48th Annual HASTI Conference

STEM: Science Teachers Engaging Minds
February 17-19, 2019
Wyndham Indianapolis West
2544 Executive Dr.
Indianapolis, IN 46241
Conference Chair: Frank Drumwright
email questions to ConferenceChair@hasti.org

Got a great idea? Maybe a new activity?
Then you need to submit a proposal! Go to http://hasti.org/conference for further information.

Strands include
• Integrating Science and Engineering
• Integrating Science and Math
• Integration of Technology into Instruction

Deadline for submission is September 28, 2018. Any proposal submitted after September 28 will be placed on a wait list.

HASTI/NSTA Joint membership
HASTI in partnership with NSTA now offers a joint membership. When signing up for a new or renewal NSTA membership you will have the option to sign up for a new or renewal HASTI membership. Each one will be discounted for a combined regular membership of $84, a savings of $15. Look for additional information on the HASTI website. HASTI will still offer the HASTI only membership as well.

Visit https://hasti.wildapricot.org/join/ for more information.
HASTI Swag coming back to you soon!

The first HASTI swag order is complete and we had a great response.

The next ordering window will be in November to mid-January. All items ordered during this time will be available for pick up at the HASTI conference in February. You will also be able to order at the conference just in case you find something you love.

You can always look at what is available at https://hasti.itemorder.com/sale

Interested in Leadership?
Watch for information about voting in the HASTI election in January. The following offices will be included in the election. Not sure what district in which you live? Go to https://hasti.wildapricot.org/Elections. Deadline for submission is October 21, 2018.

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<td>President</td>
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<td>Vice President</td>
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<td>District 5 Director</td>
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<td>Elementary School Director At Large</td>
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HASTI Website (www.hasti.org)

Just about everything you need to know about HASTI you can find on the new and improved website. Participate in FORUMS with your District and Grade Level Directors. Go to http://www.hasti.org/forums. There you can ask questions, network and find out what is happening in your district.

Teachers will find information about workshops, legislative updates, science news and cool websites at https://hasti.wildapricot.org/events

Besides information concerning HASTI you will find links to several associated groups of HASTI. They include:

- Indiana Alliance of Chemistry Teachers (IACT)
- Indiana Association of Biology Teachers (IABT)
- Indiana Section - American Association of Physics Teachers (IN-AAPT)
- Indiana Earth Science Teachers Association (IESTA)
- Indiana Association for the Education of Young Children (Indiana AYEC)
- I-STEM Resource Network
- Environmental Education Association of Indiana (EEAI)

At each site you will learn about membership in each group, officers, and upcoming events being offered to Indiana teachers.

**Directors**
District 1 - Matt Benus
District 2 - Tracy Strieder
District 3 - Steve Park
District 4 - Shireen Desouza
District 5 - Dawn Bick
District 6 - Kari Terhune
District 7 - Kim Terry
District 8 - Katherine Lane
District 9 - John Harkness
at-Large I - David Butler
at-Large II - James Hollenbeck
Elementary - Kristen Poindexter
Middle School - Melanie Bitner
High School - Lori White
College - Robert Yost

**Current Leadership**

**Executive Board**
President - Danae Wirth
Vice President - Shannon Hudson
Secretary - Jane Hunn
Treasurer - Greg McCurdy
Past President - Frank Drumwright
Executive Director - Carolyn Hayes

**Affiliate Organization Representatives**
AAPT - Craig Williams
IACT - open
IABT - Kim Terry
SEFI - Robert Yost
I-STEM – Jennifer Hicks
EEAI-
HASTI Awards

Have a great project, idea, pedagogy shift, or something your students love to work on in your class? Check HASTI Awards at https://hasti.wildapricot.org/awards. The Hoosier Association of Science Teachers, Inc. honors Indiana educators each year through several innovation education awards. We invite nominations for these awards.

The 2019 HASTI Awards will be presented during the 2019 HASTI Annual Conference at the HASTI Awards Banquet on February 15, 2018. This special celebration will not only recognize those receiving these awards but will feature a speaker for the event. All entries must be received on November 10, 2019, via online submission. Self-nominations are accepted.

For more information email: AwardsManager@hasti.org

Below are the various HASTI awards to be recognized at the awards banquet.

- The Edward L. Frazier Distinguished Service Award
- Cheryl Cowan Memorial Award for Innovative Elementary Science Teaching
- Charlotte M. Boener Memorial Award for Innovative Middle School Science Teaching
- Clyde Motts Award for Innovative High School Science Teaching
- Innovative College Science Teaching Award
- New! The Gene Stratton-Porter Environmental Science Award
- Presidential Award for Excellence in Science Teaching
HASTI HAPPENINGS

Need PGP, continuing education points, or just want a great conference to attend but don’t know where to look? Skim through these next pages. Chances are you will find just what you are looking for! If you have something you would like to include in these pages, please send them to Shannon Hudson, shudson@cville.k12.in.us
Science & Literacy Workshop

Contact:
Kristen Poindexter and Dawn Bick
317-259-5462 ext. 17102
kpoindexter@msdwt.k12.in.us

Come join us for a half day workshop designed just for K-8 teachers.

Participants will receive a grade appropriate children's tradebook and learn how to create a STEM lesson based on the 5E model. There will also be a Q&A session at the end of the workshop where participants can share their lessons and ideas.

Participants will leave with several interdisciplinary units ready to take back and use in your classroom.

Cost is $10 and includes all materials and lunch

(Lunch includes sub sandwiches, chips, cookies and water)

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Lego League and Science Olympiad

Contact:
Linda (Lin) Wozniewski
(219) 980-6637
lwoz@iun.edu

Two STEM conferences coming up:
1) Friday September 21st from 6-9 FIRST Lego League Coaches Clinic. This will be held at Indiana University Northwest Moraine Student Center, 3400 Broadway, Gary, IN. Audience: New or returning FIRST Lego League Coaches. Cost: Free, but registration is required. E-mail Lin Wozniewski at lwoz@iun.edu. FIRST Lego League is for students age 9-12.
2) Friday and Saturday October 12th and 13th. Indiana Science Olympiad Coaches Clinic. Website: https://www.iun.edu/science-olympiad/clinic/index.htm Prices are on website. Audience: New or returning Middle or High School Coaches. Contact information and registration form are on web site.
Astronomy

Contact:
Charles W. Brown Planetarium
Fall 2018 (Aug. - Dec.) Show Schedule
www.bsu.edu/planetarium

All programs are free and open to the public.

The Brown Planetarium staff are excited to share with you all two new programs just for school groups! We have added “The Moon” which teaches about the moon and the basics of phases. It is great for advanced Pre-K groups to 2nd graders. It’s unique in that it has been designed to be paused in-between sections to allow for live interaction. The modules teach:

- Module 1 - The observable features of the moon.
- Module 2 - The apparent daily motion of the moon.
- Module 3 - The pattern of change in the moon’s appearance (phases).

For our older learners, we have purchased “Earth, Moon, & Sun.” Students in grades two through five will especially enjoy this look at the Earth-Moon-Sun system, though audiences of all ages can appreciate learning the science behind the myths. This planetarium show explores the relationship between Earth, Moon and Sun with the help of Coyote, an amusing character adapted from Native American oral traditions. Coyote has many misconceptions about our home planet and its most familiar neighbors. His confusion about the universe makes viewers think about how Earth, Moon and Sun work together as a system and learn to distinguish between myths and science.

Learn the basics of fusion and solar energy and why the Sun rises and sets. Examine the Moon's orbit, craters, phases and eclipses. You'll even take a look at past and future space travel to our Moon ... and beyond!

To reserve a private showing for your group, visit www.bsu.edu/planetarium. You'll notice our website has been redone and some older programs have been removed from the show library. If you'd like to see something that isn't listed anymore (like “Cosmic Colors” for instance) please just let us know and we'll see what we can do. As always, please mark any special requests on the online request form and we'll work with you to customize your visit. We hope to hear from you soon!

Tour of the Late Summer Sky
Aug 24 at 6:30pm and 8pm
Aug 31 at 6:30pm and 8pm
Take a live tour of the late summer sky in the Brown Planetarium. You will learn how to find constellations, planets, and more. Come learn how to navigate the sky by using bright stars and constellations and discover what fascinating objects exist deep in space.
Suitable for all ages 8+
Exploring the Center of the Milky Way
Sept 14 at 6:30pm and 8pm
Sept 21 at 6:30pm and 8pm
Sept 28 at 6:30pm and 8pm
Our Sun is just one star in a galaxy of at least 100 billion stars. This galaxy, the Milky Way, is shaped like a giant pancake that is more than a 100,000 light years wide. Astronomers have long wondered what the center of our galaxy is like, but clouds of interstellar dust block the view in visible light. In recent years the advance of technology has changed all this. Astronomers can now view the galactic center in the infrared and radio wavelengths. These images show the center of the Milky Way is home to some very strange objects including a giant black hole. Join us on a live, guided tour of discovery.
Suitable for all ages 12+

Halloween: Celestial Origins
Oct 5 at 6:30pm and 8pm
Oct 19 at 6:30pm and 8pm
Oct 26 at 6:30pm and 8pm
What do you associate with Halloween? Trick-or-Treating, costumes… astronomy? After all, Halloween is an astronomical holiday! During this program you will learn the history of Halloween and how it fits into the seasons as a “cross-quarter day.” We will also explore the night sky and learn what planets, constellations, and stars will be out on your Halloween evening.
Suitable for all ages 10+

Juno at Jupiter
Nov. 2 at 6:30pm and 8pm
Nov. 9 at 6:30pm and 8pm
Nov. 16 at 6:30pm and 8pm
Join us as we explore what NASA’s Juno spacecraft is telling us about the largest planet in our solar system. Juno’s principal goal is to understand the origin and evolution of Jupiter. Instruments on Juno are revealing swirling clouds, intense aurora and deep weather systems - plus information on the spinning Great Red Spot. Underneath its dense cloud cover, Jupiter safeguards secrets to the fundamental processes and conditions that governed our solar system during its formation. Come learn what we are finding out.
Suitable for all ages 10+

The Christmas Star
Nov 30 at 6:30pm and 8pm
Dec 7 at 6:30pm and 8pm
Dec 14 at 6:30pm and 8pm
Over the years many people have tried to explain the appearance of the Star of Bethlehem, as described in the Bible. Can the star be explained as an exploding star, a comet or some other natural event in the sky? Potential natural explanations for the Star of Bethlehem and common modern-day misconceptions will be discussed.
Suitable for all ages 10+

Planetarium Information
- Planetarium shows are free of charge. We appreciate your support to make this possible.
- No tickets or reservations are required for public planetarium shows, but plan to arrive early as seating is done on a first-come, first-served basis. We do our best to open doors 30 minutes before show time.
  Food, drinks, gum or candy are not permitted in the planetarium.
- Children 17 years and under should be accompanied by an adult.
• Cellphones and any electronics that emit light must be turned off at the start of all programs. Please refrain from wearing light-up shoes to any planetarium programs.
• Please do not touch any of the planetarium equipment.
• The planetarium is located on the west end of the Cooper Science Complex, at 2000 W. Riverside Ave., Muncie.

For directions and parking information, as well as general policies, please visit the Charles W. Brown Planetarium website.

IU Science Outreach

Contact:
Teddie Phillipson-Mower, Associate Director, Office of Science Outreach, IUB College of Arts and Sciences at Indiana University Bloomington
(812) 856-0801 (office)
(812) 361-4594 (cell)
trphilli@indiana.edu

Like us on Facebook:  https://www.facebook.com/IUBScienceOutreach/
Follow us on Twitter:   @IUScihouse
Learn more about us on our website:  https://scienceoutreach.indiana.edu
Learn more about the IU STARS:  go.iu.edu/STARS
Learn more about the Integrated Freshman Learning Experience (IFLE):  go.iu.edu/IFLE

SAVE THE DATES:
September 6, 2018       First Thursdays Festival, 5:00 – 7:30 PM, Fine Arts Plaza, Arts & Humanities + Science
October 4, 2018         First Thursdays Festival, 5:00 – 7:30 PM, Fine Arts Plaza, Arts & Humanities + Science
October 6, 2018         Celebrate Science Indiana, 9:30 AM to 5:00 PM, in the Blue Ribbon Pavilion, Indiana Fairgrounds
October 27, 2018        IU College Science Fest!
November 1, 2018       First Thursdays Day of the Dead Festival, 5:00 – 7:30 PM, Fine Arts Plaza, Arts & Humanities + Science
November 9, 2018       Indiana Junior Academy of Science Research Competition
November 8 – 11, 2018  National Association of Biology Teachers Prof. Dev. Conference, San Diego
November 9, 2018       Indiana Junior Academy of Science Research Competition
February 17 – 19, 2019 2019 Hoosier Association of Science Teachers, Inc., Wyndham – Indianapolis West
March 16, 2019         Indiana Science Olympiad State Competition, Indiana University Bloomington
Celebrate Science Indiana!

Contact:
Robert Yost, CSI Executive Director at ryost@sefi.org.

Indiana State Fairgrounds
Elements Financial
Blue Ribbon Pavilion
9:30 am - 5:00 pm
FREE ADMISSION!
Parking $5

Over 50 exhibits
with hands on fun
for everyone!

Over 200 Activities
Tons of Giveaways
Special Sessions

For K-12 Students:
Have hours of fun,
doing active science.
Interact with students and
faculty from many Indiana
Colleges and Universities.

For Parents:
Educational entertainment
for the entire family

For Teachers:
RAFFLES - over
$4,000 in prizes
Free lesson plans and activities

www.celebratescienceindiana.org

October 6, 2018
The Year of the Firefly
Indiana’s Premier Science Festival Brings Science to You!

Imagine. Discover. Explore.

Many interactive exhibits that focus on Science, Technology,
Engineering and Math (STEM)
K-12 Teachers Appreciated through Raffle at Celebrate Science Indiana

K-12 teachers, you give our children so much. A boost of confidence when they really need it. Extra help when struggling. A welcoming presence when everything else seems to be collapsing, not to mention how you spark their curiosity in STEM adventures. Although we can’t thank you enough, at Celebrate Science Indiana we take a moment to share our appreciation for you!

Stop by the ACS booth at Celebrate Science Indiana on October 6th at the Indiana State Fairgrounds, Elements Financial Blue-Ribbon Pavilion, for a chance to win prizes just for you. Three drawings will occur throughout the day at 11:30 am, 2:00 pm & 4:30 pm. Teachers must be present to win, and school and contact information will be obtained. Winning teachers will be photographed while holding their prize. It’s a small thanks for such an important service to our society, it helps! We do appreciate you!

Some of the amazing prizes for this year are shown below, with more to come. A special thank you to all of these donors and those who have donated in the past. At the forefront, we thank you - for your passion, intuition, and dedication that you provide our children, making daily differences and lifetime achievements.

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<thead>
<tr>
<th>Donor</th>
<th>Value</th>
<th>Prize</th>
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<tbody>
<tr>
<td>ACS, Indiana Section</td>
<td>1000</td>
<td>Cash</td>
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<tr>
<td>The Heritage Group</td>
<td>900</td>
<td>Six Colt's tickets for October 21st</td>
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<tr>
<td>Vasey</td>
<td>500</td>
<td>Cash</td>
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<tr>
<td>Mantle Clock</td>
<td>300</td>
<td>Private Donor</td>
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<tr>
<td>Coach Purse</td>
<td>250</td>
<td>Private Donor</td>
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<tr>
<td>Elements Financial</td>
<td>200</td>
<td>Gift Card</td>
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<td>60 Minute Float (3)</td>
<td>177</td>
<td>A Place to Float</td>
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<td>Connor Prairie Gift Basket</td>
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<td>Connor Prairie</td>
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<td>Lauth</td>
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<td>Gift Card</td>
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<tr>
<td>Spa Massage</td>
<td>100</td>
<td>Massage Envy - Keystone at the Crossing</td>
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<td>Indianapolis Museum of Art</td>
<td>95</td>
<td>Family Membership</td>
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<tr>
<td>Indiana State Museum</td>
<td>80</td>
<td>Family Membership</td>
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<td>Indianapolis Symphony Orchestra</td>
<td>80</td>
<td>Voucher</td>
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<td>Coach: Kurt Ehrhardt</td>
<td>75</td>
<td>Tennis Lesson</td>
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<td>Fountain Square Brewery</td>
<td>50</td>
<td>Growlers &amp; Coupons</td>
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<tr>
<td>The Fireside Restaurant</td>
<td>20</td>
<td>Restaurant Gift Card</td>
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<tr>
<td>Lori DeSautels</td>
<td>20</td>
<td>Book &quot;How may I serve you&quot;</td>
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**STEM Teacher Training**

**Contact:**
Deb Sachs, Director, Teach (STEM)
317-788-2052
http://uindy.edu/education/teaching-fellowship

Want $20,000 to become a STEM teacher? Are you or is someone you know thinking about becoming a STEM teacher. Check out the University of Indianapolis Teach (STEM)³ program at <http://uindy.edu/education/teaching-fellowship/>. Thanks to a National Science Foundation Robert Noyce grant, full-tuition stipends are available to qualified candidates for this initial teacher preparation, one-year clinical residency, Master of Arts in Teaching program. In return, candidates agree to teach for at least two years in a high need local education agency. During those two years they also receive university provided mentoring to help them become an outstanding STEM teacher. Spread the word to help fill the STEM teacher pipeline!

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**2018 Indiana Science Symposium at Purdue University**

**Contact:**
Sarah Nern, Director of Science Express, Purdue University
(765) 49-47861
www.science.purdue.edu/science-express/

The Purdue University College of Science K-12 Outreach is hosting the 2018 Indiana Virtual GLOBE Science Symposium through sponsorship from the Haliburton Foundation. The symposium allows students (individually or in groups) in grades 5 - 12 to share results from research investigations using GLOBE protocols and/or the GLOBE database. We hope the experience will prepare students for both the GLOBE International Virtual Science Symposium (IVSS) and the U.S. Midwest regional Student Research Symposia (SRS).

The Top 2 projects submitted for the 2018 Indiana Virtual GLOBE Science Symposium will be recognized with the College of Science Staff and Faculty Choice Awards and will receive travel support to the Midwest Regional Science Symposium (May 2019). Comments on submitted Google DOCs and winners of the CoS SFC Awards will be announced no later than Friday, December 7, 2018.

**Deadline:**
Each student group must submit a link to their Google DOC by Wednesday, November 21, 2018 (11:59 PM EST)

**Mentoring for Indiana Virtual Science Fair:**
Mentoring for student group’s research questions is optional - if your student groups want feedback from Purdue graduate students, please submit the group’s draft of their research report to Steven Smith. Please understand that it will take up to 3 weeks to get feedback from these graduate students.

**COST:**
There are no costs to enter the Indiana Virtual GLOBE Science Symposium.

**Science Mentoring Form**
If you would like some help or feedback on your project, fill out the google form below.
https://goo.gl/forms/neUBWX7Q67SQPxe03
Resources:
U.S. Midwest regional Student Research Symposia (SRS)
https://www.globe.gov/web/united-states-of-america/home/student-research-symposia

GLOBE International Virtual Science Symposium (IVSS)

Physics

Contact: Hugh Ross
(317) 582-0120 Ext.275
www.guerincatholic.org

All are welcome to the spring meeting of the Indiana Section of the American Association of Physics Teachers April 12-13, 2019 at Indiana University South Bend (IUSB).

Planned activities include a demonstration derby, hands-on workshop, short presentations of physics teaching ideas and more! College students and pre-service teachers will have their registration fee waived and are encouraged to attend. More information available as the event approaches at http://www.inaapt.org/
Argument Driven Inquiry Workshop for Elementary Teachers sponsored by HASTI

WORKSHOP OVERVIEW
This workshop is an introduction to the Argument-Driven Inquiry (ADI) instructional model. During this workshop, participants will have an opportunity to learn about the ADI instructional model by participating in all eight stages of an ADI lab investigation from start to finish. The participants will then have time to reflect on their experiences during the lab investigation and ask clarifying questions. Finally, the participants will see how ADI is aligned with the state standards for Science and English-Language Arts and learn about ways to support students during each stage of the approach.

AGENDA:
- Why ADI?
- Experience all 8 Stages of an ADI Investigation
- Reflecting on Experience
- Common Questions about ADI
- Standards Alignment

MATERIALS INCLUDED:
- Prepulation of 8 Elementary ADI Labs
- Lab Handouts
- Guidance PowerPoint for the Example Lab

WORKSHOP INFORMATION
DATE: October 3, 2018
TIME: 9:30 am - 3 pm
LOCATION: The Children's Museum, 3000 N Meridian St, Indianapolis, IN 46208
COST: $150
REGISTRATION INFORMATION: Visit: https://hasti.wildapricot.org/event-3048354
Argument Driven Inquiry Workshop for Middle and High School Teachers sponsored by HASTI

ADI WORKSHOP
Introduction to the Argument-Driven Inquiry Instructional Model for Middle School and High School Educators

WORKSHOP OVERVIEW
This workshop is an introduction to the Argument-Driven Inquiry (ADI) instructional model. During this workshop, participants will have an opportunity to learn about the ADI instructional model by participating in all eight stages of an ADI lab investigation from start to finish. The participants will then have time to reflect on their experiences during the lab investigation and ask clarifying questions. Finally, the participants will see how ADI is aligned with the state standards for Science and English-Language Arts and learn about ways to support students during each stage of the approach.

AGENDA:
• Why ADI?
• Experience all 8 Stages of an ADI Investigation
• Reflecting on Experience
• Common Questions about ADI
• Standards Alignment

MATERIALS INCLUDED:
• Lab Handouts
• Guidance PowerPoint for the Example Lab

WORKSHOP INFORMATION
DATE: October 4, 2018
TIME: 8:30 am - 3:00 pm
LOCATION: Ethos Innovation Center, 1025 N. Michigan St., Elkhart, IN 46514
COST: $150 Box lunch - $10.00
REGISTRATION INFORMATION: Visit: https://hasti.wildapricot.org/event-3048395