2019 HASTI Conference Program *
This schedule is organized by day and then by strands and then general sessions.

***Note: Some sessions may be edited. This is not the final version.**

Sunday Sessions
17-Feb-19

Inquiry-Based Teaching Through Children's Literature: NSTA Picture-Perfect STEM Teaser Session for Grades 3rd-8th	Science is fun! Partcipants will engage in hands-on 5E model lessons anchored in children's literature. Get ready to work and play in cooperative learning groups during this session.	Elementary (K-5),College	Interdisciplinary (i.e. STEM)
Problem-Based Learning in the K-12 Science Classroom	NSTA Author leads this workshop for K-12 Teachers on how to use materials in the Problem-Based Learning in the Science Classroom series from NSTA Press.	General	Interdisciplinary (i.e. STEM)
Applying for the PAEMST and Shell Science Teaching Awards	Have you ever considered applying for the Presidential Award for Excellence in Math and Science Teaching or the Shell Science Teaching Award? Come learn tips and tricks about the application process from a recipient of both awards.	Pre-Elementary (PreK - 2),Elementary (K-5),Middle Level (6-8),High School (9-12)	Science Education

Monday Sessions
18-Feb-19

Integrating Science with Engineering

Monday

Understanding Chemistry Using Models, Bricks, Puzzles, and the Alphabet	High school students use various bricks and puzzle pieces as models to visualize chemical bonds, molecular structure and synthesize simple molecules.	High School (9-12)	Life Science/Biology
STEM Lessons to GO!	Share effective STEM lesson design, STEM best practices, and lesson ideas.	Elementary (K-5),Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Modeling Knots	Teachers will conduct the "knots lab" and experience how research-based Modeling Instruction forms a scientific foundation for a thriving STEM program.	Middle Level (6-8),High School (9-12)	Science Education
Stem Takes Flight	Laws of Motion, Four Forces of Flight in an activity that no student will ever be bored. Simple training using the Academy of Model Aeronautics new AMA Alpha Model Airplane. Presented by Tom Sanders, Science Olympiad National Supervisor and AMA Education Committee Member	Elementary (K-5),Middle Level (6-8),High School (9-12),College, General	Physical Science/Physics
Robotics Coding Integrates Computer Science, Engineering, and Math for Young Learners	A demonstration showing how concepts of computer science are introduced using physical blocks to program a child friendly robot including an introduction to abstract coding.	Elementary (K-5),Middle Level (6-8),High School (9-12)	
Physics of evGrand Prix	Curriculum, materials, and information about student teams designing, constructing, testing, and racing an electric go kart at IMS during Indy500 festivities	High School (9-12)	Physical Science/Physics

Integrating Science With Math

Monday

Using Math and Science to Describe Motion in One Dimension	We explore describing motion using motion maps, dot patterns, tables and graphs to represent constant and changing motion and then predict motions from those descriptions.	Middle Level (6-8)	Physical Science/Physics
Real World Data Collection Activities that Illustrate Mathematical Functions	Participants will experience a variety of simple data collection activities that lead to variety of mathematical functions.	General	Physical Science/Physics
The Science in Soil	Hands-on demonstrations show how soil and water relationships are used in the classroom to teach earth and environmental sciences, math, chemistry, physics and general sciences.	Middle Level (6-8)	Ecology/Environmental Science
STEM-ulating Activities on Human Ecology	Discover innovative ways to teach middle schoolers about human-environmental interactions, while also building STEM skills through problem solving, mathematical modeling, interactive technology and more!	Middle Level (6-8),High School (9-12)	Ecology/Environmental Science
7th Grade Science Activities	Purdue College of Science K-12 Outreach Coordinators will be leading sample hands on activities to provide resources for participating teachers over various science content.	Middle Level (6-8)	Interdisciplinary (i.e. STEM)

Integration of Technology in Instruction

Monday

Integrating Geographic Information Systems (GIS) in the Middle and High School Curriculum	Learn how students can be engaged in the geographic inquiry process in a science classroom using a web-based program, ArcGIS Online.	High School (9-12)	Interdisciplinary (i.e. STEM)
Why Do I Have to Learn This?: Using Technology to Connect STEM to the Real World	STEM is all around you! Learn how to use FREE online resources to reinforce science and technology learning by connecting STEM concepts to real-world situations.	Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Moodle LMS for K-12 Educators in Indiana	This is an interactive session on the Moodle LMS. Rose-Hulman PRISM hosts the Moodle LMS for the use of any K-12 teacher in the State of Indiana.	General	Interdisciplinary (i.e. STEM)
Gaming as an Educational Tool	Game play is part of learning. Find out how to evaluate and use a game for K-12 science education.	Elementary (K-5),Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Tricked into Thinking	Everyday events make us wonder. Some of these events happen every day, some only once in a while. Some events can easily be investigated, some not. However, each of these events provides us with the opportunity to THINK.	Elementary (K-5),Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Outside Tech: Technology Tools without WiFi for Ecology Labs	Practical tips and techniques to utilize iPad, cell phones, other devices out side without a active WiFi access.	Middle Level (6-8),High School (9-12)	Ecology/Environmental Science

Coding: From Kindergarten and Beyond!	This presentation will introduce participants to many different ways to teach coding in the elementary classroom. Participants will experience everything from unplugged activities to writing javascript.	Elementary (K-5)	Interdisciplinary (i.e. STEM)
Add Augmented Reality to Your Students' Ability to Develop and US Models	Journey to the center of the Earth with digital modeling. Students develop/use models through: investigations, technology, leveled texts and notebooks in Delta Education's new ScienceFLEX.	General	Interdisciplinary (i.e. STEM)

STEAM

Monday

The Science and Art of Sound	Join me as we explore the science of sound in playful and vibrating ways! In this high energy demonstration, audience members will join in the fun of sound vibrations. Over fifty examples will be shown.	Pre-Elementary (PreK - 2),Elementary (K-5),Middle Level (6-8),High School (9-12)	Physical Science/Physics
Science Fun with Foldables	See and create all-inclusive foldables to engage students in active learning.	Pre-Elementary (PreK - 2),Elementary (K-5),Middle Level (6-8)	Interdisciplinary (i.e. STEM)

While My Guitar Gently STEAMS!	Hear how a STEM grant incorporated students building electric guitars to learn science, math, and workplace skills while promoting community service and the arts.	High School (9-12)	Science Education
Service-Learning and STEAM: Developing Critical Thinking, Collaboration, and Analytical Skills Through Philanthropy Education and Service	Participants discover how to link all curriculum to STEAM while discovering vital links to service-learning and philanthropy education.	General	Interdisciplinary (i.e. STEM)

General

Monday

Giving Back to Help Save Lives	Donate Life Indiana wants to continue our momentum towards a youth initiative to raise awareness surrounding organ donation and transplantation. Our initiative aims to educate teenagers during an important period of time when they will visit the BMV and have the opportunity to register their personal donation decision, but also lays the foundation for elementary educators wanting to introduce living donation.	Elementary (K-5),Middle Level (6-8),High School (9-12),College	Life Science/Biology

New CRISPR-Cas 9 Activities from HHMI BioInteractive	Teach CRISPR-Cas 9 with brand new, free materials from HHMI BioInteractive. Resources include an online interactive and activity, both of which were released after HASTI 2018.	High School (9-12)	Life Science/Biology
Upgrade your Science Methods Courses with Meaningful Technology Integration	The purpose of this session is to share 15 essential educational tools for integrating technology in science and math content methods courses. The tools will be used to complement classroom instruction to allow for collaboration, learning and interaction beyond the classroom learning environment. These tools will help with course redesign to suit 21st century skills.	College	Science Education
Integrated Experiences in Environmental Science	Combining AP and regular students in environmental science classes can benefit students in both groups by broadening the range of perspectives within the classroom.	High School (9-12)	Ecology/Environmental Science
Environmental STEM classroom activities and it's impact on student perceptions of STEM	Presentation of an Environmental-STEM activity developed and conducted as part of a participatory action research study within a general education college science classroom.	General	Interdisciplinary (i.e. STEM)
Chemistry Share-A-Thon	Bring your favorite chemistry activity to share with others.	High School (9-12)	Chemistry
IABT Quick Hits/ Meeting	Middle and HS teachers share exciting Biology activities. The IABT will also hold the annual meeting and give away door prizes.	High School (9-12)	Life Science/Biology

It's All About the Genes	Come learn about a free, fun virtual program for Middle School Students. "It's All About the Genes" is a virtual program about biotechnology and its role in food, fiber, and fuel production, without leaving your classroom, sponsored by the Indiana Soybean Alliance. The program consists of introductory lesson plans, a virtual field trip to the Glass Barn at the Indiana State Fairgrounds, and follow-up lesson plans. Students will extract DNA, explore the science of GMOs, and create a comic strip to creatively display learning comprehension. Classroom supply kits are provided, that include most of the supplies needed to participate.	Middle Level (6-8)	Science Education
All Students are Budding Scientists!	Gather practical strategies for creating outdoor STEM experiences that spark and encourage a culture of curiosity, wonder, and thoughtful questioning within our smallest scientists.	Pre-Elementary (PreK - 2),Elementary (K-5)	Interdisciplinary (i.e. STEM)
Explain the Steps of Cellular Respiration Using Pop Beads, Ziplock Bags, Cups, and Paper Money	Engage in a hands-on cellular respiration activity that helps explain the concepts taught in the Amoeba Sister's Cellular Respiration and the Mighty Mitochondria YouTube video.	High School (9-12),College	Life Science/Biology
IESTA Rock Raffle	Participate in raffle to possibly win rock, mineral, or fossil samples for your classroom and support earth science education. Additional	General	Earth/Space Science

	tickets for small donation.		
IESTA Annual Share-A-Thon	IESTA and EEAI Invite you to come join earth and environmental science teachers from around Indiana to share lesson ideas and references. Everyone Welcome!	Elementary (K-5),Middle Level (6-8),High School (9-12),General	Ecology/Environmental Science
Combining math and science with the combined gas law	Use knowledge of direct and inverse proportionality to design experiments and derive the combined gas law.	Middle Level (6-8),High School (9-12)	Chemistry
Using Curriculum in a Science Content Course to Influence Science Teaching Self-Efficacy, Content Knowledge, and Curricular Role Identity	Preservice teachers in a physical science course used existing elementary physical science curricula and growth in content knowledge, self-efficacy, and curricular role identity were measured.	College	Science Education
Full Steam Ahead with Super STEAM iPad Apps and Trade Books	Discover engaging and challenging STEAM iPad apps including coding apps, paired with award-winning children's books. Create new innovative projects for students. Handouts provided.	Elementary (K-5)	Interdisciplinary (i.e. STEM)
Students as Reseachers	The process for setting up a semester-long science research project for students will be shared and students will display their projects and answer questions.	High School (9-12)	Interdisciplinary (i.e. STEM)
Culturally	In this session actual science	Elementary (K-5)	Interdisciplinar

Relevant Science Teaching in Elementary Classrooms	inquiry units taught to intermediate grade students will be presented and discussed. Actual student work will be shard.		y (i.e. STEM)
ILEARN Biology ECA	Outstanding questions about the state Biology test? The Indiana Department of Education will provide answers to your questions during this informational session.	High School (9-12),Supervisory	Science Education
Conservation Tales - Integrating Environmental Education, Art and Literacy for children	Join us to explore "Conservation Tales," a children's book series that teaches children to care for their environment, science careers and science process skills.	Elementary (K-5)	Ecology/Environmental Science
Exploring the structure of matter in the “Canister Conundrum” by determining mass indirectly.	Determining mass indirectly will be explored in a hands-on, teacher-to-teacher training session with tips to connect to Chemistry and Physics concepts.	Middle Level (6-8)	Science Education
Engage Youth with Nature & Learn Science Too!	Join us for this session to learn about some creative ways to engage students with nature at your school.	Elementary (K-5),Middle Level (6-8),High School (9-12)	Ecology/Environmental Science
The Chemistry Conversation Pit	Join Bill, Ed and Kendal for an unscripted opportunity to meet and talk about chemistry and the teaching of chemistry. Everyone is welcome.	Middle Level (6-8),High School (9-12),College	Chemistry
Climate and water monitoring data for the taking: The Indiana Water Balance Network	Indiana Water Balance Network data are available for science, math, and technology lesson plans that Indiana Geological and Water Survey earth scientists are currently developing.	General	Earth/Space Science

Middle and High School Science Break Out: Elements of the Earth and Sky	Participate in a break out activity focusing on the periodic table that integrates both math and science concepts within the different puzzles.	Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Building Google Forms for Student Engagement	Bring an idea and 3 experienced educators will show you the possibilities and assist you in getting started.	Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Science & Literacy	Participants will use a provided trade book to learn how to write a STEM unit based on the 5E model. Bring a device to type on!	Pre-Elementary (PreK - 2),Elementary (K-5),Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Lecture Busters: Engaging Ways to Break Up Your Lecture and Get Students Thinking	Engaging Ways to Break Up Your Lecture and Get Students Thinking	Elementary (K-5),Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Worksheet Busters: Easy, Low Prep Activities You Can Use Again and Again for Any Content	Easy, Low Prep Activities You Can Use Again and Again for Any Content	Elementary (K-5),Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Training Future Scientist Ambassador Program: Building a Bridge for Underserved Students in Delaware County, IN	The aim of this program is to show underserved students that they can do science despite the systemic poverty all ethnic groups have suffered.	High School (9-12),College,Supervisory	Interdisciplinary (i.e. STEM)

Access to Authentic Science Research: The Missing Link to Effective Secondary Teacher Development	Exposure to a 12-hour research experience working in an authentic science lab researcher provided the constructivist approach espoused by Johnson, Johnson and Holubec (2008).	College,Supervisory, General	Science Education
Purdue Pollinator Protection Program	Learn about newly developed lessons and computer games that add practical relevancy to existing evolution and ecology units in biology, environmental science, and zoology courses.	High School (9-12)	Life Science/Biology
Formative Assessment Quick Hits	How do you know your students are learning? UIndy Teach (STEM)^3 Scholars will share a variety of simple, engaging formative assessments you can use immediately.	High School (9-12)	Interdisciplinary (i.e. STEM)
Putting it all together through REDOX	Teaching the redox and electrochemistry unit at the end of the year is a great way to review concepts taught throughout the year. We will use the idea of a discovery activity to introduce redox and reinforce this concept in discussion and lab.	High School (9-12)	Chemistry
Student Experimental Design in first year Biology and Chemistry	Converting traditional biology and chemistry labs into student design investigations to teach the design process. The students then design an independent project that focuses on claim, evidence and reasoning.	High School (9-12)	Interdisciplinary (i.e. STEM)
The Genetics and Bioethics of Opioid Addiction and Treatment!	As opioid addiction grows, researchers are exploring its genetic basis. Gain insight into these findings via genotyping and statistically analyzing fictional patients in this workshop.	Middle Level (6-8),High School (9-12),College	Life Science/Biology

Evolution for Middle School Educators	The Teacher Institute for Evolutionary Science helps teachers teach evolution with confidence. Participants will receive a free unit of materials, including a presentation and exam.	Middle Level (6-8)	Life Science/Biology
Analyzing the Sky with Cutting Edge Tools	Add an extra dimension to Astronomy and Space Science. Professional astronomy students can do in the classroom (for free).	Middle Level (6-8),High School (9-12)	Earth/Space Science
A Framework for Teaching Students to Conduct Experimental Work	Teach more than the science, teach the method of a scientific team. Methods will be shared that develop well documented and efficient young scientists.	Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Putting the E in K-5 STEM	Come build with us. Experience how engineering practices depend upon and extend core ideas in science while deepening understanding of crosscutting concepts.	Elementary (K-5)	Physical Science/Physics
Toolbox for Teaching the Underachiever	Current science inclusion co-teachers will provide successful strategies and tips for setting up an effective co-teach, inclusion, or at-risk science classroom.	High School (9-12)	Interdisciplinary (i.e. STEM)
Learning to Learn and Metacognition	Thinking about thinking (metacognition) and learning to learn are two skills that students need. Strategies and ideas to help students will be shared.	High School (9-12)	Science Education

Tuesday Sessions
19-Feb-19

TUESDAY

Integrating Science with Engineering

Engineering CHALLENGE!	Engineering is a daunting and challenging topic! Fun unit lessons with "challenges" perfect for middle school students to help address this topic.	Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Push, Pull, Go	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.	Pre-Elementary (PreK - 2),Elementary (K-5)	Physical Science/Physics
Light and Sound Waves	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.	Pre-Elementary (PreK - 2),Elementary (K-5)	Physical Science/Physics
GET A GRIP	Students use the approach of biomimicry to design, test, evaluate, and redesign a mechanical gripping device to meet criteria. Great STEM activity from SEPUP's highly engaging "Bioengineering" Life Science Unit.	Middle Level (6-8)	Interdisciplinary (i.e. STEM)

That's the Way the Pallet Crumbles	Students incorporate science and engineering into an activity and create parachutes for emergency food, water and medicine air-drops to a storm-ravaged island.	Elementary (K-5)	Interdisciplinary (i.e. STEM)
Are you Moody?	Bring science and coding together as participants learn to do some basic coding while developing a mood ring!	Middle Level (6-8),High School (9-12),College,Supervisory	Interdisciplinary (i.e. STEM)
Hardware Store Science	Hand on science experiments for teaching physical science using materials from a typical home improvement/hardware store.	High School (9-12)	Physical Science/Physics

Integrating Science With Math

Tuesday

Students enjoy learning with Integrated STEM hands-on/minds-on activities: the "Modeling process"	We show how integrated math and science hands-on/minds-on activities help middle school teachers stimulate student interest and engagement using the "Modeling process".	Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Wave Modeling: Integrating Science, Mathematics, and Technology	Participants will experience an exciting way to study wave characteristics while integrating science, mathematics, and technology.	High School (9-12)	Physical Science/Physics

Integration of Technology in Instruction

Tuesday

Using smartphones to take data in a physics classroom	Learn to use a smartphone app that allows you to access and record data using the smartphone's built in sensors.	High School (9-12),College	Physical Science/Physics
The Shape of Science	New online community that saves time, hits the standards, and engages students. Rapidly responsive source for 3D printed teaching aids.	High School (9-12)	Interdisciplinary (i.e. STEM)
Technology as an Assessment Tool in Science Learning in the Diverse Language Classroom.	Successful strategies based on research and practical applications used in bringing many languages and cultures together.	High School (9-12)	Interdisciplinary (i.e. STEM)
Algorithms and Coding and Logic, Oh My!	Computer Science standards really aren't scary! Come see them simplified and learn how to get everyone involved in teaching students to be digital citizens.	Elementary (K-5),Middle Level (6-8)	Science Education
Teaching with i-Tree	Using the new Project Learning Tree unit, Teaching with i-Tree, participants will discover and quantify the many ecosystem services that trees provide.	High School (9-12)	Ecology/Environmental Science
Common Threads - Problem Based Learning and Tech Integration	Problem-based learning and technology integration catalyze student engagement, differentiation, and authentic learning on their own, but can do even more when paired together.	Elementary (K-5),Middle Level (6-8),High School (9-12)	Interdisciplinary (i.e. STEM)
Technology Discussion Forum	Discussion forum for teachers who are interested in technology and its use in learning. Provides an opportunity to share: ideas, challenges, successful strategies, and programs.	General	Science Education

STEAM

Tuesday

STEAM - Art to Zoo	Discover how to incorporate art while exploring the animal world. Zoo staff will take you on a journey to see how to connect art and science.	Elementary (K-5),Middle Level (6-8)	Life Science/Biology
Creative Ways to Engage Elementary Students in Learning about Birds Through STEAM activities.	Learn how to help students build their bird content knowledge, problem solving and critical thinking skills, and creativity through a variety of STEAM activities.	Elementary (K-5)	Life Science/Biology
Foster a Stewardship Ethic in Students through Science and Art Resources	Learn about exciting ideas to actively engage students in problem-based learning and stewardship through hands-on science and art activities.	Elementary (K-5),Middle Level (6-8)	Ecology/Environmental Science
Science and Art in Space	Participants will follow a three lesson sequence with transdisciplinary science and art lessons that build upon each other to further student learning.	Elementary (K-5),Middle Level (6-8)	Earth/Space Science
”Weaving the A” into STEM.	This session illustrates a dynamic method of integrating art with science standards for middle school students by demonstrating a multi-disciplinary data visualization/weaving project.	Middle Level (6-8)	Science Education

General

Tuesday

Using HHMI BioInteractive Resources to Emphasize the Nature of Science and the Diversity Among Scientists	Using free HHMI BioInteractive resources, explore ways to break traditional scientist stereotypes so students see themselves as tomorrow's scientists.	High School (9-12)	Life Science/Biology
6th Grade Middle School Blast	Purdue University College of Science K-12 Outreach Coordinators will be leading sample hands on activities to provide resources for participating teachers over various science content.	Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Educating for Environmental Change with Authentic Science Practices	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.	General	Interdisciplinary (i.e. STEM)
LbL: Learning before Lecture	Learning before Lecture: LbL is a method to allow science students the opportunity to realize the importance of reading before an educator discusses a concept or topic in class. Teachers have resisted assigning reading as homework because students most likely will not complete the assignment for various reasons; such as, interests, ability or time. Presenting a means to encourage students in class to complete reading assignments will provide reasonings for students to read outside of class.	Middle Level (6-8),High School (9-12)	Science Education

Making Art Part of STEM Education	School Makerspaces can provide a creative space, supplies, and tools for teachers wanting to add art to their STEM curriculum.	High School (9-12)	Interdisciplinary (i.e. STEM)
BIOMES and INVASIVE SPECIES	How do the characteristics of a biome determine the plant and animal life found there? How do non-native species survive to become invasive species? Find out from an Ecology activity from SEPUP's Science and Global Issues Biology Program.	High School (9-12)	Life Science/Biology
The Case Study Conundrum	How to make, introduce, and apply case studies in your secondary classroom.	Elementary (K-5),Middle Level (6-8),High School (9-12)	Science Education
Exploring Biological Evidence Through Questioning	Hear how four teachers developed questioning techniques to scaffold student use of evidence in lab. Several lab activities were modified to incorporate various questioning techniques	High School (9-12)	Life Science/Biology
Going deep under Indiana	Let you learn about Mammoth Cave and apportinities for science in caves.	Middle Level (6-8),High School (9-12),College	Earth/Space Science
Brining Science Alive Through Socratic Seminars	Learn how to increase student engagement in reading and talking about science through Socratic Seminars that bring together Language Arts, Science, and Technology.	Middle Level (6-8),High School (9-12)	Science Education
Educator Certification - Phase I	This free professional development program supports educators to become innovative leaders who teach students how to become next generation explorers, scientists, conservationists, and changemakers.	General	Interdisciplinary (i.e. STEM)

Cross-curricular Content Through PBL	This presentation will focus on my experiences designing and implementing cross-content project-based learning units (PBLs) in my secondary science classroom.	High School (9-12)	Life Science/Biology
Motion, Energy, and Waves (Activities for 6th grade physical science standards)	In this session, try out several inexpensive hands-on activities for the 6th grade science standards! Leave with explicit instructions to recreate in your own classroom!	Middle Level (6-8)	Physical Science/Physics
Addressing “Alternative Science”—A Discussion and Plan of Action	As a science teacher, are you dismayed about the widespread disregard for science, sound data, and informed decision-making? Let’s talk and make a plan...	Pre-Elementary (PreK - 2),Elementary (K-5),Middle Level (6-8),High School (9-12),College,Supervisory,General	Science Education
Designing Interactive Learning Space Classrooms	This session will provide an overview of Interactive Learning Spaces (ILS) and share ideas on designing and teaching in an ILS that integrates technology into classroom instruction.	General	Science Education
Earth Science Hands on activites	Various hands-on earth science activities will be presented. Topics include minerals, latitude and longitude and watersheds.	Middle Level (6-8),High School (9-12)	Earth/Space Science
Grant Winning for Science Teachers	Is money a stumbling block to your ideas? It does not have to be. Be encouraged and learn how to get money for your idea(s).	General	Science Education
Conservation Educator Academy - Saving Species: From Invasive Pythons to Elephant Poaching	The Conservation Educators Academy is a professional development opportunity at the Indianapolis Zoo. Meet facilitators, zoo staff and participants to find out about the CEA.	Elementary (K-5),Middle Level (6-8)	Life Science/Biology

Using a Mastery Approach in the HAP Classroom	Learn about mastery learning in the HAP classroom. Get your students ready for college through mastery approach. New technologies and networking will also be shared.	High School (9-12)	Life Science/Biology
YOGI: Yes You Can!	How to plan a "Your Own Great Investigation" (YOGI). Facilitate students' investigations of their own choosing: even when you don't have ALL the answers!	Middle Level (6-8)	Interdisciplinary (i.e. STEM)
8th Grade Middle School Content Blast	Purdue University College of Science K-12 Outreach Coordinators will be leading sample hands on activities to provide resources for participating teachers over various science content.	Middle Level (6-8)	Interdisciplinary (i.e. STEM)
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.	High School (9-12)	Interdisciplinary (i.e. STEM)
Bridging the Gap in Chemical Education: Teaching High School Chemistry with Forward Thinking	Literary review of 14 research papers to lend a collaborative suggestion for the most effective methods of teaching high school chemistry.	College,Supervisory, General	Chemistry
Science and Engineering Fairs - Easier than you think	Your students are already doing science or engineering. Why not put a poster board together and practice your presentation skills? In this session, learn how.	Middle Level (6-8),High School (9-12)	Science Education

Elementary Talk-a-thon	Come talk with other Elementary teachers as we discuss topics relating to Science and STEM in our schools! Bring business cards for networking!	Pre-Elementary (PreK - 2),Elementary (K-5)	Science Education
Science Learning through Engineering Design	Expose attendees to the engineering design model and share lessons and resources to help teach the process while also incorporating Indiana state science standards.	Elementary (K-5),Middle Level (6-8)	Interdisciplinary (i.e. STEM)
Successfully Using Science Research Projects in the 6-12 Classroom	Learn tips and strategies for implementing science research and see examples of projects that teachers have completed with their students	General	Life Science/Biology
Investigating Cell Structure and Function Beyond Paper Exercises!	Covering cell structure and function doesn't have to be rote! Come and learn how to teach cellular anatomy/processes via CER and unique lab experiences.	Middle Level (6-8),High School (9-12),College,General	Life Science/Biology
Genetics Can Be Visible	Learn some new activities to use in your class to make genetics visible to your students.	High School (9-12)	 Earth/Space Science
Experiential Learning in Geosciences through Field Trips	This presentation discusses an Indiana high school teacher's ultimate field trip to help Earth Science students experience first-hand the geological history of the American Southwest.	High School (9-12),College	Chemistry
Bonding is child's play	Using building blocks to simulate ionic bonding.	High School (9-12)	Chemistry

DIY periodic table	Students build their own periodic table given data but no names, symbols, or existing periodic tables.	High School (9-12)	Physical Science/Physics
Station Labs in the ICP classroom.	Creating and implementing station labs that reach and engage all students at the ICP level.	High School (9-12)	