Hoosier Association of Science Teachers, Inc.

42nd Annual HASTI

February 6-8, 2013

the Joy of Science

Conference Program

"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."

– Albert Einstein

Hello and welcome to the 42nd Annual HASTI Conference on Science Education! The theme for this year's conference is "The Joy of Science." You see… there is JOY in the realization that all living things on Earth share a common chemistry and ancestry; there is JOY in understanding that everything that happens on Earth and throughout this grand and glorious universe we inhabit is governed by the laws of physics; there is JOY in knowing that every atom in our body was once inside a star; and there is JOY in contemplating the awesome explanatory power of science.

My sense is that many Hoosier teachers are somewhat demoralized by the recent rhetoric of politicians and pundits aimed against the teaching profession. Many are anxious about new procedures governing evaluation and compensation. A word of advice: don't ever let people or procedures get between you and your students; don't ever let anyone or anything rob your classroom of JOY. This conference gives us a chance to stop, take a deep breath, and remind ourselves about why we became teachers and why we're in the classroom. We became science teachers because we love science, we love kids, and we love helping our students develop an appreciation for the beauty of the natural world as revealed by modern science.

I guarantee that you will leave this conference with new ideas, strategies, and activities. It is my sincere hope that you will enter your classroom next Monday morning with renewed enthusiasm, passion, and JOY!

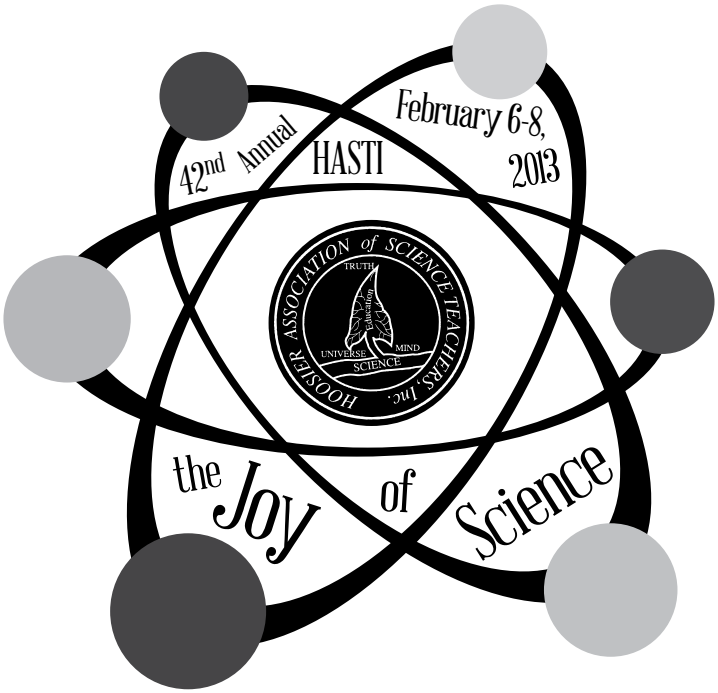
Duane Nickell

Welcome to the 42nd Annual HASTI Conference! That's right, we're celebrating forty-two years of networking, sharing ideas, learning new content, and colleagueship among all of those who support science education in Indiana. Your vibrant presence at this conference and dedicated membership allows HASTI to host one of the largest state science conferences and remain one most active state science organizations in the United States so on behalf of Indiana science educators and their students, I thank you. Enjoy the conference—I hope it is a source of rejuvenation, excitement, and wonder.

Sherry Annee
HASTI President

Conference and Special Events At-A-Glance

Wednesday, February 6	Thursday, February 7	Friday, February 8
11:00 a.m. - 6:30 p.m. Registration Open **8:00 a.m. - 5:00 p.m.** Extended Workshops	**7:00 a.m. - 6:30 p.m.** Registration Open **8:00 a.m.** Exhibit Hall Grand Opening and Ribbon Cutting **8:00 a.m. - 6:30 p.m.** Exhibits Open **8:30 a.m. - 10:15 a.m.** Concurrent Sessions **10:30 a.m. - 12:00 p.m.** Sagamore Ballroom 5 General Session Featured Speaker: David H. Levy, Jarnac Observatory *"A Nightwatchman's Journey: My Adventures as a Comet Discoverer and Skywatcher"* **12:30 p.m. - 3:15 p.m.** Concurrent Sessions **3:30 p.m. - 4:30 p.m.** Association Meetings **4:30 p.m. - 6:30 p.m.** HASTI Social	**7:00 a.m. - 12:00 p.m.** Registration Open **8:00 a.m. - 2:00 p.m.** Exhibits Open **8:30 a.m. - 10:15 a.m.** Concurrent Sessions **10:30 a.m. - 12:00 p.m.** Sagamore Ballroom 5 General Session Featured Speaker: Dr. Eugenie C. Scott, National Center for Science Education, Inc. *"The New Anti-Science Laws"* **12:30 p.m. - 3:15 p.m.** Concurrent Sessions



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Conference Information & Events

Meeting Locations
Concurrent sessions will be held in the Indiana Convention Center. The Exhibit Hall is located in the Convention Center Hall D. The headquarter hotel is the JW Marriott. The social will be held in the HASTI Exhibit Hall. The floor plan of the Convention Center is on pages 58–59 and the Exhibit Hall map on page 57.

Conference Office
The HASTI Conference office is located in Convention Center office, 2nd floor, CS02 -CS03, next to Room 211. Presenters, please feel free to store your presentation materials in the office during convention hours. Please call the HASTI Conference Office, (317) 262-5931, with any questions you may have.

Registration
The Registration Area, located near Hall D of the Convention Center, will be open during the following hours:
Wednesday, Feb. 6, 2013.....11:00 a.m. - 6:30 p.m.
Thursday, Feb. 7, 2013.....7:00 a.m. - 6:30 p.m.
Friday, Feb. 8, 2013.....7:00 a.m. - 12:00 p.m.

Presenters
Presenters should check in at the Information Booth in the Registration Area. Equipment and materials for presentations may be stored in the HASTI Conference Office, 2nd floor, CS02 -CS03.

Exhibit Hall D
Registration badges are required for admission to the Exhibit Hall. Exhibits, located in Hall D of the Convention Center, will be open for viewing during the following hours:
Thursday, Feb.7, 2013.....8:00 a.m. - 5:00 p.m.
Friday, Feb. 8, 2013.....8:00 a.m. - 2:00 p.m.

Coat Room
Coat racks are available in the East Lobby Chamber, located at the bottom of the Hyatt escalators in the Convention Center. Any personal items will be left at your own risk. HASTI will not be responsible for lost or stolen items.

Program Changes
Last minute changes to a program of this size are inevitable.
If changes are necessary, please be sure to note the program changes sheet provided with your program and also see any changes on the change board near the Registration Area.

Audio-Visual Equipment
Presentation rooms will be equipped according to the presenter requests for an LCD projector, overhead projector, screen, and/or VCR/DVD player. For any last-minute audiovisual needs, presenters must arrange and pay for their own equipment. Markey's Audio Visual is the designated AV company. You may contact Brian Solomon at Markey's AV at (317) 780-3951.

Evaluations
HASTI Conference evaluations will be online in 2013. Please watch for an email the week after the conference.

Smoking
Smoking is prohibited at all meetings, concurrent sessions, and meal functions.

Name Badges
Your registration package should include a name badge, ticket for a complimentary Indiana Mineral Aggregate mineral kit, DVD, and raffle ticket for the Thursday Evening Social. Your name badge is your "ticket of admission" to all sessions, exhibits, and other activities except those for which a separate fee is stated (extended workshops).

Sessions and Times
Extended workshops, concurrent sessions, and association meetings will be held at the Indiana Convention Center. A 15-minute break between sessions is built into the program to allow adequate time to get to sessions. The social will be held in the HASTI Exhibit Hall.

Information Booth: Outside Exhibit Hall D
The HASTI Booth will provide information on membership and services. HASTI items will be available for purchase. The HASTI Booth will have answers to conference questions, details on associated groups, and information on area restaurants and attractions.
The booth will be open the following hours:
Thursday, Feb.7, 2013.....7:00 a.m. - 4:00 p.m.
Friday, Feb. 8, 2013.....7:00 a.m. - 4:00 p.m.

Message Board
A message board for conference attendees will be set up in the registration area by Hall D in the Convention Center. Please view the message board for conference updates.

Where to Eat
There will be a concession stand available at the rear of the HASTI Exhibit Hall D, Indiana Convention Center. It will be open from 10:30 am until 2:30 p.m. Thursday and Friday.
Other food and beverage locations:
Hyatt Regency ..... Lobby Area
Marriott Hotel ..... Champions Restaurant
Circle Centre Food Court..... Second Level Circle Centre Mall
JW Marriott ..... High Velocity

IS THIS YOUR FIRST HASTI CONFERENCE?

Where Should I Go? What Should I Do?

Find out where to go and what to see to make your first HASTI Conference a success.
8:00 a.m. Thursday and Friday, Sagamore Ballroom 5

Presented by: Sherry Annee,President of Hoosier Association of Science Teachers, Inc.

2013 Conference Committee

Conference Chair	Duane Nickell
President	Sherry Annee
Vice-President	John Moore
Life Science	Tom McConnell
Physical Science	Rich Perry
Earth Science	Ginger Shirley
Interdisciplinary K-6	Pam Roller
Interdisciplinary 7-12	Carrie Sanidas
Biology	Donna Keller
Ecology / Environment	Frank Drumwright
Chemistry	Claire Baker
Physics	Charles Emmert
Science, Technology, and Society	Carl Wilms
Science Education	Ed Mottel, Jane Hunn and Shannon Hudson
Proof Reader	Shannon Hudson, Liz Schemm
Awards	Danae Wirth
PGPs	Edward Frazier
Exhibits	Charlie Flack
Social	Frank Drumwright
Website / Publicity	Marvin Giesting
Special Meetings	Edward Frazier
Conference Office	Elizabeth Frazier
Conference Planning & Registration	Laura Jackson and Tammie Corbett, cmcglobal

Enjoy a cup of coffee with Exhibitors and Colleagues!

Available each morning in the Lounge Area of Exhibit Hall D

Courtesy of
Hoosier Association of Science Teachers, Inc.

HASTI BOARD MEMBERS

President ..... Sherry Annee
Vice President ..... John Moore
Secretary ..... Claire Baker
Treasurer ..... Greg McCurdy
Immediate Past President ..... Duane Nickell

Board Members:

District I Director ..... Carrie Sanidas
District II Director ..... Danae' Wirth
District III Director ..... Liz Schemm
District IV Director ..... Kirk Janowiak
District V Director ..... Frank Drumwright
District VI Director ..... Tom McConnell
District VII Director ..... Dianna Cooper
District VIII Director ..... Rich Perry
District IX Director ..... Ginger Shirley
Elementary School ..... Pam Roller
Middle-Junior High School ..... Jane Hunn
High School ..... Donna Keller
College ..... Ed Mottel
At Large 1 ..... Carl Wilms
At Large 2 ..... Shannon Hudson

Ex-Officio Members:

Resident Agent ..... Edward Frazier
DOE Science Consultant ..... Jeremy Eltz
NSTA ..... Janet Struble

Publications:

Editor, Sci-Ed-ogram ..... Vacant
Editor, The Hoosier Science Teacher ..... Vacant

CONFERENCE EVALUATION

HASTI Evaluations will be *ONLINE* again in 2013!

Please watch your email the week after the conference to complete the evaluation.

We greatly appreciate your input! **Earn a chance to win a free HASTI membership.**

HASTI Social

Join your fellow colleagues in a wonderful reception to honor HASTI Members,Exhibitors, and Presenters at the 2013 Social.

Come meet your friends, enjoy refreshments, and win door prizes. Admission is free for all conference attendees and the event is exclusive for HASTI attendees. You must have a HASTI badge to attend.

The social hour is sponsored by the Hoosier Association of Science Teachers, Inc.

The social ticket you receive at registration is for the raffle and must be turned in as you enter the exhibit hall. You must be present to win.

Thank You!

HASTI Conference Sponsors

Pearson Education ..... Tote Bags
Indiana Mineral Aggregate Association ..... Mineral Kits
Graduate Level Credit..... Indiana University-Purdue University Columbus

IABT

Indiana Association of Biology Teachers

Join the Indiana Association of Biology Teachers for the special events being offered this year at HASTI!

Thursday, February 7th

- IABT Quick Hits (Room 122, 2:30 p.m.) – Great practical ideas for the classroom which is always a HASTI favorite so don't miss this one!!
- IABT Membership Meeting (Room 122, 3:30 p.m.) – ALL are welcome

2012 IABT Officers:

Past President:	Chris Donovan	donovanc@rushville.k12.in.us
President:	Heather Briggs	hbriggs@bishopluers.org
President Elect:	Darlene Seifert	dseifert@newpal.k12.in.us
Secretary:	Alyce Myers	amyers@njsp.k12.in.us
Treasurer:	John Gensic	john.gensic@gmail.com

For IABT membership information or support please visit us at Facebook! Simply search IABT.

Indiana Earth Science Teachers Assoc. Breakfast & Rock Raffle

Enjoy a continental breakfast and meet with people interested in discussing earth science education.

Friday, February 8, 2013, 7:30 a.m. – 8:15 a.m.
Room 120, Convention Center

The 5th annual rock raffle at a HASTI conference will follow immediately after the IESTA breakfast!

(IESTA members free, non-members $5)

EXTENDED WORKSHOPS

Extended Workshops will be located at the Indiana Convention Center, 100 S. Capitol Avenue, Indianapolis, IN 46225. HASTI registration does not begin until 11 a.m.; therefore, please go to the appropriate location to attend your 8 a.m. Extended Workshop. Extended Workshops are only available to pre-registrants.

= Inquiry Instructions = Technology Applications in Science Instruction = Incorporation of Literacy into Science Education = Human Impacts on the Environment = Assessment for Understanding

CW Commercial Workshop PS Poster Session

Wednesday, February 6, 2013 8:00 a.m.

Fat Dogs and Coughing Horses: Delivery of a Ninth Grade Curriculum **Room 101**
Biology *High School*
Looking for new ways to teach traditional high school biology concepts? Come try out (and take home!) teaching strategies flavored with veterinary medicine real-world relevancy.
Presenter(s): Joe Ruhl (Jefferson High School), Jenny Veatch (Crawfordsville High School)
Fee $0 Limted to 30 attendees

CW **Mad About Madagascar: Engaging Your Students via Envelope Foldable Projects** **Room 102**
Life Science *General*
Discover how your students can become "enveloped" in science content as they create Madagascar themed projects using envelopes. Materials and Dinah's book, *Envelope Graphic Organizers,* provided.
Presenter(s): Nancy Wisker (Dinah Zike Academy)
Fee $35 Limited to 75 attendees

Enhancing STEM Instruction by Bringing the Ocean to Your Classroom – Ocean Waves, Tides, and Upwelling **Room 104**
Ecology/Environment *General*
Learn how to use a field-tested Maury Project module to enhance STEM instruction while teaching students about Ocean Waves, Tides, and Upwelling.
Presenter(s): Kevin Spingler (La Lumiere School)
Fee $0 Limited to 50 attendees

Project Learning Tree Training K-8 **Room 103**
Ecology/Environment *General*
Get certified in Project Learning Tree curriculum! It's environmental education that brings classrooms into nature. You'll get all materials you need to take home.
Presenter(s): Donna Rogler (Department of Natural Resources), Shannon Hudson (Tuttle Middle School)
Fee $20

Inquiry with K-3 Robots **Room 105**
Physical Science *Elementary*
See how Lego WeDo Robots support K-3 learners. We will provide details about science inquiry for UDL, PBL, Special Education, and English Language Leaners.
Presenter(s): Kate Baird (IUPUC), Stephanie Coy (BCSC), Caroline Arbuckle (IUPUC)
Fee $5 Limited to 30 attendees

EXTENDED WORKSHOPS

Wednesday, February 6, 2013 1:00 p.m.

CW **Monster Meiosis and Inheritance** **Room 102**

Biology *College*

The ONLY hands-on lab that teaches the principles of and assesses student understanding of meiosis and inheritance patterns in a truly representative form.

Presenter(s): Kimberly Vogt (Marian University)

Fee $0 Limited to 30 attendees

CW **Out of This World Dinah Zike Cross-Curricular Project** **Room 104**

Interdisciplinary *General*

No room for poster board or shoebox projects? Build a space science-themed Top Pocket Project™ with notebook applications. Book, materials, handouts included in fee.

Presenter(s): Deborah Vannatter, Dinah Zike Trainer, JPL Solar System Educator (Evansville Vanderburgh School Corporation), Kimberly Elpers, Dinah Zike Trainer (Sts. Peter and Paul School), Mary Anne Feller, Dinah Zike Trainer (Delaware Elementary)

Fee $15 Limited to 30 attendees

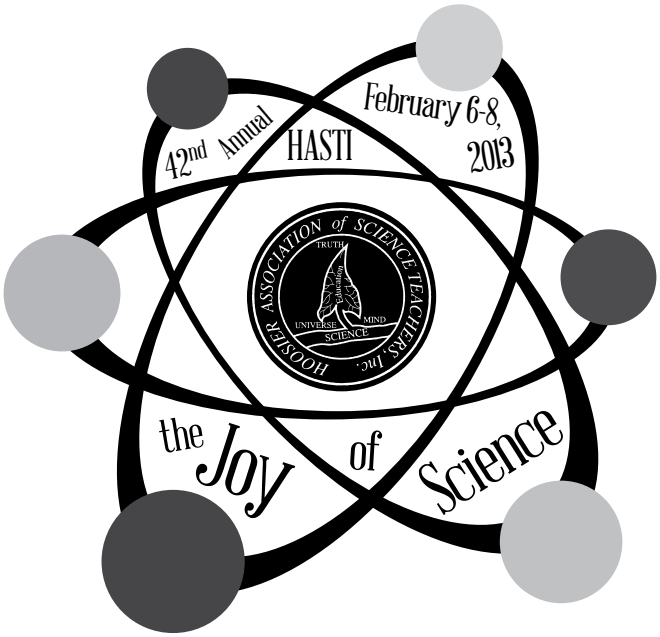
Hands-On with Nuclear Science **Room 105**

Physics *High School*

Use magnetic marbles to teach nuclear astrophysics (radioactivity, reactions, etc.). Take home your own model "nuclei" and lessons/activities. For teachers grades 6-12.

Presenter(s): Micha Kilburn (University of Notre Dame), Zach Constan (Michigan State University)

Fee $10 Limited to 75 attendees



Thursday General Session Speaker

David H. Levy

David H. Levy is one of the most successful comet discoverers in history. He has discovered 22 comets, nine of them using his own backyard telescopes. With Eugene and Carolyn Shoemaker at the Palomar Observatory in California, he discovered Shoemaker-Levy 9, the comet that collided with Jupiter in 1994. That episode produced the most spectacular explosions ever witnessed in the solar system. Levy is currently involved with the Jarnac Comet Survey, which is based at the Jarnac Observatory in Vail, Arizona but has telescopes planned for locations around the world. Levy is the author or editor of 35 books and other products. He won an Emmy in 1998 as part of the writing team for the Discovery Channel documentary *Three Minutes to Impact*. As the Science Editor for Parade Magazine from 1997 to 2006, he was able to reach more than 80 million readers—almost a quarter of the population of the United States! A contributing editor for *Sky and Telescope Magazine*, he writes its monthly "Star Trails" column, and his "Nightfall" feature appears in each issue of the Canadian magazine *Skynews*.

David has given more than 1000 lectures and major interviews, and has appeared on many television programs, such as the *TODAY show*, *Good Morning America*, the National Geographic special Asteroids: *Deadly Impact*, and ABC's *World News Tonight*, where he and the Shoemakers were named Persons of the Week for July 22, 1994. He and his wife Wendee host a weekly radio show available worldwide at www.letstalkstars.com. In 2004 he was the Senator John Rhodes Chair in Public Policy and American Institutions at Arizona State University. He has been awarded five honorary doctorates, and asteroid 3673 (Levy) was named in his honor. In 2010, David became the first person to discover comets visually, photographically, and electronically.

On June 6, 2010, David was awarded a Ph. D. from the Hebrew University of Jerusalem for his dissertation for the Department of English on the topic of "The Sky in Early Modern English Literature: A Study of Allusions to Celestial Events in Elizabethan and Jacobean Writing, 1572-1610."

Levy is President of the National Sharing the Sky Foundation, an organization intended to inspire new generations to develop an inquiring interest in the sciences, or in other words, to reach for the stars.

Currently, Levy resides in Vail, Arizona with his wife, Wendee.

Thursday, February 7, 2013, 10:30 a.m.

A Nightwatchman's Journey: My Adventures as a Comet Discoverer and Skywatcher

I was on the way to my high school French Oral exam in October 1965 when I decided that I wanted to begin a search for comets. Although I began the search on December 17 that year, it was not until 1984—19 years or 917 hours at the eyepiece later—that I discovered my first comet. Twenty-one finds later, I still feel that comets are more than just targets to be catalogued.

Thanks in part to one co-discoveries, Shoemaker-Levy 9, we know more about the role that comet collisions have played in the origin and evolution of life on this planet.

I am still searching for comets both visually and with an automated CCD program. This talk will be about my observing career and how my childhood fascination with the night sky led to a highly satisfying time under the night sky.

Friday General Session Speaker

Dr. Eugenie C. Scott

Dr. Eugenie C. Scott is Executive Director of the National Center for Science Education, Inc., a not-for-profit membership organization of scientists, teachers, and others that works to improve the teaching of science as a way of knowing, the teaching of evolution, and the teaching of climate change.

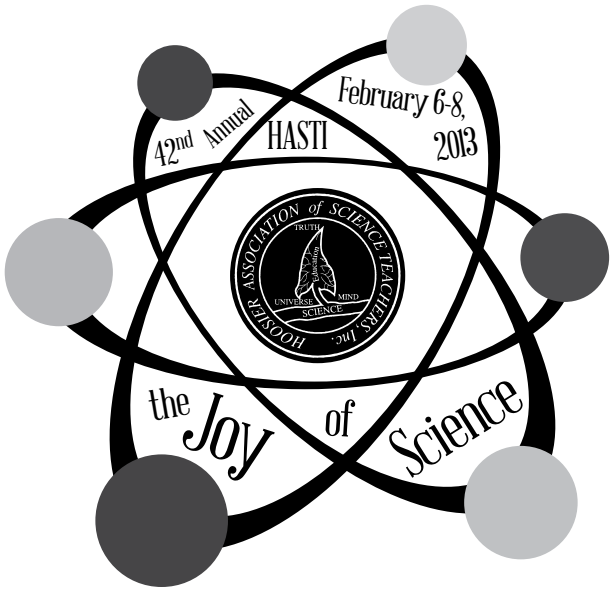
A former college professor, Dr. Scott lectures widely, and is called upon by the press and other media to explain science and evolution to the general public.

Scott is the author of Evolution vs Creationism: An Introduction, co-editor (with Glenn Branch) of Not In Our Classrooms: Why Intelligent Design Is Wrong For Our Schools, and the author of many articles in science journals. She has served as President of the American Association of Physical Anthropologists, and has been honored by both scientists and educators in having been awarded the National Academy of Sciences Public Welfare Medal, the National Science Board Public Service Award, the AIBS Outstanding Service Award, the Geological Society of America Public Service Award, the AAAS Award for Scientific Freedom and Responsibility, the California Science Teachers Association Distinguished Service Award, and the National Association of Biology Teachers Honorary Membership award, "the association's highest honor." In 2009, Scientific American named her "one of 10 outstanding leaders involved in research, business or policy pursuits that have advanced science and technology." She holds honorary D.Sc. degrees from McGill University, Ohio State University, Mt. Holyoke University, the University of Wisconsin-Milwaukee, Rutgers University, the University of New Mexico, Colorado College, and the University of Missouri, and was awarded the University Medal from the University of California-San Francisco.

Friday, February 8, 2013, 10:30 a.m.

The New Anti-Science Laws

Over the past 10 years or so about 40 anti-science laws have cropped up around the country that teachers and scientists have strongly opposed. Where do these bills come from, and how do they relate to Indiana's recent legislative history?



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Thursday, February 7, 2013 8:00 a.m.

So This Is *Your First* HASTI Conference? **Sagamore 5**

Learn how to navigate the HASTI conference by learning tips to make your experience meaningful.
Presenter(s): Sherry Annee (HASTI President)

Thursday, February 7, 2013 8:30 a.m.

Teaching Strategies To Engage Students **Room 107**
Chemistry *High School*
In this workshop, several teaching strategies will be presented to help students learn chemistry and engage them more in their learning.
Presenter(s): Lori White (Cascade High School)

Escaping the Gas Laws with PVTn Tables ... You Don't Know What You're Missing! **Room 105**
Chemistry *High School*
Presenters will demonstrate an effective method of solving gas law problems in which students develop relationships from lab experiences and are not required to memorize equations.
Presenter(s): Erica Posthuma-Adams (University High School of Indiana), Ryan Bruick (Noblesville High School), Ben Buehler (Blue River Valley Jr/Sr), Cathy Huss (Twin Lakes High School), Bill Thornburgh (University High School of Indiana)

Missing Species: Have You Seen This Species **Room 108**
Ecology/Environment *High School*
Students research the endangered species and species of concern of their county. From this they will produce a flyer to inform the public of this missing species.
Presenter(s): Betty Drinkut (Marion High School)

Drop by Drop – Water Kit for your Classroom **Room 124**
Ecology/Environment *General*
Explore water uses, how water is treated, and more. Participants receive a kit including videos, study guides, and demonstration materials. Session limited to 25 participants.
Presenter(s): Jennifer Woolson-Helrigel (Indiana Department of Environmental Management)

Enhancing STEM Instruction by Bringing the Ocean to Your Classroom – Wind-Driven Circulation **Room 122**
Ecology/Environment *General*
Learn how to use a field-tested Maury Project module to enhance STEM instruction while teaching students about how wind-driven circulation occurs in oceans.
Presenter(s): Kevin Spingler (La Lumiere School)

Hawaii Anyone? **Room 110**
Interdisciplinary *General*
We will provide a virtual tour of the teacher enrichment program at the National Tropical Botanical Garden on the Hawaiian Island of Kauai.
Presenter(s): Gail Fusaro (Clinton Prairie Jr/Sr High School), Francine Denecke (Kahler Middle School)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 8:30 a.m.

GIS Data in Your Classroom and Community **Room 123**
Interdisciplinary *High School*
This session will be a discovery event exploring activities utilizing GIS data sets to understand watershed health, as well as geocaching.
Presenter(s): Steven Smith (Purdue University), Dewayne Branch (Purdue University Libraries - GIS), Ann Bessenbacher (DLRC/Purdue University)

Inspire Curiosity with Curiosity **Room 116**
Interdisciplinary *General*
Utilize the amazing Curiosity robotic Mars mission to inspire students to explore the geology, atmosphere and life conditions on Earth. Cross-curricular NASA education resources provided.
Presenter(s): Deborah Vannatter, JPL Solar System Educator (Evansville Vanderburgh School Corporaiton)

Filling Young Brains with Neuroscience **Room 106**
Interdisciplinary *High School*
Incorporate the science of this explosive field—focused on the intersection of the brain and human behavior—into ANY science classroom.
Presenter(s): Stephen Boehm (School of Science at IUPUI)

Using Science Fiction to Improve Science Literacy and Science Interest **Room 120**
Interdisciplinary *General*
Teaching science with the unknown and known frontiers of the human imagination.
Presenter(s): James Hollenbeck (Indiana University Southeast), Evan Bridges (Indiana University Southeast)

Advancing Common Core Goals through Science Education **CANCELLED**
Interdisciplinary *Elementary*
Address Common Core Writing goals through science teaching. Take home solid writing prompts and learn strategies for developing your own. Great resources for Curriculum Maps!
Limited to 30 attendees
Presenter(s): Danae' Wirth (Elkhart Community Schools)

Integrating Science and Mathematics in Upper Elementary and Middle School: Exploring Water and DNA Using Interactive Models **Room 109**
Life Science *Middle Level*
Explore states of matter, pattern recognition, and modeling as a science practice using engaging manipulatives that allow student-centered, hypothesis-driven learning about water, salt, and DNA.
Presenter(s): Margaret Franzen, Tim Herman (Milwaukee School of Engineering)

Fun with Light and Color **Room 121**
Physical Science *General*
Participants will explore light and color mixing and use inexpensive common materials to construct simple spectroscopes and view light sources.
Presenter(s): Joel Bryan (Ball State University)

CW **What the Heck Happened?!?!** **Room 127**
Physical Science *General*
Discrepant events seize students' attention, and Educational Innovations has some real jaw droppers. Come explore our favorite student confusers. Door prizes and freebies!
Presenter(s): Ted Beyer (Educational Innovations)

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Thursday, February 7, 2013 8:30 a.m.

CW **The Icing on the Cake: FOSS 3rd Edition** **Room 102**
Science Education *Elementary*
Attend an overview of the new FOSS 3rd Edition. See how FOSS is designing to make active learning engaging for students/teachers. DOOR PRIZES
Presenter(s): Kimberly Elpers (Sts. Peter and Paul School)

A Scientist in Your Classroom: A "How–To" Guide **Room 101**
Science/Technology/Society *General*
The session will provide a step-by-step guide to bringing a local scientist into your classroom—everything from in-class visits to Skype to laboratory tours.
Presenter(s): Kathleen Marrs, Mariah Judd, Don Meissner (IUPUI)

Using Robotics to Engage Students in Technology **Room 125**
Science/Technology/Society *General*
Robotics can offer a strong engagement tool to encourage students to use technology and learn problem solving skills.
Presenter(s): Brian Boehler (ETHOS Science Center)

Melding Media Literacy and Technology with ICP Core Standard Instruction **Room 126**
Science/Technology/Society *High School*
We present our attempt at a 9th grade ICP unit for Core Standard 8 - Society that includes science current events, media literacy standards, appropriate technology integration, authentic assessment, and a creative student product.
Presenter(s): Elizabeth Ernst (Herron High School), Noelle King (IUPUI Woodrow Wilson Fellows)

Thursday, February 7, 2013 9:30 a.m.

Teaching Epigenetics to Advanced High School Biology Students **Room128**
Biology *High School*
In this session participants will receive materials and techniques for teaching genomic imprinting to high school students in Genetics, Biology II, or AP Biology courses.
Presenter(s): Joe Ruhl (Jefferson High School), Amy Lossie (Animal Sciences Dept. Purdue University)

The New AP Biology - Are You Having Fun Yet? **Room 123**
Biology *High School*
All AP Biology teachers are encouraged to attend this open forum to share their experiences, problems, and joys with the newly launched course.
Presenter(s): Jeff Smith (Indiana Academy)

Inspired by Nature? Show Your Students They Can Be Too! **Room 106**
Biology *High School*
This session will introduce the concept of biomimicry and demonstrate lesson plans geared to enhance creativity in the science classroom.
Presenter(s): Stacey Summitt-Mann (University High School of Indiana)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 9:30 a.m.

How Do We Know What We Know? How to Make Experimental Data Meaningful **Room 107**
Biology *High School*
In this session we will be collecting data, analyzing data using statistics, and thinking about how to represent data in meaningful ways.
Presenter(s): Kari Clase (Purdue University), Kathy Daniels (Mississinewa)

Building a Better Boat: Creating a Constructive Environment for Inquiry **Room 105**
Chemistry *High School*
Presenters will provide a simple and effective activity to introduce students to an inquiry-based course.
Presenter(s): Erica Posthuma-Adams (University High School of Indiana), Ryan Bruick (Noblesville High School), Ben Buehler (Blue River Valley Jr/Sr), Cathy Huss (Twin Lakes High School), Bill Thornburgh (University High School of Indiana)

Research Goes to School–Bringing the Advanced Research of Biofuels to the High School Classroom **Room 108**
Ecology/Environment *High School*
Discover how to bring next-generation research of conversion of biomass to biofuels to your classroom. Teacher-developed problem-based learning units will be shared.
Presenter(s): Lisa Kirkham (Purdue University), Jerry Fuelling (North Central High School), Donna Keller (North Judson-San Pierre High School), John Gensic (New Prairie High School), Anne-Marie Wopata (Guerin Catholic High School), Sheridan Smith (New Tech High School), Alyce Myers (North Montgomery High School)

Composting with Worms–Make a Worm Bin **Room 124**
Ecology/Environment *General*
Build your own worm compost bin (easy and light to carry). How to care for bin and worm activities included.
Session limited to 25 participants.
Presenter(s): Jennifer Woolson-Helrigel (Indiana Department of Environmental Management)

Enhancing STEM Instruction by Bringing the Ocean to Your Classroom—Density-Driven Ocean Circulation **Room 122**
Ecology/Environment *General*
Learn how to use a field-tested Maury Project module to enhance STEM instruction while teaching students about how density-driven circulation occurs in oceans.
Presenter(s): Kevin Spingler (La Lumiere School)

Hawaii Marine Science Seminar **Room 110**
Interdisciplinary *High School*
An opportunity for teachers to learn how to recruit and escort their students to Hawaii for a two week program with focus on Marine Science.
Presenter(s): Dennis O'Rourke (Retired), Steve Makurat (Brown County High School)

Galileo and the Moons of Jupiter: A Student Investigation of the Birth of Experimental Astronomy **Room 116**
Interdisciplinary *General*
A simple hands-on astronomy exercise based on Galileo's famous experiment: illustrating student engagement and developing student questions in the classroom. For high and middle school.
Presenter(s): Deborah Vannatter (Evansville Vanderburgh School Corporation), Gordon Berry (University of Notre Dame)

Electrochemical Cells and Batteries **Room 121**
Physical Science *General*
Participants will explore hands-on activities related to electrochemical cells and batteries, including the Voltaic pile, fruit and vegetable cells, and cells in combination.
Presenter(s): Joel Bryan (Ball State University)

= Inquiry Instructions = Technology Applications in Science Instruction = Incorporation of Literacy into Science Education = Human Impacts on the Environment = Assessment for Understanding

Thursday, February 7, 2013 9:30 a.m.

Explicit Instruction in Science Reading and Writing CANCELLED
Interdisciplinary *Elementary*
Learn to make authentic connections between science content learning and English Language Arts through explicit instruction and the use of science notebooks with non-fiction literature.
Limited to 30 attendees
Presenter(s): Danae' Wirth (Elkhart Commuity Schools)

Riding Across the Curriculum in a Gaming Flaming Way **Room 120**
Science Education *General*
This session is designed for science teachers in grades K-12 who want to maximize the educational possibilities and opportunities for all students.
Presenter(s): Deborah Calhoun (Pike High School Freshman Ctr)

Is There An App For That? Scientific Inquiry Enhanced by Smartphones and Electronic Tablets **Room 126**
Science Education *High School*
Little gives students more joy than their smartphones. These devices hold potential for fostering science learning. We share several apps we used to support inquiry.
Presenter(s): Gayle Buck (Indiana University Bloomington), Banu Erumit (Indiana University), Serhat Erumit (Indiana University), Khadija Fouad (Indiana University), Tina Harris (Indiana University), Mary Mills (Indiana University)

The Use of the Modeling Curriculum in First Year Biology for Special Education Students **Room 104**
Science Education *High School*
Differentiated instruction for adapting lessons to meet Individualized Educational Plans and 504s can be accomplished through the use of accommodations and modification.
Presenter(s): Judith Abram-Odigbok (Fort Wayne Community Schools), Carmen Mollison (Fort Wayne South Side High School), Ronald Newhouse (Fort Wayne South Side High School)

Notebooking for Our Youngest Scientists! **Room 101**
Science Education *Elementary*
Learn an effective hands-on approach to notebooking with primary grades. Focus on integrating reading and writing into science for grades K-2!
Presenter(s): Erin Bangel, Stefanie Bricker, Stephanie Warner (MSD of Decatur Township)

Science2Go - Building a Community-Supported Traveling STEM Bus **Room 125**
Science/Technology/Society *General*
Learn how a collaboration of a non-profit science organization, a local school system, and business partners developed an impressive traveling STEM opportunity for all!
Presenter(s): Patsy Boehler (ETHOS, Inc.), Matthew McQueen (Elkhart Community Schools)

Evolution Now! Resources and Activities for Teaching Evolution from NESCent **Room 109**
Interdisciplinary *General*
Tired of using the same old resources and activities to teach evolution? This session will introduce new alternatives from The National Evolutionary Synthesis Center (NESCent).
Presenter(s): Jory Weintraub (National Evolutionary Synthesis Center)

CW **STEM Education and TI-Nspire Technology** **Room 102**
Science Education *General*
STEM Education and TI Technology go hand-in-hand. Come see how TI-Nspire Technology can be used to capture, analyze, and model real-world data and engage students in problem solving and critical thinking in a way that is impactful.
Presenter(s): Bill Webb (Covenant Christian High School, Texas Instruments)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 10:30 a.m.

Thursday General Session

A Nightwatchman's Journey: My Adventures as a Comet Discoverer and Skywatcher **Sagamore Ballroom 5**

Join David Levy as he talks about his observing career and how a childhood fascination with the night sky led to a highly satisfying time under the night sky.

Presenter(s): David H. Levy (Jarnac Observatory)

Thursday, February 7, 2013 12:30 p.m.

A Baker's Dozen: Hands-on Activities on the Principles of Diffusion and Osmosis **Room 128**

Biology *High School*

Recieve ideas on how to clarify molecular movement in solutions and through membranes using a hands-on approach that addresses Indiana biology standards.

Presenter(s): Greg McCurdy, Stuart Tower (Salem High School), Stuart Tower

I-ACT Chemistry Share-A-Thon **Room 110**

Chemistry *High School*

Indiana Alliance of Chemistry (IACT) members will share lessons and ideas related to chemistry.

Presenter(s): Cathy Huss (Twin Lakes High School)

Finally, Stoichiometry Students Understand! **Room 105**

Chemistry *High School*

This session demonstrates an alternative to the traditional algorithmic approach to teaching stoichiometry. Once you see this innovative constructivist approach, you won't go back!

Presenter(s): Erica Posthuma-Adams (University High School of Indiana), Ryan Bruick (Noblesville High School), Ben Buehler (Blue River Valley Jr/Sr), Cathy Huss (Twin Lakes High School), Bill Thornburgh (University High School of Indiana)

Our Never-Fail Science Lesson: Engaging Students in Inquiry from Day 1 **Room 101**

Interdisciplinary *Elementary*

Experience the "Joy of Science" in a fun-to-teach investigation that models how science works, using materials that are easy to obtain and prepare.

Presenter(s): Susan Johnson (Ball State University), Jessie Bloom (Fort Wayne Catholic Diocese), Dick Dettmer (Retired Fort Wayne Community Schools), Sharon Orr (Retired Fort Wayne Community Schools)

School-Wide Spectacular Science Days **Room 103**

Interdisciplinary *Elementary*

Watch the excitement of over 400 K-3 primary elementary school students all being wowed into doing super science activities at the same time.

Presenter(s): Pam Roller (Thompson Elementary)

Building Connections in Science Teaching **Room 109**

Interdisciplinary *High School*

The 21st Century Teacher is expected to develop a network that extends to other professionals, as well as the community.

Presenter(s): Peter Berg (Decatur Central High School)

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Thursday, February 7, 2013 12:30 p.m.

Persistence of Misconceptions from Middle School to College: Strategies to Confront and Assess Misunderstandings — **Room 122**
Interdisciplinary — *General*
This workshop demonstrates an experimental design that directly confronts misconceptions. Participants will learn how to assess misconceptions and will make an activity for their classroom.
Presenter(s): Kristy Wilson (Marian Univeristy)

Interactive Science Notebooks....for Assessment? — **Room 116**
Interdisciplinary — *General*
Participants in the fast-paced hands-on workshop will create three-dimensional notebook graphic organizers for learning and assessment.
Presenter(s): Deborah Vannatter, Dinah Zike Trainer (Evansville Vanderburgh School Corporation), Kimberly Elpers, Dinah Zike Trainer (Sts. Peter and Paul School), Mary Anne Feller, Dinah Zike Trainer (Delaware Elementary)

CW **Top 10 Ways (or more) You Can Use Free Web Tools in Your Classroom Now!** — **Room 120**
Interdisciplinary — *General*
Demonstration of free resources to 1) keep your online materials organized, 2) improve your productivity, 3) share content, and 4) use in classroom activities.
Presenter(s): Julie OBrien (Eli Lilly and Company)

Bedbugs in School – Challenges and Opportunities — **Room 127**
Life Science — *Elementary*
This session explains what schools should do about bedbugs and introduces curriculum with activities for grades 3, 4, and 5 called "Bedbugs and Bookbags."
Presenter(s): Margaret Huelsman, Indra Frank (Improving Kids' Environment)

CW **Fantastic Physical Science Demonstrations from Flinn Scientific** — **Room 107**
Physical Science — *High School*
Experience demonstrations that teach common physical science topics – sound, color dynamics, energy, pressure, density, rotation, and scientific inquiry. Over a dozen demonstrations will be performed.
Presenter(s): Janet Hoekenga (Flinn Scientific, Inc.)

Making Sound Progress on Waves — **Room 126**
Physics — *High School*
Sharing handouts and standards included. Demonstrations and activities that I do in general physics during the waves and sound unit.
Presenter(s): Rich Perry (Greenwood Community High School)

CW **CSI Flight Adventures** — **Room 102**
Physics — *Elementary*
Become a Curious Scientific Investigator and learn how models are tools we use to explore the science of flight and overcome aviation challenges, and ways models are an essential when studying math, science, and engineering. Online modules and multimedia products that enhance unit lessions will be shared.
Presenter(s): Becky Wolfe (The Children's Museum of Indianapolis)

Keeping It Real! Insights from a Teacher of the Year Finalist — **Room 106**
Interdisciplinary — *High School*
Let's discuss keeping it real in the classroom and what excites my students in physics and chemistry.
Presenter(s): Amy Haywood (Decatur Central High School)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 12:30 p.m.

Notebooking Basics **Room 121**
Science Education *General*
Hands-on inquiry lessons will be used to model notebooking concepts that can be implemented in a K-8 classroom.
Presenter(s): Dawn Bick (Hasten Hebrew Academy of Indianapolis), Beth Leffler (Carmel Middle School)

CW **Swift and Motic Help to Prepare Students for the 21st Century Using Stem Initiatives** **Room 123**
Science Education *General*
See how to convert your current science labs to digital using digital products from Swift and Motic software and FREE Image™ software.
Presenter(s): David Doty (Swift Optical Instruments Inc.), Larry Winkleman (Winkleman Microscopes)

Are Your Students Excited About Science? They Can Enjoy Learning with the High School Science Modeling Curriculum **Room 104**
Science Education *High School*
Highlights of the Notre Dame and University High School (Carmel) 2012 workshops in chemistry and biology, and discuss future NISMEC workshop plans, including physics modeling.
Presenter(s): Gordon Berry (University of Notre Dame), Lynda Rose (Penn-Harris-Madison High School), Ben Buehler (Blue River Valley Jr-Sr High School), Erica Adams (University High School), Jennifer Hicks (I-STEM)

Writing Grants to Get Resources for Your Classroom **Room 124**
Science Education *General*
The session will provide hints and suggestions for getting external funds for your classroom.
Presenter(s): Kate Baird (IUPUC), Carol Chen (Retired)

Improving Your Science Inquiry Program **Room 125**
Science Education *General*
An effective science inquiry program must contain five essential components. This presentation discusses those five components and how to maximize your impact.
Presenter(s): Patsy Boehler (ETHOS Science Center)

Thursday, February 7, 2013 1:30 p.m.

Henrietta's Story of Cancer, p53, and Eternal Life **Room 106**
Biology *High School*
A collection of hands-on inquiry activities that illustrate how Henrietta Lacks' story is used as a central theme for teaching cell cycle, genetics, and biotechnology.
Presenter(s): Christina McCarter (Brebeuf Jesuit Preparatory School)

Using Natural Selection as a Unifying Theme and 2010 Biology 1 Standards **Room 128**
Biology *High School*
This presentation will show how to begin the school year and continually revisit natural selection to help students make connections throughout the Biology 1 standards.
Presenter(s): John Gensic (New Prairie High School)

Whiteboarding: Giving Your Students the Floor to Explain What They Understand **Room 105**
Chemistry *High School*
Presenters will provide attendees with nine strategies for using whiteboards in the chemistry classroom to promote student engagement, ownership, and retention of content.
Presenter(s): Erica Posthuma-Adams (University High School of Indiana), Ryan Bruick (Noblesville High School), Ben Buehler (Blue River Valley Jr/Sr), Cathy Huss (Twin Lakes High School), Bill Thornburgh (University High School of Indiana)

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Thursday, February 7, 2013 1:30 p.m.

Demo-A-Thon **Room 110**
Chemistry *High School*
Check out these three old guys' favorite presentations of several chemistry concepts including areas of density, gas laws, equilibrium and many more...
Presenter(s): Merle Callahan (North Daviess High School), John Calhoun (Salem High School), Steve Riggle (Salem High School)

Standards-Based Grading in the Chemistry I Classroom **Room 126**
Chemistry *High School*
This session summarizes the principles of standards-based grading and the experience of two teachers implementing this form of assessment in the chemistry classroom.
Presenter(s): Jeremy Horner (Carmel High School), Kimi Fellers (Carmel High School)

Let's Go APES! **Room 108**
Ecology/Environment *High School*
AP Environmental Science teachers will get together to share ideas, labs, and review activities.
Presenter(s): Dotty Johnson (Crown Point High School)

NOAA Teacher at Sea: The Entire Journey from Application to Classroom **Room 121**
Ecology/Environment *General*
You will learn all about the NOAA Teacher at Sea program during this session. Includes hands-on activities you can use in your classroom.
Presenter(s): Valerie Bogan (Maple Crest Middle School)

***Inquire*, A Student Handbook for 21st Century Learning** **Room 120**
Interdisciplinary *General*
Worried about connecting to the CCS, PARCC, or Smarter-Balanced tests? Learn how this resource can truly teach students to think critically. Door prizes given!
Presenter(s): Shannnon Hudson (Tuttle Middle School)

Engineering New Ways to Recycle Paper and Filter Water in the Elementary Science Classroom **Room 127**
Interdisciplinary *Elementary*
Participants learn about three teachers' practical experiences of integrating life science, standards-based engineering design tasks in the grade 5 classroom. Handouts are provided.
Presenter(s): Kelly Myers (Wea Ridge Elementary School), Sarah Roth (Wea Ridge Elementary School), Sara Wright (Wea Ridge Elementary School), Brenda Capobianco (Purdue University), Chell Nyquist (Purdue University)

Maintaining the Balance: Using Scientific Inquiry to Improve Literacy **Room 122**
Interdisciplinary *Middle Level*
Strategies will be presented to incorporate literacy into inquiry-based science modules. Emphasis is on vocabulary, reading, writing, and talking using notebooking as the foundation.
Presenter(s): Carrie Sanidas (Willowcreek Middle School), Marcella Haupt (Willowcreek Middle School), Laurie Littke (Willowcreek Middle School)

Urban Green **Room 107**
Ecology/Environment *General*
Examine a native landscape/outdoor classroom developed by students with support from BP and Wildlife Habitat Council. Design, outreach, and funding opportunities will be discussed.
Presenter(s): Erin Nolan-Higgins (School City of East Chicago)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 1:30 p.m.

CW Using Inquiry to Explore Plants — **Room 102**
Life Science — *Elementary*
Combine inquiry and literacy with the plant lifecycle. Join Children's Museum staff and learn to use rapid-cycling plants in your elementary life science classroom.
Presenter(s): Becky Wolfe (The Children's Museum of Indianapolis)

PS Check Out These Awesome Web-Based Learning Activities! — **Outside Exhibit Hall**
Physical Science — *High School*
Three web-based astronomy modules are available at Indiana University Bloomington. Students can explore novae in the Andromeda, find binary stars, and create color images.
Presenter(s): Catherine Pilachowski (Indiana University)

Let the Data Speak — **Room 109**
Physics — *High School*
Use video analysis, Google Docs collaborative software, and a spreadsheet to teach students to analyze their data and compare their results to the class.
Presenter(s): Peter Berg (Decatur Central High School)

Science Inquiry Integrated with Technology — **Room 101**
Science Education — *Elementary*
Participate in an interesting activity that integrates inquiry strategies and interactive technology tools.
Presenter(s): Tahsin Khalid (Southeast Missouri State University)

ISI Implementation for 5th-8th Grades: Some Teacher-Developed Extensions — **Room 104**
Science Education — *Middle Level*
Experience a hands-on activity illustrating ideas from two summer workshops of SBCSC teachers investigating the ISI kits for 5-8th grades. Hear implementation and extensions suggestions.
Presenter(s): Gordon Berry (University of Notre Dame), Kent Mikel (Schmucker Middle School), David VanDyke (Clay Intermediate Center)

Research Matters: Designing Hands-On Activities through Hands-On Research — **Room 116**
Science Education — *High School*
This session focuses on the benefits of participating in research and using current topics of scientific research to develop meaningful units in science.
Presenter(s): Phillip Cook (Culver Academies)

Finding Free Resources From NSTA — **Room 124**
Science Education — *General*
The session will provide an introduction to online resources available from the NSTA Learning Center.
Presenter(s): Kate Baird (IUPUC), Stephanie Coy (BCSC)

Literature and Science: The 5E Way — **Room 103**
Science Education — *Elementary*
Lesson plans geared for the elementary classroom that incorporate language arts and science using the 5E lesson plan format.
Presenter(s): Deborah Hanson (Hanover College)

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Thursday, February 7, 2013 1:30 p.m.

The Blue Print for an Effective Resource Center **Room 125**
Science Education *General*
One of the components of a successful inquiry program is the development of an effective Resource Center to manage curriculum.
Presenter(s): Dennis Boehler (ETHOS Science Center)

CW **Forensic Updates: The Latest and Best Practices for Teaching Forensics** **Room 123**
Science/Technology/Society *General*
Investigate best practices for teaching forensics by incorporating the shared strategies into your curriculum. See how forensics fits the STEM core curriculum and engages students.
Presenter(s): David Doty (Swift Optical Instruments), Mike Benz (Benz Microscopes)

Thursday, February 7, 2013 2:30 p.m.

IABT Quick Hits **Room 122**
Biology *High School*
A collection of quick lessons and activities presented by Biology teachers. Handouts of lessons will be available on CD.
Presenter(s): Heather Briggs (Bishop Luers High School), Darlene Seifert (New Palestine High School)

An Attempt Legislate Teaching Creation Science: The Past, Present, and Future of Indiana General Assembly Senate Bill 89 **Room 103**
Biology *High School*
I will summarize the movement and outcome of Senate Bill 89 in the 2012 Indiana General Assembly and discuss its probable reintroduction in 2013.
Presenter(s): John Staver (Purdue University)

The Cellular Landscapes of David Goodsell: Biology at the Mesoscale **Room 107**
Biology *College*
Explore the amazing cellular landscapes by David Goodsell - representing the crowded protein environment of an E. coli cell, a mitochondrion, a synapse, and human cell.
Presenter(s): Tim Herman (MSOE), Margaret Franzen (MSOE)

The Chemistry Conversation Pit **Room 110**
Chemistry *High School*
An unstructured opportunity for high school and college chemistry teachers to meet. Anyone with an interest in chemistry and conversation is welcome to attend.
Presenter(s): Ed Mottel (Rose-Hulman Institute or Technology), Bill Bayley (Purdue University)

Why Do the Seasons REALLY Happen? **Room 121**
Earth Science *Middle Level*
Students finding it difficult to understand how the seasons happen? Come to this interactive, problem-based learning format. Free handouts and goodies to take home!
Limited to 50 attendees.
Presenter(s): Shannon Hudson (Tuttle Middle School), John Harsh (Deep River Outdoor Education Center), Michelle Kornberger (Snowden School)

What Physics Concepts Have Students Learned Best After 12 Years of Schooling? **Room 128**
Physics *High School*
Research on physics content knowledge of university students in relation to whether or not they took high school physics or ICP will be presented.
Presenter(s): Joel Bryan (Ball State University)

CW Commercial Workshop PS Poster Session

Thursday, February 7, 2013 2:30 p.m.

Earth Science Teachers Share-A-Thon **Room 116**
Earth Science *High School*
Come join Earth Science teachers from around Indiana to share ideas, lesson plans, references and resources that work for you in the classroom.
Presenter(s): Vickey Zehringer (Northwestern High School), Tina Harris (East Side Middle ASchool), Gary Potter (North Harrison High School), Steve Smith (Purdue University)

PS **Blueprint for Better Science Teachers with Reading and Technology** **Outside Exhibit Hall**
Earth Science *General*
This study will research the most effective teacher qualities and techniques that make science teachers most effective.
Presenter(s): Christopher Bradley Jr. (Indiana University Southeast)

Going Green in Kindergarten **Room 102**
Ecology/Environment *Elementary*
Learn about composting, growing things, and the peril of the monarch butterfly in this session.
Presenter(s): Kristen Poindexter (Spring Mill Elementary School)

Update: Conservation and Environmental Education **Room 124**
Ecology/Environment *General*
This program will discuss two hands-on environmental activities that can be used in a variety of classrooms.
Presenter(s): Rick Parsons (Tippecanoe Co. Solid Waste District & Tippecanoe Co. Soil and Water Conservation District)

Using Scientific Literacy to Answer the Question: Is Climate Change Anthropogenic? **Room 108**
Ecology/Environment *High School*
Learn how one teacher navigates the politically charged topic of climate change with an emphasis on science literacy skills.
Presenter(s): John Brady (Brebeuf Jesuit Preparatory School)

The Institute for Accessible Science (IAS): Broadening Participation in Science for Students with Physical Disabilities **Room 126**
Interdisciplinary *College*
Come discover how the Institute for Accessible Science's efforts can support you and your students with physical disabilities as they pursue a career in science.
Presenter(s): Bradley Duerstock (Purdue University), Susan Mendrysa (Purdue University), Lisa Hilliard (Purdue University)

Establishing and Developing Whole-Class Dialogue in an Elementary Science Classroom **Room 127**
Interdisciplinary *Elementary*
This session explains and models how an experienced 5th grade teacher, using argument-based science inquiry, establishes patterns of talk that meet Indiana's science literacy standards.
Presenter(s): Matthew Benus (Indiana University Northwest)

Using Scientific Publications in Your Classroom **Room 120**
Interdisciplinary *General*
Show students "how scientists do real science" by using scientific publications. Using actual journal articles, learn how you can incorporate scientific research into your lessons.
Presenter(s): Julie OBrien (Eli Lilly and Company)

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Thursday, February 7, 2013 2:30 p.m.

Is There Another Way to Teach Integrated Chemistry and Physics? **Room 105**
Physical Science *High School*
In this workshop, a student-directed, but teacher-controlled unit plan curriculum, developed to engage urban ICP students, will be discussed and modeled.
Presenter(s): Dustan Smith (Muncie Southside High School)

Teaching Science Using Tablet Technology **Room 101**
Physical Science *Elementary*
The presenters will showcase a digital learning tool on an iPad intended to teach 5th grade physical science standards.
Presenter(s): Sarah Erhart (Ball State University), Jason Ribblett (Ball State University)

Uniform Acceleration without Quadratics **Room 109**
Physics *High School*
Make a first year of physics more accessible to younger students by using linear equations and geometry to solve acceleration problems without quadratics.
Presenter(s): Peter Berg (Decatur Central High School)

Supporting Student Scientists Writing in Their Scientist Notebook **Room 123**
Science Education *General*
We describe the scientist notebook, its purpose and use, and how teachers can, through questioning, encourage students to take responsibility for their learning.
Presenter(s): Joseph Bellina (NISMEC)

The Indiana Biology Modeling Curriculum: The Scientific Method and the Structure and Replication of DNA **Room 104**
Science Education *High School*
The new Indiana Biology Modeling curriculum. Two hands-on investigations: introduction to the modeling scientific method, and a hands-on modeling of DNA structure and replication.
Presenter(s): Dawn Slein (Triton Jr-Sr High School), Lynne Barden (Union North School Corporation), Lynda Rose (Penn-Harris-Madison High School)

CW **New Guided Inquiry Labs for Advanced Placement Biology from Flinn Scientific** **Room 106**
Biology *High School*
Four big ideas, more great labs! The revised AP Biology curriculum integrates scientific inquiry and reasoning through a series of student-directed, inquiry-based laboratory investigations.
Presenter(s): Maureen Hunt (Flinn Scientific, Inc.)

Best Practices Shared by the Practitioners – Middle Level Sharathon **Room 125**
Interdisciplinary *Middle Level*
Come share an activity or lesson that you use in your classroom, OR come watch as other teachers share their favorites. All are welcome.

Thursday, February 7, 2013 3:30 p.m.

Annual Association Meetings
IN-AAPT: American Association of Physics Teachers – Room 109, IACT: Indiana Alliance of Chemistry Teachers – Room 110, IESTA: Indiana Earth Science Teachers Association – Room 116, IABT: Indiana Association of Biology Teachers – Room 122, Middle Level Conversation Pit – Room 125

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 7:30 a.m.

IESTA Annual Breakfast and Rock Raffle **Room 120**
Earth Science *General*
Come join Earth Science teachers from around Indiana for breakfast (members free; $5 fee for nonmembers) and our guest speaker followed by our rock raffle.
Presenter(s): Gary Potter (North Harrison High School), Tina Harris (East Side Middle ASchool), Vickey Zehringer (Northwestern High School), Steve Smith (Purdue University)

Friday, February 8, 2013 8:00 a.m.

So This Is *Your First* HASTI Conference? **Sagamore 5**
Learn how to navigate the HASTI conference by learning tips to make your experience meaningful.
Presenter(s): Sherry Annee (HASTI President)

Friday, February 8, 2013 8:30 a.m.

From DNA to Protein: Using Technology to Model Protein Synthesis **Room 104**
Biology *High School*
Protein Synthesis is often a complicated concept for freshmen biology students to understand. Through a protein synthesis simulation students will come to a conceptual understanding of what happens during transcription and translation by creating a model using cell phones and building blocks! Models will be discussed further through the process of whiteboarding.
Presenter(s): Alyce Myers (North Montgomery High School), Darlene Seifert

Corny Enzyme Activity Assays **Room 103**
Biology *High School*
A hands-on laboratory activity that contains applications to plant science, digestion, and human nutrition and also incorporates graphing, geometry, and math calculations into data analysis.
Presenter(s): Suzanne Cunningham (Purdue University)

From DNA to Genomics to Personalized Medicine: What Should We Teach? **Room 105**
Biology *High School*
Explore new instructional tools that will take your students beyond DNA as a double helix – to understand the impact of genomics on personalized medicine.
Presenter(s): Tim Herman (MSOE), Margaret Franzen (MSOE)

Flipping Your Classroom: It takes More Than Just A Video! **Room 106**
Chemistry *High School*
Two chemistry teachers will share techniques and examples of how they flipped their classrooms to create a more dynamic, hands-on, collaborative learning environment.
Presenter(s): Robin Esteb (Brebeuf Jesuit), Nick Friedman (Brownsburg High School)

Monitoring Oriental Bittersweet at the Indiana Dunes National Lakeshore **Room 128**
Ecology/Environment *High School*
Participants in this session will utilize web-based GIS technology and a tablet app to monitor invasive species at INDU.
Presenter(s): Jabin Burnworth (Manchester Junior Senior High School)

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Friday, February 8, 2013 8:30 a.m.

Aquaculture as the New Agricultural Frontier in the Midwest/Midsouth **Room 121**
Ecology/Environment *General*
Agriculture in the traditional Midwest/Midsouth is dramatically changing with the introduction of aquaculture. We will be using first-hand information from local aquafarms to examine their future for success and challenges.
Presenter(s): Dana Winchell (Indiana University Southeast), Sarah Vaugh (Indiana University Southeast)

CW **Introducing the Vernier LabQuest 2!** **Room 110**
Interdisciplinary *General*
Conduct experiments using sensors to explore our new LabQuest 2. Our most versatile interface ever.
Presenter(s): Angie Harr (Vernier Software & Technology)

Pictionary Telephone **Room 122**
Interdisciplinary *General*
This activity is an adaptation from the party game "Pictionary Telephone," in which students engage in translating between graphical, pictorial, and written models.
Presenter(s): Barak Pauley (Ball State University)

High School Student Research Showcase **Room 127**
Interdisciplinary *High School*
Alter the way your students experience and appreciate science—learn how, as high school students and undergraduates share their personal experiences with laboratory research.
Presenter(s): Amelia Miller (School of Science, IUPUI)

Teaching Science to all Students **Room 101**
Physical Science *Elementary*
We will share the intervention materials and ideas we've developed using "I Can" statements to assist students in self monitoring mastery of science standards.
Presenter(s): Gail Stewart (Highland Elementary School), Leah Hoffman (Harper Elementary)

CW **Teaching Simple Machines and Force and Motion using LEGO** **Room 125**
Physical Science *Middle Level*
Even the least science-oriented teacher will feel confident teaching simple machines, force and motion, and a little energy using LEGO with a STEM curriculum.
Presenter(s): Ivery Toussant, Jr. (LEGO Education)

Technology in the Classroom **Room 108**
Physics *College*
Clickers 101 for Physics 202: Using response pads to improve the conceptual understanding of challenging principles in physics.
Presenter(s): Garfield Warren (Indiana University)

Physics Demonstrations in Light **Room 124**
Physics *High School*
Presentation of a series of classroom demonstrations for use in a unit light concepts in the high school physics classroom.
Presenter(s): Charles Emmert (Noblesville High School)

INCCS: Indiana's Common Core Standards and How They Are Changing Instruction **Room 116**
Science Education *General*
The Indiana Department of Education's Math Specialist will provide science teachers with an overview of Indiana's Common Core Standards.
Presenter(s): Laurie Ferry (Indiana Department of Education)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 8:30 a.m.

Physics and Math with Balloon Cars **Room 126**
Science/Technology/Society *Middle Level*
Building and analyzing the distance and speed of a homemade balloon-powered car.
Presenter(s): Kristen Swangin (Edgewood Middle School)

Engineering, Technology, and the Application of Science K-8 **CANCELLED**
Science/Technology/Society *Middle Level*
Using practical applications of inquiry-based lessons you will help prepare students for STEM careers. Participants combine science resources and utilize best practice engineering processes.
Presenter(s): Carolina Teaching Partner (Carolina Biological Supply Company)

Positive Impact of the ISTEM Grant in the Greater Clark School District of Indiana **Room 107**
Science/Technology/Society *High School*
A discussion how a partnership between IUS and the Greater Clark School Corporation led to improved science and math state exam scores.
Presenter(s): James Hollenbeck (Indiana University Southeast), Aimee Parry (Indiana University Southeast)

Engaging Engineering Ideas for Early Elementary! **Room 102**
Science/Technology/Society *Elementary*
This engaging workshop explores creative ways to integrate engineering activities in your elementary curriculum with a focus on space exploration.
Presenter(s): Catherine Pangan (Butler University), Megan Donisch (Butler University), Laura Hoffman (Butler University), Meredith Schaar (Butler University), Holly Whiteman (Butler University), Lauren Chapman (Butler University)

Assessment Options for ISI Teachers Grades 3-6 **Room 123**
Interdisciplinary *Elementary*
Participants will explore formative assessments with next-step strategies, and summative assessments options for grading. Grade-specific handouts provided.
Presenter(s): Kimberly Elpers (Sts. Peter and Paul School), Debbie Vannatter (Evansville Vanderburgh School Corporation)

Friday, February 8, 2013 9:30 a.m.

Enzymes: Group 1, The Builders **Room 103**
Biology *High School*
High school students become model "Maniacs" or Lego "Lunatics" as they synthesize the sugar glucose. Various concepts assist students to visualize polymerization and enzyme specificity.
Presenter(s): Suzanne Cunningham (Purdue University)

Exploring the Molecular World through Modeling – A Cross-Cutting Practice of Science **Room 105**
Biology *High School*
Using a magnetic water kit explore basic chemistry and then be applying that to fold a protein into its complex 3D shape.
Presenter(s): Tim Herman (MSOE), Margaret Franzen (MSOE)

Predicting Shapes & Polarity **Room 104**
Chemistry *High School*
This session is designed for beginning teachers or those teaching in an endorsement area. Hands-on demonstrations, models, and handouts, and links to handouts will be provided.
Presenter(s): Carol Chen (Retired)

= Inquiry Instructions = Technology Applications in Science Instruction = Incorporation of Literacy into Science Education = Human Impacts on the Environment = Assessment for Understanding

Friday, February 8, 2013 9:30 a.m.

Trees Are The Answer **Room 102**
Ecology/Environment *Elementary*
Implementation of a sustainable forestry program including a turnkey Arbor Day educational kit and exploring the role of trees in the new "green world."
Presenter(s): Ray Moistner (Indiana Hardwood Lumbermen's Association), Donna Rogler (Indiana Project Learning Tree)

Photo Voice, Youth Voice: Getting Public Comment from Kids **Room 128**
Ecology/Environment *High School*
Photo Voice is a socio-scientific, issue-driven, pedogogical tool offering an opportunity for students to become active participants in the community.
Presenter(s): Ann Niednagel (Environmental Education Association of Indiana), Ariana, Jon, Anthony

Medical Explorers – A Cross Curricular Case Study Approach **Room 124**
Interdisciplinary *High School*
This medical case based instruction approach will open students' eyes to global health issues, diverse cultures, the importance of service, and focuses the next generation standards.
Presenter(s): Lance Brand (Delta High School), Dr. Chuck Dietzen (Timmy Foundation)

CW **Integrating Your iPad® or Mobile Device with Vernier Technology** **Room 110**
Interdisciplinary *General*
In this hands-on workshop, we will use built-in wireless capabilities of our new LabQuest 2, view and analyze data using Graphical Analysis for iPad® or on any device using Vernier Data Share.
Presenter(s): Angie Harr (Vernier Software & Technology)

CW **ConceptLinks: Science, Literacy, Inquiry, and Proven Effective in Indiana** **Room 106**
Interdisciplinary *Middle Level*
ConceptLinks integrates nonfiction literacy, inquiry, and technology. Proven effective in Indiana, supports INCCS and Science Standards. Observe an integrated inquiry and literacy lesson. Receive samples.
Presenter(s): Stacey Steele (Boys & Girls Club of Wayne County), Megan Oldham (Boys & Girls Club of Wayne County), Jenny O'Brien (Boys & Girls Club of Wayne County), Millmark Education (Millmark Education)

Impacts of Aquaculture **Room 121**
Life Science *General*
Looking at the economic effects that aquaculture can have and whether or not it will remain sustainable in the future.
Presenter(s): Logan Jackson (Indiana University Southeast)

Using a Smartphone or Tablets as Scientific Instruments In and Outside the Classroom **Room 108**
Physics *College*
The talk will show you how and provide hands-on example activities for using your Smartphone or tablet computer as a data-taking device.
Presenter(s): Tim Duman (University of Indianapolis), Bob Kastings (University of Indianapolis)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 9:30 a.m.

Muons Among Us **Room 107**
Physics *High School*
This session elaborates a successful teacher professional development program and authentic classroom investigations into cosmic rays and particle physics.
Presenter(s): David Sederberg (Purdue University), Chris Kraner (Purdue University), Cheryl McLean (McCutcheon High School), Marla Glover (Rossville High School), Matthew Jones (Purdue University)

Grant Writing for Science Teachers **Room 120**
Science Education *General*
Teachers have ideas and dreams of helping their students but often lack the necessary funding. Grant monies can make these dreams realities. Come see how!
Presenter(s): Norman Leonard (Pike High School)

Changes Within the IDOE Q&A **Room 116**
Science Education *General*
A Q&A session for teachers with questions about changes within the IDOE.
Moderated by Dr. John Moore, Vice-President of HASTI.
Presenter(s): Carlotta Cooprider (Indiana Department of Education)

Using Service Learning to Improve Science Teaching **Room 127**
Science Education *High School*
Service learning can be used to improve science teaching in a variety of ways.
Presenter(s): Jeramy Powers (Indiana University Southeast)

Instructional Conversations in the Inquiry Science Classroom **Room 101**
Science Education *Elementary*
Dialogic discussions in science classrooms can help students understand core ideas and cross-cutting concepts. Strategies for engaging in classroom discourse will be shared.
Presenter(s): Susan Disch (ETHOS, Inc.), Danae' Wirth (Elkhart Community Schools)

The Perceived Key Concepts in Biology, Geology, and Chemistry Across Educational Levels **Room 122**
Science Education *General*
Come see and discuss which concepts high school teachers, college students, and college professors stated were the most important concepts in their subject areas.
Presenter(s): Jeff Thomas (University of Southern Indiana), Josh Long (University of Southern Indiana), Chelsey Calhoun (University of Southern Indiana)

What Science Process Skills Do Middle School Children Need? **Room 109**
Science Education *Middle Level*
We review the recently published Frameworks for the NGSS, and discuss as a group which process skills are most helpful to middle school science teachers.
Presenter(s): Joseph Bellina (NISMEC)

If I Could Only Read Their Minds... **Room 125**
Science Education *High School*
Various techniques using students response systems (clickers) in the classroom will be presented that are based upon research at Harvard and OSU.
Presenter(s): Craig Smiley (Harrison High School)

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Friday, February 8, 2013 9:30 a.m.

Engaging Students with iPads® **Room 123**
Science/Technology/Society *High School*
iPads® in the classroom can seem like an overwhelming idea but they can easily be used to help students become engaged in their learning.
Presenter(s): Kim Terry (South Vermillion High School)

HELP ME! I'm Teaching High School Physics! **Room 126**
Physics *High School*
Ever want to design your own professional development? Help IU's physics department design and develop a summer professional development program for physics teachers.
Presenter(s): Stacy McCormack (Indiana University)

Friday, February 8, 2013 10:30 a.m.

Friday General Session

The New Anti-Science Laws **Sagamore Ballroom 5**
Over the past 10 years or so about 40 anti-science laws have cropped up around the country that teachers and scientists have strongly opposed. Where do these bills come from, and how do they relate to Indiana's recent legislative history?
Presenter(s): Dr. Eugenie C. Scott (National Center for Science Education, Inc.)

Friday, February 8, 2013 12:30 p.m.

Taking Learning Outside **Room 122**
Ecology/Environment *Middle Level*
Participants will go through lessons that are part of an exciting hands-on unit in which students learn about climate and increase environmental stewardship.
Presenter(s): Amy Uebelhor (Decatur Middle School), Mary Anne Hammonds (Decatur Middle School), Steven Smith (Purdue Univer),

Close Reading: A Literacy Based Approach to Teaching Science **Room 123**
Interdisciplinary *General*
Close Reading is a literacy-based teaching strategy. We will demonstrate Close Reading as a method to improve student achievement in science.
Presenter(s): Gary Cooper (Pike High School), Leslie Sitzman (Pike High School), Angela Welch (Pike High School)

Rethinking the Preparation of Science Teachers:
The Woodrow Wilson Indiana Teaching Fellowships at Ball State **Room 120**
Interdisciplinary *General*
This presentation will discuss the design and implementation of the Woodrow Wilson Fellowships at Ball State, including implication for science teacher education.
Presenter(s): Tom McConnell (Ball State University), Susan Johnson (Ball State University), Joel Bryan (Ball State University), Kay Roebuck (Ball State University), Jason Dunham (Ball State University), Sheryl Stump (Ball State University)

CW **GIS in the Indiana Classroom** **Room 107**
Interdisciplinary *General*
Review basic concepts of GIS and how to use web mapping tools in Indiana classrooms.
Presenter(s): Matthew Johnson (Indiana Geological Survey), Laura Montgrain (Indiana Geological Survey)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 12:30 p.m.

The Indiana Science Initiative and Its Effect on the Classroom **Room 125**
Interdisciplinary *Elementary*
Three science coaches from Indiana Science Initiative Districts will present information on how the ISI curriculum and professional development has impacted their district.
Presenter(s): Jenny Hicks (Purdue University, I-STEM), Jennifer Kruse (Avon Community Schools), Lori Fields (Richmond Community Schools), Michael Miller (Logansport Community Schools), Brandon Sorge (Purdue University-ISTEM)

Food + Nutrition + Digestion + Plant Biology + Chemistry = FUN! **Room 104**
Life Science *Elementary*
A simple chemistry experiment identifying starch leads students to better understand about the foods they eat, plant biology, the digestion process, and balanced nutrition.
Presenter(s): Suzanne Cunningham (Purdue University)

Excite Students with Science and Art As They Make Mirrors and Use Them in a Kaleidoscope **Room 105**
Physical Science *Middle Level*
Use a chemical reaction to create mirrors on microscope slides, then use those mirrors to make a kaleidoscope, infusing art into your science curriculum.
Presenter(s): Joseph Muskin (University of Illinois), Carrie Kouadio (University of Illinois)

Eureka! Make History of Science Come Alive to Make Nature of Science Connections **Room 102**
Physical Science *Elementary*
Learn to design lessons using science history. Archimedes' solution to the crown problem sparks a hands-on density investigation with questioning about nature of science.
Presenter(s): Khadija Fouad (Indiana University)

Car Crashes and Freefalls **Room 124**
Physics *High School*
Come see two different lab opportunities using technology: creating car crashes from online maps, and analyzing freefall using LoggerPro.
Presenter(s): John Taylor (Elkhart Memorial High School)

Rube Goldberg Machines: Bridging the Gap Between High School Physics and Engineering **Room 103**
Physics *High School*
Using the Rube Goldberg Machine as a final project engages students in conversation about models of physics and with local engineers about building and design.
Presenter(s): Josie Sillampa (Tri-Central Middle/High School)

RISE Evaluation: An Introduction and Overview of the Rise Evaluation System for Science Teachers **CANCELLED**
Science Education *General*
The Indiana Department of Education's Division of Educator Effectiveness would like to provide science teachers with information about the RISE Evaluation.
Presenter(s): Jeffrey Botteron (Indiana Department of Education)

What is the Uncertainty in a Meter Stick? **Room 108**
Science Education *High School*
Always assumed the uncertainty in a meter stick is 1/2 the smallest division? Come learn a low cost activity to determine the uncertainty.
Presenter(s): Dan Beeker (Indiana University – Physics)

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Friday, February 8, 2013 12:30 p.m.

Engaging Students in Science at All Grades by "Reading an Object" **Room 109**
Science Education *General*
Learn a "Reading an Object" procedure that focuses on student questions, as opposed to teacher questions. The workshop will model a "reading an object" session.
Presenter(s): Gordon Berry (University of Notre Dame), Mary Hynes-Berry (Erikson Institute)

Stop Lecturing and Turn Your Classroom on Its Head **Room 106**
Science Education *General*
Explore techniques for increasing critical thinking, student collaboration, and inquiry learning through flipped lessons. Tried and true sample activities and resources will be shared.
Presenter(s): Christina McCarter (Brebeuf Jesuit Preparatory School), Robin Esteb (Brebeuf Jesuit Preparatory School)

Impact Science: A Pro's Approach **Room 121**
Science Education *General*
fast paced presentation of 20 solid ideas and activities that will impact any science lesson at any level.
Presenter(s): Jed Freels (Dekalb Middle School)

Darwin's Dynasty: Several Tactics to Approaching and Teaching Evolution **Room 110**
Science Education *General*
This session will outline several difficulties when teaching evolution in the classroom and offer some possible activities in assisting the teacher tasked with this duty.
Presenter(s): Christopher Driver (Indiana University Southeast), John Harris (Indiana University Southeast)

Nanotechnology: Nano-Dream or Nano-Nightmare? **Room 101**
Interdisciplinary *Middle Level*
Nanotechnology holds great promise, but with that can come great concern. Engage students in classroom practice and dialogue to focus on personal and societal impact.
Presenter(s): Susan Disch (ETHOS, Inc.), Danae' Wirth (Elkhart Community Schools)

Kinesthetic Learning in a High School Classroom **Room 116**
Interdisciplinary *High School*
This session is designed to help teachers understand kinesthetic learning activities that can be implemented in the classroom to supplement or replace traditional teaching methods.
Presenter(s): Shannon Wenning (Castle High School)

Friday, February 8, 2013 1:30 p.m.

PS **Observational Learning in Rats: Using a Two-Action Method to Test for Reverse Oblique Transmission of Imitative Behavior** **Outside Exhibit Hall**
Biology *High School*
A high school student presents her senior research thesis on imitative behavior and social learning in rats. Come ask questions about her project and research experience!
Presenter(s): Lisa Bowes (University High School of Indiana), Stacey Summitt-Mann (University High School of Indiana)

The Incredible Shrinking Balloons! **Room 108**
Chemistry *College*
An activity has been developed that demonstrates kinetic molecular theory, the particulate nature of matter, and the relative strengths of intermolecular forces using balloons.
Presenter(s): Jason Ribblett (Ball State University), Jason Dunham (Ball State University)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 1:30 p.m.

CW **Glacial Geology of Indiana** **Room 107**
Earth Science *High School*
Discussion of glacial theory and processes, and the features (landforms and sediments) that are found in Indiana.
Presenter(s): Marni Karaffa (Indiana Geological Survey)

7 Billion and Counting: Lessons for Our Planet's Future **Room 122**
Ecology/Environment *Middle Level*
Engage in innovative activities to explore connections between human population growth, resource consumption, and the changing face of our planet. Free CD-ROM of activities.
Presenter(s): Meredith McAllister (Butler University), Isaac Adams (Butler University)

CW **Know When to Fold 'em: Foldable® Formative Assessment** **Room 109**
Interdisciplinary *General*
What is your students' visibility with concepts in the classroom? Learn how to use Foldables® as authentic, relevant, formative assessment tools.
Presenter(s): Nancy Wisker (Dinah Zike Academy)

The Joys of Teaching AP Science! **Room 106**
Interdisciplinary *High School*
Lessons learned and strategies shared from the AP Training and Incentive Program in Indiana.
Presenter(s): Karen Morris (University of Notre Dame), Amy Keller (AP-TIP IN/Univ. of Notre Dame)

Shedding Light on Spectrophotometry from Biology to Chemistry **Room 127**
Interdisciplinary *High School*
In this session we will share some of the labs we do with our biology and chemistry classes to teach and reinforce spectrophotometry.
Presenter(s): Becky Kehler (Greenwood Community High School), Rich Perry (Greenwood Community High School)

Finding the Best Pace – Using Students to Regulate Learning **Room 124**
Interdisciplinary *High School*
A simple feedback system that is easily integrated with "clicker" technology allows teacher and student to regulate learning easily.
Presenter(s): John Taylor (Elkhart Memorial High School)

Metacognitive Prompts to Boost Student Problem-Solving Skills **Room 120**
Interdisciplinary *High School*
This session will share research results and practical ideas for generating metacognitive prompts to help students score better on problem solving tests.
Presenter(s): Catherine Aurah (Ball State University), Tom McConnell (Ball State University)

Create Real Objects Using Light in This Lab You Can Do in Your Class! **Room 105**
Interdisciplinary *High School*
Engineering principles are in the Next Generation Science Standards. Address this in an exciting activity in a chemistry or physics class while teaching existing curriculum.
Presenter(s): Joseph Muskin (University of Illinois)

Gravity and the Mass of Rocks **Room 123**
Physical Science *Middle Level*
This activity uses measurements, data tables, and graphs to show students how pebble type influences density. This activity emphasizes Common Core State Standards.
Presenter(s): David Vessell (Indiana University Indianapolis)

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Friday, February 8, 2013 1:30 p.m.

Emphasizing Science (Over Science Content) in Introductory Physical Science Courses — **Room 126**
Physical Science — *High School*
The author discusses a shift in emphasis from a content-to-idea-based approach that better addresses the important goal of building scientific literacy.
Presenter(s): George Devendorf (Indiana Academy)

Use of Technology to Provide Immediate Feedback for Misconceptions — **Room 103**
Physics — *High School*
Technology such as clickers, moodle, or blackboard can be used in pre-tests or post-tests to immediately address misconceptions.
Presenter(s): William Steelman (Ball State University)

Secondary Literacy Framework: Methods for Teaching Literacy in Secondary Science — **Room 116**
Science Education — *High School*
With the implementation of Indiana's Common Core Standards, teachers of all disciplines are expected to have students reading nonfiction and technical text.
Presenter(s): Sarah Sutton (Indiana Department of Education), Tom Ferry (Lawrence North High School)

Bugs in a Jar and Other Fun Stuff to Do at Science Camp — **Room 110**
Science Education — *General*
Make a "Specimen in a Jar" and do other activities from the Saint Joseph's College's annual Little Einstein Science Camp.
Limited to 25 attendees.
Presenter(s): Sherry Urbanski (Saint Joseph's College), Cheryl Wistrom (Saint Joseph's College), Nyssa Brodman (Rensselaer High School), Jaiden Urbanski (Rensselaer High School)

Learning Science through Engineering Design by Designing A Careful Carrier — **Room 102**
Science/Technology/Society — *Elementary*
Participants design an environmentally friendly way to hold six cans together while applying concepts of weight, mass, and volume. Handouts will be provided.
Presenter(s): Heidi Vance (Taylor Middle School), Pam Stamm (Taylor Immediate School), Brenda Capobianco (Purdue University), Chell Nyquist (Purdue University)

Soy Biodiesel Chemistry Kit Overview & Demonstration — **Room 101**
Science Education — *High School*
Get your students excited about science with a Soy Biodiesel Chemistry Education Kit. Join our workshop for a brief overview and demonstration.
Presenter: Fred Henderson (Indiana Soybean Alliance)

Indiana Science Initiative — **Room 125**
Interdisciplinary — *Elementary*
We will present an update on the Indiana Science Initiative, its professional development model, current results, and what the future holds for this statewide initiative.
Presenter(s): Jenny Hicks (Purdue University, I-Stem), Brandon Sorge (Purdue University), Bill Walker (Purdue University), Guy Hansen (Purdue University)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 2:30 p.m.

CW Scientific Communication: Acid/Base Poster Sessions in Chemistry I — **Room 123**
Chemistry — *High School*
Poster sessions provide a way to incorporate scientific inquiry, scientific communication, and the Common Core standards into the Chemistry I classroom.
Presenter(s): Kimi Fellers (Carmel High School), Jeremy Horner (Carmel High School)

CW From the Crime Scene to the Classroom **CANCELLED**
Chemistry — *High School*
We will be demonstrating how the use of hands-on forensic science laboratory modules will provide students the opportunity to exercise their critical thinking skills through inquiry-based learning. *Limited to 30 attendees*.
Presenter(s): Vickers Cassie (Crosscutting Concepts)

Using Soils in the Classroom — **Room 122**
Earth Science — *Middle Level*
Basic soil science demonstrations and hands-on activities will aid in teaching and understanding erosion, pH, Cation Ion Exchange, filtration, waterholding capacity and soil health.
Presenter(s): Sherry Fulk-Bringman (Purdue University)

The Quake Cottage Program — **Room 107**
Earth Science — *General*
Participants will receive information about the Quake Cottage Program and learn about new content resources related to earthquakes in Indiana.
Presenter(s): Walt Gray (Indiana Geological Survey), Polly Root (Indiana Geological Survey)

Science and Stories: Connecting Literature in the Lab — **Room 102**
Interdisciplinary — *Elementary*
Participants will gain practical application of a blended approach towards science and literature within a Common Core environment.
Presenter(s): Terri Hebert (Indiana University South Bend)

Using BioClubs for Co-Curricular Experiences — **Room 127**
Interdisciplinary — *High School*
Biology clubs encourage co-curricular education through service projects, guest speakers, weekend trips, and extended trips. Strategies involved in developing a successful BioClub.
Presenter(s): Andrew Corless (Vincennes University)

Income Tax for Teachers — **Room 121**
Interdisciplinary — *General*
Will answer income tax questions for teachers.
Presenter(s): Charles W Gwaltney (Retired)

No More Walls: Connect Students (and Yourself) to Professionals via Twitter — **Room 104**
Interdisciplinary — *High School*
Learn how and why Twitter should be your daily PD and how you can engage and connect students to the professional world via Twitter.
Presenter(s): Rebecca Taylor (Lanesville Jr/Sr High School)

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Friday, February 8, 2013 2:30 p.m.

Secondary Science and Literacy: Making the Connection **Room 126**
Interdisciplinary *High School*
Join University of Indianapolis Woodrow Wilson Fellows and faculty as they share various literacy-based teaching strategies for promoting academic language and literacy.
Presenter(s): Deb Sachs (University of Indianapolis), Sue Blackwell (University of Indianapolis), Heather Hartnagel (University of Indianapolis), Filomena Haselby (University of Indianapolis), Patrick May (University of Indianapolis), Lawanda Mitchell (University of Indianapolis), Gary Nickleson (University of Indianapolis)

Teaming – A New Dimension of Laboratory Method **Room 124**
Interdisciplinary *High School*
An inquiry/cooperative mix in a lab structure that teaches students to work as part of an efficient collaboration conducting experimental work.
Presenter(s): John Taylor (Elkhart Memorial High School)

Planning Inquiry Activities to Enhance Process Skills Understanding **Room 106**
Interdisciplinary *High School*
We will provide planning tips for inquiry activities that help to enhance process skills understanding, whereby these skills can then be transferred to other disciplines.
Presenter(s): Marilyn Glick (Indiana University Kokomo), Julie Saam (Indiana University Kokomo)

If Your Students Use Textbooks to Learn Science Content, You Gotta Try This Strategy! **Room 120**
Interdisciplinary *Middle Level*
Triad Summarizing is an interactive reading strategy utilized when students are reading text for content understanding. A simple and successful way to get students reading!
Presenter(s): Susan Gran (Purdue University)

Nanoparticles: Engaging Students with Hands-On Nanotechnology Laboratory Activities **Room 105**
Physical Science *Middle Level*
Nanoparticles offer interesting opportunities to solve modern problems. Participants will make nanoparticles and learn how to apply them to either a chemistry or biology classroom.
Presenter(s): Joseph Muskin, Justin Thorlton, Megan Yarcho, Andy Head, Bridget Kemner, Michelle Umbarger, Carrie Kouadio (University of Illinois)

Shifting Your Physics Class to Any Time, Any Where, Any Place **Room 125**
Physics *High School*
Empower your students to succeed by creating a blended or online physics class. Use screencasts, tutorials, java apps, and online homework to develop students' independence.
Presenter(s): Jerome Flewelling (Crown Point High School), Maryanne Nicks (Crown Point High School), Kelly Loving (Crown Point High School)

Angry Bird Game Use in Physics **Room 103**
Physics *High School*
Angry Bird game use in physics for projectile motion, universal gravitation, and planetary motion.
Presenter(s): William Steelman (Ball State University)

CW Commercial Workshop PS Poster Session

Friday, February 8, 2013 2:30 p.m.

PS **Measuring Elementary Teachers' Perceptions as an Initial and Partial Assessment of the Impact of the Indiana Science Initiative** **Outside Exhibit Hall**

Science Education *Supervision*

Local elementary teachers' perceptions of the classroom environment were assessed through the launch of a major state science initiative.

Presenter(s): Chelsy Calhoun (University of Southern Indiana), Josh Long (University of Southern Indiana), Jeff Thomas (University of Southern Indiana)

Elementary Literacy Framework: Methods for Teaching Literacy in Elementary Science **Room 116**

Science Education *Elementary*

The Indiana Department of Education's Elementary Literacy Specialists will provide elementary science teachers methods and practices for their classroom to improve reading and writing.

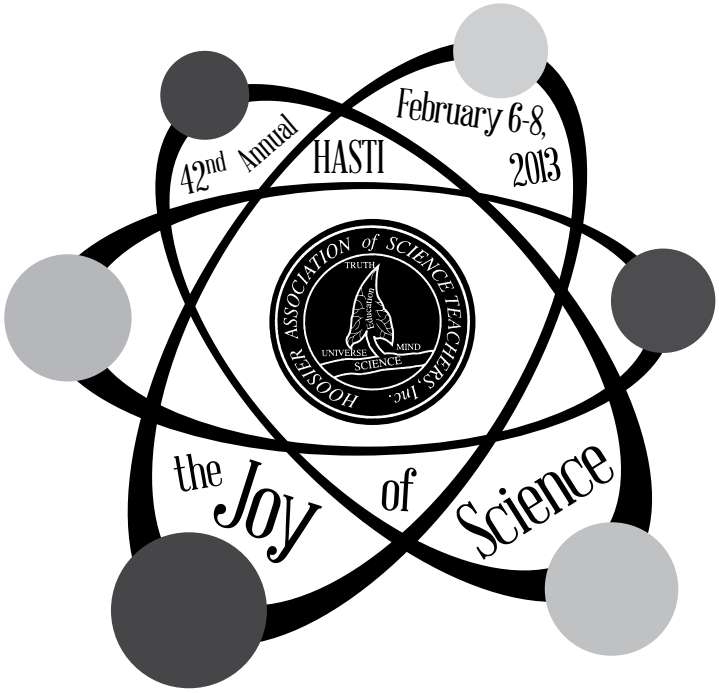
Presenter(s): Anna Schults (Indiana Department of Education), John Wolf (Indiana Department of Education), Jeff Hegnauer (Carmel Clay Schools: Cherry Tree Elementary)

Next Generation Science Standards/ K12 Science Framework: An Introduction, Overview, and Where Indiana Stands for Implementation **CANCELLED**

Science Education *General*

The Indiana Department of Education's Science Specialist will provide Indiana's overview and where Indiana stands for implementation.

Presenter(s): Jeremy Eltz (Indiana Department of Education)



2012 PAEMST Finalists

Elementary
PAEMST Finalist

"The core foundations of science: questioning, investigating, analyzing, and critical thinking, are applicable to all areas of our lives. If I can hone these skills in my students, I believe I am equipping them with the tools necessary to succeed in whatever interests they choose to pursue well beyond my classroom."

– Teresa Gross, Westwood Elementary School

Elementary
PAEMST Finalist

"One of my favorite sayings is: Teach a child how to think, not what to think."

– Kristen Poindexter, Spring Mill Elementary School

PAEMST Finalist

HASTI Salutes our 2011 PAEMST Finalist, Stacy McCormack, Indiana University

Elementary
PAEMST Finalist

"An emphasis on science in my classroom engages students and opens opportunities for creativity and innovation. STEM activities are used to encourage students to become global thinkers."

– Meg Strnat, Cumberland Road Elementary School

2012 Cheryl Cowan Memorial Award for Innovative Elementary Science Teaching

HASTI Congratulates Douglas Hunnings

Douglas Hunnings, a sixth grade teacher at Riverview Elementary in Elkhart, Indiana, is the recipient of the 2013 Cheryl Cowan Award as an outstanding and innovative new elementary science teacher. During his five years of teaching, Douglas has attended and presented at two HASTI conferences and was a presenter at the 2012 National NSTA conference in Indianapolis. His presentations focused on science notebooking and action research with science notebooking.

He became a science liaison for his district as part of the Math/Science Partnership grant between Elkhart Community Schools and ETHOS (Encouraging Technology and Hands On Science), a non-profit science education organization. Over the course of three years, he has participated in more than 240 hours of professional development, moving from novice to expert science teacher. He has served on his district's science adoption committee and has developed technology resources to enhance the grade six science curriculum.

Douglas was also able to spend a week in Washington DC to do work through the Smithsonian, with the NSRC (National Science Resource Center), which would help promote STEM education within his district.

"Be willing to learn with and from your students. Let their enthusiasm and natural curiosity rub off on you. They can be your best teaching tools."

– Douglas Hunnings

HASTI Congratulates Becky Mitcheltree

Becky Mitcheltree is currently a fifth grade teacher at Aylesworth Elementary School in Portage, Indiana. She has been teaching for eight years and has been fortunate enough to be at the same building throughout her career. Prior to teaching fifth grade, Becky taught at the fourth grade level. During her time as a fourth grade teacher, the grade level was departmentalized and she was responsible for the science instruction of all fourth grade students, and was in charge of the school's Science Fair. She truly enjoys teaching the scientific process because students get to use hands on approaches to learning, and loves seeing the excitement on the students' faces after they have completed their projects. This is Becky's first year teaching fifth grade, which is also departmentalized, and she is responsible for teaching science and social studies.

"I feel so fortunate to have a job that I enjoy. I love science and working with kids!"

– Becky Mitcheltree

2012 Charlotte M. Boener Award for Innovative Middle School Science Teaching

HASTI Congratulates Stephanie Tokarski

Stephanie Katherine Tokarski is truly passionate about her profession as a science educator! She knew from an early age that teaching was her calling, saying "I had a fourth grade teacher who impacted my life in many ways. She not only molded my mind, but also developed an inner desire to learn and strive to do one's best."

After graduating from Hobart High School in 2005, Stephanie attended Purdue University West Lafayette to study Elementary Education. In 2009, she graduated with honors with a bachelor's degree in elementary education. A week before graduating, she readily accepted a position as a 6th grade math and science teacher at Willowcreek Middle School located in Portage, Indiana, exhilarated to begin this new journey and express her passion for discovery to her students!

Stephanie believes students learn best by incorporating hands-on, inquiry based learning that is integrated with the 6th grade science curriculum. She also strives to incorporate real-world science into lessons to build background knowledge for students for future success. Science note-booking has become a big part of her curriculum the past two years. In doing this, students are creating a scientific journal that documents their learning while participating in labs which allows Stephanie to differentiate her instruction to help all students succeed. Students also use their journals to answer higher order thinking questions, anchor in foldables, and track their own individual learning so that they can take more of an ownership role in their education. Her ultimate goal in teaching is to develop a love of learning and encourage them to see science as an integral component in many of their career choices in the future!

"When educating the minds of our youth, we must not forget to educate their hearts"

– Dalai Lama

"The purpose of HASTI is the advancement, stimulation, extension, improvement, and coordination of science education in all fields of science at all educational levels."

– HASTI Founders, 1969

2012 Edward L. Frazier Distinguished Service Award

HASTI Congratulates Jane Hunn

Jane's love of science came from having a high school chemistry teacher in town willing to do informal science for groups like Lions Club and church groups. She wasn't even in school yet, and was hooked on straws going through potatoes, model rocketry, a solar powered transistor radio, and messy chemistry that spilled out of flasks.

When Jane student taught high school chemistry at Bloomington High School in Bloomington, IL, her supervising teacher took her to the Illinois science education conference. He urged her to seek out the professional group wherever she began her teaching career. She was extremely excited to find and meet the people at the HASTI conference on Meridian in Indianapolis the next year. HASTI has grown a lot since that time with many more members, and we have outgrown two venues!

Jane has been at Tippecanoe Valley School Corporation her whole career. She began in 1977 teaching 7th and 8th grade general science until this year when she moved to 6th grade. The school is part of the Indiana Science Initiative; so hands-on science is still part of her way of communicating science to bring in new science converts. They have added a literacy emphasis to meet common core needs, and inquiry is still what keeps her coming to school.

Professional development has always been important to Jane, and she have met many good influences by attending conferences, workshops, and training sessions.

> *"Years ago a group of science educators with a vision for the future got together and started HASTI. It has been my honor to continue their work to bring together educators to inform and educate them to improve science education in Indiana. My hope is that we can continue this work even though we face."*
>
> – Jane Hunn

2012 Edward L. Frazier Distinguished Service Award

HASTI Congratulates Isidore Julien

Isidore Julien became a member of HASTI in 1991 soon after his relocation to Indiana to take a position as Outreach Coordinator in the Department of Biological Sciences at Purdue University. For the past 22 years he has never missed the annual HASTI conference, where he has presented many sessions over the years. In 1992, he re-established the Indiana Association of Biology Teachers (IABT) and as President (1992-1993) was IABT's representative at the HASTI Board of Directors meetings. Isidore Julien has consistently supported the IABT for two decades. As one of Purdue's K-12 College of Science Outreach Coordinators, he co-initiated the first Purdue display booth at the annual HASTI convention. The presence of Purdue at HASTI has expanded and continued uninterrupted for 22 years.

Isidore's involvement with HASTI provided him a voice in Indiana Science Education. He has served on many state committees including the Indiana Academic Standard and the Core 40 Standard for Biology for the Indiana Department of Education. As an original member of the committee for the Indiana Science Proficiency Guide, Isidore contributed to the 9th Grade Biology proficiency content.

Isidore has received many grants from the Indiana Commission for Higher Education to improve science content knowledge and pedagogical development. These grants have provided many opportunities and encouraged many teachers. These teachers have showcased their work via presentations at the annual HASTI conventions. Through his interactions at HASTI, Isidore has been able to connect many university faculty members with Indiana teachers and collaborated with colleagues at other Universities. IABT has sponsored "Quick Hits" where teachers share their favorite short laboratory exercises in the HASTI Forum. Isidore actively supports HASTI because "the HASTI Form is the best venue for Indiana science teachers to communicate their scholarly work and to interact with their colleagues."

"For more than two decades Isidore has been a friend to all teachers across the state of Indiana. He never fails to help teachers with his hallmark positive attitude and friendly personality." – his colleagues. It is not surprising that Isidore lives as he believes... "Science Teachers are our Nation's greatest resources in the 21st century!"

Past Recipients of the Edward L. Frazier HASTI Distinguished Service Award

1980 Charlotte M. Boener
1980 Jerry Colglazier
1981 Robert Milliron
1982 Edward Frazier
1984 Pam Steeves Kendall
1985 Walter A. Cory
1986 Stanley Shimer
1987 Jude B. Bingham
1988 Elizabeth A. Frazier
1988 Susan P. Speece
1989 Jane B. Kahle
1992 Hans O. Andersen
1993 James Baumgartner
1994 Priscilla Costello
1994 Judith Douglas Pritchett
1994 Florence L. Juillerat
1994 James E. Weigand
1994 Carole Goshorn
1994 William Gommel
1995 William Greathouse
1995 Gordon Hopp
1995 Clyde Motts
1996 Dorothy Gabel
1996 Virginia Rhodes
1997 John V. Davis
1997 Jon R. Hendrix
1997 Cheryl Cowan (in memoriam)
1998 Susan Johnson
1999 Michael Kobe
1999 Margaret Flack
1999 Charlie Flack
2000 Rick Crosslin
2000 Marshall Parks
2000 Kenneth Uhlhorn
2000 Emma Colglazier
2001 Carolyn Hayes
2002 D'Ann Stouffer
2003 Marvin Giesting
2004 Patricia Zeck
2005 Karen Henman
2006 Carol Chen
2006 Sharon McElroy
2007 Monica Ellis
2009 Greg McCurdy
2009 Mark Mettert
2012 Jane Hunn
2012 Isadore Julien

Presidential Award for Excellence in Mathematics and Science Teaching

The Hoosier Association of Science Teachers, Inc. would like to salute the Indiana teachers who have been selected as recipients of the prestigious Presidential Award for Excellence in Mathematics and Science Teaching. These teachers have exhibited exemplary teaching in their discipline and have justifiably been recognized nationally for their service. We are proud of their accomplishments and know that they will serve as models for their colleagues.

Year	Discipline	Name	School
1983	Secondary Science	Cheryl Mason	Highland High School
1984	Secondary Science	Nevin Longenecker	John Adams High School
1985	Secondary Science	Carole Goshorn	Columbus East High School
1986	Secondary Science	Gordon Mendenhall	Lawrence Central High School
1987	Secondary Science	Gladysmae Good	Arlington High School
1988	Secondary Science	Diane Burnett	Warren Central High School
1989	Secondary Science	Joseph Ruhl	Jefferson High School
1990	Elementary Science	Rick Crosslin	Chapel Glen Elementary
1990	Secondary Science	Kathleen Kaye	Pike High School
1991	Elementary Science	Sheryl Braile	Burtsfield Elementary School
1991	Secondary Science	Sam Chattin	Scottsburg Middle School
1992	Elementary Science	Monica Ellis	Indian Creek Elementary School
1992	Secondary Science	John Kasting	Columbus East High School
1993	Elementary Science	Cheryl Cowan	Mayflower Mill Elementary School
1993	Secondary Science	Stephen H. Randak	Jefferson High School
1994	Elementary Science	Amy McClelland	Indian Creek Elementary School
1994	Secondary Science	Patricia Strawbridge	Portage High School
1995	Elementary Science	Barbara Walczak	Lincoln Elementary School
1995	Secondary Science	Maria Walsh	Pike High School
1996	Elementary Science	Mark Beck	Indian Meadows Elementary School
1996	Secondary Science	Cherie Lehman	West Lafayette Jr./Sr. High School
1997	Elementary Science	William Schmidt	Emmanus Lutheran School
1997	Secondary Science	Phillip McKinley	Lawrence High School
1998	Elementary Science	Michael Kaiser	Pine View Elementary School
1998	Secondary Science	Tony Hiatt	South Newton High School
1999	Elementary Science	Sandra Brown	Allisonville Elementary School
1999	Secondary Science	Claire Baker	Brebeuf Jesuit Preparatory School
2000	Elementary Science	Linda Ann Crissman	Model Elementary School
2000	Secondary Science	Carolyn A. Hayes	Center Grove High School
2001	Elementary Science	Kimberly Ann Pinto	Burnett Creek Elementary School
2001	Secondary Science	Patricia Zeck	Northwestern High School
2002	Elementary Science	Sara Lynn Jarvis	Washington – Carver Elementary School
2002	Secondary Science	Duane Nickell	Franklin Central High School
2003	Secondary Science	Patricia Mason	Delphi Community High School
2004	Elementary Science	Brenda Main	Creekside Elementary School
2005	Secondary Science	Jane Elizabeth Hunn	Tippecanoe Valley Middle School
2006	Elementary Science	Sharon McElroy	East Washington School Corporation
2007	Secondary Science	Deborah Teuscher	Pike High School
2008	Elementary Science	Regina Scott	Creekside Elementary School
2009	Secondary Science	Deanna York	Ben Davis High School
2010	Elementary Science	Jan Koloszar	Northwestern Elementary School
2010	Elementary School	Alicia Madeka	Kenwood Elementary School
2011	**Post-Secondary Science**	**Stacey McCormack**	**Indiana University**
2012	**Elementary Science**	**Teresa Gross**	**Westwood Elementary School**
2012	**Elementary Science**	**Kristen Poindexter**	**Spring Mill Elementary School**
2012	**Elementary Science**	**Margaret Stmat**	**Cumberland Road Elementary School**

HASTI Past Presidents 1969-2012

President	Years of Service
Clyde Motts	1969-70
Virgil Imel	1970-71
Bill Greathouse	1971-72
Charles Richardson	1972-73
Charlotte M. Boener	1973-74
Edward Frazier	1974-75
Paul Tully	1975-76
Jane Kahle	1976-77
Charles Stephens	1977-78
Gordon Hopp	1978-79
Dorothy Gabel	1979-80
Stanley Shimer	1980-81
Virginia Rhodes	1981-82
Ken Potts	1982-83
Walter Cory	1983-84
Judy Douglas	1984-85
Lee Williford	1985-86
Sue Speece	1986-87
William Vernon	1987-88
Florence Juillerat	1988-89
Carole Goshorn	1989-90
John V. Davis	1990-91
James Baumgartner	1991-92
Priscilla Costello	1992-93
Michael Kobe	1993-94
Rick Crosslin	1994-95
Carolyn Hayes	1995-96
D'Ann Stouffer	1996-97
Patricia Zeck	1997-98
Dick Dettmer	1998-99
Paul Elliott	1999-00
Jerry Colglazier	Honorary
Diane Burnett	2000-01
Hans Andersen	2001-02
Carol Chen	2002-03
Sharon McElroy	2003-04
Monica Ellis	2004-05
Mark Mettert	2005-06
Greg McCurdy	2006-07
Jane Hunn	2008-09
Bobbi Speicher	2009-10
Kirsten Carlson	2010-11
Duane Nickell	2011-12

25 Year Exhibitors

Exhibitor	25th Year
Prentice Hall	1995
Larry Winkleman	1995
Sargent-Welch	1995
NASCO	1996
Dairy and Nutrition Council	1999
School Masters Science	2000
Science Kit and Boreal Laboratories	2000
Benz Microscope Optics	2001
Ward's Natural Science	2001
William K. Sheridan & Associates	2001
PARCO Scientific Co.	2002
Carolina Biological Supply	2003
Indiana Wildlife Federation	2003
Flinn Scientific	2004
Indiana Tree Farm Committee	2005
Glencoe/McGraw-Hill	2005
Scott Foresman	2007
McDougal Littell	2008
Holt, Rinehart, and Winston	2008

The Hoosier Science Teacher

The editorial staff of *THE HOOSIER SCIENCE TEACHER* would like to invite all presenters at the 2013 HASTI Conference to submit articles to the magazine editor for possible publication.

However, we will accept submissions from all people whether or not they will be presenting at the conference. If you are scheduled to speak at the HASTI Conference and your presentation utilizes slides, video tapes, lasers, and/or computer programs but you can communicate your main points in writing, please send your ideas (in written form only) to the editor.

If you have any questions about submitting a possible article, ask for a copy of "Guidelines for Authors" or you may download it. Please feel free to contact us by using the information listed below.

The Hoosier Science Teacher
Center for Science Education
Science Building, Room 181
Indiana State University
Terre Haute, Indiana 47809
Phone: (812) 237-3010
Toll Free: 1-866-237-3014
Fax: (812) 237-3002
E-mail: thst@hasti.org
Online at www.hasti.org

HASTI Remembers

Jude Bingham

Nov 26, 1937 – Jan 19, 2013

Editor, *The Hoosier Science Teacher*

Jerry Colglazier

April 1930 – October 2012

Founding Member and Honorary Past President

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2013 HASTI Sessions by Audience

Elementary Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Wed.	8:00 a.m.	12:00 p.m.	Elementary	Inquiry with K-3 Robots	Physical Science
Thur.	8:30 a.m.	9:15 a.m.	Elementary	The Icing on the Cake: FOSS 3rd Edition	Science Education
Thur.	9:30 a.m.	10:15 a.m.	Elementary	Notebooking for Our Youngest Scientists!	Science Education
Thur.	12:30 p.m.	1:15 p.m.	Elementary	Our Never-Fail Science Lesson: Engaging Students in Inquiry from Day 1	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	Elementary	CSI Flight Adventures	Physics
Thur.	12:30 p.m.	1:15 p.m.	Elementary	School-Wide Spectacular Science Days	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	Elementary	Bedbugs in School – Challenges and Opportunities	Life Science
Thur.	1:30 p.m.	2:15 p.m.	Elementary	Science Inquiry Integrated with Technology	Science Education
Thur.	1:30 p.m.	2:15 p.m.	Elementary	Using Inquiry to Explore Plants	Life Science
Thur.	1:30 p.m.	2:15 p.m.	Elementary	Literature and Science: The 5E Way	Science Education
Thur.	1:30 p.m.	2:15 p.m.	Elementary	Engineering New Ways to Recycle Paper and Filter Water in the Elementary Science Classroom	Interdisciplinary
Thur.	2:30 p.m.	3:15 p.m.	Elementary	Teaching Science Using Tablet Technology	Physical Science
Thur.	2:30 p.m.	3:15 p.m.	Elementary	Going Green in Kindergarten	Ecology/Environment
Thur.	2:30 p.m.	3:15 p.m.	Elementary	Establishing and Developing Whole-Class Dialogue in an Elementary Science Classroom	Interdisciplinary
Fri.	8:30 a.m.	9:15 a.m.	Elementary	Assessment Options for ISI Teachers Grades 3-6	Interdisciplinary
Fri.	8:30 a.m.	9:15 a.m.	Elementary	Teaching Science to all Students	Physical Science
Fri.	8:30 a.m.	9:15 a.m.	Elementary	Engaging Engineering Ideas for Early Elementary!	Science/Technology/Society
Fri.	9:30 a.m.	10:15 a.m.	Elementary	Instructional Conversations in the Inquiry Science Classroom	Science Education
Fri.	9:30 a.m.	10:15 a.m.	Elementary	Trees Are The Answer	Ecology/Environment
Fri.	12:30 p.m.	1:15 p.m.	Elementary	Eureka! Make History of Science Come Alive to Make Nature of Science Connections	Physical Science
Fri.	12:30 p.m.	1:15 p.m.	Elementary	Food + Nutrition + Digestion + Plant Biology + Chemistry = FUN!	Life Science
Fri.	12:30 p.m.	1:15 p.m.	Elementary	The Indiana Science Initiative and Its Effect on the Classroom	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	Elementary	Learning Science through Engineering Design by Designing A Careful Carrier	Science/Technology/Society
Fri.	1:30 p.m.	2:15 p.m.	Elementary	Indiana Science Initiative	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	Elementary	Science and Stories: Connecting Literature in the Lab	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	Elementary	Elementary Literacy Framework: Methods for Teaching Literacy in Elementary Science	Science Education

Middle Level Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Thur.	8:30 a.m.	9:15 a.m.	Middle Level	Integrating Science and Mathematics in Upper Elementary and Middle School: Exploring Water and DNA Using Interactive Models	Life Science
Thur.	1:30 p.m.	2:15 p.m.	Middle Level	ISI Implementation for 5th-8th Grades: Some Teacher-Developed Extensions	Science Education
Thur.	1:30 p.m.	2:15 p.m.	Middle Level	Maintaining the Balance: Using Scientific Inquiry to Improve Literacy	Interdisciplinary
Thur.	2:30 p.m.	3:15 p.m.	Middle Level	Why Do the Seasons REALLY Happen?	Earth Science
Thur.	2:30 p.m.	3:15 p.m.	Middle Level	Best Practices Shared by the Practitioners – Middle Level Sharathon	Interdisciplinary
Fri.	8:30 a.m.	9:15 a.m.	Middle Level	Teaching Simple Machines and Force and Motion using LEGO	Physical Science
Fri.	8:30 a.m.	9:15 a.m.	Middle Level	Physics and Math with Balloon Cars	Science/Technology/Society
Fri.	9:30 a.m.	10:15 a.m.	Middle Level	Nanotechnology: Nano-Dream or Nano-Nightmare?	Interdisciplinary
Fri.	9:30 a.m.	10:15 a.m.	Middle Level	ConceptLinks: Science, Literacy, Inquiry, and Proven Effective in Indiana	Interdisciplinary
Fri.	9:30 a.m.	10:15 a.m.	Middle Level	What Science Process Skills Do Middle School Children Need?	Science Education
Fri.	12:30 p.m.	1:15 p.m.	Middle Level	Excite Students with Science and Art As They Make Mirrors and Use Them in a Kaleidoscope	Physical Science
Fri.	12:30 p.m.	1:15 p.m.	Middle Level	Taking Learning Outside	Ecology/Environment
Fri.	1:30 p.m.	2:15 p.m.	Middle Level	7 Billion and Counting: Lessons for Our Planet's Future	Ecology/Environment
Fri.	1:30 p.m.	2:15 p.m.	Middle Level	Gravity and the Mass of Rocks	Physical Science
Fri.	2:30 p.m.	3:15 p.m.	Middle Level	Nanoparticles: Engaging Students with Hands-On Nanotechnology Laboratory Activities	Physical Science
Fri.	2:30 p.m.	3:15 p.m.	Middle Level	If Your Students Use Textbooks to Learn Science Content, You Gotta Try This Strategy!	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	Middle Level	Using Soils in the Classroom	Earth Science

2013 HASTI Sessions by Audience

High School Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Wed.	8:00 a.m.	12:00 p.m.	High School	Fat Dogs and Coughing Horses: Delivery of a Ninth Grade Curriculum	Biology
Wed.	1:00 p.m.	5:00 p.m.	High School	Hands-On with Nuclear Science	Physics
Thur.	8:30 a.m.	9:15 a.m.	High School	Escaping the Gas Laws with PVTn Tables ... You Don't Know What You're Missing!	Chemistry
Thur.	8:30 a.m.	9:15 a.m.	High School	Filling Young Brains with Neuroscience	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	High School	Teaching Strategies To Engage Students	Chemistry
Thur.	8:30 a.m.	9:15 a.m.	High School	Missing Species: Have You Seen This Species	Ecology/Environment
Thur.	8:30 a.m.	9:15 a.m.	High School	GIS Data in Your Classroom and Community	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	High School	Melding Media Literacy and Technology with ICP Core Standard Instruction	Science/Technology/Society
Thur.	9:30 a.m.	10:15 a.m.	High School	The Use of the Modeling Curriculum in First Year Biology for Special Education Students	Science Education
Thur.	9:30 a.m.	10:15 a.m.	High School	Building a Better Boat: Creating a Constructive Environment for Inquiry	Chemistry
Thur.	9:30 a.m.	10:15 a.m.	High School	Inspired by Nature? Show Your Students They Can Be Too!	Biology
Thur.	9:30 a.m.	10:15 a.m.	High School	How Do We Know What We Know? How to Make Experimental Data Meaningful	Biology
Thur.	9:30 a.m.	10:15 a.m.	High School	Research Goes to School - Bringing the Advanced Research of Biofuels to the High School Classroom	Ecology/Environment
Thur.	9:30 a.m.	10:15 a.m.	High School	Hawaii Marine Science Seminar	Interdisciplinary
Thur.	9:30 a.m.	10:15 a.m.	High School	The New AP Biology - Are You Having Fun Yet?	Biology
Thur.	9:30 a.m.	10:15 a.m.	High School	Is There An App For That? Scientific Inquiry Enhanced by Smartphones and Electronic Tablets	Science Education
Thur.	9:30 a.m.	10:15 a.m.	High School	Teaching Epigenetics to Advanced High School Biology Students	Biology
Thur.	12:30 p.m.	1:15 p.m.	High School	Are Your Students Excited About Science? They Can Enjoy Learning with the High School Science Modeling Curriculum	Science Education
Thur.	12:30 p.m.	1:15 p.m.	High School	Finally, Stoichiometry Students Understand!	Chemistry
Thur.	12:30 p.m.	1:15 p.m.	High School	Keeping It Real! Insights from a Teacher of the Year Finalist	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	High School	Fantastic Physical Science Demonstrations from Flinn Scientific	Physical Science
Thur.	12:30 p.m.	1:15 p.m.	High School	Building Connections in Science Teaching	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	High School	I-ACT Chemistry Share-A-Thon	Chemistry
Thur.	12:30 p.m.	1:15 p.m.	High School	Making Sound Progress on Waves	Physics
Thur.	12:30 p.m.	1:15 p.m.	High School	A Baker's Dozen: Hands-on Activities on the Principles of Diffusion and Osmosis	Biology
Thur.	1:30 p.m.	2:15 p.m.	High School	Whiteboarding: Giving Your Students the Floor to Explain What They Understand	Chemistry
Thur.	1:30 p.m.	2:15 p.m.	High School	Henrietta's Story of Cancer, p53, and Eternal Life	Biology
Thur.	1:30 p.m.	2:15 p.m.	High School	Let's Go APES!	Ecology/Environment
Thur.	1:30 p.m.	2:15 p.m.	High School	Let the Data Speak	Physics
Thur.	1:30 p.m.	2:15 p.m.	High School	Demo-A-Thon	Chemistry
Thur.	1:30 p.m.	2:15 p.m.	High School	Research Matters: Designing Hands-On Activities through Hands-On Research	Science Education
Thur.	1:30 p.m.	2:15 p.m.	High School	Standards-Based Grading in the Chemistry I Classroom	Chemistry
Thur.	1:30 p.m.	2:15 p.m.	High School	Using Natural Selection as a Unifying Theme and 2010 Biology 1 Standards	Biology
Thur.	1:30 p.m.	2:15 p.m.	High School	Check Out These Awesome Web-Based Learning Activities!	Physical Science
Thur.	2:30 p.m.	3:15 p.m.	High School	What Physics Concepts Have Students Learned Best After 12 Years of Schooling?	Physics
Thur.	2:30 p.m.	3:15 p.m.	High School	An Attempt Legislate Teaching Creation Science: The Past, Present, and Future of Indiana General Assembly Senate Bill 89	Biology
Thur.	2:30 p.m.	3:15 p.m.	High School	The Indiana Biology Modeling Curriculum: The Scientific Method and the Structure and Replication of DNA	Science Education
Thur.	2:30 p.m.	3:15 p.m.	High School	Is There Another Way to Teach Integrated Chemistry and Physics?	Physical Science
Thur.	2:30 p.m.	3:15 p.m.	High School	Using Scientific Literacy to Answer the Question: Is Climate Change Anthropogenic?	Ecology/Environment
Thur.	2:30 p.m.	3:15 p.m.	High School	Uniform Acceleration without Quadratics	Physics
Thur.	2:30 p.m.	3:15 p.m.	High School	The Chemistry Conversation Pit	Chemistry
Thur.	2:30 p.m.	3:15 p.m.	High School	Earth Science Teachers Share-A-Thon	Earth Science
Thur.	2:30 p.m.	3:15 p.m.	High School	IABT Quick Hits	Biology
Thur.	2:30 p.m.	3:15 p.m.	High School	New Guided Inquiry Labs for Advanced Placement Biology from Flinn Scientific	Biology
Fri.	8:30 a.m.	9:15 a.m.	High School	Corny Enzyme Activity Assays	Biology
Fri.	8:30 a.m.	9:15 a.m.	High School	From DNA to Protein: Using Technology to Model Protein Synthesis	Biology
Fri.	8:30 a.m.	9:15 a.m.	High School	From DNA to Genomics to Personalized Medicine: What Should We Teach?	Biology
Fri.	8:30 a.m.	9:15 a.m.	High School	Flipping Your Classroom: It takes More Than Just A Video!	Chemistry
Fri.	8:30 a.m.	9:15 a.m.	High School	Positive Impact of the ISTEM Grant in the Greater Clark School District of Indiana	Science/Technology/Society
Fri.	8:30 a.m.	9:15 a.m.	High School	Physics Demonstrations in Light	Physics
Fri.	8:30 a.m.	9:15 a.m.	High School	High School Student Research Showcase	Interdisciplinary

2013 HASTI Sessions by Audience

High School Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Fri.	8:30 a.m.	9:15 a.m.	High School	Monitoring Oriental Bittersweet at the Indiana Dunes National Lakeshore	Ecology/Environment
Fri.	9:30 a.m.	10:15 a.m.	High School	Enzymes: Group 1, The Builders	Biology
Fri.	9:30 a.m.	10:15 a.m.	High School	Predicting Shapes & Polarity	Chemistry
Fri.	9:30 a.m.	10:15 a.m.	High School	Exploring the Molecular World through Modeling – A Cross-Cutting Practice of Science	Biology
Fri.	9:30 a.m.	10:15 a.m.	High School	Muons Among Us	Physics
Fri.	9:30 a.m.	10:15 a.m.	High School	Engaging Students with iPads	Science/Technology/Society
Fri.	9:30 a.m.	10:15 a.m.	High School	Medical Explorers – A Cross Curricular Case Study Approach	Interdisciplinary
Fri.	9:30 a.m.	10:15 a.m.	High School	If I Could Only Read Their Minds...	Science Education
Fri.	9:30 a.m.	10:15 a.m.	High School	HELP ME! I'm teaching high school physics!	Physics
Fri.	9:30 a.m.	10:15 a.m.	High School	Using Service Learning to Improve Science Teaching	Science Education
Fri.	9:30 a.m.	10:15 a.m.	High School	Photo Voice, Youth Voice: Getting Public Comment from Kids	Ecology/Environment
Fri.	12:30 p.m.	1:15 p.m.	High School	Kinesthetic Learning in a High School Classroom	Interdisciplinary
Fri.	12:30 p.m.	1:15 p.m.	High School	Rube Goldberg Machines: Bridging the Gap Between High School Physics and Engineering	Physics
Fri.	12:30 p.m.	1:15 p.m.	High School	What is the Uncertainty in a Meter Stick?	Science Education
Fri.	12:30 p.m.	1:15 p.m.	High School	Car Crashes and Freefalls	Physics
Fri.	1:30 p.m.	2:15 p.m.	High School	Use of Technology to Provide Immediate Feedback for Misconceptions	Physics
Fri.	1:30 p.m.	2:15 p.m.	High School	Create Real Objects Using Light in This Lab You Can Do in Your Class!	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	High School	The Joys of Teaching AP Science!	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	High School	Glacial Geology of Indiana	Earth Science
Fri.	1:30 p.m.	2:15 p.m.	High School	Secondary Literacy Framework: Methods for Teaching Literacy in Secondary Science	Science Education
Fri.	1:30 p.m.	2:15 p.m.	High School	Metacognitive Prompts to Boost Student Problem-Solving Skills	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	High School	Finding the Best Pace – Using Students to Regulate Learning	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	High School	Emphasizing Science (Over Science Content) in Introductory Physical Science Courses	Physical Science
Fri.	1:30 p.m.	2:15 p.m.	High School	Shedding Light on Spectrophotometry from Biology to Chemistry	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	High School	Observational Learning in Rats: Using a Two-Action Method to Test for Reverse Oblique Transmission of Imitative Behavior	Biology
Fri.	1:30 p.m.	2:15 p.m.	High School	Soy Biodiesel Chemistry Kit Overview & Demonstration	Science Education
Fri.	2:30 p.m.	3:15 p.m.	High School	Angry Bird Game Use in Physics	Physics
Fri.	2:30 p.m.	3:15 p.m.	High School	No More Walls: Connect Students (and Yourself) to Professionals via Twitter	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	High School	Planning Inquiry Activities to Enhance Process Skills Understanding	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	High School	From the Crime Scene to the Classroom	Chemistry
Fri.	2:30 p.m.	3:15 p.m.	High School	Scientific Communication: Acid/Base Poster Sessions in Chemistry I	Chemistry
Fri.	2:30 p.m.	3:15 p.m.	High School	Teaming – A New Dimension of Laboratory Method	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	High School	Shifting Your Physics Class to Any Time, Any Where, Any Place	Physics
Fri.	2:30 p.m.	3:15 p.m.	High School	Secondary Science and Literacy: Making the Connection	Interdisciplinary
Fri.	2:30 p.m.	3:15 p.m.	High School	Using BioClubs for Co-Curricular Experiences	Interdisciplinary

College Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Wed.	1:00 p.m.	5:00 p.m.	College	Monster Meiosis and Inheritance	Biology
Thur.	2:30 p.m.	3:15 p.m.	College	The Cellular Landscapes of David Goodsell: Biology at the Mesoscale	Biology
Thur.	2:30 p.m.	3:15 p.m.	College	The Institute for Accessible Science (IAS): Broadening Participation in Science for Students with Physical Disabilities	Interdisciplinary
Fri.	8:30 a.m.	9:15 a.m.	College	Technology in the Classroom	Physics
Fri.	9:30 a.m.	10:15 a.m.	College	Using a Smartphone or Tablets as Scientific Instruments In and Outside the Classroom	Physics
Fri.	1:30 p.m.	2:15 p.m.	College	The Incredible Shrinking Balloons!	Chemistry

Supervision Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Friday	2:30 p.m.	3:15 p.m.	Supervision	Measuring Elementary Teachers' Perceptions as an Initial and Partial Assessment of the Impact of the Indiana Science Initiative	Science Education

2013 HASTI Sessions by Audience

General Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Wed.	8:00 a.m.	12:00 p.m.	General	Project Learning Tree Training K-8	Ecology/Environment
Wed.	8:00 a.m.	12:00 p.m.	General	Enhancing STEM Instruction by Bringing the Ocean to Your Classroom – Ocean Waves, Tides, and Upwelling	Ecology/Environment
Wed.	8:00 a.m.	12:00 p.m.	General	Mad About Madagascar: Engaging Your Students via Envelope Foldable Projects	Life Science
Wed.	1:00 p.m.	5:00 p.m.	General	Out of This World Dinah Zike Cross-Curricular Project	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	General	A Scientist in Your Classroom: A "How–To" Guide	Science/Technology/Society
Thur.	8:30 a.m.	9:15 a.m.	General	Hawaii Anyone?	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	General	Inspire Curiosity with Curiosity	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	General	Using Science Fiction to Improve Science Literacy and Science Interest	Interdisciplinary
Thur.	8:30 a.m.	9:15 a.m.	General	Fun with Light and Color	Physical Science
Thur.	8:30 a.m.	9:15 a.m.	General	Enhancing STEM Instruction by Bringing the Ocean to Your Classroom – Wind-Driven Circulation	Ecology/Environment
Thur.	8:30 a.m.	9:15 a.m.	General	Drop by Drop – Water Kit for your Classroom	Ecology/Environment
Thur.	8:30 a.m.	9:15 a.m.	General	Using Robotics to Engage Students in Technology	Science/Technology/Society
Thur.	8:30 a.m.	9:15 a.m.	General	What the Heck Happened?!?!	Physical Science
Thur.	9:30 a.m.	10:15 a.m.	General	Galileo and the Moons of Jupiter: A Student Investigation of the Birth of Experimental Astronomy	Interdisciplinary
Thur.	9:30 a.m.	10:15 a.m.	General	Riding Across the Curriculum in a Gaming Flaming Way	Science Education
Thur.	9:30 a.m.	10:15 a.m.	General	Electrochemical Cells and Batteries	Physical Science
Thur.	9:30 a.m.	10:15 a.m.	General	Enhancing STEM Instruction by Bringing the Ocean to Your Classroom – Density-Driven Ocean Circulation	Ecology/Environment
Thur.	9:30 a.m.	10:15 a.m.	General	Composting with Worms – Make a Worm Bin	Ecology/Environment
Thur.	9:30 a.m.	10:15 a.m.	General	Science2Go - Building a Community-Supported Traveling STEM Bus	Science/Technology/Society
Thur.	9:30 a.m.	10:15 a.m.	General	Evolution Now! Resources and Activities for Teaching Evolution from NESCent	Interdisciplinary
Thur.	9:30 a.m.	10:15 a.m.	General	STEM Education and TI-Nspire Technology	Science Education
Thur.	12:30 p.m.	1:15 p.m.	General	Interactive Science Notebooks....for Assessment?	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	General	Top 10 Ways (or more) You Can Use Free Web Tools in Your Classroom Now!	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	General	Notebooking Basics	Science Education
Thur.	12:30 p.m.	1:15 p.m.	General	Persistence of Misconceptions from Middle School to College: Strategies to Confront and Assess Misunderstandings	Interdisciplinary
Thur.	12:30 p.m.	1:15 p.m.	General	Swift and Motic Help to Prepare Students for the 21st Century Using Stem Initiatives	Science Education
Thur.	12:30 p.m.	1:15 p.m.	General	Writing Grants to Get Resources for Your Classroom	Science Education
Thur.	12:30 p.m.	1:15 p.m.	General	Improving Your Science Inquiry Program	Science Education
Thur.	1:30 p.m.	2:15 p.m.	General	Urban Green	Ecology/Environment
Thur.	1:30 p.m.	2:15 p.m.	General	Inquire, A Student Handbook for 21st Century Learning	Interdisciplinary
Thur.	1:30 p.m.	2:15 p.m.	General	NOAA Teacher at Sea: The Entire Journey from Application to Classroom	Ecology/Environment
Thur.	1:30 p.m.	2:15 p.m.	General	Forensic Updates: The Latest and Best Practices for Teaching Forensics	Science/Technology/Society
Thur.	1:30 p.m.	2:15 p.m.	General	Finding Free Resources From NSTA	Science Education
Thur.	1:30 p.m.	2:15 p.m.	General	The Blue Print for an Effective Resource Center	Science Education
Thur.	2:30 p.m.	3:15 p.m.	General	Using Scientific Publications in Your Classroom	Interdisciplinary
Thur.	2:30 p.m.	3:15 p.m.	General	Supporting Student Scientists Writing in Their Scientist Notebook	Science Education
Thur.	2:30 p.m.	3:15 p.m.	General	Update: Conservation and Environmental Education	Ecology/Environment
Thur.	2:30 p.m.	3:15 p.m.	General	Blueprint for Better Science Teachers with Reading and Technology	Earth Science
Fri.	7:30 a.m.	9:15 a.m.	General	IESTA Annual Breakfast and Rock Raffle	Earth Science
Fri.	8:30 a.m.	9:15 a.m.	General	Introducing the Vernier LabQuest 2!	Interdisciplinary
Fri.	8:30 a.m.	9:15 a.m.	General	INCCS: Indiana's Common Core Standards and How They Are Changing Instruction	Science Education
Fri.	8:30 a.m.	9:15 a.m.	General	Aquaculture as the New Agricultural Frontier in the Midwest/Midsouth	Ecology/Environment
Fri.	8:30 a.m.	9:15 a.m.	General	Pictionary Telephone	Interdisciplinary
Fri.	9:30 a.m.	10:15 a.m.	General	Integrating Your iPad® or Mobile Device with Vernier Technology	Interdisciplinary
Fri.	9:30 a.m.	10:15 a.m.	General	Changes Within the IDOE Q&A	Science Education
Fri.	9:30 a.m.	10:15 a.m.	General	Grant Writing for Science Teachers	Science Education
Fri.	9:30 a.m.	10:15 a.m.	General	Impacts of Aquaculture	Life Science
Fri.	9:30 a.m.	10:15 a.m.	General	The Perceived Key Concepts in Biology, Geology, and Chemistry Across Educational Levels	Science Education

2013 HASTI Sessions by Audience

General Sessions

Date	SchedTime	End Time	Session Title	Audience	Discipline
Fri.	12:30 p.m.	1:15 p.m.	General	Stop Lecturing and Turn Your Classroom on Its Head	Science Education
Fri.	12:30 p.m.	1:15 p.m.	General	GIS in the Indiana Classroom	Interdisciplinary
Fri.	12:30 p.m.	1:15 p.m.	General	Engaging Students in Science at All Grades by "Reading an Object"	Science Education
Fri.	12:30 p.m.	1:15 p.m.	General	Darwin's Dynasty: Several Tactics to Approaching and Teaching Evolution	Science Education
Fri.	12:30 p.m.	1:15 p.m.	General	Rethinking the Preparation of Science Teachers: The Woodrow Wilson Indiana Teaching Fellowships at Ball State	Interdisciplinary
Fri.	12:30 p.m.	1:15 p.m.	General	IMPACT SCIENCE: A PRO'S Approach	Science Education
Fri.	12:30 p.m.	1:15 p.m.	General	Close Reading: A Literacy Based Approach to Teaching Science	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	General	Know When to Fold 'em: Foldable® Formative Assessment	Interdisciplinary
Fri.	1:30 p.m.	2:15 p.m.	General	Bugs in a Jar and Other Fun Stuff to Do at Science Camp	Science Education
Fri.	2:30 p.m.	3:15 p.m.	General	The Quake Cottage Program	Earth Science
Fri.	2:30 p.m.	3:15 p.m.	General	Income Tax for Teachers	Interdisciplinary

2013 HASTI Conference Strands

To help you make the most of this professional development opportunity, the 2013 HASTI Conference features five strands, enabling you to focus on a specific area of interest or need. The Conference Committee has identified sessions that are relevant to each of the five strands and that fit together to provide a cohesive, multi-session experience. These sessions are listed below and will also be identified by icons in the program listing. Plan your attendance around the strands to meet your individual professional growth plan and to justify to your school district the value of attending this professional development conference.

Inquiry Instruction — Wednesday, February 6

Fat Dogs and Coughing Horses: Delivery of a Ninth Grade Curriculum ..... Joe Ruhl, 8:00 a.m.

Inquiry Instruction — Thursday, February 7

Filling Young Brains with Neuroscience ..... Stephen Boehm, 8:30 a.m.
Integrating Science and Mathematics in Upper Elementary and Middle School: Exploring Water and DNA Using Interactive Models ..... Margaret Franzen, 8:30 a.m.
Hawaii Anyone? ..... Gail Fusaro, 8:30 a.m.
Inspire Curiosity with Curiosity ..... Deborah Vannatter, JPL Solar System Educator, 8:30 a.m.
The Use of the Modeling Curriculum in First Year Biology for Special Education Students ..... Judith Abram-Odigbok, 9:30 a.m.
Inspired by Nature? Show Your Students They Can Be Too! ..... Stacey Summitt-Mann, 9:30 a.m.
Galileo and the Moons of Jupiter: A Student Investigation of the Birth of Experimental Astronomy ..... Deborah Vannatter, 9:30 a.m.
Electrochemical Cells and Batteries ..... Joel Bryan, 9:30 a.m.
Teaching Epigenetics to Advanced High School Biology Students ..... Joe Ruhl, 9:30 a.m.
Our Never-Fail Science Lesson: Engaging Students in Inquiry from Day 1 ..... Susan Johnson, 12:30 p.m.
School-Wide Spectacular Science Days ..... Pam Roller, 12:30 p.m.
Are Your Students Excited About Science? They Can Enjoy Learning with the High School Science Modeling Curriculum ..... Gordon Berry, 12:30 p.m.
Finally, Stoichiometry Students Understand! ..... Erica Posthuma-Adams, 12:30 p.m.
I-ACT Chemistry Share-A-Thon ..... Cathy Huss, 12:30 p.m.
Notebooking Basics ..... Dawn Bick, 12:30 p.m.
Improving Your Science Inquiry Program ..... Patsy Boehler, 12:30 p.m.
A Baker's Dozen: Hands-on Activities on the Principles of Diffusion and Osmosis ..... Greg McCurdy, 12:30 p.m.
Using Inquiry to Explore Plants ..... Becky Wolfe, 1:30 p.m.
ISI Implementation for 5th-8th Grades: Some Teacher-Developed Extensions ..... Gordon Berry, 1:30 p.m.
Whiteboarding: Giving Your Students the Floor to Explain What They Understand ..... Erica Posthuma-Adams, 1:30 p.m.
Henrietta's Story of Cancer, p53, and Eternal Life ..... Christina McCarter, 1:30 p.m.
Let the Data Speak ..... Peter Berg, 1:30 p.m.
Research Matters: Designing Hands-On Activities through Hands-On Research ..... Phillip Cook, 1:30 p.m.
Inquire, A Student Handbook for 21st Century Learning ..... Shannnon Hudson, 1:30 p.m.
Finding Free Resources From NSTA ..... Kate Baird, 1:30 p.m.
The Blue Print for an Effective Resource Center ..... Dennis Boehler, 1:30 p.m.
Using Natural Selection as a Unifying Theme and 2010 Biology 1 Standards ..... John Gensic, 1:30 p.m.
Check Out These Awesome Web-Based Learning Activities! ..... Catherine Pilachowski, 1:30 p.m.
The Indiana Biology Modeling Curriculum: The Scientific Method and the Structure and Replication of DNA ..... Dawn Slein, 2:30 p.m.
Uniform Acceleration without Quadratics ..... Peter Berg, 2:30 p.m.
Earth Science Teachers Share-A-Thon ..... Vickey Zehringer, 2:30 p.m.
Why Do the Seasons REALLY Happen? ..... Shannon Hudson, 2:30 p.m.
IABT Quick Hits ..... Heather Briggs, 2:30 p.m.
Supporting Student Scientists Writing in Their Scientist Notebook ..... Joseph Bellina, 2:30 p.m.
New Guided Inquiry Labs for Advanced Placement Biology from Flinn Scientific ..... Maureen Hunt, 2:30 p.m.

Inquiry Instruction — Friday, February 8

From DNA to Protein: Using Technology to Model Protein Synthesis ..... Alice Myers, 8:30 a.m.
Teaching Simple Machines and Force and Motion using LEGO ..... Ivery Toussant, Jr., 8:30 a.m.
High School Student Research Showcase ..... Amelia Miller, 8:30 a.m.
Instructional Conversations in the Inquiry Science Classroom ..... Susan Disch, 9:30 a.m.
What Science Process Skills Do Middle School Children Need? ..... Joseph Bellina, 9:30 a.m.

2013 HASTI Conference Strands

Inquiry Instruction — Friday, February 8

Medical Explorers – A Cross Curricular Case Study Approach ..... Lance Brand, 9:30 a.m.
HELP ME! I'm teaching high school physics! ..... Stacy McCormack, 9:30 a.m.
Eureka! Make History of Science Come Alive to Make Nature of Science Connections ..... Khadija Fouad, 12:30 p.m.
Stop Lecturing and Turn Your Classroom on Its Head ..... Christina McCarter, 12:30 p.m.
Engaging Students in Science at All Grades by "Reading an Object" ..... Gordon Berry, 12:30 p.m.
Impact Science: A Pro's Approach ..... Jed Freels, 12:30 p.m.
Taking Learning Outside ..... Amy Uebelhor, 12:30 p.m.
The Indiana Science Initiative and Its Effect on the Classroom ..... Jenny Hicks, 12:30 p.m.
The Joys of Teaching AP Science! ..... Karen Morris, 1:30 p.m.
Gravity and the Mass of Rocks ..... David Vessell, 1:30 p.m.
Planning Inquiry Activities to Enhance Process Skills Understanding ..... Marilyn Glick, 2:30 p.m.
Indiana Science Initiative ..... Jenny Hicks, 1:30 p.m.
Predicting Shapes & Polarity ..... Carol Chen, 9:30 a.m.

Assessment for Understanding — Wednesday, February 6

Monster Meiosis & Inheritance ..... Kimberly Vogt, 1:00 p.m.

Assessment for Understanding — Thursday, February 7

Teaching Strategies To Engage Students ..... Lori White, 8:30 a.m.
Assessment Options for ISI Teachers Grades 3-6 ..... Kimberly Elpers, 9:30 a.m.
Interactive Science Notebooks....for Assessment? ..... Deborah Vannatter, Dinah Zike Trainer, 12:30 p.m.
Persistence of Misconceptions from Middle School to College: Strategies to Confront and Assess Misunderstandings ..... Kristy Wilson, 12:30 p.m.
Standards-Based Grading in the Chemistry I Classroom ..... Jeremy Horner, 1:30 p.m.

Assessment for Understanding — Friday, February 8

Corny Enzyme Activity Assays ..... Suzanne Cunningham, 8:30 a.m.
Technology in the Classroom ..... Garfield Warren, 8:30 a.m.
The Perceived Key Concepts in Biology, Geology, and Chemistry Across Educational Levels ..... Jeff Thomas, 9:30 a.m.
Rube Goldberg Machines: Bridging the Gap Between High School Physics and Engineering ..... Josie Sillampa, 12:30 p.m.
Kinesthetic Learning in a High School Classroom ..... Shannon Wenning, 12:30 p.m.
Know When to Fold 'em: Foldable® Formative Assessment ..... Nancy Wisker, 1:30 p.m.
Metacognitive Prompts to Boost Student Problem-Solving Skills ..... Catherine Aurah, 1:30 p.m.
Measuring Elementary Teachers' Perceptions as an Initial and Partial Assessment of the Impact of the Indiana Science Initiative ..... Chelsy Calhoun, 2:30 p.m.

Human Impacts on the Environment — Wednesday, February 6

Project Learning Tree Training K-8 ..... Donna Rogler, 8:00 a.m.

Human Impacts on the Environment — Thursday, February 7

Missing Species: Have You Seen This Species ..... Betty Drinkut, 8:30 a.m.
Drop by Drop – Water Kit for your Classroom ..... Jennifer Woolson-Helrigel, 8:30 a.m.
Research Goes to School - Bringing the Advanced Research of Biofuels to the High School Classroom ..... Lisa Kirkham, 9:30 a.m.
Hawaii Marine Science Seminar ..... Dennis O'Rourke, 9:30 a.m.
Composting with Worms – Make a Worm Bin ..... Jennifer Woolson-Helrigel, 9:30 a.m.
Urban Green ..... Erin Nolan-Higgins, 1:30 p.m.
Let's Go APES! ..... Dotty Johnson, 1:30 p.m.
NOAA Teacher at Sea: The Entire Journey from Application to Classroom ..... Valerie Bogan, 1:30 p.m.
Going Green in Kindergarten ..... Kristen Poindexter, 2:30 p.m.
An Attempt Legislate Teaching Creation Science: The Past, Present, and Future of Indiana General Assembly Senate Bill 89 ..... John Staver, 2:30 p.m.
Using Scientific Literacy to Answer the Question: Is Climate Change Anthropogenic? ..... John Brady, 2:30 p.m.
Update: Conservation and Environmental Education ..... Rick Parsons, 2:30 p.m.

2013 HASTI Conference Strands

Human Impacts on the Environment — Friday, February 8

Aquaculture as the New Agricultural Frontier in the Midwest/Midsouth ..... Dana Winchell, 8:30 a.m.
Nanotechnology: Nano-Dream or Nano-Nightmare? ..... Susan Disch, 9:30 a.m.
Trees Are The Answer ..... Ray Moistner, 9:30 a.m.
Impacts of Aquaculture ..... Logan Jackson, 9:30 a.m.
7 Billion and Counting: Lessons for Our Planet's Future ..... Meredith McAllister, 1:30 p.m.
Using Soils in the Classroom ..... Sherry Fulk-Bringman, 2:30 p.m.
Using BioClubs for Co-Curricular Experiences ..... Andrew Corless, 2:30 p.m.

Incorporation of Literacy into Science Education — Wednesday, February 6

Mad About Madagascar: Engaging Your Students via Envelope Foldable Projects ..... Nancy Wisker, 8:00 a.m.
Out of This World Dinah Zike Cross-Curricular Project ..... Deborah Vannatter, Dinah Zike Trainer, JPL Solar System Educator, 1:00 p.m.

Incorporation of Literacy into Science Education — Thursday, February 7

Using Science Fiction to Improve Science Literacy and Science Interest ..... James Hollenbeck, 8:30 a.m.
Notebooking for Our Youngest Scientists! ..... Erin Bangel, 9:30 a.m.
Riding Across the Curriculum in a Gaming Flaming Way ..... Deborah Calhoun, 9:30 a.m.
Literature and Science: The 5E Way ..... Deborah Hanson, 1:30 p.m.
Maintaining the Balance: Using Scientific Inquiry to Improve Literacy ..... Carrie Sanidas, 1:30 p.m.
Engineering New Ways to Recycle Paper and Filter Water in the Elementary Science Classroom ..... Kelly Myers, 1:30 p.m.
Using Scientific Publications in Your Classroom ..... Julie O'Brien, 2:30 p.m.
Establishing and Developing Whole-Class Dialogue in an Elementary Science Classroom ..... Matthew Benus, 2:30 p.m.

Incorporation of Literacy into Science Education — Friday, February 8

Pictionary Telephone ..... Barak Pauley, 8:30 a.m.
ConceptLinks: Science, Literacy, Inquiry, and Proven Effective in Indiana ..... Stacey Steele, 9:30 a.m.
Close Reading: A Literacy Based Approach to Teaching Science ..... Gary Cooper, 12:30 p.m.
Learning Science through Engineering Design by Designing A Careful Carrier ..... Heidi Vance, 1:30 p.m.
Secondary Literacy Framework: Methods for Teaching Literacy in Secondary Science ..... Sarah Sutton, 1:30 p.m.
Science and Stories: Connecting Literature in the Lab ..... Terri Hebert, 2:30 p.m.
Elementary Literacy Framework: Methods for Teaching Literacy in Elementary Science ..... Anna Schults, 2:30 p.m.
If Your Students Use Textbooks to Learn Science Content, You Gotta Try This Strategy! ..... Susan Gran, 2:30 p.m.
Scientific Communication: Acid/Base Poster Sessions in Chemistry I ..... Kimi Fellers, 2:30 p.m.
Teaming – A New Dimension of Laboratory Method ..... John Taylor, 2:30 p.m.
Secondary Science and Literacy: Making the Connection ..... Deb Sachs, 2:30 p.m.

Technology Applications in Science Instruction — Wednesday, February 6

Inquiry with K-3 Robots ..... Kate Baird, 8:00 a.m.

2013 HASTI Conference Strands

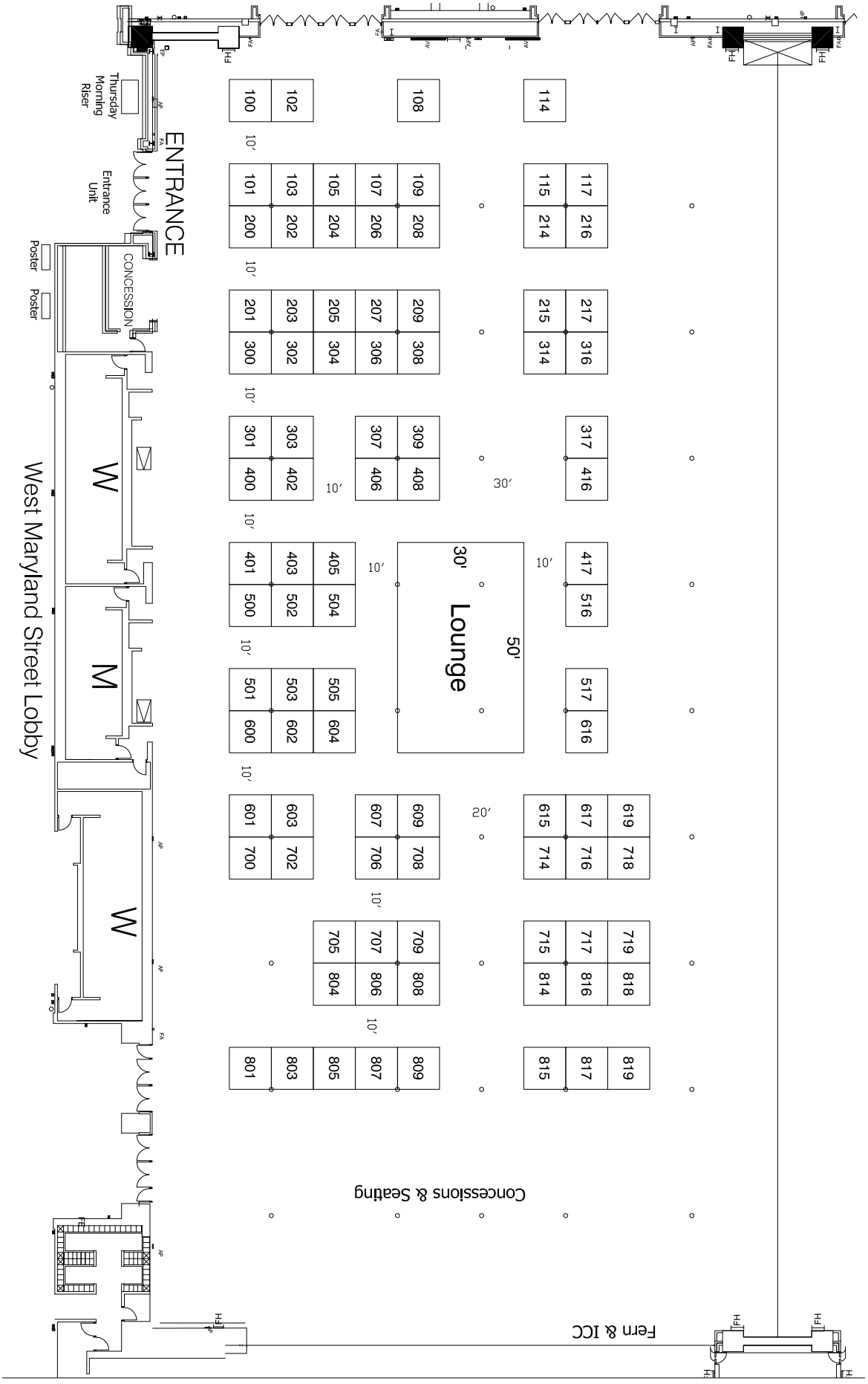
Technology Applications in Science Instruction — Thursday, February 7

The Icing on the Cake: FOSS 3rd Edition....Kimberly Elpers, 8:30 a.m.
GIS Data in Your Classroom and Community....Steven Smith, 8:30 a.m.
Using Robotics to Engage Students in Technology....Brian Boehler, 8:30 a.m.
Melding Media Literacy and Technology with ICP Core Standard Instruction....Elizabeth Ernst, 8:30 a.m.
How Do We Know What We Know? How to Make Experimental Data Meaningful....Kari Clase, 9:30 a.m.
Science2Go - Building a Community-Supported Traveling STEM Bus....Patsy Boehler, 9:30 a.m.
Is There An App For That? Scientific Inquiry Enhanced by Smartphones and Electronic Tablets....Gayle Buck, 9:30 a.m.
STEM Education and TI-Nspire Technology....Bill Webb, 9:30 a.m.
Top 10 Ways (or more) You Can Use Free Web Tools in Your Classroom Now!....Julie OBrien, 12:30 p.m.
Swift and Motic Help to Prepare Students for the 21st Century Using Stem Initiatives....David Doty, 12:30 p.m.
Science Inquiry Integrated with Technology....Tahsin Khalid, 1:30 p.m.
Forensic Updates: The Latest and Best Practices for Teaching Forensics....David Doty, 1:30 p.m.
Teaching Science Using Tablet Technology....Sarah Erhart, 2:30 p.m.
The Cellular Landscapes of David Goodsell: Biology at the Mesoscale....Tim Herman, 2:30 p.m.
The Institute for Accessible Science (IAS): Broadening Participation in Science for Students with Physical Disabilities....Bradley Duerstock, 2:30 p.m.
Blueprint for Better Science Teachers with Reading and Technology....Christopher Bradley Jr., 2:30 p.m.

Technology Applications in Science Instruction — Friday, February 8

Engaging Engineering Ideas for Early Elementary!....Catherine Pangan, 8:30 a.m.
From DNA to Genomics to Personalized Medicine: What Should We Teach?....Tim Herman, 8:30 a.m.
Flipping Your Classroom: It takes More Than Just A Video!....Robin Esteb, 8:30 a.m.
Positive Impact of the ISTEM Grant in the Greater Clark School District of Indiana....James Hollenbeck, 8:30 a.m.
Introducing the Vernier LabQuest 2!....Angie Harr, 8:30 a.m.
Physics and Math with Balloon Cars....Kristen Swangin, 8:30 a.m.
Monitoring Oriental Bittersweet at the Indiana Dunes National Lakeshore....Jabin Burnworth, 8:30 a.m.
Exploring the Molecular World through Modeling – A Cross-Cutting Practice of Science....Tim Herman, 9:30 a.m.
Muons Among Us....David Sederberg, 9:30 a.m.
Using a Smartphone or Tablets as Scientific Instruments In and Outside the Classroom....Tim Duman, 9:30 a.m.
Integrating Your iPad® or Mobile Device with Vernier Technology....Angie Harr, 9:30 a.m.
Grant Writing for Science Teachers....Norman Leonard, 9:30 a.m.
Engaging Students with iPads....Kim Terry, 9:30 a.m.
If I Could Only Read Their Minds...Craig Smiley, 9:30 a.m.
Photo Voice, Youth Voice: Getting Public Comment from Kids....Ann Niednagel, 9:30 a.m.
Excite Students with Science and Art As They Make Mirrors and Use Them in a Kaleidoscope....Joseph Muskin, 12:30 p.m.
Car Crashes and Freefalls....John Taylor, 12:30 p.m.
Use of Technology to Provide Immediate Feedback for Misconceptions....William Steelman, 1:30 p.m.
Create Real Objects Using Light in This Lab You Can Do in Your Class!....Joseph Muskin, 1:30 p.m.
Shedding Light on Spectrophotometry from Biology to Chemistry....Becky Kehler, 1:30 p.m.
Angry Bird Game Use in Physics....William Steelman, 2:30 p.m.
No More Walls: Connect Students (and Yourself) to Professionals via Twitter....Rebecca Taylor, 2:30 p.m.
Nanoparticles: Engaging Students with Hands-On Nanotechnology Laboratory Activities....Joseph Muskin, 2:30 p.m.
Shifting Your Physics Class to Any Time, Any Where, Any Place....Jerome Flewelling, 2:30 p.m.

2013 HASTI Conference List of Exhibitors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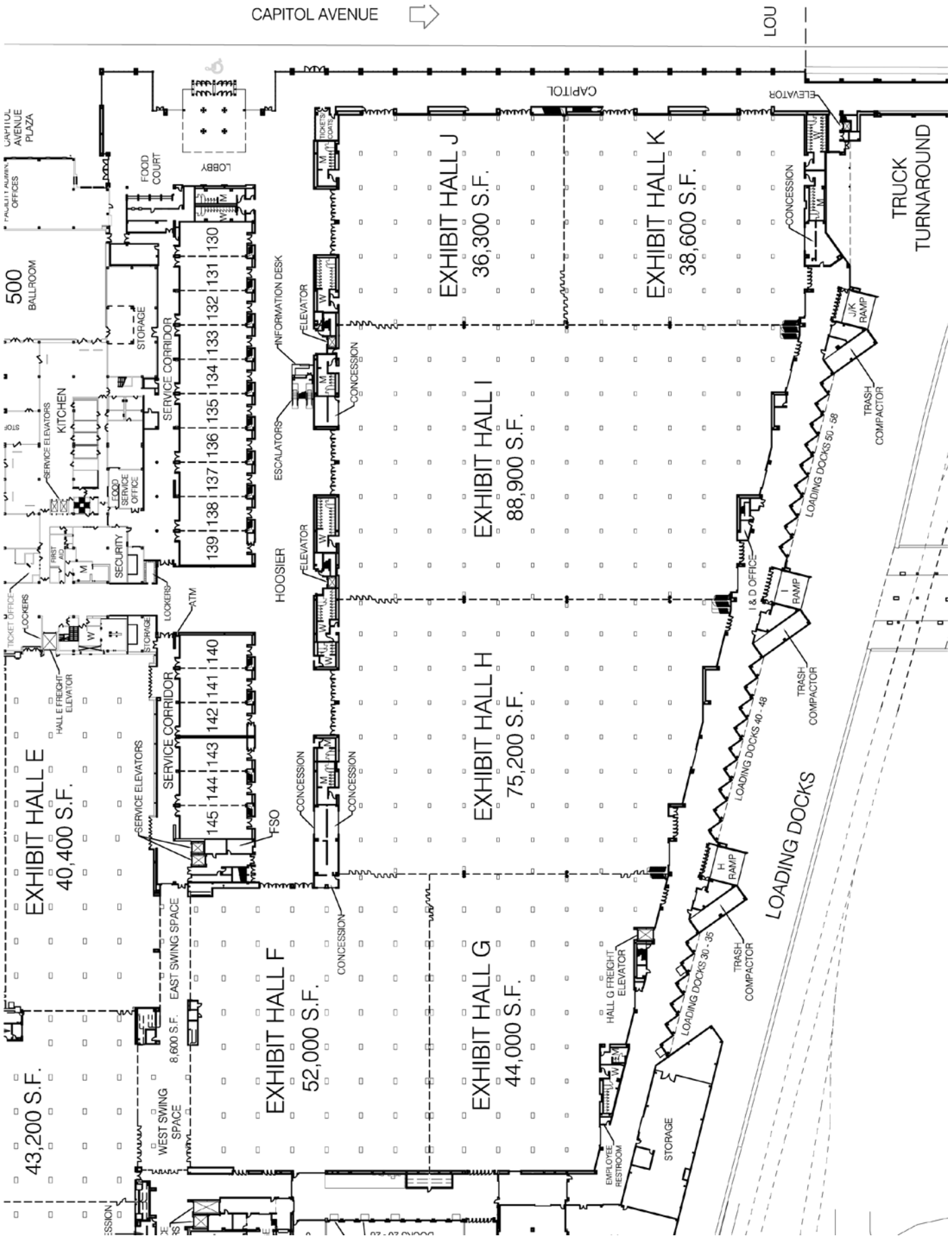
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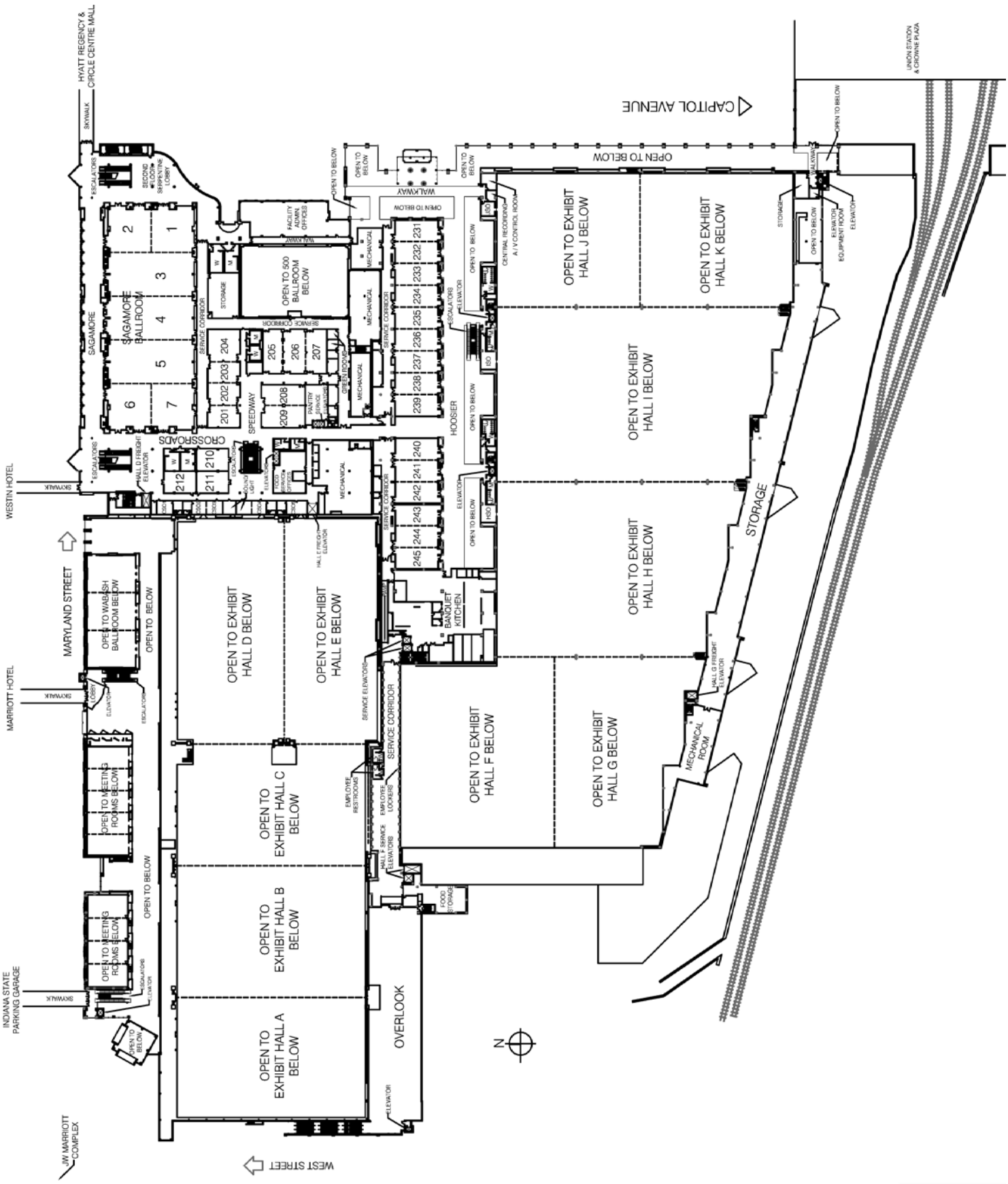
ATM
HALL E FREIGHT ELEVATOR
INFORMATION DESK
ESCALATORS
HOOSIER
CONCESSION
FSO
EXHIBIT HALL E
40,400 S.F.
EXHIBIT HALL J
36,300 S.F.
EXHIBIT HALL K
38,600 S.F.
EXHIBIT HALL I
88,900 S.F.
EXHIBIT HALL H
75,200 S.F.
EXHIBIT HALL F
52,000 S.F.
EXHIBIT HALL G
44,000 S.F.
43,200 S.F.
8,600 S.F.
EAST SWING SPACE
WEST SWING SPACE
HALL G FREIGHT ELEVATOR
EMPLOYEE RESTROOM
TRUCK TURNAROUND
J/K RAMP
I RAMP
H RAMP
TRASH COMPACTOR
I & D OFFICE
LOADING DOCKS 50 - 58
LOADING DOCKS 40 - 48
LOADING DOCKS 30 - 35
LOADING DOCKS


HYATT REGENCY & CIRCLE CENTRE MALL
SKYWALK
ESCALATORS
SECOND FLOOR SERVICE LOBBY
SAGAMORE
SAGAMORE BALLROOM
SERVICE CORRIDOR
STORAGE
OPEN TO 500 BALLROOM BELOW
FACILITY ADMIN. OFFICES
MECHANICAL
SHRINE CORRIDOR
OPEN ROOMS
PANTRY SERVICE
SPEEDWAY
CROSSROADS
HALL D FREIGHT ELEVATOR
SOUND LIGHT
FOOD SERVICE OFFICES
HOOSIER
ELEVATOR
OPEN TO BELOW
OWEN TO BELOW
WALKWAY
CENTRAL RECORDING A / V CONTROL ROOM
OPEN TO EXHIBIT HALL J BELOW
OPEN TO EXHIBIT HALL K BELOW
OPEN TO EXHIBIT HALL I BELOW
OPEN TO EXHIBIT HALL H BELOW
OPEN TO EXHIBIT HALL F BELOW
OPEN TO EXHIBIT HALL G BELOW
STORAGE
MECHANICAL ROOM
HALL G FREIGHT ELEVATOR
ELEVATOR EQUIPMENT ROOM
STORAGE
CAPITOL AVENUE
UNION STATION & CROWNE PLAZA
WESTIN HOTEL
MARYLAND STREET
MARRIOTT HOTEL
LOBBY
OPEN TO WABASH BALLROOM BELOW
OPEN TO MEETING ROOMS BELOW
OPEN TO EXHIBIT HALL D BELOW
OPEN TO EXHIBIT HALL E BELOW
OPEN TO EXHIBIT HALL C BELOW
OPEN TO EXHIBIT HALL B BELOW
OPEN TO EXHIBIT HALL A BELOW
BANQUET KITCHEN
SERVICE ELEVATORS
SERVICE CORRIDOR
EMPLOYEE RESTROOMS
EMPLOYEE LOCKERS
HALL F SERVICE ELEVATORS
FOOD STORAGE
OVERLOOK
INDIANA STATE PARKING GARAGE
JW MARRIOTT COMPLEX
WEST STREET
N

Index of Presenters

Graduate Level Credit from IUPUC

Indiana University-Purdue University Columbus will offer graduate level professional development credits to individuals who attend the 2013 HASTI Conference, "The Joy of Science," February 6-8, 2013. 1 or 2 Graduate Credit(s) of Pass/ Not Pass credit is available.

To receive 1 credit you must complete the admissions application (the application fee is being waived for this year). Send the application and a payment of $385.63 to IUPUC at the address on the application (please make checks payable to Indiana University). Next you must attend HASTI and participate in at least 15 hours of workshops, sessions, field trips, and professional networking in the exhibit hall. You will need to write a short paragraph about each session. This would include what you learned on short courses, in the exhibit hall or in general sessions. Evidence of 15 hours is necessary.

Finally you must then complete a 5 page reflective paper about how what you learned at HASTI will be applied into your classroom or other educational setting. This paper should be emailed to Kate Baird, kabaird@iupuc.edu by March 1.

To receive 2 credits you must complete the admissions applicatio (the application fee is being waived for this year). Send the application and a payment of $717.16 to IUPUC at the address on the application (please make checks payable to Indiana University). Next you must attend HASTI and participating in at least 15 hours of workshops, sessions, field trips, and professional networking in the exhibit hall. You will need to write a short paragraph about each session. This would include what you learned on short courses, in the exhibit hall or in general sessions. Evidence of 15 hours is necessary.

You must then choose one idea to implement in your classroom. Finally you must then complete a 10 page reflective paper about what you applied in your room. Provide evidence of the materials you created, evidence of actual instruction and student success. Ideas for modification or future use may be included as well. This paper should be emailed to Kate Baird, kabaird@iupuc.edu by March 1.

Collect Professional Growth Points Toward License Renewal for HASTI Workshop Attendance

Educators who hold renewable Bulletin 400, Rules 46-47 and Rules 2002 licenses issued by the Office of Educator Licensing and Development (OELD) may use the Professional Growth Plan to renew those licenses. One PGP point is given for every contact hour an educator is actively involved in a professional development activity. PGP experience logs will be available at the HASTI registration counters.

Educators Currently Working in a School Setting

If you are currently working in a school setting, your PGP must be verified by your Building Level Administrator, Superintendent, Director or Supervisor.

Educators Currently NOT in a School Setting or renewing from Out of State

Educators that are currently NOT working in a school setting or renewing from Out of State will need to complete their PGP and submit it to the OELD for evaluation.

For more information regarding PGP and license renewal, please reference the IDOE website.Science Building, Room 181

IUPUC Graduate Non-Degree Application

IUPUC Office of Admissions ■ 4601 Central Avenue ■ Columbus, Indiana 47203 ■ Phone: 812.348.7390 ■ Fax: 812.348.7257 ■ E-mail: admissions@iupuc.edu

I am:

- ☐ fulfilling **PREREQUISITES FOR THE IU MBA COLUMBUS** program through the Division of Business at the...
  - ☐ ...**UNDERGRADUATE LEVEL**.
  - ☐ ...**GRADUATE LEVEL**.
- ☐ seeking **TEACHER RECERTIFICATION**.
- ☐ taking courses for **PERSONAL ENRICHMENT**.
- ☐ a **VISITING STUDENT** not otherwise covered in one of the above categories.

Please attach your $50 application fee here.

TERM

Semester: ☐ Fall/August ☐ Spring/January ☐ Summer I/May ☐ Summer II/June Year: _____

PERSONAL

Full Legal Name: _____
Last/Family Name First/Given Name Middle/Maiden Name

Variations of Your Name: _____
If different from above, give exact names (last, first, middle) as they appear on TOEFL and other test reports and academic records sent to IUPUC.

Gender: ☐ Male ☐ Female Date of Birth: __ __ / __ __ / __ __ __ __ SSN: __ __ __ - __ __ - __ __ __ __ *
Month Day Year

Phone: __ __ __ - __ __ __ - __ __ __ __ E-mail: _____

RESIDENCE INFORMATION

Incomplete information will result in a preliminary determination of non-resident.

Birthplace: _____ Native Language: _____

Legal state of residence: _____ Dates of Indiana residency: _____

If you graduated from college less than one year ago, what was your state of residence prior to attending college? _____

CURRENT ADDRESS

_____ _____ _____
Dates *(MM/YYYY to MM/YYYY)* Address, City, State, ZIP County

ETHNIC INFO

☐ Non-U.S. Citizen (If you are a non-U.S. citizen, you do not need to check any additional boxes in this section.)

☐ Native/Alaskan American ☐ Asian/Pacific American ☐ African American ☐ Hispanic American

☐ White (Non-Hispanic) ☐ Other (Please explain.) _____

IMMIGRATION STATUS

☐ U.S. Citizen ☐ Permanent Resident, Refugee, or Asylee ☐ F-1 Visa ☐ F-2 Visa

☐ H-1 Visa ☐ H-4 Visa ☐ J-1 Visa ☐ J-2 Visa ☐ Other

If not a U.S. citizen, country of citizenship: _____ Resident Alien Card Number: _____

Provide legible photocopy with application.

(Continued on back.)

* In accordance with state and federal law, the disclosure of your Social Security number is voluntary.

EDUCATION HISTORY

School	City, State	Degree Date *(MM/YYYY)*	Degree Awarded *(B.A., B.S., etc.)*

EMPLOYMENT HISTORY

Employer	City, State	Starting Date *(MM/YYYY)*	Ending Date *(MM/YYYY)*

MARKETING SURVEY

Please tell us how you learned about IUPUC and our degree programs: *(Please check all that apply.)*

- ☐ Friend
- ☐ Family Member
- ☐ School Counselor/Teacher
- ☐ School Publication
- ☐ Community Newspaper
- ☐ Radio Station
- ☐ Billboard
- ☐ Direct Mail
- ☐ IUPUC Web site
- ☐ College Fair
- ☐ _____ County Fair
- ☐ IUPUC Visit to Your School
- ☐ IUPUC Visit to Your Work
- ☐ Your Company's HR Dept.
- ☐ Trade/Career Fair
- ☐ Other Community Event
- ☐ Bull Dog Days
- ☐ Explore IUPUC
- ☐ Discover IUPUC
- ☐ Just for Juniors
- ☐ Funtastic Friday
- ☐ Office Visit with Admissions
- ☐ Personally Scheduled Tour
- ☐ Other On-Campus Event

AUTHORIZATION

- ☐ I have enclosed a non-refundable application fee of $50.
- ☐ I have enclosed either a copy of my diploma or transcript as proof of a baccalaureate degree (unless it is an IU degree).
- ☐ I realize I am not eligible for financial aid.
- ☐ I certify that the information I provided is complete and accurate.

Signature: _____ Date: _____

Professional Growth Points/Graduate Credit Tracker

Name: _____

Address (include city, state and zip code): _____

_____

1. Session Name: _____
   Presenter's Signature: _____
   Date: _____

2. Session Name: _____
   Presenter's Signature: _____
   Date: _____

3. Session Name: _____
   Presenter's Signature: _____
   Date: _____

4. Session Name: _____
   Presenter's Signature: _____
   Date: _____

5. Session Name: _____
   Presenter's Signature: _____
   Date: _____

6. Session Name: _____
   Presenter's Signature: _____
   Date: _____

7. Session Name: _____
   Presenter's Signature: _____
   Date: _____

Professional Growth Points/Graduate Credit Tracker (continued)

8. Session Name: _____
   Presenter's Signature: _____
   Date: _____

9. Session Name: _____
   Presenter's Signature: _____
   Date: _____

10. Session Name: _____
    Presenter's Signature: _____
    Date: _____

11. Session Name: _____
    Presenter's Signature: _____
    Date: _____

12. Session Name: _____
    Presenter's Signature: _____
    Date: _____

13. Session Name: _____
    Presenter's Signature: _____
    Date: _____

14. Session Name: _____
    Presenter's Signature: _____
    Date: _____

Your 2013 Conference Planner		
Thursday, February 7		
7:30 a.m.		
8:00 a.m.		
8:30 a.m.		
9:30 a.m.		
10:30 a.m.	**General Session** David H. Levy, Jarnac Observatory *A Nightwatchman's Journey: My Adventures as a Comet Discoverer and Skywatcher*	Sagamore 5
12:30 p.m.		
1:30 p.m.		
2:30 p.m.		
3:30 p.m.	Association Meetings IN-AAPT, IACT, IABT, IESTA, Middle School Converstaion Pit	
4:30 - 6:30 p.m.	*HASTI Social*	*HASTI Exhibit Hall*
Friday, February 8		
7:30 a.m.		
8:00 a.m.		
8:30 a.m.		
9:30 a.m.		
10:30 a.m.	**General Session** Dr. Eugenie C. Scott, *The New Anti-Science Laws*	Sagamore 5
12:30 p.m.		
1:30 p.m.		
2:30 p.m.		
3:30 p.m.		

NOTES

Mark Your Calendars!

Visit **www.hasti.org** for information on next year's conference!

Watch your e-mail for details!