49th Annual HASTI Conference
February 9-11, 2020

ALL IN: Sharing the Vision for Indiana Science Education

Wyndham – Indianapolis West
Indianapolis, Indiana
Welcome to the 49th Annual HASTI Conference – ALL IN: Sharing the Vision for Indiana Science Education! As a former classroom teacher, Science Specialist and STEM Coordinator this year’s theme has special significance to me. I have seen how working across content areas in authentic contexts can deepen and internalize science learning in powerful ways that impact both learning facilitators and their students. It certainly takes a village to raise future generations who have a deep understanding of the natural and man-made world! The skills obtained through a solid and consistently strong science education are needed now more than ever for us to contribute and participate in our communities as informed decision makers and it is up to ALL of us to provide these skills to our future generations. This is our shared vision.

**ALL teachers in ALL subjects for All students – we are ALL IN.**

This year’s conference strands reflect the strong ties between science topics and a variety of other subject areas. It is our hope that you find an overabundance of ideas and many opportunities to think about how you can be ALL IN for Indiana science education. As you enjoy the sessions and the company of like-minded individuals please remember to take time for reflection and relaxation. Attend the social, visit the Exhibitors, engage with your colleagues, make new friends and have a great conference experience!

Danaé Wirth
HASTI 2020 Conference Chair

Welcome to the 2020 HASTI 49th annual conference ALL IN: Sharing the Vision for Indiana Science Education!! This conference location allows us to bring you over 120 sessions and workshops on all areas and levels of science education, free WIFI, free parking, fabulous lunches, and opportunities to network around every corner. Be sure to visit the exhibit hall, attend the socials, and congratulate the award winners.

We are very pleased to have Okhee Lee, professor at New York University, as our keynote speaker. Her current research to develop instructional materials to support science learning and language development of elementary students including English learners may well revolutionize our classrooms.

I would also like to add my personal thanks to all the conference committee volunteers, presenters, and exhibitors, for their hard work to make this conference a success.

Whether you are fairly new to the classroom, a veteran educator, or somewhere in between, you will find something to improve all aspects of your teaching. If you need any questions answered, just stop by the registration area, or find someone with a green HASTI badge. At the end of the conference, remember to fill out the evaluation as we prepare for the 50th anniversary of HASTI conference in 2021 during which HASTI will partner with ICTM (The Indiana Council of Teachers of Mathematics). Have a great conference!

Shannon Hudson
HASTI 2019-2020 President
<table>
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<th>Sunday February 9, 2019</th>
<th>Monday, February 10, 2019</th>
<th>Tuesday, February 11, 2019</th>
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<tr>
<td><strong>12:00 noon – 4:00 pm</strong> Registration Open</td>
<td><strong>7:00 am. – 4:00 pm</strong> Registration Open</td>
<td><strong>7:30 am – 2:00 pm</strong> Registration Open</td>
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<td><strong>1:00 pm – 5:00 pm</strong> Pre-Conference Workshops</td>
<td><strong>8:00 am – 11:00 am</strong> Concurrent Sessions</td>
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<td><strong>1:00 pm – 5:00 pm</strong> Field Trips</td>
<td><strong>9:00 am - 4:00 pm</strong> Exhibits Open</td>
<td><strong>9:00 am – 2:30 pm</strong> Exhibits Open</td>
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<td><strong>12:00 pm – 5:00 pm</strong> Exhibitor Set-Up</td>
<td><strong>9:00 am – 10:00 am</strong> Elementary Share-A-Thon</td>
<td><strong>9:00 am – 10:00 am</strong> Middle Level Share-A-Thon</td>
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<td><strong>4:30 pm – 5:30 pm</strong> HASTI Board of Directors Meeting</td>
<td><strong>11:00 am - 12:45 am</strong> Luncheon/Keynote Speaker Okhlee Lee</td>
<td><strong>11:00 am – 12:30 pm</strong> Lunch</td>
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<td><strong>6:30-8 pm</strong> HASTI Social in the Brickyard Program: Bringing Science Research and Resources to the Indiana K-16 Science Classroom</td>
<td><strong>1:00 pm – 3:45 pm</strong> Concurrent Sessions</td>
<td><strong>12:30- 2:00</strong> Preservice Share-A-Thon</td>
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<td><strong>2:00 pm – 3:00 pm</strong> STEM Share-A-Thon</td>
<td><strong>12:30 pm – 3:15 pm</strong> Concurrent Sessions</td>
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<td><strong>4:00 pm</strong> Association Meetings</td>
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<td><strong>5:30 pm – 7:00 pm</strong> Awards Banquet</td>
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<td><strong>7:30</strong> Social with That’s What SHE Said! sponsored by Pearson</td>
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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.
Door Prizes!

8:00 a.m. Monday and Tuesday, Director’s Row 2

Presenter: Shannon Hudson, President of Hoosier Association of Science Teachers, Inc.

FREE MINERAL KITS

Pick up your mineral kit at Tables A/B across from the Exhibit Hall.

Thank you – Indiana Mineral and Aggregate Association
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Conference Information and Events

Meeting Locations
Concurrent sessions will be held in the Wyndham – Indianapolis West. The Exhibit Hall is located in Golden Ballrooms 4, 5, 6 & 7. Luncheons and Keynote Speakers will be in the Hall of Champions. Please refer to the session listings for specific room numbers for concurrent sessions. A Wyndham floor plan has been included in the back of this booklet.

Registration
The Registration Desk, located across from Ballrooms 1, 2 and 3, will be open during the following hours:

Sunday, February 9 ...............................................................1 pm – 5:00 pm
Monday, February 10 ............................................................7:00 am - 3:00 pm
Tuesday, February 11 .............................................................7:30 am – 2:00 pm

Presenters
Presenters will check in at the Registration Desk prior to their session. See the HASTI registration desk if you need to store any materials.

Name Badges
Your registration package will include a name badge, a ticket for a complimentary Indiana Mineral Aggregate mineral kit, and lunch ticket/s. If you signed up for the Awards Banquet a ticket will also be included. Your name badge is your “ticket of admission” to all sessions, exhibit hall, and other activities.

Sessions and Times
Extended workshops, concurrent sessions and association meetings will be held at the Wyndham. A 15-minute break between sessions has been built into the program to allow adequate time to get to your next session. Morning sessions begin at 8:00 am and afternoon sessions begin at 1:00 pm Monday and 12:30 on Tuesday.

Exhibitors
Exhibitors are located in Golden Ballrooms 4, 5, 6 and 7. Registration Badges are required for admission to the Exhibit Hall.
Hours for Exhibit Hall:
   Monday – 9:00 am – 4:00 pm
   Tuesday – 9:00 am – 2:30 pm

Coat Room
A coat room is located next to the PreConvene. 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.

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. Please come to the registration desk if you have any questions.

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<th>HASTI Conference Committee</th>
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<td>Program Manager</td>
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<td>Registration Manager</td>
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<td>Exhibits Manager</td>
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Directors
District 1 – Matt Benus  
District 2 - Tracy Strieder  
District 3 – David Butler  
District 4 - Kevin Leineweber  
District 5 - Stacy Hootman  
District 6 – Kathy Daniels  
District 7 - Kim Terry  
District 8 – Kady Lane  
District 9 - John Harkness  
At-Large I – Russ Sanders  
At-Large II - James Hollenbeck  
Elementary - Dawn Bick  
Middle School – Suzanne Cunningham  
High School - Lori White  
College - Robert Yost  
NSTA District X - Danae Wirth

HASTI Board of Directors

Executive Board
President - Shannon Hudson  
Vice President – Kristen Poindexter  
Secretary – Georgia Everett  
Treasurer - Greg McCurdy  
Past President - Danae Wirth  
Executive Director - Carolyn Hayes

Affiliate Organization Representatives
AAPT - Craig Williams  
IABT - Kim Terry  
SEFI - Robert Yost  
I-STEM – Jennifer Hicks
### Key to the Strand Sessions

- **CW** = commercial workshops presented by exhibitors and businesses
- All in for Computer Science
- All in for Interdisciplinary STEM
- All in for Science and Technology
- All in for Science Education
- All in for Science and Engineering

### Share-A-Thons

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<tr>
<td>Monday, 9:00 am – 10:00 am</td>
<td>Elementary Share-A-Thon</td>
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<tr>
<td>Tuesday, 12:30- 2:00 pm</td>
<td>Preservice Share-A-Thon</td>
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Thank you to our Sponsors!

INDIANA UNIVERSITY
INTEGRATED PROGRAM IN
THE ENVIRONMENT

Oriental Trading

Indiana Mineral
Aggregates Association

Pearson
HASTI Sunday Social

When: 6:30 pm
Where: The Brickyard

Bringing Science Research and Resources to the Indiana K-16 Science Classroom

Come and network with IUB- Integrated Program in the Environment science researchers and affiliates who are seeking ways to advance research impacts for all Hoosiers. What do YOU need in order to improve science education outcomes? Researchers and IPE affiliates are eager to share information about current professional development opportunities, workshops, citizen science projects, science data sharing, and classroom modules and activities based on their research. They also are looking forward to learning about science educator and education needs and to develop relationships for future projects to improve Indiana science education.

Dr. Kim Novick, Associate Professor of land-atmosphere interactions in the O’Neill School of Public and Environmental Affairs, will give a short presentation titled, *How do trees affect climate? What we've learned about ecoclimatic legacies of reforestation, and tools for translating the knowledge to students and the public.* She, and members of her lab, will also be available before and after the presentation for questions and networking.

Come and think big.

This special event is sponsored by Indiana University Integrated Program in the Environment. Refreshments will be available.

HASTI Monday Social

Pearson education is excited to Rock out the 2020 HASTI conference with an after awards party! Pearson will be providing food and beverages plus bringing in one of Indy’s top cover bands- That’s What SHE Said! Rock out like a Geologist with Pearson Education.
Don’t forget these Associated Group Meetings

Monday, February 18, 2018 4:00 pm

**IABT Annual Meeting**
Fortune Square A
Biology
Middle/High School
Meeting will address the business of the organization and provide door prizes.

**Indiana Association of Physics Teachers Meeting and Share -A-Thon**
Fortune Square B
Physical Science/Physics
High School (9-12)
Join with other physics/physical science teachers to share ideas and discuss physics in Indiana
Presenters: Craig Williams, Hugh Ross, Brian Vermillion

Sunday, February 9, 2020 1:00 – 5:00 pm

**HELP! I Don’t Know Where to Begin…….**
Fortune Square D
Middle Level (6-8)
Participants will learn about important aspects for design challenges and will try their hand at writing a design challenge appropriate for their grade level.
Presenters: Elaine Gwinn, Shenandoah High School; Karen Jo Matsler and Cathy Barthelemy

**Abstract Strategy Games and Hypotheses**
Fortune Square C
Middle Level (6-8), High School (9-12), College
Learn how to use abstract strategy game materials to introduce students to the processes of formulating and testing hypotheses.
Presenter: David Maloney Purdue University Fort Wayne

**Elementary GLOBE Professional Development**
International Ballroom
Elementary (K-5)
Elementary GLOBE modules help teachers make connections to both literacy and math through science. Participating teachers will receive GLOBE certification.
Presenter: Sarah Nern, Purdue University

**Hands on Biotech with Bio-Rad: Opioid Dependence & Global Health**
Off site
High School (9-12)
Explore the genetics of opioid dependence and measure protein content in foods to combat undernutrition while using two new kits from Bio-Rad.
Presenter: Sherry Annee, Brebeuf Jesuit Preparatory School

Sunday, February 9, 2020 1:00 – 4:00 pm

**Using Model Aircraft in Your Classroom –**
Fortune Square B
**Academy of Model Aeronautics - Arconic Foundation**
Elementary (K-5), Middle Level (6-8)
Join us as we learn how to use model aircraft to learn important STEM science concepts and practices. The Academy of Model Aeronautics & Arconic Foundation will provide free classroom resources - 3 models, lesson plans, AeroLab DVD, and much more.
Presenter: Rick Crosslin, MSD Wayne Township Schools
Monday Exhibit Hall Hours
9 am – 4 pm

Monday, February 10, 2020
8:00 am
Concurrent Sessions

So this is your First Time attending HASTI
Director’s Row 2
General
If this your first time attending the HASTI conference, come and learn tips to maximize your experience at the conference. Door prizes.
Presenter(s): Shannon Hudson, President of Hoosier Association of Science Teachers, Inc.

Grey Matter: Learning and Teaching Science with the Brain in Mind
Fortune Square A
General
Science Education
Experience through science activities how discoveries in cognitive neuroscience are applied to NGSS teaching strategies and the principles of how students learn science.
Presenter: Carolyn Hayes, HASTI Executive Director

Is the e-text and e-learning right for me?
Golden Ballroom 1
General
Science Education
The goal of using technologies within learning and teaching processes is creating a paradigm shift in teaching and we will examine the facts.
Presenter: James Hollenbeck, Indiana University Southeast

Machines of the Midway
International Ballroom
Middle Level (6-8)
Interdisciplinary
There is finally an answer to the age-old question: “When are we going to use this in real life?” Machines of the Midway is the educational experience with the biggest thrill for your students at the 2020 Indiana State Fair.
Presenter: Stephanie DeCamp, Indiana State Fairgrounds

“It’s above me now”: Using representations to Improve Student Engagement of Earth and Space in Elementary Classrooms.
Golden Ballroom 3
Elementary (K-5)
Earth/Space Science
In this session presenters will provide lesson examples that incorporates using representations to increase students’ knowledge of earth and space.
Presenter: Jessica McClain
Monday, February 10, 2020 8:00 am

Concurrent Sessions continued

STEM and PBL Connect for Success

Fortune Square D
Elementary (K-5)
Interdisciplinary

Gain a better understanding of the basics of Project-Based Learning while making connections to STEM practices, academic standards, and the engineering design process.
Presenter: Angela Fitzgerald, The STEM Connection

STEM/PBL: Students Providing Wifi for Their Community

Golden Ballroom 2
Elementary (K-5), Middle Level (6-8)
Science Education

Seventh graders in a STEM class research current and possible Wi-Fi capabilities in our rural community. Learn about our failures and successes in our first PBL unit!
Presenter: Katie Coryell

Exploring the Solar System in the K-8 Classroom

Fortune Square B
Pre-Elementary (PreK - 2), Elementary (K-5)
Earth/Space Science

Join us for a session on the solar system, including resources that allow students to observe, explore, and visualize astronomical objects and their motions!
Presenter: Sarah Reynolds, University of Indianapolis

Virtual Science Experiences!

Director’s Row 3
High School (9-12)
Ecology/Environmental Science

Learn from virtual science teachers how to create engaging science experiences for your students!
Presenter: Elizabeth Owens, Indiana Connections Academy

Reclaiming the Metal

PreConvene
Middle Level (6-8)
Physical Science/Physics

In this activity from the SEPUP middle level physical science program, participants role play a scenario involving pre-treatment of copper containing liquid wastes from computer circuit board manufacture.
Presenter: Bill Cline, LAB-AIDS
Monday, February 10, 2020  

Concurrent Sessions continued

**Snapshots of Physics for ICP and More**  
Fortune Square C  
Middle Level (6-8), High School (9-12)  
Physical Science/Physics

Come explore novel and engaging learning opportunities pulled from the diverse world of physics.  
Presenter: David Sederberg, Purdue University

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**Elementary – Share-A-Thon**  
Brickyard  
Interdisciplinary  
Come and learn from other elementary science teachers in an informal setting. Door prizes will be awarded throughout the session  
Monday, 9-10 am

**Energize Your Students with PBL: Explore Sample Units**  
Fortune Square B  
General  
Interdisciplinary

Wondering what PBL is all about? Explore the principles and practices of PBL and see them come alive through sample PBL units.  
Presenter: Deb Sachs, University of Indianapolis

**Science and Language Assessment of All Students, Including English Learners**  
Golden Ballroom 1  
General  
Interdisciplinary

The Next Generation Science Standards (NGSS) three-dimensional instruction and assessment present both opportunities and challenges to teachers, especially involving student diversity and equity. This session will address how to design science instruction that incorporates formative assessment of science and language with all students, including English learners. After engaging in a science investigation, participants will assess student-developed models in terms of both science and language, and consider how to use the assessment to inform instructional next steps.  
Presenter: Okhee Lee
Monday, February 10, 2020

Concurrent Sessions continued

**Game-tastic Gamification**

Gamifying your classroom to create students who know how to be self-driven, self-discipline, time managers, and motivated in your classroom along with learning your content/grade level side-by-side.

Presenter: Robin Coffman, Lakeview Middle School

**Free engineering resources for clubs for classroom.**

Two teachers will have a slide presentation describing 3 engineering activities that can fulfill engineering standards or can be used to develop science clubs.

Presenter: Walt Buras, John Young Middle School

**Monsters, Dragons, Deer... Oh My! and SO much more!**

Explore interactive ways to teach concepts in genetics, ecology, classification and more. Experience the activities and leave with materials to use in your classroom!

Presenter: Courtney Brummett, Mishawaka High School

**Learning about Indiana’s Plants & Animals:**

Environmental Literacy Guidelines outline what students should know about their natural world. Learn about native species and how Indiana’s ELG fits into your science lessons.

Presenter: Melissa Moran, The Nature Conservancy

**Elementary Share a Thon**

Bring your ideas to share at the Elementary Share-A-Thon! No idea is too big or too small to be shared. Come network and learn from other Elementary Educators and share what’s happening in your classrooms!

Presenter: Kristen Poindexter, Allisonville Elementary School
Revitalizing the Earth Science Classroom with Rigor & Relevance

Director's Row 3
High School (9-12)
Earth/Space Science

Earth Science is often referred to as the “forgotten science” and has lost its equal position among its contemporaries in K12 education. This presentation offers unconventional approaches to bring meaning and purpose back to your Earth Science Curriculum. Topics of discussion include re-visionsing state standards, citizen science using NASA’s GLOBE initiative, planning impactful field trips, digital classroom resources, and many other ways to inspire your students to do more than simply worksheets.
Presenter: Anthony Thomas, Garrett High School

Sort of Flipped Classroom

Golden Ballroom 3
High School (9-12)
Physical Science/Physics

Get ICP lessons from my classroom where kids collaborate and take ownership of their work, there’s more time for reteaching, and it’s totally paperless!
Presenter: Shelby Biehl, Franklin Community High School; Cathy Barthelemy

Discover CRISPR-Cas9 and Updated Sickle Cell Resources from HHMI BioInteractive

International Ballroom
High School (9-12)
Life Science/Biology

Watch a new HHMI BioInteractive short film about sickle cell disease and learn about CRISPR-Cas 9 as a possible cure. All resources are free.
Presenter: Sherry Annee, Brebeuf Jesuit Preparatory School

Biomes and Invasive Species

PreConvene
High School (9-12)
Life Science/Biology

In this activity from the SEPUP High School Biology program, students match a set of organism cards to proper climate/biome cards, then use literacy strategies to consider the impact of invasive species.
Presenter: Bill Cline, LAB-AIDS

Modified in the Midwest

Fortune Square C
High School (9-12)
Interdisciplinary

Walk away with co-teach/inclusion techniques you can implement tomorrow for at-risk students! Modify without changing the curriculum. Presented by current science co-teachers.
Presenter: Elizabeth Walter, Brownsburg High School
Monday, February 10, 2020

**Concurrent Sessions**

*Oh Wait! There are things jumping off the screen in my science methods course*  
Fortune Square A  
College Science Education

We will be presenting augmented reality educational technology tools that were used as part of the elementary education science methods course.  
Presenter: Sumreen Asim, IU Southeast

*On The Case- Forensic PBL*  
Fortune Square B  
Middle Level (6-8)  
Interdisciplinary

Step into the forensics lab and solve a mystery with me. We will be using synthetic blood for blood typing evidence from a crime scene.  
Presenter: Becky Hillenburg, Edgewood Jr. High School

*Investigate the Science of Life*  
PreConvene  
Middle Level (6-8), High School (9-12)  
Life Science/Biology

Join us to explore inquiry activities, lesson plans, program opportunities, references and resources for your classroom to teach life sciences! Hosted by Purdue University Staff.  
Presenter: Amy Jones, Purdue University

*Science Learning through Engineering Design*  
Golden Ballroom 1  
Elementary (K-5), Middle Level (6-8)  
Science Education

This session will give a general overview of teaching engineering design in the elementary/middle school classroom.  
Presenter: Nikki Rumpler, Riverside Intermediate School

*Let’s run: An Integrated Inquiry Activity*  
Director’s Row 3  
Elementary (K-5), Middle Level (6-8)  
Physical Science/Physics

Run for 100 meter dashes to calculate your speed and participate in this hands-on activity.  
Presenter: Tahsin Khalid, Southeast Missouri State University
Concurrent Sessions continued

**Computer Science Updates from IDOE**
Golden Ballroom 2
Elementary (K-5), Middle Level (6-8)
Science Education

Looking for information on state-level computer science initiatives and resources? Attend this session for important updates and an opportunity to have your questions answered.
Presenter: Jacob Koressel, Indiana Department of Education

**STEAM Stories**
Director's Row 3
Pre-Elementary (PreK - 2), Elementary (K-5)
Interdisciplinary

What do you get when you combine engineering design and children’s literature? Find out as we explore connections between STEAM and science biographies for elementary learners.
Presenter: Catherine Pangan, Butler University

**Science and You - Purdue Students Take on Science Communication**
Fortune Square D
High School (9-12)
Interdisciplinary

Purdue students challenge how the world sees science by partnering with science educators.
Presenter: Andrew Santos

**What Can a Red Tattoo Teach Us About Skin Color?**
International Ballroom
High School (9-12)
Life Science/Biology

Use free HHMI BioInteractive resources, such as a microscopic image of a red tattoo, an online interactive, and short film to teach skin color.
Presenter: Sherry Annee, Brebeuf Jesuit Preparatory School

**Means of Conceptualizing Molecular Genetics and Genetic Expressions**
Golden Ballroom 3
High School (9-12)
Life Science/Biology

From DNA origami to 2-Ply DNA, this presentation showcases a variety of simple and cost-effective manipulatives, activities, and labs in order to motivate your students. The presentation will highlight DNA, RNA, Protein Synthesis, and Genetics.
Presenter: David Butler, Southern Wells High School
Monday, February 10, 2020

Concurrent Sessions continued

Be a Hero, Save a Life  
Fortune Square C  
High School (9-12), College  
Life Science/Biology

Every 10 minutes a person is added to the transplant waiting list in the US. Learn about classroom presentation offerings provided by Donate Life Indiana.  
Presenter: Corinn Osinski-Carey, Donate Life Indiana

**Share-A-Thon 10:30 AM - 3:00 PM**  
Directors Row 1  
General  
Science Education

Retired teachers will offer a variety of classroom items for free to current teachers!  
Presenter: Ann Burke

Don’t forget to Tweet:  
#HASTI20
Special Guest Dennis Schatz
President - National Science Teaching Association

Dennis Schatz is Senior Advisor at Pacific Science Center in Seattle, Washington, and President of NSTA for 2019-2020. He was Founding Field Editor of the journal, Connected Science Learning, which highlights links between in-school and out-of-school STEM learning.

He has served as Principal Investigator for a number of National Science Foundation (NSF) projects and co-directed Washington State LASER (Leadership and Assistance for Science Education Reform), a program to implement a quality K-12 science program in all 295 school districts in Washington State.

He has received numerous honors. Most recently, Asteroid 25232 was renamed Asteroid Schatz by the International Astronomical Union IAU) in recognition of his leadership in astronomy and science education. He received NSTA’s 2005 Distinguished Service to Science Education Award, and its 1996 Distinguished Informal Science Educator Award.
He is the author of 26 science books for children, including When the Sun Goes Dark, and Uncover A T.rex. He is also co-author/editor of several curriculum resources for teachers, including his most recent book, Solar Science - published by NSTA.

His breakout session, “Developing Effective In-School and Out-of-School Science Learning Collaborations” will be held Monday, February 10 at 2 pm in the Grand Ballroom 1.
Join the President of NSTA to explore effective connected science experiences between schools and out-of-school programs, and to consider similar experiences that you can use in your STEM education efforts.
Monday Luncheon/Keynote Speaker/
Hall of Champions

Okhee Lee
Professor of Childhood Education, Department of Teaching and Learning
New York University|Steinhardt

Okhee Lee is a professor in the Steinhardt School of Culture, Education, and Human Development at New York University. Her research areas include science education, language and culture, and teacher education. She is leading collaborative research between New York University and Stanford University to develop NGSS-aligned instructional materials to promote science and language learning of elementary students, including English learners. She is also leading collaborative research with MIT and Vanderbilt University to integrate computational thinking and modeling in NGSS-aligned instructional materials. She was a member of the NGSS writing team and served as leader for the NGSS Diversity and Equity Team. She was also a member of the Steering Committee for the Understanding Language Initiative at Stanford University. She received 2019 Innovations in Research on Equity and Social Justice in Teacher Education Award from the American Educational Research Association (AERA) Division K Teaching and Teacher Education, was a 2009 AERA Fellow, received 2003 Distinguished Career Contribution Award from the AERA Scholars of Color in Education, and was awarded a 1993-1995 National Academy of Education Spencer Postdoctoral Fellowship.

Her breakout sessions, “Science and Language Assessment of All Students, Including English Learners” will be held Monday, Feb 10 9:00 am in Golden Ballroom 1

The Next Generation Science Standards (NGSS) three-dimensional instruction and assessment present both opportunities and challenges to teachers, especially involving student diversity and equity. This session will address how to design science instruction that incorporates formative assessment of science and language with all students, including English learners.
**Monday, February 10, 2020**

**1:00 pm**

**Concurrent Sessions**

**Using IDOE Frameworks to Create STEM Lessons**
Fortune Square C
General
Interdisciplinary

Participants will take a deep dive into IDOE’s Math and Science Frameworks. They will gain an understanding of the guiding principles driving the development and various components of the Frameworks. Most importantly, participants will learn how to use the Frameworks to plan standards-based, inquiry-driven instruction. Time will be given to brainstorm how to best integrate the standards to create dynamic STEM lessons! Join us for an in-depth look at these free resources!

Presenter: Jennifer Jensen, Indiana Department of Education, *Director for Curriculum & Instruction*

**Helping Middle School Girls on an Adventure**
Golden Ballroom 2
General
Interdisciplinary

**“To the Stars and Back” with Big STEM**

We describe an interdisciplinary experience, which enhanced the scientific knowledge and self-efficacy of middle school girls, incorporating Astronomy, Biology, Chemistry, Geology, Physics, Engineering. Hands-on examples.

Presenter: Keri Rodgers, Indiana University

**Coding: Cups, Ozo’s and Apps Oh My!**
Fortune Square A
General
Science Education

We will work through a week’s worth of coding lessons, starting with an offline activity and finishing with actual code writing.

Presenter: Lisa Custer

**Science Teaching as a Higher Calling**
Director’s Row 3
General
Science Education

A newly retired teacher will encourage and motivate your science teaching efforts with stories, original songs, and humor - a relaxed, uplifting look at the profession.

Presenter: David Inskeep, Northwestern High School
Monday, February 10, 2020 1:00 pm

Concurrent Sessions continued

**Engineering a Better World in Grades 5-8**

Explore investigations where students isolate and test variables, recognize criteria and constraints, test designs, and apply the engineering design process to real-world problems.

Presenter: Deborah Vannatter

**Exploring Weathering in a Karst Region**

We will present several hands-on activities that model weathering and contour mapping in a karst region.

Presenter: Kelly Kuchenbrod, William Henry Harrison High School

**Becoming E.A.R.T.H.: Our journey in creating a STEM focused vision for learning**

This session will chronicle the work our school engaged in as we defined our school vision and made STEM an integral part of our school.

Presenter: Lily Albright

**Indiana Envirothon**

ScienceEngage high school students in natural resources and the current issues related to them.

Presenter: LuAnne Holeva

**Integrating Content into Engineering Designs to Support STEM**

Participants will engage in the process of designing an engineering design challenge by using content stations, incorporating the 4C’s, integrating content and phenomenon.

Presenter: Elaine Gwinn, Shenandoah High School
Let me out of here: Using Breakout EDU in science methods coursework
Golden Ballroom 1
CollegeScience Education

We will share, what worked well and what did not, when using Breakout EDU. Participants will be immersed in a hands-on experience with trying to unlock the code to escape.
Presenter: Sumreen Asim, IU Southeast

Building scientific argumentation skills - teaching your students to be “CLEVER” when analyzing graphs and data
Fortune Square C
Middle Level (6-8), High School (9-12)
Science Education

The (I2) Strategy (Identify and Interpret) and Claim/Evidence/Reasoning will be explored in a hands-on, teacher-to-teacher training session connecting to physical and life science concepts.
Presenter: Maureen McGrail, University of Notre Dame

STEM – Share-A-Thon
Brickyard
General
Come and learn about STEM lessons from other science teachers in an informal setting. Door prizes will be awarded throughout the session.
Monday, 2-3 pm

Developing Effective In-School and Out-of-School Science Learning Collaborations
Grand Ballroom 1
Join the President of NSTA to explore effective connected science experiences between schools and out-of-school programs, and to consider similar experiences that you can use in your STEM education efforts.
Presenter: Dennis Schatz, President of National Science Teaching Association

Lecture Busters
International Ballroom
General
Science Education
Engaging Ways to Break Up Your Lecture and Get Students Thinking
Presenter: Katie Powell, Southmont Jr. High
**Monday, February 10, 2020**

**Concurrent Sessions continued**

**STEM Integration with IN-FIRST**

Director's Row 3
General
Science Education

Learn about the programs that are available through Indiana FIRST to integrate STEM into your school and/or classroom.
Presenter: Georgia Everett, Western High School

**Findings of Perceptions of English Language Learners in the Secondary Science Classrooms 2017-2018.**

Fortune Square A
General
Science Education

Teachers were surveyed and interviewed on observations, beliefs, and attitudes about the progress of new language learners in the academic year 2017-2018.
Presenter: James Hollenbeck, Indiana University Southeast

**“Beyond Control, Alt and Delete”**

*How to use technology to improve student scientific learning.*

Golden Ballroom 2
Elementary (K-5)
Earth/Space Science

This session provides resources that include using technology to teach scientific phenomena in classroom settings for student engagement.
Presenter: Jessica McClain

**Machines at Work and Play**

PreConvene
Elementary (K-5)
Interdisciplinary

How do people use simple and compound machines? Come play/work with simple machines; consider how they can be combined to make playground equipment.
Presenter: Deborah Vannatter

**Solar System Exploration for Elementary Students**

Fortune Square A
Elementary (K-5), Middle Level (6-8)
Earth/Space Science

Join us as we explore the solar system with hands-on activities, demonstrations, and concepts that every K-6 student should understand. Topics covered include celestial objects, revolution, rotation, eclipse, gravity, sun, moon phases, tides and much more.
Presenter: Rick Crosslin, MSD Wayne Township Schools
**Monday, February 10, 2020**

*Concurrent Sessions continued*

**Connecting Literature and STEM**
Golden Ballroom 3
Pre-Elementary (PreK - 2), Elementary (K-5)
Science Education

STEM lessons will be presented that begin with a literature connection. Lessons will be differentiated for K-4th grade. Language Arts and STEM standards will be addressed.
Presenter: Eileen Wodda, St. Monica

**Creating an online physics course (from scratch)!**
Director's Row 3
Physical Science/Physics

What does it take to create an entirely online physics course from scratch? Come hear about my pitfalls (but mostly successes!) in making this happen!
Presenter: Stacy Hootman, University of Indianapolis

**How to Read/Understand Research**
Fortune Square D
High School (9-12)
Science Education

Explore a web-based tool to teach your students how to read and understand research. Discover how you can be involved in the development.
Presenter: Teddie Phillipson-Mower, Indiana University Bloomington

**Getting students to create quality products**
Fortune Square C
Middle Level (6-8), High School (9-12)
Science Education

Want your high school students to create quality products, but they aren't quite up to your expectations? Come learn how to continually raise the bar.
Presenter: Kevin Leineweber, Cascade High School

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**Survey 123 - What Is your perception of the White River?**
Golden Ballroom 1
Interdisciplinary

The Survey 123 is a form-centric web-based data collection App. The questionnaire, the analysis and the results of the survey will be shared.
Presenter: Josephine Desouza, Ball State University, Kizmin Jones
Monday, February 10, 2020

Concurrent Sessions continued

Our World - from a Google-eye View
Golden Ballroom 2
General
Interdisciplinary

Through Google Earth, Tours and Expeditions, your students can explore the world from a whole new perspective - not even the sky is the limit!
Presenter: Meighan Scott

Worksheet Busters
International Ballroom
General
Science Education

Easy, Low Prep Activities You Can Use Again and Again for Any Content
Presenter: Katie Powell, Southmont Jr. High

Are you Moody?
PreConvene
Middle Level (6-8), High School (9-12), College
Interdisciplinary

We will bring science and coding together as participants learn to do some basic coding (no experience necessary) while developing a mood ring!
Presenter: Michelle Grooms

Super STEM iPad Apps and Trade Books for Real-World STEM Projects
Fortune Square A
Elementary (K-5)
Interdisciplinary

Discover challenging and engaging STEM iPad apps, including coding and other computer science apps and children’s books for interdisciplinary real-world projects.
Presenter: Janet Jordan, IPFW, Education retired

Elementary Talk A Thon
Director's Row 3
Pre-Elementary (PreK-2), Elementary (K-5)
Interdisciplinary

Come join other elementary educators as we talk about and share what is happening in science in our classrooms. Network with other teachers, learn about free opportunities available for educators, and bring ideas to share!
Presenter: Kristen Poindexter, Allisonville Elementary School; Karen Jo Matsler and Cathy Barthelemy
Monday, February 10, 2020

Concurrent Sessions continued

The Chemistry Conversation Pit

Join Bill and Ed for an unscripted opportunity to meet and talk about chemistry and the teaching of chemistry. Everyone is welcome.
Presenter: Ed Mottel, Rose-Hulman Institute of Technology

IABT Quick Hits

Middle and HS teachers share Biology activities and lessons that are ready to use when you return to school. The IABT will also hold the annual meeting and give away door prizes.
Presenter: Reena Markstahler, Southwood High School

Hoosier STEM Academy: Stipends for Indiana STEM Teachers to Become ALL IN for Dual-Credit Teaching

The Hoosier STEM Academy offers stipends to secondary STEM teachers wanting to become qualified to teach dual-credit classes. Learn how to apply for these stipends.
Presenter: Annette Leitze, Ball State University/Hoosier STEM Academy

Case Studies Used in Problem Solving

Case studies offer students a chance to use their knowledge to solve problems that often have more than one position.
Presenter: Tyler Hudson, North Miami High School

Teaching Science to English Language Learners

Help ESL students improve via modified assessments and assignments from an experienced teacher of sheltered instruction for Biology and ICP.
Presenter: Jacquelyn Tschudy, North Central High School
Tuesday Exhibit Hall Hours
9 am – 2 pm

Tuesday, February 11, 2020  8:00- 11 am  Workshop

**Educating for Environmental Change with Authentic Science Practices**
International Boardroom
Interdisciplinary  General
We’re a collaboration between IU, WonderLab Museum, and teachers. Join us to explore free, hands-on resources for teaching grades 7-12 about climate! Laptop recommended.
Presenters: Emmy Brockman, Kirstin Milks

Tuesday, February 11, 2020  8:00 am  Concurrent Sessions

**So this is your First Time attending HASTI**
Director’s Row 2  General
If this your first time attending the HASTI conference, come and learn tips to maximize your experience at the conference. Door prizes.
Presenter(s): Shannon Hudson, President of Hoosier Association of Science Teachers, Inc.

**Keep Calm and Put Your Lab Coat On**
Director’s Row 3  Interdisciplinary  General
Learn how to increase student engagement through labs, activities, and demos. Handouts will cover all science disciplines.
Presenter: Sarah Leach, West Washington Jr.-Sr, Madalyn Pedigo

**Instruction in the Nature of Science**
Fortune Square D  Science Education  General
Presentation of 3 activities used to introduce Nature of Science concepts
Presenter: Joel Bryan, Ball State University

**Science Olympiad in the classroom**
Fortune Square B  Interdisciplinary
Middle Level (6-8), High School (9-12)
Science Olympiad is the Nation’s best STEM competition, hands down. Learn how to incorporate the essence of Science Olympiad into your classroom activities.
Presenter: Dan Nichols, Indiana Science Olympiad
Weather in the Elementary Classroom: spark interest in math and literacy connections

Learn how to incorporate the NASA sponsored Global Learning and Observations to Benefit the Environment (GLOBE) Program into your elementary curriculum.
Presenter: Steven Smith, Purdue University

Incorporating Environmental Education into your Classroom: “Put your Ecosystem into Homeostasis” Game

Play the environmental education game “Put your Ecosystem into Homeostasis” and learn about other resources from the BSU Field Station and Environmental Education Center.
Presenter: Erica Forstater, Ball State University Field Station and Environmental Education Center

Playful Learning & Scientific Inquiry with PBS Kids

Learn about available FREE PBS Kids and PBS Ready To Learn products that use playful learning and scientific inquiry to engage early learners (ages 2-8) in STEM.
Presenter: Carly Weidman, PBS Learning Media - WFYI

Chemistry and Physical Science Activities

Short lab activities that will enhance the physical science classroom, and help students grasp abstract concepts.
Presenter: Dan Witt, Mishawaka High School

Tricked Into Thinking

Using simulations and virtual CASES high school students can experience what it means to think like a scientist and solve problems.
Presenter: Thom O'Brien

Research in the AP Biology Classroom

Find out how to incorporate more scientific research into your AP Biology classroom while covering the required topics.
Presenter: Georgia Everett, Western High School
Empowering Science Teachers to Help Improve State Test Scores  
International Ballroom  
Science Education  
Middle Level (6-8)

Science teachers are able to help Math and Language Arts teachers increase state test scores by incorporating all subject skills within their content area. In this session, I will provide 3rd - 7th grade science lessons that incorporate tested reading, writing, and math skills. As non-tested content teachers become more familiar with tested content and skills, they will be able to work collaboratively with other grade level teachers to customize lessons to their students' data.

Presenter: Lindsay Hafft, South Ripley Junior High

Enigmatic Mongolia Steppe by Steppe  
Golden Ballroom 2  
Ecology/Environmental Science  
General

Discover the wonders and worries of one of the world’s most remote countries. From climate change to biomes and ecosystems - see Mongolia through scientific eyes.

Presenter: Carol Pierobon Hofer, Fox Hill Elementary/MSD of Washington Township

Robotic Arm End Effector - An Engineering Design Task  
Fortune Square D  
Interdisciplinary  
General

Low-cost engineering design task appropriate for students of all levels

Presenter: Joel Bryan, Ball State University

Teaching Reading, Writing, and Math with Science Activities  
International Boardroom  
Life Science/Biology  
Elementary (K-5)

Learn how to use science activities to teach reading, writing, and math to elementary students.

Presenter: Mary Gobbett, University of Indianapolis
**Tuesday, February 11, 2020**

**Concurrent Sessions continued**

**Service-Learning and Interdisciplinary STEM**
Director's Row 2
Interdisciplinary
Elementary (K-5), Middle Level (6-8)

Participants will become familiar with the free resources to incorporate service-learning using the STEM and PBL model and critical thinking skills into all disciplines.
Presenter: Beth Smith, INSPIRE3

**Where in the Cell Are We? Exploring Cellular Watercolor Landscapes**
Directors Row 3
Interdisciplinary
High School (9-12), College

Engage students in a thoughtful exploration of the invisible molecular world using vibrant, accurate watercolor landscapes that illustrate proteins and other cellular structures and visualize where protein synthesis and other processes occur. Trace the production and secretion of antibodies and how antibodies work to block the influenza infection cycle.
Presenter: Heather Ryan, 3D Molecular Designs

**Highlights from Saturday Morning Astro at Purdue**
PreConvene
Earth/Space Science
Middle Level (6-8), High School (9-12)

Astronomy and planetary activities for your classroom.
Presenter: David Sederberg, Purdue University

**Story Maps: Tech Literacy Across Disciplines**
Golden Ballroom 3
Interdisciplinary
Pre-Elementary (PreK - 2), Elementary (K-5)

Discover the steps of creating Story Maps using ESRI's FREE ArcGIS Online software. Story Maps are interdisciplinary/visual ways to tell a story through geo-spatial text.
Presenter: Kathy Lamb Kozenski, Geography Educators’ Network of Indiana, Inc. (GENI)

**Modeling Intermolecular Forces**
Fortune Square C
Chemistry
High School (9-12)

Models will be presented that will allow students to feel the interactions between different types of molecules.
Presenter: Richard Heaston Pike High School; Chris Ludy
Tuesday, February 11, 2020  

**Concurrent Sessions continued**

**Where in the Cell Are We? Exploring Cellular Watercolor Landscapes**  
Director Row 3  
Biology

Engage students in a thoughtful exploration of the invisible molecular world using vibrant, accurate watercolor landscapes that illustrate proteins and other cellular structures and visualize where protein synthesis and other processes occur. Trace the production and secretion of antibodies and how antibodies work to block the influenza infection cycle.  
Presenter: Tim Herman

**2020 Sustainable Alternative Energies Summer Boot Camp**  
Golden Ballroom 1  
Science Education  
Middle Level (6-8), High School (9-12)

Indiana STEM teachers (grades 5-12), teaching units on alternative energies, are invited to participate in Rose-Hulman PRISM's Sustainable Alternative Energies Summer Boot Camp. The camp dates are June 14 - 19, 2020.  
Presenter: Bob Jackson, Rose-Hulman Institute of Technology - PRISM Project

**Paid to Travel and Learn**  
Fortune Square A  
Interdisciplinary  
General

Do you lack funds? Be inspired that you can win grants to help others or get things you want like paid study trips.  
Presenter: Norman Leonard, Pike High School

Tuesday, February 11, 2020  

**Concurrent Sessions**

**Share-A-Thon 10:30 AM - 3:00 PM**  
Directors Row 1  
General  
Science Education

Retired teachers will offer a variety of classroom items for free to current teachers!  
Presenter: Ann Burke
If you are interested in learning more about STEM School Certification then this is the session for you! Participants will gain insight into the process and the reasoning behind the recent overall of the STEM School Certification process. The steps to apply for certification will be reviewed. Participants will also gain an understanding of the four Domains and the twenty six Elements that comprise the STEM School Certification rubric as well as examples of how to provide the evidence for documenting the required metrics.
Presenter: Christina Hilton, Indiana Department of Education, STEM Specialist

Recycling Classroom Kits and Grants Available for Schools

IDEM will be discussing recycling, products made from recycled items (25 classroom kits available) and requirements for the recycling grants available for schools.
Presenter: Jennifer Helrigel

Conservation Educator Academy

Learn about a professional development at the Indianapolis Zoo for teachers who want to integrate more inquiry into their lessons!
Presenter: Tolly Foster, Indianapolis Zoo; Tom McConnell

Helping Students Safely and Confidently Participate in a Technology-Focused World

Educators will learn about EVERFI’s free digital STEM resources - Hockey Scholar, Ignition, and Endeavor, which focus on STEM application, digital literacy, and STEM careers.
Presenter: Kaley Esselborn

Microbiology Activities Without Using Living Microorganisms

Engage in a variety of activities to teach students about microorganisms without growing living organisms.
Presenter: Mary Gobbett, University of Indianapolis
A Planning Framework for Developing a Sense-of-Place Through Outdoor, Place-Based Education

Citing decades of research, the authors propose a framework to help educators plan an environmental education program that increases sense-of-place in students' community.

Presenter: Jory Mathews, River Forest Middle School

Hawaii Marine Science Seminar

Engage your students through intensive study in a favorite field—Marine Science! Indiana teachers are escorting students to Hawai’i for this authentic two-week program.

Presenter: Dennis O'Rourke, Retired

Three Investigations Merging Math and Science with Same Inexpensive Apparatus

We describe three investigations based on a simple pendulum that are research-like and make use of mathematics to support the science.

Presenter: Joseph Bellina, Northern Indiana Science Mathematics and Engineering Collaborative (NISMEC)

Endangered Species Trading Cards

Raise awareness about endangered species by engaging the students in creating endangered species trading cards.

Presenter: Joshua Mott, Pike High School

Unstoppable!

Teaching is a rewarding profession. It can also be challenging, difficult and draining. Learn how we manage day to day challenges and still love the classroom!

Presenter: Grace Schmitt, Ben Davis High School; Carey Munoz
Middle School Demo Show: using science to excite and engage students
PreConvene
Science Education
Middle Level (6-8)

Presenters Sarah and Steven will go through a variety of demos and explain the science and use of them in the classroom. Bring your notebook!
Presenters: Steven Smith, Sarah Nern, Purdue University

Tuesday Luncheon/Networking Session
Hall of Champions
11- 12:30
Pizza Buffet
Don’t forget to visit the exhibits!

Using Podcasts in the Classroom to Help Your Students Succeed
Fortune Square B
Science Education

General Podcasts can be a great resource in and out of the classroom. Discover how to use podcasts to help your students learn many skills!
Presenter: Sarah Nern, Purdue University

Developing Research Courses
Fortune Square D
Interdisciplinary
Middle Level (6-8), High School (9-12)

After years of helping students run experimental research projects, I am mentoring a colleague to expand research class offerings in preparation for pathways.
Presenter: John Taylor, Elkhart Memorial H.S.
Tuesday, February 11, 2020 12:30 pm

Concurrent Sessions continued

*Push, Pull, Go*  
PreConvene  
Physical Science/Physics  
Elementary (K-5)

This session will explore the kindergarten force and motion standards and how the BBS Push, Pull, Go kit meets those standards. Teachers will go through each lesson and feel confident in teaching the kit. A BBS Push, Pull, Go kit will be raffled off at the end of the session.  
Presenter: Dawn Bick, Hasten Hebrew Academy of Indianapolis

*Bats and Bees and Manatees: Bring authentic science processes and conservation to your classroom with Conservation Tales*  
Golden Ballroom 3  
Ecology/Environmental Science  
Elementary (K-5)

Learn about the authentic science processes, inquiry activities and conservation actions you can find in the Conservation Tales book series for K-8 classrooms!  
Presenter: Tom McConnell, Ball State University

*Teaching and Learning Science with STEM-based PBLs*  
Director’s Row 3  
Interdisciplinary  
Elementary (K-5), Middle Level (6-8)

Join us as we share successful strategies for uniting students, teachers, and the greater community through engaging, NGSS-aligned culturally and community-relevant project-based learning experiences.  
Presenters: Demetrice Smith-Mutegi, Marian University; Kasha Hayden

*The Magnetic Field Measurement Project at UIndy*  
Golden Ballroom 1  
Physical Science/Physics  
Elementary (K-5), Middle Level (6-8)

Using smartphone technology with health science majors to both collect magnetic field data and examine existing studies into their impact on human health  
Presenter: Stacy Hootman, University of Indianapolis; Cory Pickett

*Educating for Environmental Change: Engineering Workshop*  
Fortune Square A  
Ecology/Environmental Science  
Middle Level (6-8)

Learn about Educating for Environmental Change, a free Indiana University program that helps teachers teach climate change and participate in an exemplar wind turbine activity.  
Presenter: Adam Scribner, Indiana University
Tuesday, February 11, 2020  
12:30 pm  

Concurrent Sessions continued

Let’s Explore the Human-Made Landscape  
Golden Ballroom 2  
Ecology/Environmental Science  
Middle Level (6-8)

Discover inquiry-based simulations and games on the impacts of urbanization, agricultural expansion and industrialization on ecosystems and communities over the past 200 years.
Presenter: Jodi Bondy

NatGeo Certified Educator Phase 1  
Director’s Row 2  
Interdisciplinary  
Pre-Elementary (PreK - 2), Elementary (K-5)

Do you want to be a National Geographic Certified Educator? Become part of this exclusive community of formal and informal educators who are re-inventing interdisciplinary teaching and learning.
Presenter: Kathy Lamb Kozenski, Geography Educators’ Network of Indiana, Inc. (GENI)

Activities for Teaching about Evolution, Charles Darwin, and the Galapagos Islands  
International Boardroom  
Life Science/Biology  
High School (9-12)

Take a virtual trip to the Galapagos. Enjoy videos of Darwin’s visit to my classroom! Take home videos, PowerPoint presentations, lesson plans and student handouts.
Presenter: Joe Ruhl, Lafayette Jefferson High School

Teaching of Cell Respiration and Photosynthesis can be Energizing! Pun Intended  
Fortune Square C  
Science Education  
High School (9-12), College

The teaching of bioenergetics processes should be tied to overarching principles that can help lead to understanding of biochemical processes that are found in the mitochondria and chloroplasts.
Presenter: John Moore, Taylor University

Preservice – Share-A-Thon  
Brickyard  
General

Preservice  
Come and learn about topics for preservice lessons from other science teachers in an informal setting. Door prizes will be awarded throughout the session.
Tuesday 12:30-1:30 pm
Tuesday, February 11, 2020

**Concurrent Sessions**

**CW The Dynamics of DNA – from Structure to Function**  
Fortune Square D

Support three-dimensional learning with a new, atomically-accurate model of double helical DNA that students can untwist and separate to explore the processes of replication and transcription. Convert deoxyribose to ribose sugars and generate the universal currency of energy, ATP. Additional manipulatives go beyond genetics to consider epigenetics and gene expression.

Presenter: Heather Ryan, 3D Molecular Designs

**iNaturalist: Your Students as Citizen Scientists**  
Fortune Square A

Join this session to learn how a free app called iNaturalist can turn your students into citizen scientists who post observations and use global data.

Presenter: Tom McConnell, Ball State University

**Opportunities for Science Teachers to do Authentic Science Research**  
Director's Row 2

With so much emphasis on students doing authentic science, how much time do we spend doing authentic science ourselves? Emphasis on NITARP, Quarknet, and RET.

Presenter: John Taylor, Elkhart Memorial H.S.

**Proficiency-based grading for Biology 1: What skills are we supposed to teach?**  
International Boardroom

See how one teacher implements proficiency-based grading in a biology 1 class at a school that doesn’t support that type of grade reporting.

Presenter: Emily Hintz, Winamac Community High School

**CW Light and Sound Waves**  
PreConvene

This session will explore the first grade light and sound standards and how the BBS Light and Sound Waves kit meets those standards. Teachers will go through each lesson and feel confident in teaching the kit. A BBS Light and Sound Waves kit will be raffled off at the end of the session.

Presenter: Dawn Bick, Hasten Hebrew Academy of Indianapolis
Tuesday, February 11, 2020

Concurrent Sessions continued

**Epic! Reading in Science Classrooms**
Golden Ballroom 3
Interdisciplinary
Pre-Elementary (PreK - 2), Elementary (K-5)

Participants will learn how the Epic! books app and website can help bring literature into their science classrooms. Bring a laptop or tablet to sign up for a free account!
Presenter: Kristen Poindexter, Allisonville Elementary School

**Utilizing Research Based Projects in ICP**
Golden Ballroom 1
Physical Science/Physics
High School (9-12)

An overview of implementing a student designed research based project over the course of 9 weeks in Integrated Chemistry & Physics
Presenter: Becca Gwin, West Lafayette High School

**Chemistry and Art**
Fortune Square C
Chemistry
High School (9-12), College

Exploring ceramics, network covalent solids, and melting points through collaboration between a chemistry course and art class.
Presenter: Kyle Jane, Concordia Lutheran High School

**Stuck in the Middle**
Golden Ballroom 2
Science Education
Middle Level (6-8)

Games, vocabulary ideas and activities to get your middle school students moving! Come join and find new ways to liven up your classroom.
Presenter: Susan Waymire, Knightstown Intermediate School

**CAPtivating Teachers in STEM**
Fortune Square B
K-12

The Civil Air Patrol’s STEM Kit program provides STEM resources for hands-on, inquiry-based learning in astronomy, robotics, flight simulation, coding, engineering, rocketry, quadcopters, and more in grades K-12. Learn how you can become a CAP member, explore stem materials, and create excitement in your classroom.
Presenter: David Straughn, Civil Air Patrol
The Dynamics of DNA – from Structure to Function

Support three-dimensional learning with a new, atomically-accurate model of double helical DNA that students can untwist and separate to explore the processes of replication and transcription. Convert deoxyribose to ribose sugars and generate the universal currency of energy, ATP. Additional manipulatives go beyond genetics to consider epigenetics and gene expression.

Presenter: Tim Herman
# HASTI Past Presidents

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<td>Virgel Imel</td>
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<td>Charles Richardson</td>
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<td>Gordon Hopp</td>
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<td>Dorothy Gable</td>
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<td>Lee Williford</td>
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<td>Rick Crosslin</td>
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<td>Patricia Zeck</td>
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<td>Dick Dettmer</td>
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<td>Paul Elliott</td>
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<td>Diane Burnett</td>
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2020 HASTI Awards
HASTI Distinguished Service Award

Frank Drumwright
Pike High School, Indianapolis, IN

Clyde Motts Memorial Award for Innovative High School Science Teaching

Kevin Leineweber,
Cascade High School, Clayton, IN
Innovative College Teaching Award

Dr. Brenda Capobianco
Purdue University, West Lafayette, IN

Dr. Sumreen Asim,
Indiana University Southeast, New Albany, IN
Gene Stratton Porter Environmental Award

Lori Baker
Danville Middle School, Danville, IN

Indiana Tree Farm - Indiana Outstanding Outdoor Lab
James Cole Outdoor Education Center, Tippecanoe School Corporation
Principal Michael Pinto
Lab contact Kris Ziller.
2019 Indiana Finalists - PAEMST

David Butler
Southern Wells Junior-Senior High School

Sarah A. Chattin
Hamilton Southeastern High School

Kirstin Milks
Bloomington High School South
<table>
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<tr>
<th>Date</th>
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<td>2/9/20</td>
<td>1-5pm</td>
<td>Elaine</td>
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<td>HELP! I Don’t Know Where to Begin……</td>
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<td>1-5pm</td>
<td>David</td>
<td>Maloney</td>
<td>Abstract Strategy Games and Hypotheses</td>
<td>Middle Level (6-8),High School (9-12),College</td>
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<td>Sarah</td>
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<td>Sherry</td>
<td>Annee</td>
<td>Hands on Biotech with Bio-Rad: Opioid Dependence &amp; Global Health</td>
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<td>Angela</td>
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<td>STEM Educator Empowerment with The STEM Connection</td>
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<td>Rick</td>
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<td>Using Model Aircraft in Your Classroom - Academy of Model Aeronautics - Arconic Foundation</td>
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<td>Sumreen</td>
<td>Asim</td>
<td>Let me out of here: Using Breakout EDU in science methods coursework</td>
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<td>Oh Wait! There are things jumping off the screen in my science methods course</td>
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<td>Desouza</td>
<td>Survey 123 - What is your perception of the White River?</td>
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<td>Lisa</td>
<td>Custer</td>
<td>Coding: Cups, Ozos’s and Apps Oh My!</td>
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<td>STEM Integration with IN-FIRST</td>
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<td>Hollenbeck</td>
<td>Findings of Perceptions of English Language Learners in the Secondary Science Classrooms 2017-2018.</td>
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<td>DeCamp</td>
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<td>Buras</td>
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<td>Grooms</td>
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<td>Courtney</td>
<td>Brummet</td>
<td>Monsters, Dragons, Deer… Oh My! and SO much more!</td>
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<td>Jessica</td>
<td>McClain</td>
<td>“Beyond Control, Alt and Delete” : How to use technology to improve student scientific learning,</td>
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<td>McClain</td>
<td>“It’s above me now”: Using representations to Improve Student Engagement of Earth and Space in Elementary Classrooms,</td>
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<td>Jordan</td>
<td>Super STEM iPad Apps and Trade Books for Real-World STEM Projects</td>
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<td>STEM and PBL Connect for Success</td>
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<td>STEM/PBL: Students Providing Wifi for Their Community</td>
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<td>Solar System Exploration for Elementary Students</td>
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<td>Nikki</td>
<td>Rumper</td>
<td>Science Learning through Engineering Design</td>
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<td>Tahsin</td>
<td>Khalid</td>
<td>Let’s run: An Integrated Inquiry Activity</td>
<td>Elementary (K-5),Middle Level (6-8)</td>
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**2020 HASTI SESSIONS**

*February 9-11, 2020*
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<td>Melissa Moran</td>
<td>Learning about Indiana’s Plants &amp; Animals: A Path to Environmental</td>
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<td>Jacob Koressel</td>
<td>Computer Science Updates from IDOE</td>
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<td>Kelly Kuchenbroad</td>
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<td>Lily Albright</td>
<td>Becoming E.A.R.T.H.: Our journey in creating a STEM focused vision for</td>
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<td>Elementary Talk A Thon</td>
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<td>Elementary Share A Thon</td>
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<td>Connecting Literature and STEM</td>
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<td>Catherine Pangan</td>
<td>STEAM Stories:</td>
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<td>Sarah Reynolds</td>
<td>Exploring the Solar System in the K-8 Classroom</td>
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<td>2/10/20</td>
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<td>Sarah Reynolds</td>
<td>Exploring the Solar System in the K-8 Classroom</td>
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<td>Stacy Hootman</td>
<td>Creating an online physics course (from scratch)!</td>
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<td>Andrew Santos</td>
<td>Science and You - Purdue Students Take on Science Communication</td>
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<td>The Chemistry Conversation Pit</td>
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<td>Anthony Thomas</td>
<td>Revitalizing the Earth Science Classroom with Rigor &amp; Relevance</td>
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<td>Reena Markstahler</td>
<td>IABT Quick Hits</td>
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<td>Toddie Phillipson-Mower</td>
<td>How to Read/Understand Research</td>
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<td>Sort of Flipped Classroom</td>
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<td>Virtual Science Experiences!</td>
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<td>Sherry Annee</td>
<td>What Can a Red Tattoo Teach Us About Skin Color?</td>
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<td>Discover CRISPR-Cas9 and Updated Sickle Cell Resources from HHMI</td>
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<td>Biomes and Invasive Species</td>
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<td>Indiana Envirothon</td>
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<td>Annette Leitze</td>
<td>Hoosier STEM Academy: Stipends for Indiana STEM Teachers to Become</td>
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<td>Means of Conceptualizing Molecular Genetics and Genetic Expressions</td>
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<td>Tyler Hudson</td>
<td>Case Studies Used in Problem Solving</td>
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<td>Be a Hero, Save a Life</td>
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<td>Getting students to create quality products</td>
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<td>Maureen McGrail</td>
<td>Building scientific argumentation skills - teaching your students</td>
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<td>Jacquelyn Tschudy</td>
<td>Teaching Science to English Language Learners</td>
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<td>Share-a-thon</td>
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<td>Carol Hofer</td>
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<td>Sarah Nern</td>
<td>Using Podcasts in the Classroom to Help Your Students Succeed</td>
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<td>Sarah Leach</td>
<td>Keep Calm and Put Your Lab Coat On</td>
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<td>Jennifer Helrigel</td>
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<td>Instruction in the Nature of Science</td>
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<td>Emily Hintz</td>
<td>Proficiency-based grading for Biology 1: What skills are we supposed to teach?</td>
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<td>Push, Pull, Go</td>
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<td>Tom McConnell</td>
<td>Bats and Bees and Manatees: Bring authentic science processes and conservation to your classroom with Conservation Tales</td>
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<td>Beth Smith</td>
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<td>Jory Mathews</td>
<td>A Planning Framework for Developing a Sense-of-Place Through Outdoor, Place-Based Education</td>
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<td>Stacy Hootman</td>
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<td>Adam Scribner</td>
<td>Educating for Environmental Change: Engineering Workshop</td>
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<td>Let’s Explore the Human-Made Landscape</td>
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<td>David Sederberg</td>
<td>Highlights from Saturday Morning Astro at Purdue</td>
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<td>Erica Forstater</td>
<td>Incorporating Environmental Education into your Classroom: “Put your Ecosystem into Homeostasis” Game</td>
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<td>Playful Learning &amp; Scientific Inquiry with PBS Kids</td>
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<td>Joe Ruhl</td>
<td>Activities for Teaching about Evolution, Charles Darwin, and the Galapagos Islands</td>
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<td>Teaching of Cell Respiration and Photosynthesis can be Energizing! Pun Intended</td>
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<td>2020 Sustainable Alternative Energies Summer Boot Camp</td>
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<td>Lindsay Hafft</td>
<td>Empowering Science Teachers to Help Improve State Test Scores</td>
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### 2020 HASTI SESSIONS

#### Pre-Elementary

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<td>Wodda</td>
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<td>Pangan</td>
<td>STEAM Stories:</td>
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<td>Sarah</td>
<td>Reynolds</td>
<td>Exploring the Solar System in the K-8 Classroom</td>
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<td>2/11/20</td>
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<td>Carly</td>
<td>Weidman</td>
<td>Playful Learning &amp; Scientific Inquiry with PBS Kids</td>
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<td>Kozenki</td>
<td>STEM Educator Empowerment with The STEM Connection</td>
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#### Elementary

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<td>Sarah</td>
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<td>Jessica</td>
<td>McClain</td>
<td>&quot;Beyond Control, Alt and Delete&quot;: How to use technology to improve student scientific learning.</td>
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<td>Deborah</td>
<td>Vannatter</td>
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<td>McClain</td>
<td>&quot;It's above me now&quot;: Using representations to improve Student Engagement of Earth and Space in Elementary Classrooms.</td>
<td>Earth/Space Science</td>
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<td>2/10/20</td>
<td>3:00 PM</td>
<td>Janet</td>
<td>Jordan</td>
<td>Super STEM iPad Apps and Trade Books for Real-World STEM Projects</td>
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<td>2/10/20</td>
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<td>Fitzgerald</td>
<td>STEM and PBL Connect for Success</td>
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<td>Gobbett</td>
<td>Teaching Reading, Writing, and Math with Science Activities</td>
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2/9/20  1-4pm  Rick  Crosslin  Using Model Aircraft in Your Classroom - Academy of Model Aeronautics - Arconic Foundation  Science Education
2/10/20  8:00 AM  Katie  Coryell  STEM/PBL: Students Providing Wifi for Their Community  Science Education
2/10/20  2:00 PM  Rick  Crosslin  Solar System Exploration for Elementary Students  Earth/Space Science
2/10/20  10:00 AM  Nikki  Rumpler  Science Learning through Engineering Design  Science Education
2/10/20  10:00 AM  Tahsin  Khalid  Let’s run: An Integrated Inquiry Activity  Physical Science/Physics
2/10/20  9:00 AM  Melissa  Moran  Learning about Indiana’s Plants & Animals: A Path to Environmental Literacy and Empathy  Ecology/Environmental Science
2/10/20  10:00 AM  Jacob  Koressel  Computer Science Updates from IDOE  Science Education
2/11/20  12:30 PM  Demetrice  Smith-Mutegi  Teaching and Learning Science with STEM-based PBLs  Interdisciplinary
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2/11/20  12:30 PM  Stacy  Hootman  The Magnetic Field Measurement Project at UIndy  Physical Science/Physics
2/10/20  1:00 PM  Lilly  Albright  Becoming E.A.R.T.H.: Our journey in creating a STEM focused vision for learning.  Interdisciplinary
2/10/20  3:00 PM  Kristen  Poindexter  Elementary Talk A Thon  Interdisciplinary
2/10/20  9:00 AM  Kristen  Poindexter  Elementary Share A Thon  Interdisciplinary
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2/11/20  9:00 AM  Kathy Lamb  Kozenski  Story Maps: Tech Literacy Across Disciplines  Interdisciplinary
2/9/20  9:00 AM  Angela  Fitzgerald  STEM Educator Empowerment with The STEM Connection  Earth/Space Science

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<td>Elaine  Gwinn</td>
<td>HELP! I Don’t Know Where to Begin.....</td>
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<td>Stephanie  DeCamp</td>
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<td>Engineering a Better World in Gr. 5-8</td>
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<td>Becky  Hillenburg</td>
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<td>2/10/20  1:00 PM</td>
<td>Lisa  Nyers</td>
<td>ADI and The Classroom</td>
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<td>Wait  Buras</td>
<td>Free engineering resources for clubs or classroom.</td>
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<td>Elaine  Gwinn</td>
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<tr>
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<td>Reclaiming the Metal</td>
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<td>Kaley  Esselborn</td>
<td>Helping Students Safely and Confidently Participate in a Technology-Focused World</td>
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<td>Adam  Scribner</td>
<td>Educating for Environmental Change: Engineering Workshop</td>
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<td>Jodi  Bondy</td>
<td>Let’s Explore the Human-Made Landscape</td>
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<td>Erica  Forstater</td>
<td>Incorporating Environmental Education into your Classroom: “Put your Ecosystem into Homeostasis” Game</td>
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<td>Susan  Waymire</td>
<td>Stuck in the Middle</td>
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<td>Steven  Smith</td>
<td>Middle School Demo Show: using science to excite and engage students</td>
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### 2020 HASTI SESSIONS

#### Secondary

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
<th>Subject</th>
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<tr>
<td>2/9/20</td>
<td>1-5pm</td>
<td>Sherry Annee</td>
<td>Hands on Biotech with Bio-Rad: Opioid Dependence &amp; Global Health</td>
<td>Life Science/Biology</td>
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<td>Andrew Santos</td>
<td>Science and You - Purdue Students Take on Science Communication</td>
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<td>3:00 PM</td>
<td>Ed Mottel</td>
<td>The Chemistry Conversation Pit</td>
<td>Chemistry</td>
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<td>2/10/20</td>
<td>9:00 AM</td>
<td>Anthony Thomas</td>
<td>Revitalizing the Earth Science Classroom with Rigor &amp; Relevance</td>
<td>Earth/Space Science</td>
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<td>Reena MarkStahler</td>
<td>IABT Quick Hits</td>
<td>Life Science/Biology</td>
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<td>2:00 PM</td>
<td>Teddie Phillipson-Mower</td>
<td>How to Read/Understand Research</td>
<td>Science Education</td>
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<td>2/10/20</td>
<td>9:00 AM</td>
<td>Shelby Biehl</td>
<td>Sort of Flipped Classroom</td>
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<td>2/10/20</td>
<td>8:00 AM</td>
<td>Elizabeth Owens</td>
<td>Virtual Science Experiences!</td>
<td>Ecology/Environmental Science</td>
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<tr>
<td>2/10/20</td>
<td>10:00 AM</td>
<td>Sherry Annee</td>
<td>What Can a Red Tattoo Teach Us About Skin Color?</td>
<td>Life Science/Biology</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Sherry Annee</td>
<td>Discover CRISPR-Cas9 and Updated Sickle Cell Resources from HHMI</td>
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<td>2/10/20</td>
<td>9:00 AM</td>
<td>Bill Cline</td>
<td>Biomes and Invasive Species</td>
<td>Life Science/Biology</td>
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<tr>
<td>2/10/20</td>
<td>1:00 PM</td>
<td>LuAnne Holeva</td>
<td>Indiana Envirothon</td>
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<td>Annette Leitze</td>
<td>Hoosier STEM Academy: Stipends for Indiana STEM Teachers to Become ALL IN for Dual-Credit Teaching</td>
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<td>10:00 AM</td>
<td>David Butler</td>
<td>Means of Conceptualizing Molecular Genetics and Genetic Expressions</td>
<td>Life Science/Biology</td>
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<td>Elizabeth Walter</td>
<td>Modified in the Midwest</td>
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<td>Dennis O'Rourke</td>
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<td>Joseph Bellina</td>
<td>Three Investigations Merging Math and Science with Same Inexpensive Apparatus</td>
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<td>8:00 AM</td>
<td>Dan Witt</td>
<td>Chemistry and Physical Science Activities</td>
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<td>8:00 AM</td>
<td>Thom O'Brien</td>
<td>Tricked Into Thinking</td>
<td>Life Science/Biology</td>
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<tr>
<td>2/11/20</td>
<td>10:00 AM</td>
<td>Joshua Mott</td>
<td>Endangered Species Trading Cards</td>
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<td>Richard Heaston</td>
<td>Modeling Intermolecular Forces</td>
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<td>10:00 AM</td>
<td>Grace Schmitt</td>
<td>Unstoppable!</td>
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<td>8:00 AM</td>
<td>Georgia Everett</td>
<td>Research in the AP Biology Classroom</td>
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<td>Becca Gwin</td>
<td>Utilizing Research Based Projects in ICP</td>
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### 2020 HASTI SESSIONS

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<td>Sumreen</td>
<td>Asim</td>
<td>Let me out of here: Using Breakout EDU in science methods coursework</td>
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<td>2/10/20</td>
<td>10:00 AM</td>
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<td>Asim</td>
<td>Oh Wait! There are things jumping off the screen in my science methods course</td>
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<td>Stacy</td>
<td>Hootman</td>
<td>Creating an online physics course (from scratch)!</td>
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<td>Tyler</td>
<td>Hudson</td>
<td>Case Studies Used in Problem Solving</td>
<td>Life Science/Biology</td>
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<td>2/10/20</td>
<td>10:00 AM</td>
<td>Corinne</td>
<td>Osinski-Carey</td>
<td>Be a Hero, Save a Life</td>
<td>Life Science/Biology</td>
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<td>2/11/20</td>
<td>12:30 PM</td>
<td>John</td>
<td>Moore</td>
<td>Teaching of Cell Respiration and Photosynthesis can be Energizing! Pun Intended</td>
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<td>Kyle</td>
<td>Jane</td>
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<td>David</td>
<td>Straughn</td>
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<td>2/10/20</td>
<td>10:00 AM</td>
<td>Amy</td>
<td>Jones</td>
<td>Investigate the Science of Life</td>
<td>Life Science/Biology</td>
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<td>2/10/20</td>
<td>1:00 PM</td>
<td>Kelly</td>
<td>Kuchenbrod</td>
<td>Exploring Weathering in a Karst Region</td>
<td>Earth/Space Science</td>
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<tr>
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<td>Sederberg</td>
<td>Snapshots of Physics for ICP and More</td>
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<td>Leineweber</td>
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<td>Maureen</td>
<td>McGral</td>
<td>Building scientific argumentation skills - teaching your students to be “CLEVER” when analyzing graphs and data.</td>
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<td>8:00 AM</td>
<td>Dan</td>
<td>Nichols</td>
<td>Science Olympiad in the classroom</td>
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<tr>
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<td>Taylor</td>
<td>Opportunities for Science Teachers to do Authentic Science Research</td>
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<tr>
<td>2/11/20</td>
<td>12:30 PM</td>
<td>John</td>
<td>Taylor</td>
<td>Developing Research Courses</td>
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<td>2/11/20</td>
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<td>Mary</td>
<td>Gobbett</td>
<td>Microbiology Activities Without Using Living Microorganisms</td>
<td>Life Science/Biology</td>
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<td>2/11/20</td>
<td>1:30 PM</td>
<td>Emily</td>
<td>Hintz</td>
<td>Proficiency-based grading for Biology 1: What skills are we supposed to teach?</td>
<td>Life Science/Biology</td>
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<td>9:00 AM</td>
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<td>Sederberg</td>
<td>Highlights from Saturday Morning Astro at Purdue</td>
<td>Earth/Space Science</td>
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<td>Bob</td>
<td>Jackson</td>
<td>2020 Sustainable Alternative Energies Summer Boot Camp</td>
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<td>Maloney</td>
<td>Abstract Strategy Games and Hypotheses</td>
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<td>Michelle</td>
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<td>Are you Moody?</td>
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<tr>
<td>2/11/20</td>
<td>9:00 AM</td>
<td>Mary</td>
<td>Gobbett</td>
<td>Teaching Reading, Writing, and Math with Science Activities</td>
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<td>Tom</td>
<td>McConnell</td>
<td>iNaturalist: Your Students as Citizen Scientists</td>
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<tr>
<td>2/9/20</td>
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<td>Sherry</td>
<td>Annee</td>
<td>Hands on Biotech with Bio-Rad: Opioid Dependence &amp; Global Health</td>
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<tr>
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<td>Reena</td>
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<td>Georgia</td>
<td>Everett</td>
<td>Research in the AP Biology Classroom</td>
<td>High School (9-12)</td>
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<td>Joe</td>
<td>Ruhl</td>
<td>Activities for Teaching about Evolution, Charles Darwin, and the Galapagos Islands</td>
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<td>2/10/20</td>
<td>3:00 PM</td>
<td>Tyler</td>
<td>Hudson</td>
<td>Case Studies Used in Problem Solving</td>
<td>High School (9-12,College)</td>
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<td>Corinne</td>
<td>Be a Hero, Save a Life</td>
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<td>2/10/20</td>
<td>9:00</td>
<td>Courtney</td>
<td>Monsters, Dragons, Deer... Oh My! and SO much more!</td>
<td>Middle Level (6-8),High School (9-12)</td>
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<td>2/10/20</td>
<td>10:00</td>
<td>Amy</td>
<td>Investigate the Science of Life</td>
<td>Middle Level (6-8),High School (9-12)</td>
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<td>Proficiency-based grading for Biology 1: What skills are we supposed to teach?</td>
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### 2020 HASTI SESSIONS - Chemistry

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<td>The Chemistry Conversation Pit</td>
<td>High School (9-12)</td>
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<td>2/11/20</td>
<td>9:00</td>
<td>Richard</td>
<td>Modeling Intermolecular Forces</td>
<td>High School (9-12)</td>
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<td>Kyle</td>
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### 2019 HASTI SESSIONS - Earth Science

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<td>Jessica</td>
<td>“Beyond Control, Alt and Delete” : How to use technology to improve student scientific learning.</td>
<td>Elementary (K-5)</td>
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<td>2/10/20</td>
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<td>Jessica</td>
<td>“It’s above me now”: Using representations to Improve Student Engagement of Earth and Space in Elementary Classrooms.</td>
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<td>Rick</td>
<td>Solar System Exploration for Elementary Students</td>
<td>Elementary (K-5),Middle Level (6-8)</td>
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<td>9:00</td>
<td>Anthony</td>
<td>Revitalizing the Earth Science Classroom with Rigor &amp; Relevance</td>
<td>High School (9-12)</td>
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<td>1:00</td>
<td>Kelly</td>
<td>Exploring Weathering in a Karst Region</td>
<td>Middle Level (6-8),High School (9-12)</td>
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<td>2/11/20</td>
<td>9:00</td>
<td>David</td>
<td>Highlights from Saturday Morning Astro at Purdue</td>
<td>Middle Level (6-8),High School (9-12)</td>
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<td>Sarah</td>
<td>Exploring the Solar System in the K-8 Classroom</td>
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<td>Angela</td>
<td>STEM Educator Empowerment with The STEM Connection</td>
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### 2020 HASTI SESSIONS - Environmental Science

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<td>Melissa</td>
<td>Learning about Indiana’s Plants &amp; Animals: A Path to Environmental Literacy and Empathy</td>
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<td>Jory</td>
<td>A Planning Framework for Developing a Sense-of-Place Through Outdoor, Place-Based Education</td>
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<td>Carol</td>
<td>Enigmatic Mongolia Steppe by Steppe</td>
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<td>10:00</td>
<td>Jennifer</td>
<td>Recycling Classroom Kits and Grants Available for Schools</td>
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<td>2/10/20</td>
<td>8:00</td>
<td>Elizabeth</td>
<td>Virtual Science Experiences!</td>
<td>High School (9-12)</td>
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<td>2/10/20</td>
<td>1:00</td>
<td>LuAnne</td>
<td>Indiana Envirothon</td>
<td>High School (9-12)</td>
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<td>Joshua</td>
<td>Endangered Species Trading Cards</td>
<td>High School (9-12)</td>
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<td>2/11/20</td>
<td>12:30</td>
<td>Adam</td>
<td>Educating for Environmental Change: Engineering Workshop</td>
<td>Middle Level (6-8)</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30</td>
<td>Jodi</td>
<td>Let’s Explore the Human-Made Landscape</td>
<td>Middle Level (6-8)</td>
</tr>
<tr>
<td>2/11/20</td>
<td>8:00</td>
<td>Erica</td>
<td>Incorporating Environmental Education into your Classroom: “Put your Ecosystem into Homeostasis” Game</td>
<td>Middle Level (6-8)</td>
</tr>
</tbody>
</table>

### 2020 HASTI SESSIONS - Physical Science

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Name</th>
<th>Topic</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/10/20</td>
<td>2:00</td>
<td>Stacy</td>
<td>Creating an online physics course (from scratch)!</td>
<td>College</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30</td>
<td>Dawn</td>
<td>Push, Pull, Go</td>
<td>Elementary (K-5)</td>
</tr>
<tr>
<td>2/11/20</td>
<td>1:30</td>
<td>Dawn</td>
<td>Light and Sound Waves</td>
<td>Elementary (K-5)</td>
</tr>
<tr>
<td>2/10/20</td>
<td>10:00</td>
<td>Tahsin</td>
<td>Let’s run: An Integrated Inquiry Activity</td>
<td>Elementary (K-5),Middle Level (6-8)</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30</td>
<td>Stacy</td>
<td>The Magnetic Field Measurement Project at UIndy</td>
<td>Elementary (K-5),Middle Level (6-8)</td>
</tr>
</tbody>
</table>
## 2020 HASTI SESSIONS

### Science Education

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/10</td>
<td>1:00 PM</td>
<td>Sumreen Asim</td>
<td>Let me out of here: Using Breakout EDU in science methods coursework</td>
<td>College</td>
</tr>
<tr>
<td>2/10</td>
<td>10:00 AM</td>
<td>Sumreen Asim</td>
<td>Oh Wait! There are things jumping off the screen in my science methods course</td>
<td>College</td>
</tr>
<tr>
<td>2/9</td>
<td>1-4pm</td>
<td>Rick Crosslin</td>
<td>Using Model Aircraft in Your Classroom - Academy of Model Aeronautics - Arconic Foundation</td>
<td>Elementary (K-5), Middle Level (6-8)</td>
</tr>
<tr>
<td>2/10</td>
<td>8:00 AM</td>
<td>Katie Coryell</td>
<td>STEM/PBL: Students Providing Wifi for Their Community</td>
<td>Elementary (K-5), Middle Level (6-8)</td>
</tr>
<tr>
<td>2/10</td>
<td>10:00 AM</td>
<td>Nikki Rumper</td>
<td>Science Learning through Engineering Design</td>
<td>Elementary (K-5), Middle Level (6-8)</td>
</tr>
<tr>
<td>2/10</td>
<td>10:00 AM</td>
<td>Jacob Koressel</td>
<td>Computer Science Updates from IDOE</td>
<td>Elementary (K-5), Middle Level (6-8)</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>Katie Powell</td>
<td>Lecture Busters</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>3:00 PM</td>
<td>Katie Powell</td>
<td>Worksheet Busters</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>1:00 PM</td>
<td>Lisa Custer</td>
<td>Coding: Cups, Ozos and Apps Oh My!</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>Georgia Everett</td>
<td>STEM Integration with IN-FIRST</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>8:00 AM</td>
<td>Carolyn Hayes</td>
<td>Grey Matter: Learning and Teaching Science with the Brain in Mind</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>1:00 PM</td>
<td>David insep</td>
<td>Science Teaching as a Higher Calling</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>James Hollenbeck</td>
<td>Findings of Perceptions of English Language Learners in the Secondary Science Classrooms 2017-2018.</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>8:00 AM</td>
<td>James Hollenbeck</td>
<td>Is the e-text and e-learning right for me?</td>
<td>General</td>
</tr>
<tr>
<td>2/11</td>
<td>10:30 AM-3:00 PM</td>
<td>Ann Burke</td>
<td>Share-a-thon</td>
<td>General</td>
</tr>
<tr>
<td>2/11</td>
<td>12:30 PM</td>
<td>Sarah Nern</td>
<td>Using Podcasts in the Classroom to Help Your Students Succeed</td>
<td>General</td>
</tr>
<tr>
<td>2/11</td>
<td>8:00 AM</td>
<td>Joel Bryan</td>
<td>Instruction in the Nature of Science</td>
<td>General</td>
</tr>
<tr>
<td>2/11</td>
<td>10:00 AM</td>
<td>Tolly Foster</td>
<td>Conservation Educator Academy</td>
<td>General</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>Teddie Phillipson-Mower</td>
<td>How to Read/Understand Research</td>
<td>High School (9-12)</td>
</tr>
<tr>
<td>2/10</td>
<td>3:00 PM</td>
<td>Annette Leitz</td>
<td>Hoosier STEM Academy: Stipends for Indiana STEM Teachers to Become ALL IN for Dual-Credit Teaching</td>
<td>High School (9-12)</td>
</tr>
<tr>
<td>2/11</td>
<td>10:00 AM</td>
<td>Grace Schmitt</td>
<td>Unstoppable!</td>
<td>High School (9-12)</td>
</tr>
<tr>
<td>2/11</td>
<td>12:30 PM</td>
<td>John Moore</td>
<td>Teaching of Cell Respiration and Photosynthesis can be Energizing! Pun Intended</td>
<td>High School (9-12), College</td>
</tr>
<tr>
<td>2/11</td>
<td>1:30 PM</td>
<td>Susan Waymire</td>
<td>Stuck in the Middle</td>
<td>Middle Level (6-8)</td>
</tr>
<tr>
<td>2/11</td>
<td>10:00 AM</td>
<td>Steven Smith</td>
<td>Middle School Demo Show: using science to excite and engage students</td>
<td>Middle Level (6-8)</td>
</tr>
<tr>
<td>2/11</td>
<td>8:00 AM</td>
<td>Lindsay Haft</td>
<td>Empowering Science Teachers to Help Improve State Test Scores</td>
<td>Middle Level (6-8)</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>Kevin Leineweber</td>
<td>Getting students to create quality products</td>
<td>Middle Level (6-8), High School (9-12)</td>
</tr>
<tr>
<td>2/10</td>
<td>1:00 PM</td>
<td>Maureen McGrail</td>
<td>Building scientific argumentation skills - teaching your students to be “CLEVER” when analyzing graphs and data.</td>
<td>Middle Level (6-8), High School (9-12)</td>
</tr>
<tr>
<td>2/10</td>
<td>3:00 PM</td>
<td>Jacquelyn Tschudy</td>
<td>Teaching Science to English Language Learners</td>
<td>Middle Level (6-8), High School (9-12)</td>
</tr>
<tr>
<td>2/11</td>
<td>9:00 AM</td>
<td>Bob Jackson</td>
<td>2020 Sustainable Alternative Energies Summer Boot Camp</td>
<td>Middle Level (6-8), High School (9-12)</td>
</tr>
<tr>
<td>2/10</td>
<td>2:00 PM</td>
<td>eileen wodda</td>
<td>Connecting Literature and STEM</td>
<td>Pre-Elementary (PreK - 2), Elementary (K-5)</td>
</tr>
<tr>
<td>2/11</td>
<td>1:30 PM</td>
<td>David Straughn</td>
<td>CAPtivating Teachers in STEM</td>
<td>K-12</td>
</tr>
</tbody>
</table>

## 49th Annual Conference

February 9-11, 2020
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Name</th>
<th>Title/Program/Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/10/20</td>
<td>2:00 PM</td>
<td>Deborah Vannatter</td>
<td>Machines at Work and Play</td>
</tr>
<tr>
<td>2/10/20</td>
<td>3:00 PM</td>
<td>Janet Jordan</td>
<td>Super STEM iPad Apps and Trade Books for Real-World STEM Projects</td>
</tr>
<tr>
<td>2/10/20</td>
<td>8:00 AM</td>
<td>Angela Fitzgerald</td>
<td>STEM and PBL Connect for Success</td>
</tr>
<tr>
<td>2/11/20</td>
<td>8:00 AM</td>
<td>Steven Smith</td>
<td>Weather in the Elementary Classroom: spark interest in math and literacy connections</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30 PM</td>
<td>Demetris Smith-Mutegi</td>
<td>Teaching and Learning Science with STEM-based PBLs</td>
</tr>
<tr>
<td>2/11/20</td>
<td>9:00 AM</td>
<td>Beth Smith</td>
<td>Service-Learning and Interdisciplinary STEM</td>
</tr>
<tr>
<td>2/10/20</td>
<td>1:00 PM</td>
<td>Keri Rodgers</td>
<td>Helping Middle School Girls on an Adventure &quot;To the Stars and Back&quot; with Big STEM</td>
</tr>
<tr>
<td>2/10/20</td>
<td>3:00 PM</td>
<td>Meighan Scott</td>
<td>Our World - from a Google-eye View</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Deb Sachs</td>
<td>Energize Your Students with PBL: Explore Sample Units</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Robin Coffman</td>
<td>Game-tastic Gamification</td>
</tr>
<tr>
<td>2/11/20</td>
<td>10:00 AM</td>
<td>Christina Hilton</td>
<td>STEM School Certification</td>
</tr>
<tr>
<td>2/11/20</td>
<td>8:00 AM</td>
<td>Sarah Leach</td>
<td>Keep Calm and Put Your Lab Coat On</td>
</tr>
<tr>
<td>2/11/20</td>
<td>9:00 AM</td>
<td>Joel Bryan</td>
<td>Robotic Arm End Effector – An Engineering Design Task</td>
</tr>
<tr>
<td>2/11/20</td>
<td>9:00 AM</td>
<td>Norman Leonard</td>
<td>Paid to Travel and Learn</td>
</tr>
<tr>
<td>2/10/20</td>
<td>10:00 AM</td>
<td>Andrew Santos</td>
<td>Science and You - Purdue Students Take on Science Communication</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Elizabeth Walter</td>
<td>Modified in the Midwest</td>
</tr>
<tr>
<td>2/11/20</td>
<td>10:00 AM</td>
<td>Dennis O'Rourke</td>
<td>Hawaii Marine Science Seminar</td>
</tr>
<tr>
<td>2/9/20</td>
<td>1:50 PM</td>
<td>Elaine Gwinn</td>
<td>HELP! I Don't Know Where to Begin....</td>
</tr>
<tr>
<td>2/10/20</td>
<td>8:00 AM</td>
<td>Stephanie DeCamp</td>
<td>Machines of the Midway</td>
</tr>
<tr>
<td>2/10/20</td>
<td>1:00 PM</td>
<td>Deborah Vannatter</td>
<td>Engineering a Better World in Gr. 5-8</td>
</tr>
<tr>
<td>2/10/20</td>
<td>10:00 AM</td>
<td>Becky Hillenburg</td>
<td>On The Case- Forensic PBL</td>
</tr>
<tr>
<td>2/10/20</td>
<td>1:00 PM</td>
<td>Lisa Nyers</td>
<td>ADI and The Classroom</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Walt Buras</td>
<td>Free engineering resources for clubs orf classroom.</td>
</tr>
<tr>
<td>2/11/20</td>
<td>10:00 AM</td>
<td>Kaley Esselborn</td>
<td>Helping Students Safely and Confidently Participate in a Technology-Focused World</td>
</tr>
<tr>
<td>2/11/20</td>
<td>8:00 AM</td>
<td>Dan Nichols</td>
<td>Science Olympiad in the classroom</td>
</tr>
<tr>
<td>2/11/20</td>
<td>1:30 PM</td>
<td>John Taylor</td>
<td>Opportunities for Science Teachers to do Authentic Science Research</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30 PM</td>
<td>John Taylor</td>
<td>Developing Research Courses</td>
</tr>
<tr>
<td>2/9/20</td>
<td>1:50 PM</td>
<td>David Maloney</td>
<td>Abstract Strategy Games and Hypotheses</td>
</tr>
<tr>
<td>2/10/20</td>
<td>3:00 PM</td>
<td>Michelle Grooms</td>
<td>Are you Moody?</td>
</tr>
<tr>
<td>2/10/20</td>
<td>1:00 PM</td>
<td>Lily Albright</td>
<td>Becoming E.A.R.T.H.: Our journey in creating a STEM focused vision for learning.</td>
</tr>
<tr>
<td>2/10/20</td>
<td>3:00 PM</td>
<td>Kristen Poindexter</td>
<td>Elementary Talk A Thon</td>
</tr>
<tr>
<td>2/10/20</td>
<td>9:00 AM</td>
<td>Kristen Poindexter</td>
<td>Elementary Share A Thon</td>
</tr>
<tr>
<td>2/10/20</td>
<td>10:00 AM</td>
<td>Catherine Pangan</td>
<td>STEAM Stories:</td>
</tr>
<tr>
<td>2/11/20</td>
<td>8:00 AM</td>
<td>Carly Weidman</td>
<td>Playful Learning &amp; Scientific Inquiry with PBS Kids</td>
</tr>
<tr>
<td>2/11/20</td>
<td>1:30 PM</td>
<td>Kristen Poindexter</td>
<td>Epic! Reading in Science Classrooms</td>
</tr>
<tr>
<td>2/11/20</td>
<td>12:30 PM</td>
<td>Kathy Lamb</td>
<td>NatGeo Certified Educator Phase 1</td>
</tr>
<tr>
<td>2/11/20</td>
<td>9:00 AM</td>
<td>Kathy Lamb</td>
<td>Story Maps: Tech Literacy Across Disciplines</td>
</tr>
</tbody>
</table>
**HASTI Conference Exhibitors**

**3-D Molecular Designs**

Hands-on and minds-on! Our kits and models focus on core ideas and cross-cutting concepts in biology, chemistry, physical and life sciences. We involve teachers in developing products, field testing and presenting workshops. Kits support STEM, NGSS, IB and PLTW. Ask about our new Dynamic DNA Kit!

**Amplify**

A pioneer in K–12 education since 2000, Amplify is leading the way in next-generation curriculum and assessment. Our captivating core and supplemental programs in ELA, math, and science engage all students in rigorous learning and inspire them to think deeply, creatively, and for themselves. Our formative assessment products turn data into practical instructional support to help students at every skill level build a strong foundation in early reading and math. Our programs provide teachers with powerful tools that help them understand and respond to the needs of all their students. Today, Amplify serves four million students in all 50 states.

**AP-TIP IN/Notre Dame**

A program of the University of Notre Dame Institute for Educational Initiatives Center for STEM Education, AP-TIP IN implements strategies of the National Math and Science Initiative (NMSI) focused on AP access and success in the STEM areas (math, science and English). We use AP as a college (and career!) readiness strategy.

**Ball State University**

State University dedicated to teacher education.

**Bedford, Freeman, & Worth**

At Bedford, Freeman & Worth, we've built our reputation on producing the highest quality materials for AP® courses and a variety of electives, and now we're proud to offer resources for a range of high school courses.

**Carolina Biological Supply Co**

Department of Forestry and Natural Resources - Purdue University

The Department of Forestry and Natural Resources at Purdue is preparing the next generation of leaders in the science and sustainable management of natural resources. The department maintains strong disciplinary research programs in forestry, aquatic sciences, and wildlife, with an emphasis on applied ecology. Additional expertise exists in molecular biology, including genetics, physiology, and tissue culture, ecology of natural systems, fisheries, and aquatic sciences, forest biology, forest measurement and assessment/GIS, natural resource social science, quantitative ecology, wildlife sciences, wood products, and wood products manufacturing.

Donate Life Indiana

Since 1998, Donate Life Indiana is the state-authorized nonprofit organization responsible for managing the Indiana Donor Registry. Our mission is to save lives by creating opportunities for all Indiana citizens to sign up on our official state registry while striving to raise awareness for organ, eye, and tissue donation and transplantation through public education.

Environmental Education Association of Indiana

The Environmental Education Association of Indiana (EEAI) is dedicated to promoting environmental education. EEAI is not issue driven. EEAI promotes networking and communication between groups and individuals in an effort to provide its members the opportunities to share their knowledge, skills, and resources with others.

Education Service Centers of Indiana

In 1976, the Education Service Centers of Indiana (ESCs of Indiana) were authorized by legislative action to provide joint services for Indiana K-12 schools. With definitive geographical boundaries in nine regions, covering all ninety-two counties, local school corporations may voluntarily cooperate and share programs and services which they cannot individually provide, but collectively may implement. Education Service Centers are dedicated to offering educational services which are provided more effectively and efficiently on a cooperative basis, supporting activities and initiatives provided within local school districts and buildings, and better equalizing educational opportunities and costs for all students.

ExploreLearning

ExploreLearning develops online solutions to improve learning in math and science including: Gizmos—online simulations for math and science, grades 3-12; and Reflex—a powerful math fact fluency solution.
INSPIRE3 (generationOn Indiana)
generationOn Indiana is a grant funded program facilitated by the IASP and the IMLEA to support and assist educators in Indiana with the FREE service and service-learning resources on the generationOn.org website and the FREE K-12 service-learning/philanthropy education lessons and resources on the learningtogive.org website. The genOn IN program also provides educators with free professional development and supports service-learning projects with our genOn IN $250 mini-grants. Questions: Contact Joan Belschwender, Director or genOn IN at generationOn@iasp.org. For more information check out our generationOn Indiana page on the www.iasp.org and www.imlea.org

Geography Educators' Network of Indiana, Inc. (GENI)
Providing Geography Education/Geographic Literacy outreach and professional development enriching Indiana schools' capacity to connect to 21st century geospatial technologies for research, application, and employment.

Hoosier Association of Science Teachers, INC.

Hoosier STEM Academy
The Hoosier STEM Academy provides stipends to in-service and pre-service STEM teachers who want to become dual-credit qualified.

Indiana Association of Biology Teachers
The Indiana Association of Biology Teachers (IABT) is an affiliate of the National Association of Biology Teachers (NABT) dedicated to providing information, support, and opportunities for Indiana biology teachers.

Indiana Association of Physics Teachers
The Indiana Association of Physics Teachers was established in the year 1984 by the late Dr. D.P. Khandelwal with the aim of upgrading the quality of physics teaching and physics teachers through a mass movement of dedicated teachers.

Indiana Envirothon
Indiana Envirothon promotes environmental education to high school aged students. The goal is to raise awareness of the importance of achieving and maintaining a natural balance between the quality of life and of the environment.

Indiana Department of Environmental Management (IDEM)
Environmental protection in Indiana has come a long way since 1986, when the Indiana Department of Environmental Management (IDEM) was established. Today IDEM employs some of Indiana's most qualified engineers, scientists and environmental project managers specializing in air, land, pollution prevention and water quality issues. Our staff members work hard to provide quality environmental oversight and technical assistance in your community and around the state. Whether you're a business owner, consultant, student, farmer, teacher or parent, IDEM is here to help you.
Indiana Mineral Aggregates Association
The purpose of the Indiana Mineral Aggregates Association is to solve common problems of the Indiana aggregate producing industry, principally in the areas of specifications for aggregates, mine safety and reclamation, air and water pollution, legislation, research for improvements in aggregates used, increased public awareness of the importance of aggregate products in their daily lives, and broadening the use and application of aggregates in Indiana.

Indiana Project Learning Tree
Project Learning Tree (PLT) is an environmental education program that uses the forest ecosystem as the basis for ready to go lesson plans and activities for early childhood through high school. PLT teaches students HOW to think, not what to think about complex environmental issues emphasizing problem-solving and critical thinking. PLT can be used in all subject areas and can easily be integrated into the curriculum.

Indiana University Advance College Project
The Indiana University Advance College Project is a high school program where high school teachers can become instructors of IU courses in their high school setting. Approved instructors are also provided tuition-free online masters degrees if needed or if already holding a masters then whatever graduate coursework needed to become credentialed by the Higher Learning Commission.

Indiana State Museum and Historic Sites
The Indiana State Museum and Historic Sites is a 12 site statewide system creating interactive, relevant and powerful experiences to engage visitors as well as to celebrate, explore and steward all that is authentically wondrous about Indiana.

Indiana Science Olympiad
Indiana Science Olympiad (INSO) is a nonprofit organization devoted to improving the quality of science education, increasing student interest in science and providing recognition for outstanding achievement by students in grades 6-12.

Indiana University School of Informatics, Computing, and Engineering
The mission of the School is to excel and lead in education, research, and outreach spanning and integrating the full breadth of computing and information technology, including the scientific and technical core, a broad range of applications, and human and societal issues and implications.

IndianaFIRST
IndianaFIRST is an organization dedicated to growing FIRST robotics programs in the state of Indiana. Founded in the fall of 2001 as the Indiana-based affiliate of FIRST, IndianaFIRST brings FIRST programming to students in grades K-12, teaching them hands-on skills in engineering, science and technology that they can relate back to their class work.
Indianapolis Zoo
The Indianapolis Zoo empowers people and communities, both locally and globally, to advance animal conservation.

ISTEM
Purdue based STEM advocacy agency that provides hands-on curriculum to schools in Indiana via the Indiana Science Initiative. We also provide professional development and mentoring for STEM teachers.

Lab-Aids
Lab-Aids proudly publishes the Science Education for Public Understanding Program (SEPUP) which began developing science instructional materials with funding from the National Science Foundation (NSF) in 1987.

Larry Winkleman Microscope
Sales & Service Microscopes

LIFT Academy
Leadership in Flight Training is a flight training school owned by Republic Airways Holdings. Our flight academy trains individuals to become commercial airline pilots with Republic Airline.

Millikin University
Millikin is an independent, four year university that is privately funded and has an enrollment of approximately 2,200 students in traditional and non-traditional undergraduate and graduate degree programs. Located in Decatur, Illinois, you will quickly discover that the signature of a Millikin education is a unique experience we like to call Performance Learning.

miniPCR bio
We make tools for scientists. Whether you are holding a micropipette for the first time or defining the cutting edge of research, doing science requires high quality innovative solutions. From classrooms to the International Space Station, our team of molecular biologists, engineers, designers, and educators is dedicated to the mission of making science accessible to everyone, everywhere.

National Weather Service
Serves the community with weather/safety for the state of Indiana

National Science Teachers Association
It is the largest organization in the world committed to promoting excellence and innovation in science teaching and learning for all.

NSTA Press - (National Science Teachers Association)
National Science Teachers Association - resources for Science Educators
PAEMST - Indiana
Presidential Award in Excellence in Mathematics and Science Teaching

Purdue University - College of Agriculture
Purdue University’s College of Agriculture is one of the world’s leading colleges of agricultural, food, life, and natural resource sciences. As a land-grant institution, we are committed to preparing our students to make a difference, wherever their careers take them; stretching the frontiers of science to find solutions to some of our most pressing global challenges. Through Purdue Extension and engagement programs, we are helping the people of Indiana, the nation and the world improve their lives and livelihoods.

Purdue University - K-12 Science Outreach
K-12 Science Outreach program was initiated in 1989 to increase interest and achievement in science and mathematics at the pre-college level. We provide K12 science and mathematics professional development programs for teachers, form long-term partnerships with school districts, and engage students in standards-based activities.

Pearson K-12 Learning
Pearson Learning Services is a global pre K-12 learning company with expertise in digital and print core curriculum, supplemental content, and professional services. Our educational solutions are powered by innovative technology to advance personalized learning experiences and to achieve successful teaching results.

Rose-Hulman’s AskRose Homework Help
Started in 1991, AskRose is a FREE math and science tutoring service for students in grades 6–12 offered by Rose-Hulman Institute of Technology. Call 877-ASK-ROSE (877-275-7673) to speak with a tutor or chat and email at www.askrose.org. Certified by the National Tutoring Association. Funded and Supported by Rose-Hulman Institute of Technology and Lilly Endowment Inc.

Science Education Foundation, INC.
The Science Education Foundation of Indiana was formed in 1964 with the sole purpose of providing resources and coordination for students from Indiana to attend the National Science Fair

STEM Teach
STEM Teach offers graduate and undergraduate classes, workshops and conference scholarships at no cost to Indiana teachers!
Texas Instruments 509/510
TI provides free classroom activities that enhance math, science and STEM curricula, technology that encourages students to develop a deeper understanding of concepts, and professional development that maximizes your investment in TI technology. Visit education.ti.com.

The Children's Museum of Indianapolis 502
To support educators, The Children’s Museum of Indianapolis offers discounted field trips, free classroom resources, and professional development opportunities. These museum resources cover a diverse range of topics in the arts, humanities, and sciences. Learn about field trip experiences, museum exhibits, and our school membership program by visiting our booth.

The Nature Conservancy 8a
The mission of The Nature Conservancy is to protect the lands and waters on which all life depends.

University of Indianapolis Graduate and Adult Learning Enrollment 6
The University of Indianapolis is a great place to continue your education, whether you're advancing in your current career or changing to one that’s completely new to you. We’ve designed our graduate programs to fit your busy life, offering evening, weekend, and online courses for many of the degrees.

USA Skateland - Indianapolis #3 207
Education and Fun, All Rolled Into One! A unique educational experience that gets students EXCITED about learning! Students will learn how the concepts of SCIENCE, TECHNOLOGY, ENGINEERING and MATH can be found in everyday experiences, even FUN experiences like ROLLER SKATING! Our professional STEM Educators teach visiting students about how STEM principles exist in just about every part of life. The lessons focus on hands on activities that are both educational and fun! Lessons are customized based on teachers needs to DIRECTLY RELATE back to classroom learning making this program completely unique! Following the completion of the 1hour STEM Lesson, the students roller skate for physical fitness. While Roller Skating the concepts students learned are continually reinforced. Our lessons are designed not only to help students overcome their fear of learning STEM concepts but to show how STEM is both FUN & EXCITING!

WFYI Public Media 403
WFYI Public Media uses the power of media to help students of all ages reach their potential. From airing a 24-hour PBS Kids channel, to implementing PBS Kids workshops and camps, to offering FREE classroom resources through the PBS LearningMedia (pbslearningmedia.org) digital library, WFYI is committed to improving educational and STEM outcomes for students.
Wyndham Hotel map
Put these dates on your calendar!

February 7-9, 2020

50TH ANNUAL HASTI CONFERENCE joint conference with ICTM
Shannon Hudson – Conference Chairperson

Moving to the Marriot EAST, Indianapolis, Indiana
In conjunction with Indiana Council Teachers of Math

Super Bowl Party
Celebrating 50 years of the HASTI Conference
Science Movie Marathon
Marriot East newly renovated