

www.nwocenter.org/nwoSymposium

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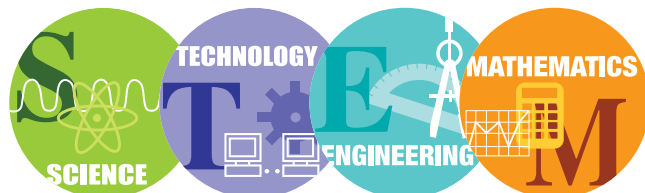
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NWO Symposium

**on Science, Technology, Engineering,
and Mathematics Teaching**

Saturday, November 5, 2011
hosted at Penta Career Center



Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching

Welcome

We are delighted to once again welcome you to the 2011 Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching. The symposium is sponsored by the Northwest Ohio Center for Excellence in STEM Education (NWO) and its partners throughout the region. This event offers a valuable opportunity for P-16 educators to share and learn from one another in our common effort to advance science, technology, engineering, and mathematics (STEM) education for people of all ages.

Last year we had more than 300 attendees at this event, including in-service and pre-service teachers, higher education faculty, graduate and undergraduate students, and business and community partners participating in more than 100 sessions. This year, vendors will again participate so as to keep educators abreast of new and exciting classroom materials and opportunities. Additionally, attendees will be allowed to examine new textbooks, pick up equipment for classroom use, and preview some of the new classroom technologies now available.

We are very grateful to Penta Career Center for hosting this year's symposium. We admire their new state-of-the-art building and the wonderful work that they are doing and we look forward to strengthening our partnership with them in advancing STEM education throughout the region. We invite you to pay special attention to their capabilities and programs while you are here.

We hope that you find the 2011 Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching to be an even more beneficial experience than last year. With your help, we will continue to make this symposium the premier STEM professional development opportunity for educators in Northwest Ohio. Thank you for joining us!

Dr. Bob Midden
Director
NWO/COSMOS, BGSU

Jessica Belcher
Assistant Director
NWO/COSMOS, BGSU

Michelle Leow Klinger
Assistant Director
NWO/COSMOS, BGSU



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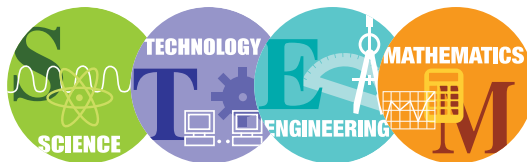
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EVALUATION of Symposium

Please complete the online evaluation for the 2011 Symposium.
 All who complete the survey will be entered into a drawing
 for a \$25 Amazon gift card.

Please go to the following website to complete the online evaluation:

www.nwocenter.org/nwoSymposium



Conference Agenda

7:30 – 8:00 Registration and Refreshments (*Commons Area*)

8:00 – 8:50 Session A

9:00 – 9:50 Session B

10:00 – 10:50 Session C

11:00 – 12:50 Lunch & Vendor Area Viewing Time (*Commons Area*)

1:00 – 1:50 Keynote Presentation: Gene Poor (*Auditorium*)

2:00 – 2:50 Session D

3:00 – 3:50 Session E

The limit for all rooms is 30 people, unless specified in the program (excluding 1106 & Auditorium).

Vendors open from 11:00 AM – 12:50 PM

Lunch catered by Penta Culinary Arts Program



Session A (8:00 am - 8:50 am)**A1 Strategies for Teaching Ninth-Grade Science With Theatrical Technology and Drama**

A grant-supported project centered around five lessons that took place in the theatre and involved hands-on activities. Topics included inertia, vertical force, electricity, properties of light, and color. Presenters will describe the lessons and discuss challenges and rewards of the project.

Presented by: JoBeth Gonzalez, Bowling Green High School

Cale Hover, Bowling Green High School

Grade Levels: 9-12 (Interdisciplinary)

Room: Auditorium

A2 Halloween at Hogwarts

Halloween demonstrations by combining chemistry with Harry Potter.

Presented by: Kimberley Cortez, Arlington High School

Amanda Miller, Arlington High School

Grade Levels: 9-12 (Science)

Room: 2105

A3 Science Fair Poster in Glogster

Glogster is a social network that allows users to create and share posters online. This session will demonstrate how to use Glogster to create interactive and online posters, and how online posters can be used to teach science concepts.

Presented by: Lan Li, Bowling Green State University

Grade Levels: 5-12, College (Technology)

Room: 3100

A4 Digital Creations for Primary Grades

Utilize a digital camera, iPod Touch, or cell phone to create unique classroom presentations for families and open house nights!

Presented by: Amy Contos, Kateri Catholic Schools

Grade Levels: PreK-4 (Technology)

Room: 2109

A5 How Do We Put the Thrill in a Thrill Ride?

Use roller coasters to engage students in an inquiry lesson about gravitational potential energy and kinetic energy.

Presented by: Elizabeth Buckholtz, Toledo Public Schools

Grade Levels: 5-12 (Science)

Room: 2110

Session A (8:00 am - 8:50 am) continued

A6 Back to Basics With SmartBoard and the Notebook Software

Have you been wanting to use the SmartBoard and the Notebook Software in your classroom, but have no clue where to start? Then this workshop is for you! We will cover the BASICS of the SmartBoard Notebook Software, including setting up the page, adding interactivity (revealing, cloning, etc.), using multimedia, adding links, and more!

Presented by: Cindy Edwards, Emmanuel Christian School

Grade Levels: PreK-12 (Interdisciplinary)

Room: 2111

A7 Will Women Run Faster Than Men in the Olympics?

Reasoning about and making sense of statistics and probability are essential to students' future success. This investigation emphasizes the role of reasoning and sense making in defining a statistical question followed by analyzing and interpreting data to answer it. It illustrates how to help students develop their skills in working with data.

Presented by: Oxana Grinevich, Lourdes University

Grade Levels: 9-12 (Mathematics)

Room: 2113

A8 Ethnoacademics: 5 Secret Strategies for Teaching Black Boys Academic Success

Black boys begin an academic decline by fourth grade. Discover how the LSS mathematical instruction system helps students gain mathematic procedure power. LSS allows all reading levels to fully participate while gaining mathematic confidence. *Continued in Session B8.*

Presented by: C. Jackson Howard, Ancestor Anderson LLC

Grade Levels: 5-8 (Mathematics)

Room: 2117

A9 Humans at the Earth's Extremes: Death in Death Valley

Directed to an unmaintained road by their GPS navigation system, a woman and her son become stranded in the desert. One survives, one does not. What science lessons can be learned from this true story? Come with us to one of the hottest and driest places on earth.

Presented by: Frederick Andres, Bowling Green State University

Amy Morgan, Bowling Green State University

Grade Levels: 9-12, College (Interdisciplinary)

Room: 2119

A10 I Really Do Study

"I really did study." How many times have teachers heard this statement from students after a poor performance on a test? Student perception of their mastery of content does not always match reality. Explore the differences between these students and more successful students, and how teachers can move these novice learners toward becoming experts.

Presented by: Debra A. Bercher, Lourdes University

Grade Levels: 5-12, College (Science)

Room: 2125

Session A (8:00 am - 8:50 am) continued**A11 Exclusively for Project pi r² Teachers: Habitat Change**

This session (for grant Project pi r² teachers only) will offer cross-curricular, standards-aligned assessments and activities to help K-6 students understand habitat change with Ohio native species. Co-presenters Dr. Eric Worch and Robyne Kramp will present science content and assessment strategies. *Continued in Session B12 & C12.*

Presented by: Michelle Klinger, NWO

Heather Norris, Metroparks of the Toledo Area

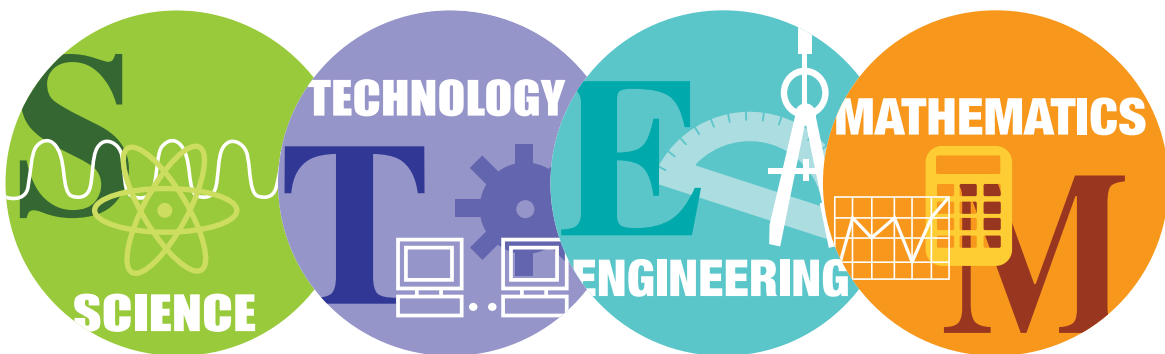
Karen Mitchell, Metroparks of the Toledo Area

Eric Worch, Bowling Green State University

Robyne Kramp, Bowling Green City Schools

Grade Levels: K-6 (Science)

Room: 2122



Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching

Session B (9:00 am - 9:50 am)**B1 SATELLITES: Students And Teachers Exploring Local Landscapes to Investigate The Earth from Space—A Program Worth a Closer Look**

The workshop discusses the use of geospatial technologies to investigate the Earth by observing local school environments. Project-based learning using inquiry and the 21st century skills of critical thinking, collaboration, communication, and creativity form the foundation of the program. Information on a free summer workshop and handouts provided.

Presented by: Mikell Lynne Hedley, The University of Toledo

Grade Levels: 5-12, College, Administrators (**Interdisciplinary**)

Room: 2105

B2 Using Fossils to Engage Students in Science Learning

Fossils provide a fascinating window into Earth's ancient past and are a great way to excite kids about scientific discovery. We'll discuss hands-on activities using fossils that target general science skills and specific content standards in life and earth sciences. Every participant will receive lesson plans and fossil kits will be raffled off.

Presented by: Peg Yacobucci, Bowling Green State University

Grade Levels: PreK-4 (**Science**)

Room: 2110

B3 UT StACS Chemistry Summer Camp

The University of Toledo Student American Chemical Society (UT StACS) hosts a pre-professional STEM-related summer camp for high school students. UT StACS would like to invite all educators to learn about and encourage a camp like this. During the session participants will gain knowledge of the activities in the camp and the benefits for their students.

Presented by: Amber Hall & Edith Kippenhan, The University of Toledo

Grade Levels: 9-12, College (**Interdisciplinary**)

Room: 2109

B4 Modeling Instruction in Physical Science

Have you heard of Modeling Instruction? Come see why many teachers are getting excited about this new way of presenting curriculum. Modeling targets misconceptions and attempts to correct them by having students conduct self-directed labs, participate in whiteboard sessions, and develop models. **Continued in Session C4.**

Presented by: Christie Westenkirchner, Fairview High School & Nate Ash, Perrysburg High School

Grade Levels: 5-12 (**Science**)

Room: 2107

B5 Beyond the Paper/Pencil and Into Next Generation Innovation: Using eTech Ohio's STEM Initiatives in Your Classroom Integration

From the earliest cave drawings to today's CGI renditions in the world of movies and other high-end graphics programs, the way that we view and engineer the world around us has grown rapidly. This session will explore free STEM resources available from eTech Ohio and Ohio Educational Conference 2012 opportunities for teachers and students.

Presented by: Steve Crumbacher, eTech Ohio

Grade Levels: 5-12 (**Technology**)

Room: 2111

Session B (9:00 am - 9:50 am) continued**B6 Putting the “E” in STEM Teacher Preparation: Ohio Northern University’s Engineering Education Major**

Ohio Northern University (ONU) began offering a new Bachelor of Science degree with a major in Engineering Education. This program provides graduates with a foundation in engineering, mathematics and education and qualifies the graduate for licensure as a secondary math teacher in the state of Ohio.

Presented by: Kenneth Reid, Ohio Northern University

Grade Levels: 9-12, College (**Engineering**)

Room: 2119

B7 FAST: Formative Assessment Strategies and Tips

This session will define formative assessment as participants take part in several hands-on activities. Attendees will leave with a “Formative Assessment Toolkit” that is filled with ideas that can be used in the classroom tomorrow.

Presented by: Beth Hench, Putnam County Educational Service Center

Gary Herman, Putnam County Educational Service Center

Grade Levels: PreK-12 (**Interdisciplinary**)

Room: 2113

B8 Ethnoacademics: 5 Secret Strategies for Teaching Black Boys Academic Success

Black boys begin an academic decline by fourth grade. Discover how the LSS mathematical instruction system helps students gain mathematic procedure power. LSS allows all reading levels to fully participate while gaining mathematic confidence. *Continued from Session A8.*

Presented by: C. Jackson Howard, Ancestor Anderson LLC

Grade Levels: 5-8 (**Mathematics**)

Room: 2117

B9 Teaching and Assessing Through Problem-Solving Contexts

We will explore teaching through problem-solving contexts by examining rich standards-focused problems and discussing ways to effectively structure the learning environment. Participants will create open, complex, and realistic problems for their instruction and assessments. *Continued in Session C9.*

Presented by: Jonathan Bostic, Bowling Green State University

Gabriel Matney, Bowling Green State University

Grade Levels: PreK-8 (**Interdisciplinary**)

Room: 2125

B10 Do You Wiki? Web 2.0 Tools in the Elementary Classroom (LIMIT 20)

Are you interested in injecting your classroom with 21st Century learning? Would you like your students to create websites to teach others and demonstrate their understanding? In this session we will explore multiple ways to use blogs and wikis in all curriculum areas and be guided through the creation of your own wiki to use with your students. *Continued in Session C10.*

Presented by: Brynn Bostic, Bowling Green State University

Grade Levels: PreK-8 (**Technology**)

Room: 3100

Session B (9:00 am - 9:50 am) continued

B11 Exclusively for Project pi r² Teachers: Habitat Change

This session (for grant Project pi r² teachers only) will offer cross-curricular, standards-aligned assessments and activities to help K-6 students understand habitat change with Ohio native species. Co-presenters Dr. Eric Worch and Robyne Kramp will present science content and assessment strategies. *Continued from Session A11. Continued in Session C11.*

Presented by: Michelle Klinger, NWO

Heather Norris, Metroparks of the Toledo Area

Karen Mitchell, Metroparks of the Toledo Area

Eric Worch, Bowling Green State University

Robyne Kramp, Bowling Green City Schools

Grade Levels: K-6 (Science)

Room: 2122

Vendor Presentation

B12 Implementing STEM in Your Classroom with Carolina Curriculum and the Smithsonian Institute

Take away free material to implement K-10 STEM initiatives in your classroom. Learn to incorporate STEM standards using research-based programs developed by Carolina Curriculum and the Smithsonian Institution.

Presented by: Missi Zender, Carolina Biological Supply Company

Grade Levels: PreK-8 (Science)

Room: 2107

Session C (10:00 am - 10:50 am)**C1 Ohio Total Science Safety System (OTSSS)**

OTSSS is a comprehensive safety tool designed by Jakel, Inc. and SECO to aid educators in following safety regulations in Ohio science classrooms. Each Ohio public or private middle/junior high and high school can receive one CD. Come and learn how you can keep your science classroom safe and pick up a CD for your school.

Presented by: Janet Struble, Science Education Council of Ohio

Mikell Hedley, Science Education Council of Ohio

Grade Levels: 5-12 (Science)

Room: 2105

C2 Asian Carp—Something Fishy in Your Classroom

Asian carp invaded our technology classroom through an interdisciplinary unit centered around the Life Science Investigation unit created by WVIZ (Cleveland PBS station).

Presented by: Susan Hartman, Danbury Middle School

Grade Levels: 5-8 (Interdisciplinary)

Room: 2109

C3 Integrating STEM Activities Into the PreK-6 Standards-Based Science Curriculum

Participants will investigate STEM activities that are aligned with the new Ohio Science Standards for Ohio. They will also explore lessons that integrate those activities into the preK-6 curriculum and be given a CD of these lessons and other elementary STEM resources.

Presented by: Robert Claymier, Technology Is Elementary

Grade Levels: PreK-6 (Interdisciplinary)

Room: 2110

C4 Modeling Instruction in Physical Science

Have you heard of Modeling Instruction? Come see why many teachers are getting excited about this new way of presenting curriculum. Modeling targets misconceptions and attempts to correct them by having students conduct self-directed labs, participate in whiteboard sessions, and develop models. **Continued from Session B4.**

Presented by: Christie Westenkirchner, Fairview High School

Nate Ash, Perrysburg High School

Grade Levels: 5-12 (Science)

Room: 2107

C5 What Pavlov Can Teach Us About How Math Students Respond to Questions on a Test

This session will examine student misinterpretations of various types of test problems, and how they may have been conditioned to address them in incorrect, yet plausible, ways. The importance of teaching students to read problems accurately will be discussed, and how to help students identify the core concept being tested in a question.

Presented by: Donald Czarcinski, Lourdes University

Grade Levels: 5-12 (Mathematics)

Room: 2111

Session C (10:00 am - 10:50 am) continued

C6 Gravity Racing Challenge

Gravity Racing Challenge promoting STEM Initiative in K-12 through gravity racing.

Presented by: Linda Hubbell & Joe Mazur, All American Soap Box Derby

Grade Levels: 5-8 (Interdisciplinary)

Room: 2113

C7 Interdisciplinary Professional Development: Chemistry and Art

I will speak about knowledge and skills gained from completing a course called Beginning Painting Conservation I at Studio Art Centers International (SACI) in Florence, Italy, as well as my experiences to date collaborating with conservators at the Toledo Museum of Art.

Presented by: Elizabeth Wise, Lourdes University

Grade Levels: 9-12, College (Interdisciplinary)

Room: 2117

C8 You're Never Too Old for Picture Books

Picture books are a great way to introduce concepts, inspire questions, and grab students' attention.

Presented by: Betty Winslow, Bowling Green Christian Academy

Grade Levels: PreK-12 (Interdisciplinary)

Room: 2119

C9 Teaching and Assessing Through Problem-Solving Contexts

We will explore teaching through problem-solving contexts by examining rich standards-focused problems and discussing ways to effectively structure the learning environment. Participants will create open, complex, and realistic problems for their instruction and assessments. *Continued from Session B9.*

Presented by: Jonathan Bostic, Bowling Green State University

Gabriel Matney, Bowling Green State University

Grade Levels: PreK-8 (Interdisciplinary)

Room: 2125

C10 Do You Wiki? Web 2.0 Tools in the Elementary Classroom (LIMIT 20)

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Presented by: Brynn Bostic, Bowling Green State University

Grade Levels: PreK-8 (Technology)

Session C (10:00 am - 10:50 am) continued**C11 Exclusively for Project pi r² Teachers: Habitat Change**

This session (for grant Project pi r² teachers only) will offer cross-curricular, standards-aligned assessments and activities to help K-6 students understand habitat change with Ohio native species. Co-presenters Dr. Eric Worch and Robyne Kramp will present science content and assessment strategies. *Continued from Session B11.*

Presented by: Michelle Klinger, NWO

Heather Norris & Karen Mitchell, Metroparks of the Toledo Area

Eric Worch & Robyne Kramp, Bowling Green City Schools

Grade Levels: K-6 (Science)

Room: 2122

Vendor Presentations**C12 Notebooking: Preparing Students for the 21st Century**

Notebooking provides tools for students preparing for a 21st century workplace. Participants learn how to incorporate notebooks using lessons from the research-based STC Secondary, developed by the Smithsonian Institution.

Presented by: Missi Zender, Carolina Biological Supply Company

Grade Levels: PreK-8 (Science)

Room: 1106

C13 Loops, Whorls, and Arches—Integrating Science, Reading, and Math in the Elementary Classroom

Children are as unique as their fingerprints, but they all can get excited about science! Participate in elementary science activities and take these activity ideas back to your classroom. You will also learn how instructional, reading, and math strategies can be effectively incorporated into a science lesson.

Presented by: Kathy Tabor, Nancy Larson Science

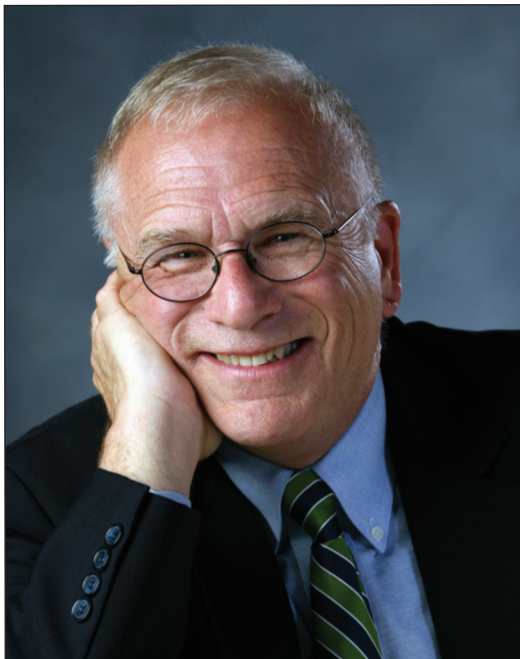
Grade Levels: PreK-4 (Interdisciplinary)

Room: 2103

Lunch and Vendor Area Viewing (11:00 am - 12:50 pm) Commons Area

Keynote (1:00 pm - 1:50 pm) Auditorium

Keynote Presentation



Dr. Gene William Poor, Instructor & Hamilton Professor, Department of Marketing, BGSU

Searching for the AHA

Dr. Gene Poor is the first Scott Hamilton Endowed Professor of Entrepreneurship in The College of Business at Bowling Green State University and is the Director of the Entrepreneur Program. He also serves as Professor Emeritus in the College of Technology where he conceived and launched the Visual Communication Program.

In addition to his academic roles, Dr. Poor is also the founder of LifeFormations, an innovative animatronic company that designs and builds life-like characters for theme parks, visitor centers, museums, and retail establishments.

Dr. Poor has received numerous awards and citations including Bowling Green State University's Student Alumni Association Master Teacher Award. This award is considered the highest honor given to the faculty at BGSU. Additionally, he has received the Kent State University Distinguished Alumni Award and the Ernst and Young Entrepreneur of the Year. Recently, he was inducted into the Dallas-Hamilton Entrepreneurship Hall of Fame.

Session D (2:00 am - 2:50 am)**D1 Trigonometry “Tricks” to Help Students Remember**

Most students know “SOHCAHTOA” to help them remember the trig functions. I will show them how to remember the unit circle, some of the trig identities, derivatives using trig, and even integration involving trig and other tidbits.

Presented by: Beryl Stemen, Owens Community College

Grade Levels: 9-12, College (**Mathematics**)

Room: 2125

D2 Out With the Old; In With the New Ohio Science Content Standards

Now that you are comfortable with the science standards at your grade level, Ohio has created a new set of standards for teachers to follow. This session provides a general overview of the new Science Content Standards and Model Curriculum along with a general timeline of implementation and grade level comparisons of old and new curricula.

Presented by: Janet Struble, Science Education Council of Ohio

Kristie Reighard, Science Education Council of Ohio

Grade Levels: PreK-8 (**Science**)

Room: 2105

D3 Amazing Light—The New (First of Its Kind in the World!) 3D Interdisciplinary Planetarium at UT

Learn about our new 3D fulldome video projection system at the Ritter Planetarium at UT. This amazing projector (the first of its kind in the world!) is the perfect tool to excite and educate students not only about astronomy, but also biology, geology, art, history, and more!

Presented by: Alexander Mak, The University of Toledo

Grade Levels: 5-12 (**Interdisciplinary**)

Room: 2107

D4 What Would I Do as a Chemist? Career Information for High School Students

Information appropriate for high school students who are considering a career in science or engineering will be provided. It will place chemistry in the context of various other fields in terms of subject matter and professional activities. Learn what you can do as a high school chemistry teacher to encourage your students to pursue a career in science.

Presented by: Andy Jorgensen, The University of Toledo

Grade Levels: 9-12 (**Science**)

Room: 2109

D5 Doing Well and Feeling Good About It

Dedicated researchers have turned their attention to the patterns of thinking, feeling, relating, and behaving that create human success. This field has discovered some of the fundamental processes that enable ways to help us better understand and adopt these patterns of relating. Imagine using that knowledge to advance our learners!

Continued in Session E5.

Presented by: Chris Goldenmeister, Sandusky City Schools

Grade Levels: PreK-12, College (**Interdisciplinary**)

Room: 2122

Session D (2:00 am - 2:50 am) continued

D6 Electricity From the Sun: Solar Energy Activities for the Classroom

Activities that I use with my high school students to learn about what factors affect the way solar panels work, as well as activities for younger students that my classes have performed with children at Imagination Station, will be performed. I will also provide lists of resources for teachers to help them include this in their classes. *Continued in Session E6.*

Presented by: Scott Secrest, St. Francis de Sales High School

Grade Levels: 5-12, (Science)

Room: 2103

Vendor Presentations

D7 Teaching Children Through Play and Inquiry Science

Using hands-on examples, we will discuss the importance and impact of both learning through play and scientific inquiry. Our aim is to make these concepts accessible to any educator.

Presented by: Stephen Oswanski, The Toledo Zoo

Grade Levels: PreK-8 (Science)

Room: 2100

D8 Our Wild Neighbors

Meet the wildlife in your backyard. The flying, crawling, slithering critters of your neighborhood. Learn about the programs that Nature's Nursery can conduct in your classroom that align with the Ohio Science Standards.

Presented by: Laura Rusch, Nature's Nursery

Grade Levels: PreK-4 (Science)

Room: 2111

D9 Thinking BIG to Make BIG Impacts in the Classroom

Start with children's natural fascination about the largest land mammal, add the charm of a new calf at the Zoo, and gather BIG ideas about how to teach using elephants across your curriculum. All lessons are TONS more fun when pachyderms are providing the pedagogy! Join TZ educators for BIG ideas and take-home, classroom-ready materials.

Presented by: Linda Calcamuggio, The Toledo Zoo

Joshua Minor, The Toledo Zoo

Grade Levels: PreK-8 (Interdisciplinary)

Room: 2113

Session E (3:00 am - 3:50 am)**E1 The One Room School House: Teaching Developmental Mathematics Using My Math Lab/Course Compass**

This presentation will consist of a review of how to use the Emporium Model for teaching a three course developmental mathematics sequence in the same classroom at the same time. This model allows the students to be rewarded for what they do know and provide the necessary lecture and online remediation to strengthen the areas where they need assistance.

Presented by: James R. Perry, Owens Community College

Grade Levels: 9-12, College (**Mathematics**)

Room: 2100

E2 Mathematics in the Media

This session will examine mathematics as presented in a particular media, namely comics and comic strips. We will explore how mathematics and mathematics education is portrayed and how as mathematics educators we can leverage the comics to illustrate particular points in our classrooms.

Presented by: David Meel, Bowling Green State University

Grade Levels: 5-12, College (**Mathematics**)

Room: 1106

E3 Integrating Technology Into Academic Classes

Participants will explore different technologies and how to utilize them to enhance academic content comprehension. Technologies will include iPad II, wikis, podcasts, garageband, moviemaking, and others. I will share how I incorporate these technologies into my high school classroom, which can be easily adapted for use in other disciplines.

Presented by: David Harms, Penta Career Center

Grade Levels: 9-12, (**Technology**)

Room: 2105

E4 How Polynomials and Numbers Are Alike

Students seem to have problems with adding and subtracting polynomials after they have learned how to multiply them. So I will relate the operation of polynomials to the operations of numbers, since they are related.

Presented by: Beryl Stemen, Owens Community College

Grade Levels: 5-12, College (**Mathematics**)

Room: 2125

E5 Doing Well and Feeling Good About It

Dedicated researchers have turned their attention to the patterns of thinking, feeling, relating, and behaving that create human success. This field has discovered some of the fundamental processes that enable ways to help us better understand and adopt these patterns of relating. Imagine using that knowledge to advance our learners!

Continued from Session D5.

Presented by: Chris Gildenmeister, Sandusky City Schools

Grade Levels: PreK-12, College (**Interdisciplinary**)

Room: 2122

Session E (3:00 am - 3:50 am) continued

E6 Electricity From the Sun: Solar Energy Activities for the Classroom

Activities that I use with my high school students to learn about what factors affect the way solar panels work, as well as activities for younger students that my classes have performed with children at Imagination Station, will be performed. I will also provide lists of resources for teachers to help them include this in their classes.

Continued from Session D6.

Presented by: Scott Secrest, St. Francis de Sales High School

Grade Levels: 5-12 (Science)

Room: 2103

E7 Bringing CSI Into the Classroom

Let your students become CSI detectives in the classroom to spark their interest in science! Set the stage with an exciting crime scene investigation then introduce chemical tests, chromatography, and more. Forensics can also be applied to many other disciplines from math to art.

Presented by: Cynthia Molitor, Lourdes University

Grade Levels: PreK-12 (Science)

Room: 2109

E8 Collaborative Learning Projects Using Technology

Make science engaging through collaborative projects. Integrate technology and higher order thinking skills by using wikis, social networking, and videos.

Presented by: Kathy Laney, Hicksville High School

Grade Levels: 9-12 (Science)

Room: 2110

E9 Mashing Up Software to Create Rich Learning Experiences

This session examines specific technology resources and tools that can be combined to create rich learning experiences to facilitate lifelong learning and promote information fluency in K-12 students across content areas. Use the power of communication technology to help students share their understandings by incorporating authentic tasks.

Presented by: Terry Herman, Bowling Green State University

Aaron Carpenter, Bowling Green State University

Wesley Parsell, Bowling Green State University

Grade Levels: PreK-12, College (Technology)

Room: 3100

E10 Who Is That Lady and What Does She Want?

How to use games, songs, and visuals to quickly focus your students' attention in new situations or environments and subject matter. Come prepared to play along!

Presented by: Jennifer Berk, Metroparks of the Toledo Area

Grade Levels: PreK-8, Informal Educators (Science)

Room: 2117

Session E (3:00 am - 3:50 am) continued**E11 A Discussion of Student Evaluations of Teachers (SETs)**

We will give examples of student evaluations of teachers and cite references that will demonstrate the good, the bad, and the indifferent. Hopefully this will inspire a lively discussion among all present.

Presented by: Raymond Heitger, Bowling Green State University
Andrea Milner, Adrian College

Grade Levels: PreK-12 (Interdisciplinary)

Room: 2119

Vendor Presentations**E12 Native Americans Incorporated Science, the Arts, and Natural Resources to Sustain and Enhance Their Daily Life in the Land Called Ohio**

"Lightfoot" explains and demonstrates how our northwest Ohio area's first Americans lived creatively and in harmony with nature's flora and fauna and developed a culture that remains unnoticed in our society today.

Presented by: Martin Nagy, Arts Council LEW / Seven Eagles Historical Education Center

Grade Levels: PreK-8 (Interdisciplinary)

Room: 2107

E13 Imagination Station Teacher Resources

Learn about all the great resources that the Imagination Station (formerly COSI Toledo) has for you! In addition, we will provide some ideas for engaging hands-on classroom activities.

Presented by: Carl Nelson, Imagination Station

Grade Levels: PreK-8 (Science)

Room: 2111

E14 Houston, We Have a Problem: Enhancing Student Learning With a Distance Learning Program Based on Apollo 13

This session introduces you to the Challenger Center's Tiger Team program, which provides hands-on STEM experiences using Skype to engage students in NASA emergency problem solving. Discover how your class can become part of this grant program. Tiger Team evaluation data demonstrate its effectiveness in raising student content knowledge.

Presented by: Reed Steele, Challenger Learning Center of Lucas County
Jacob Burgoon & Michelle Leow Klinger, NWO

Grade Levels: 5-12 (Interdisciplinary)

Room: 2113

Vendors

All American Soap Box Derby

98 Benedict Drive
Johnstown, OH 43031
(740) 817-0345

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hubbell@johnstown.net
www.aasbd.org

Appold Planetarium at Lourdes University

6832 Convent Blvd
Sylvania, OH 43560
(419) 517-8897

Laura Megeath
lmegeath@lourdes.edu
www.lourdes.edu/CommunityOutreach/AppoldPlanetarium

Arts Council LEW/Seven Eagles Historical Education Center

Common Space
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(419) 531-2046

Martin Nagy
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www.seven-eagles.com

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Gina Wofford
gina.wofford@carolina.com
www.carolinacurriculum.com

Center for Microscopy & Microanalysis

Bowling Green State University
Bowling Green, OH 43403

Carol Heckman
heckman@bgsu.edu
www.bgsu.edu/departments/biology/facilities/

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Reed Steele
lcsc_rs@nwoca.org
www.challenger-lc.org

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Discovery Lab (Air Force)

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Wright-Patterson AFB, OH 45433

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F.T. Stone Laboratory, OSU

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1314 Kinnear Rd.
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Imagination Station

1 Discovery Way
Toledo, OH 43604
(419) 244-2674

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www.imaginationstationtoledo.org

Maumee Valley Historical Society

1035 River Road
Maumee, OH 43537

Darlene Limmer
dlimmer@bex.net
www.wolcotthouse.org/MVHS.html

Metroparks of the Toledo Area

5100 W Central Ave
Toledo, OH 43615
(419) 407-9742

Heather Norris
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www.metroparkstoledo.com

NWOET & WBGU

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Marilyn DuFour

dufourm@toledo.oh.gov

www.raingardeninitiative.org

Sauder Village

PO Box 235, 22611 St Rt 2
Archbold, OH 43502
1-(800) 590-9755

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SECO-Science Education Council of Ohio

2801 W. Bancroft St., MS 924
Toledo, OH 43606
(419) 530-4993

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SETGO/BGSU

328 Life Sciences, BGSU
Bowling Green, OH 43403
(419) 372-4238

Liz Ross

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The Toledo Zoo

P.O. Box 140130
Toledo, OH 43614
(419) 385-5721

Linda Calcamuggio

lindacal@toledo zoo.org

www.toledo zoo.org

Wood County Park District

18729 Mercer Road
Bowling Green, OH 43402
(419) 353-1897

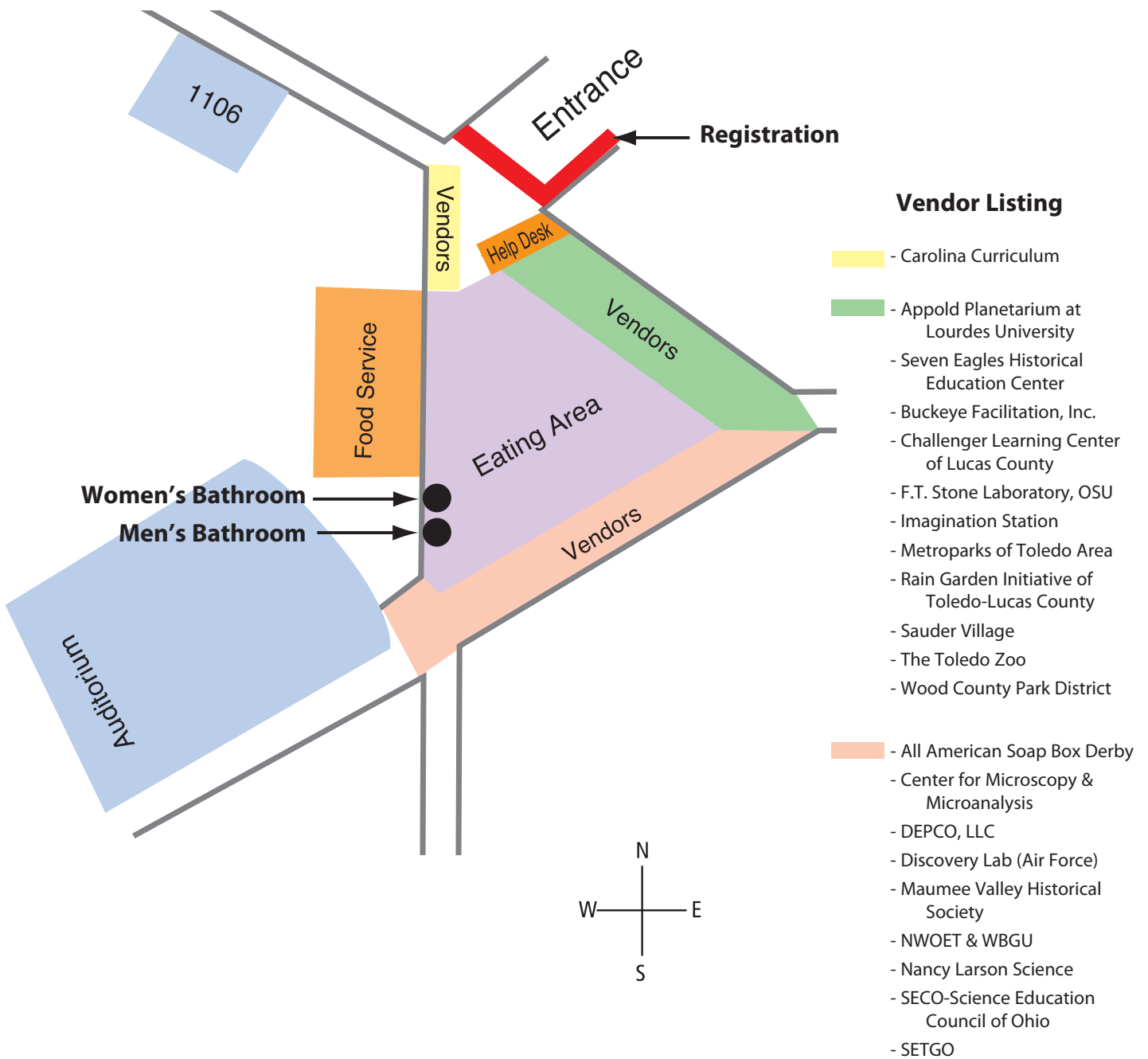
Lori Anteau

lanteau@wcparks.org

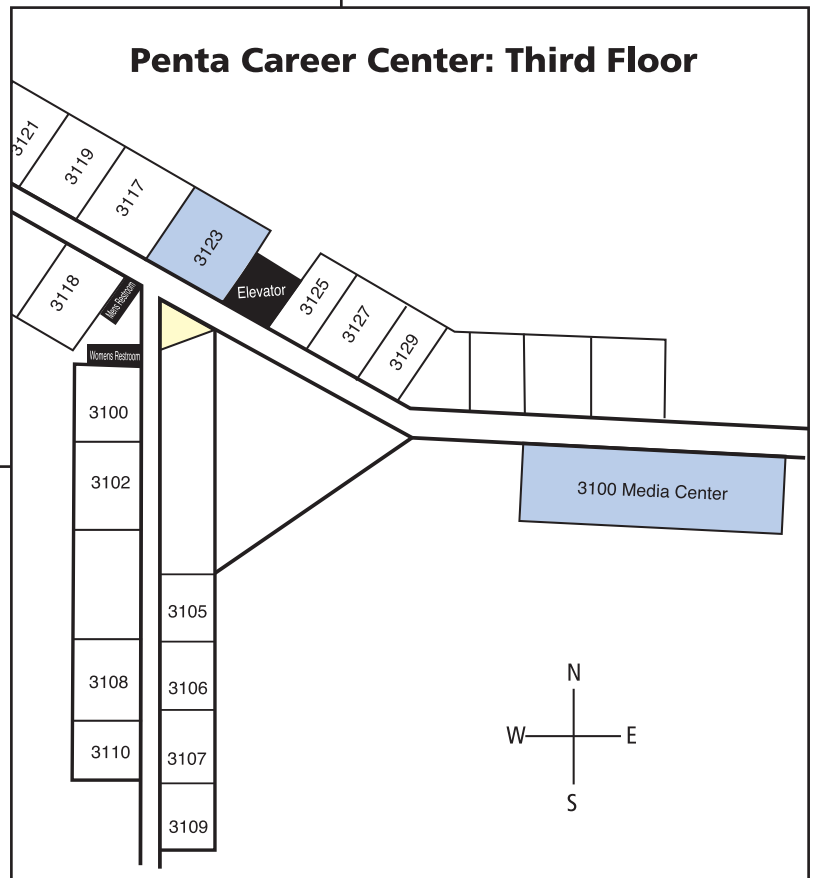
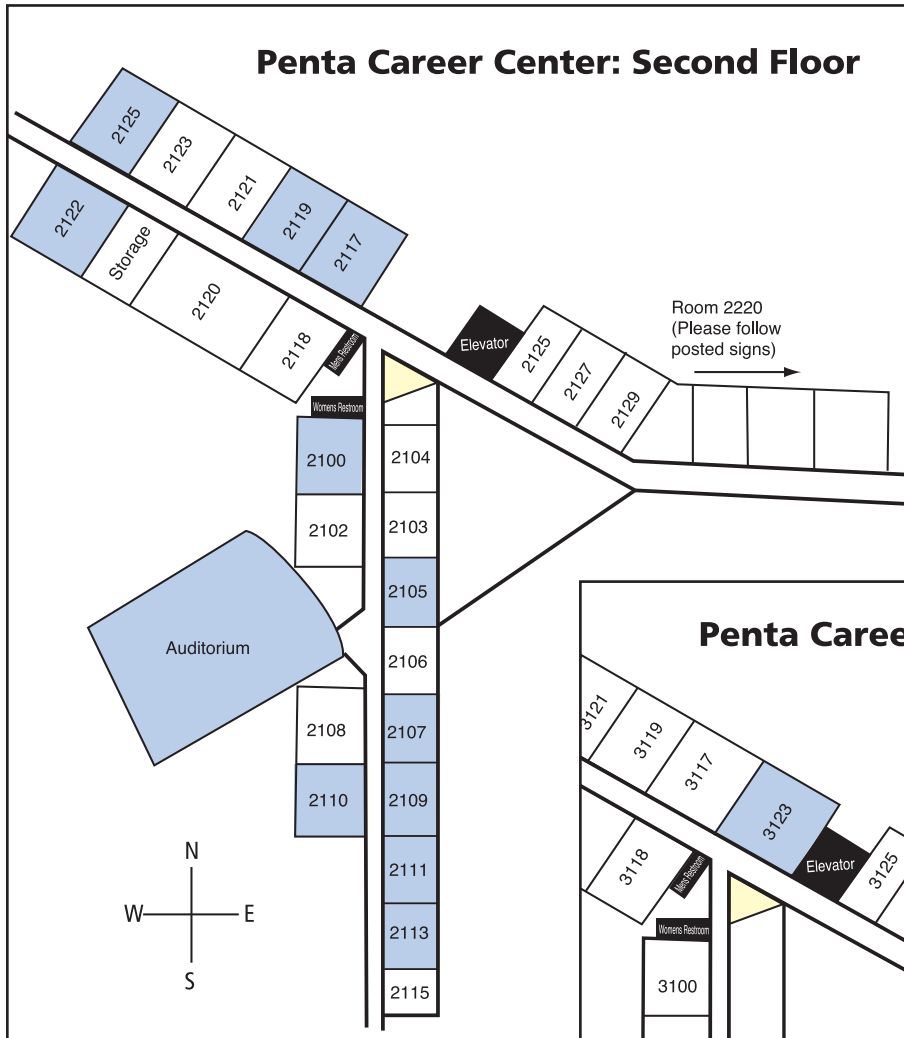
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Penta Career Center Building Maps

Penta Career Center: First Floor



Penta Career Center Building Maps cont.



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Many thanks to

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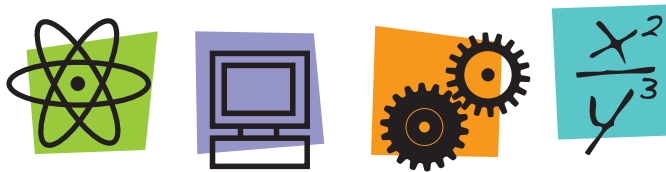
Hosting Organization

Penta Career Center (special thanks to Jeffrey Kurtz,
Deb Everhardt, Tim Davis, and the Culinary Arts Program)



Session Overview

	Auditorium (1st Floor)	1106	2103	2105	2107	2109	2110	2111	2113	2117	2119	2122	2125	3100 (Media Center)
Session A: 8-8:50 am	A1 Interdisciplinary			A2 Science		A4 Technology	A5 Science	A6 Interdisciplinary	A7 Mathematics	A8 Mathematics	A9 Interdisciplinary	A11 Science	A10 Science	A3 Technology
Session B: 9-9:50 am		B12 Science		B1 Interdisciplinary	B4 Science	B3 Interdisciplinary	B2 Science	B5 Technology	B7 Interdisciplinary	B8 Mathematics	B6 Engineering	B11 Science <i>(Exclusively for Project 211-squared participants)</i>	B9 Interdisciplinary	B10 Technology
Session C: 10-10:50 am		C12 Science	C13 Interdisciplinary	C1 Science	C4 Science	C2 Interdisciplinary	C3 Interdisciplinary	C5 Mathematics	C6 Interdisciplinary	C7 Interdisciplinary	C8 Interdisciplinary	C11 Interdisciplinary	C9 Interdisciplinary	C10 Technology
Lunch and Vendor Area Viewing Time (Located in the Commons Area on the 1st Floor)														
Lunch 11am-12:50 pm														
Keynote Presentation: Gene Poor (Located in the Auditorium on the 1st Floor)														
Keynote 1-1:50 pm														
	2100	1106	2103	2105	2107	2109	2110	2111	2113	2117	2119	2122	2125	3100 (Media Center)
Session D: 2-2:50 pm	D7 Science		D6 Science	D2 Science	D3 Interdisciplinary	D4 Science		D8 Science	D9 Interdisciplinary			D5 Interdisciplinary	D1 Mathematics	
Session E: 3-3:50 pm	E1 Mathematics	E2 Mathematics	E6 Science	E3 Technology	E12 Interdisciplinary	E7 Science	E8 Science	E13 Science	E14 Interdisciplinary	E10 Science	E11 Interdisciplinary	E5 Interdisciplinary	E4 Mathematics	E9 Technology



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