the 5th grade science assessment (**https://oakspt.tds.airast.org/student/Scripts/Calculator/TDSCalculator.aspx?mode=Basic**) and for the middle and high school science assessment (**https://oakspt.tds.airast.org/student/Scripts/Calculator/TDSCalculator.aspx?mode=Graphing,Scientific**). Teachers will use these links to the calculators to allow students to practice using the online calculator(s) during classroom instruction.

SCIENCE LOCAL PERFORMANCE TASKS (Work Samples)-

Science Local Performance Assessment Clarifications for 2012-2013

In June 2008, the State Board of Education adopted OAR 581-022-0615: Assessment of Essential Skills. This rule requires school districts and public charter schools to administer local performance assessments on an annual basis to all students in **Grades 3 through 8 and once in high school** in the following skill areas: Writing, Speaking, Mathematical Problem Solving, and **Scientific Inquiry**. Local performance assessment in social sciences is optional.

The purpose of this requirement is to ensure that Oregon students are afforded opportunities to learn and to

1 For further information, please contact Rachel Aazzerah, Science and Social Sciences Assessment Specialist at rachel.aazzerah@state.or.us

receive feedback regarding their progress toward meeting specific state standards throughout their years in public schools.

As for meeting the local performance assessment in Scientific Inquiry, there has been some confusion on whether or not Engineering Design work samples can "replace" Scientific Inquiry work samples in order fulfill this requirement. Engineering Design work samples **cannot currently** replace Scientific Inquiry work samples in order to fulfill OAR 581-022-0615 local performance requirements. If an Engineering Design local performance task can be scored in all four dimensions with the Scientific Inquiry scoring guide, this task is eligible to meet the assessment of essential skills requirement for Scientific Inquiry. As stated earlier, this rule requires school districts and public charter schools to administer a work sample (local performance assessment) on an annual basis in **Scientific Inquiry** at Grades 3-8, and once during High School. Students **should** still be completing **Engineering Design work samples**, because this content is part of the science content standards and will be **assessed** on the **OAKS in Science**.

Official work sample scoring guides for all subjects can be found on the Oregon Department of Education website (**http://www.ode.state.or.us/search/page/?id=32**). Scientific Inquiry work samples should be scored using the correct grade level **Scientific Inquiry** scoring guide (not the Scientific Inquiry/Engineering Design comparison scoring guide) and students should receive scores of 4 or higher in each dimension in order meet the standard.

***New Scientific Inquiry and Engineering Design Work Sample Resources*:**

***Student Language Scientific Inquiry Scoring Guides (English/Spanish)*:** New sample student language scientific inquiry scoring guides are now available at grade 3, grades 4-5, grades 6-8 and high school levels. The new scoring guides can be accessed at the following link on the ODE website: **http://www.ode.state.or.us/search/page/?=2667**. Sample student language scientific inquiry scoring guides that have been translated into Spanish are now available as well.

***Model Scientific Inquiry High School Student Template*:** A new model High School Scientific Inquiry Student Template developed by North Clackamas School District is now also available on the web at **http://www.ode.state.or.us/wma/teachlearn/testing/scoring/guides/2011-12/science_inquiry_notebooktemplate_hs.pdf**

Model Scientific Inquiry Student Feedback Forms: New Model scientific inquiry student feedback forms have been created that are aligned with the Oregon Official Scientific Inquiry Scoring Guide. Forms are available for each of the different benchmark levels and are a useful tool to assist students in the revision process in order to meet the benchmark standard (4's or higher). (**http://www.ode.state.or.us/search/page/?=2667**)

Model Engineering Design Student Notebook Templates with Teacher Instructions: New engineering design student templates with teacher instructions are now available for grades K-3, grades 4-5, grades 6-8 and high school. The new engineering design student templates and teacher instructions can be accessed at the following link on the ODE website: **http://www.ode.state.or.us/search/page/?id=32**.

Model Engineering Design Process Posters/Handouts and Engineering Design Templates: New engineering design process posters/handouts have been developed by ODE that are aligned with the Oregon Official Engineering Design scoring guides. The new poster/handouts are available for grades K-3, grades 4-5, grades 6-8 and high school. Also available for grades K-3 and grades 4-5, are model engineering design templates that are aligned with both the Engineering Design Scoring guide and the new engineering design posters/handouts. (**http://www.ode.state.or.us/search/page/?id=32)**.

Saturday Workshop—Project WET

Go With The Flow
Linking Science and Literacy with Project WET
Saturday October 13, 2012—9:00 to 3:30 PM
Leslie Middle School
Grades K-8

Instructors:

- Susan McWilliams, Outgoing Region 6 Director and OSTA Professional Development Coordinator
- Dr. Adele Schepige, Western Oregon University

Discover new ways to engage students by connecting water science with literacy. Participants will explore a variety of lessons from the new **Project WET Curriculum and Activity Guide 2.0** on topics such as Physical Properties of Water, Water for Life, Water Management, Water Resources and Water Connections. The workshop will also focus on ways to integrate literacy through the use of science discourse, science writing strategies, and children's trade books.

All participants will receive the Project WET Curriculum Guide 2.0 and sample copies of 3 Student Activity Booklets (The Water Story, Conserve Water and Discover Storm Water)

Cost:

- **$20 non-refundable deposit with advance registration on the OSTA website**
- **$50 workshop fee payable at the beginning of the workshop**
- **1-graduate credit option from WOU (Western Oregon University) for $50**
- **Questions? Contact Susan McWilliams by email: smcw@bendcable.com**

One Graduate Credit from Eastern Oregon University

Instructor: D. Allan Bruner

brunera@colton.k12.or.us

Brief Outline of Course:

Students will attend the full-day conference in Colton, Oregon at their own or district expense. Students will have opportunity to select sessions to attend, inclusive of the keynote speaker address. During the lunch break the student is encouraged to visit the exhibit hall. After the conference students will complete the required assignments by the due date in order to be awarded a grade and credit for the course.

Course Requirements/Assignments/Attendance Expectations:

- Student will attend 4 presentations (unless one or more are double sessions) as well as the general keynote address.
- Student will take notes at the sessions for later use.
- Student will collect handouts/materials provided by each presenter.
- Student will collect information regarding professional resources and materials from exhibitors (both commercial and non-commercial are acceptable).
- Student will provide written evidence of understanding of the new Oregon Science Standards and how this will affect their current classroom instructional practices and planning in the form of a two-page paper submitted to the instructor (online submission is preferred).
- Student will submit one lesson plan that addresses one new science content standard, based on a session or presentation attended during the conference that includes an application of Scientific Inquiry instruction **-OR-** Engineering Design instruction.
- Students may use their PERSONAL SCHEDULE (page 18) to document attendance at sessions if instructor signs or initials student's PERSONAL SCHEDULE**.**
- ***All assignments must be delivered via email to the instructor by October 30, 2012.***

Credit Overlay – Registration Form

Non-refundable tuition

Please type or print in black ink

Term you plan to take course: Summer _____ **Fall 2012** Winter _____ Spring _____ ☐ Male ☐ US Citizen

Social Security Number _____ Date of Birth _____ Advisor _____ ☐ Female ☐ Non-Citizen

Last Name _____ First Name _____ MI ___ Other Names Used _____ Email _____

Mailing/Billing Address City State Zip Daytime Telephone

Permanent Address City State Zip Home Telephone

In compliance with a commitment to the Department of Health and Welfare, the university must seek to identify the ethnic background of the student. Please mark the appropriate box below:

☐ W - White, Non- Hispanic ☐ A - Asian or Pacific Islander
☐ H – Hispanic ☐ I - Amer. Indian or Alaska Native
☐ B - Black, Non-Hispanic ☐ D - Decline to respond

You are requested to provide voluntarily your Social Security Number to assist OUS (and organizations conducting studies for or on behalf of OUS) in developing, validating, or administering predictive tests and assessments; administering student aid programs; improving instruction; internal identification of students; collection of student debts; or comparing student educational experiences with subsequent workforce experiences. When conducting studies, OUS will disclose your Social Security Number only in a manner that does not permit personal identification of you by individuals other than representatives of OUS (or the organization conducting the study for OUS) and only if the information is destroyed when no longer needed for the purposes for which the study was conducted. By providing your Social Security Number you are consenting to the uses identified above. This request is made pursuant to ORS 351.070 and 351.085. Provision of your Social Security Number and consent to its use is not required and, if you choose not to do so, you will not be denied any right, benefit, or privilege provided by law. You may revoke your consent for the use of your Social Security Number at any time by writing to: Registrar's Office, Eastern Oregon University, One University Boulevard, La Grande, OR 97850-2899. **Submission of this form to the Division of Distance Education obligates you to receive grades and pay tuition and fees.**

Tuition and fees may vary.

To pay by credit card, call the Student Accounts Office at 541-962-3590 or you can make an online payment at http://www.eou.edu/staccts/.

*Please return the appropriate tuition and fees with this registration form to:

Registrar's Office
One University Boulevard
La Grande, OR 97850-2899

Phone: 541-962-3519
Fax: 541-962-3799

***Order course materials EOU Bookstore.**

Course Ref. No.	Prefix	Number	Course Title	Cr. Hrs.	Audit	Repeat	S/U	Tuition	Fees	Total
34426	**SCED**	**508**	**Oregon Science Teachers Association Annual Conference**	1				$75/cr		$75.00
To be registered & receive credit for the class, this registration form and payment in full must be received in the Registrars										$75.00

I understand that once I submit my registration, I am responsible for this bill. Credit overlay courses are non-refundable.

Total Due

Eastern Oregon University

Non-Admitted Student Form

A non-admitted student is a person who feels academically qualified to enroll for classes at EOU but does not desire to be admitted to the university. The non-admitted status is specifically designed for the person who desires to take a very limited number of courses generally for purposes other than obtaining a degree or teaching certificate at Eastern Oregon University. Non-admitted students are not eligible to receive federal student aid.

Year and term you plan to begin: Fall _____ Winter _____ Spring _____ Summer _____

Status: □ Undergraduate □ Graduate □ Post-Baccalaureate/Non-Graduate

Campus Location: □ La Grande □ Online or Onsite at a Regional Center

Educational Intent:
□ High School □ Personal interest □ Education endorsement □ Professional development □ Prerequisites for graduate program

Eventual degree: _____ Current academic major or area of interest: _____

Full Legal Name: _____
Last First Middle

Any other names used: _____

***Social Security Number:** _____ **Date of Birth:** _____

Gender: □ Male □ Female

Current Mailing Address: _____
Street or PO Box City State Zip Code Country (if not USA)

Permanent Address: _____
Street City State Zip Code Country (if not USA)

Email Address: _____ **Primary Telephone** _____

Are you a citizen of the United States of America? □ Yes □ No
If no, are you a Permanent Resident of the United States of America? □ Yes □ No
If not a U.S. Citizen or a U.S. Permanent Resident, what is your country of origin? _____

What is your state of residence? _____
If your state of residence is not Oregon, did you attend a high school or institution of higher education in the last 3 years? □ Yes □ No
If yes, list school name and dates attended: _____

Oregon Residency Classification
Eastern Oregon University is required to collect state residency information for all students. An Oregon "resident for tuition purposes" is a person who has, or a dependent person whose parent or legal guardian has, lived in Oregon for at least 12 months, without attending college as a full-time student.

Are you claiming Oregon Residency? Yes _____ No _____
If yes, you must answer all the following questions for yourself:
Have you resided in Oregon for the last 12 consecutive months? Yes _____ No _____
If yes, list the date the continuous presence in Oregon began? Mo/Yr _____
Do you have an Oregon driver's license? Yes _____ No _____ Date of issuance? Mo/Yr _____
Did you or your spouse enter military service from Oregon? Yes _____ No _____
Did you file tax returns in Oregon? Yes _____ No _____ If yes, list last two years filed _____/_____
If you are employed in Oregon, list name of current employer and city
_____
If you are under 24 you must answer all the following questions for parent or legal guardian:
Did a parent or legal guardian reside in Oregon for the last 12 consecutive months? Yes _____ No _____
If yes, list the date the continuous presence in Oregon began? Mo/Yr _____
Did your parent or legal guardian enter military service from Oregon? Yes _____ No _____ Mo/Yr _____
Did your parent or legal guardian file tax returns in Oregon? Yes _____ No _____ If yes, list last two years filed _____/_____
If your parent or legal guardian is employed in Oregon, list name of current employer and city
_____

****Ethnic/Racial Identification: Please indicate your ethnic identity by selecting one of the following:**
□ Hispanic □ Non-Hispanic

□ American Indian/Alaskan Native (specify tribal affiliation) _____
□ Asian American (specify ethnic group)_____
□ Black, African American
□ Hispanic American (specify ethnic group) _____
□ Pacific Islander (specify ethnic group) _____
□ White, European American
□ If none of the above, please write in the ethnic/racial identification you use _____

What is your military/veteran status?
□ Not applicable
□ Current/active military
□ Veteran
□ Eligible dependent

I certify the information on this application is correct and complete. Please sign in ink.

_____ _____
Signature **Date**

You will be notified of your EOU Student ID and ability to register by email within 5 working days after submitting this form to the Office of Admissions.

***Social Security Number Disclosure and Consent Statement**
As an eligible educational institution EOU must receive your correct social security number (SSN) to file certain returns with the IRS and to furnish a statement to you. The returns EOU must file contain information about qualified tuition and related expenses. Privacy Act Notice—Section 6109 of the Internal Revenue Code required you to give your correct SSN to persons who must file information returns with the IRS to report certain information. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. For more information please refer to IRS code 6050S.
You will be issued a student ID number for your academic record at Eastern Oregon University.

**This information will not be used for making admissions decisions. However, you are encouraged to provide this information for data collection, application processing, and research purposes.

Eastern Oregon University

Office of Admissions, One University Blvd., La Grande, Oregon 97850-2899

(541) 962-3393 or 1-800-452-8639 Fax (541) 962-3418

E-mail: admissions@eou.edu

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Michael Rockow

October 12, 2012

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TO INSPIRE & EDUCATE


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Magic Planet

GPS Adventure


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Curiosity Rover Exhibit

Day Camps & Fun Fridays

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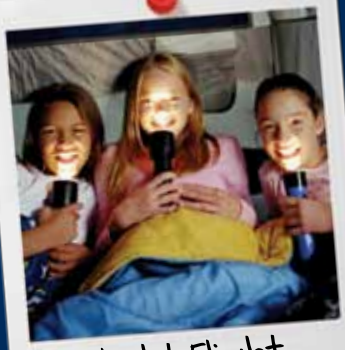

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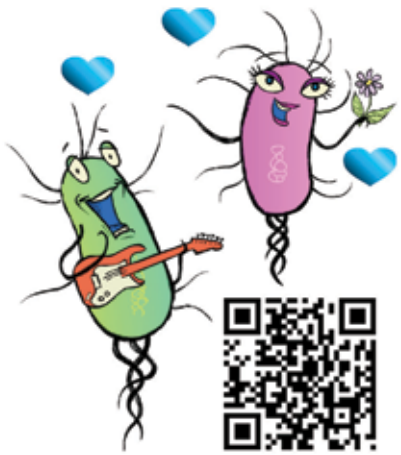

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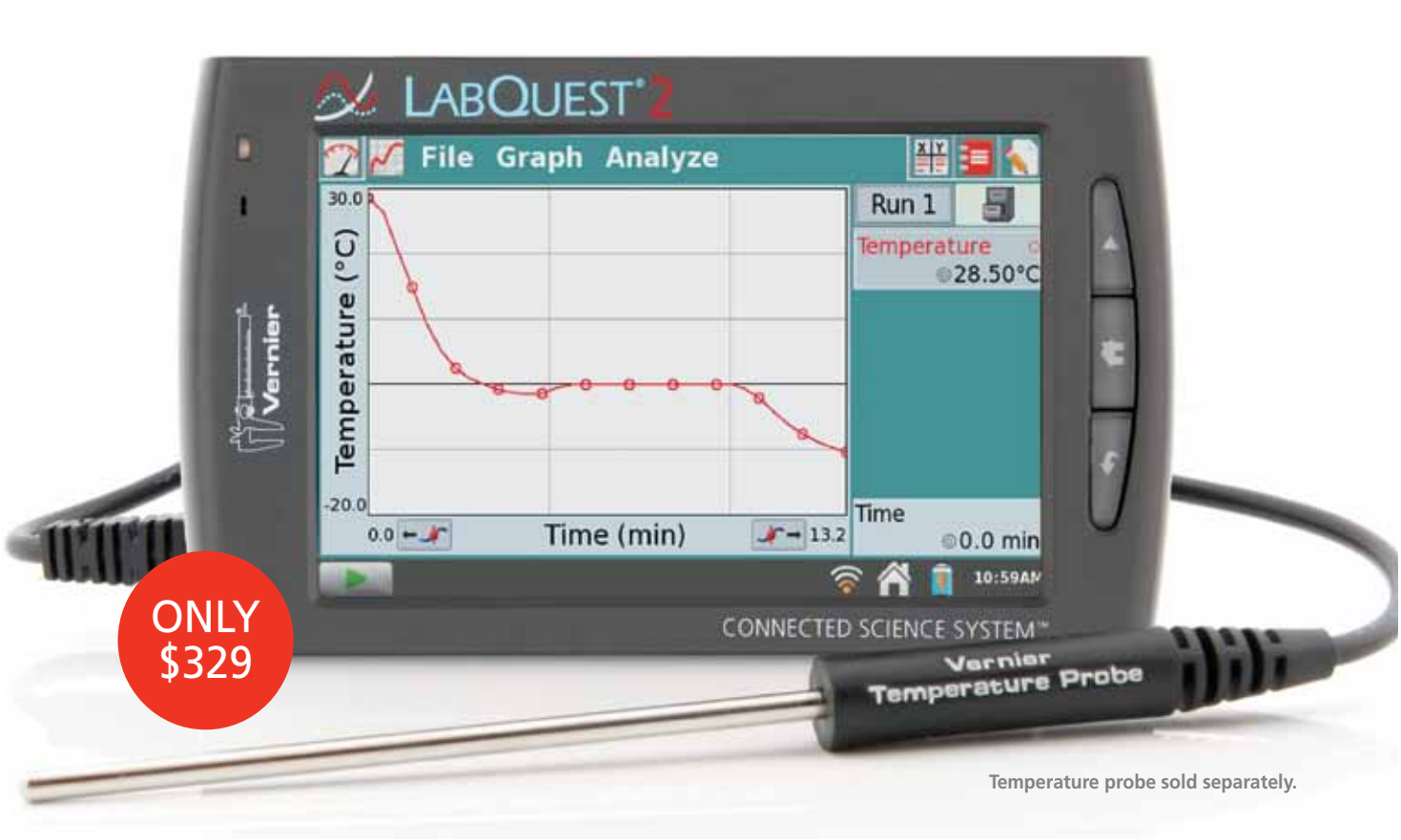
- Bridging to the Highly Anticipated Next Generation Science Standards—What's in It for Me?
- Building Bridges Within STEM Education

NSTA National Science Teachers Association



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