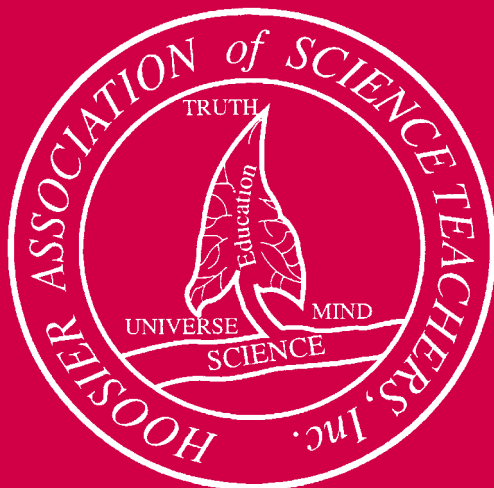




**Do More!! Teach!!!**

# HASTI



**February 19-21, 2003**

**Convention  
Announcement**



It is a great pleasure to WELCOME YOU to HASTI 2003. Our theme "Do More!! TEACH!!!" is about you, because you do more, you TEACH!!! You bring knowledge, skills and love to our future – our students. Keep it up! PLEASE!!

James Weigand, Professor and Dean Emeritus at Indiana University will address the Wednesday evening General session. Jim is an inspirational speaker with an international reputation for motivating people. His speech, "What is teaching?" will highlight the fact that quality teaching is much, much more than simply knowing what content to teach. Jim always does more, he teaches.

Herpetologist Brady Barr, Ph.D, is a field specialist with National Geographic. He is frequently featured on the weekly EXPLORER series and will be the general session speaker on Thursday. A few of his National Geographic credits include, "Gator Doc", "Savage Salties", "Velvet Killers", "Crocodile Wild", "Outback Venom", "Diving Shark" and the kids' videos "Comets and Asteroids", "Earth Alive", and "Where Storms Begin". Dr. Barr has captured crocodiles on all the world's Continents. He has captured 16 of the 23 known species of crocodiles and plans to catch the remaining 7 before 2004. Dr. Barr will also present a special session for Biology teachers on Thursday afternoon. I proudly claim Brady as one of my students. Brady grew up in Indiana and taught at North Central High School.

Our Friday morning General Session speaker is Paul G. Hewitt, the best selling author of *Conceptual Physics* (College Edition), *Conceptual Physics* (High School Edition), *Conceptual Physical Science*, and *Conceptual Physical Science: Explorations*. Paul's books led to a revolution in the teaching of physics that opened the door to the study of physics to many students who paled at the mere mention of the word. Paul has spoken extensively on teaching in general and on the teaching of physics. He has been a frequent speaker at conventions of the National Science Teachers Association and the Association of American Physics Teachers where he is always well received. Paul will also present a special session for physics teachers on Friday afternoon.

Don't forget the HASTI Social on Thursday evening. At the social you will find good food, good friends, and good door prizes which were contributed by our exhibitors.

Many people have worked very hard to make this convention a success. Thanks are extended to the more than 200 presenters, over 100 exhibitors, 30 convention committee members, the HASTI Board of Directors, Cummings Meeting Consultants Inc., student hosts, and all in attendance at the 33rd Annual HASTI Convention.

Cheers!

Hans O. Andersen

## 2003 Convention Committee

Hans Andersen.....	Convention Chair	Luke Hunt .....	Biology
Valerie Akerson .....	Secretary	Pam Kendall .....	Registration, On-Site
Claire Baker .....	Poster Sessions	Annie Linville .....	Program/Conv. Services/ Registration – Adv./On-Site
Brian Brewer .....	Information Booth	Sharon McElroy .....	Meet and Greet
Diane Burnett .....	Assistant Field Trips	Mark Mettert.....	Evaluations
Carol Chen .....	Special Assistant	John Moore .....	Science Education
Jerry Colglazier .....	Field Trips	Duane Nickell .....	Interdisciplinary/Environment
Paul Elliott .....	Exhibits	Sharon Orr .....	Awards
Monica Ellis.....	Elementary	Judy Pritchett .....	Registration: On-Site
Charles Emmert.....	Physics	Karen Rogers.....	C.E. Credits/Publicity
Ron Endris.....	Earth and Aerospace Science	Deb Sachs .....	Biology
Margaret and Charley Flack .....	Social	Suzanne Starkey .....	Chemistry
Elizabeth Frazier .....	Convention Office	Bobbie Speicher.....	Elementary
Edward Frazier.....	Special Meals	D'Ann Stouffer .....	Awards
Tina Harris .....	Middle School Science	Jeff Thomas .....	Information Booth
Randy Hein .....	Science/Technology/Society	Patty Zeck .....	Awards/Program Editor
Jane Hunn .....	Middle School Science		



# Convention and Special Events At-A-Glance

Wednesday February 19	Thursday February 20	Friday February 21
<p>11:00 a.m. - 9:00 p.m. Registration Open</p> <p>8:00 a.m. - 5:00 p.m. Extended Workshops</p> <p>12:00 p.m. - 5:00 p.m. Field Trips</p> <p>7:00 p.m. - 8:00 p.m. Sagamore Ballroom 5-7 Indiana Convention Center <b>Opening Session</b> <b>Featured Speaker:</b> <b>James Edward Weigand</b> <b>“What is Teaching”</b></p> <p>8:15 p.m. - 9:15 p.m. Exhibit Hall Sneak Preview</p>	<p>7:00 a.m. - 5:00 p.m. Registration Open</p> <p>8:00 a.m. - 4:00 p.m. Field Trips</p> <p>8:00 a.m. - 5:00 p.m. Exhibits Open</p> <p>8:30 a.m. - 10:15 a.m. Concurrent Sessions</p> <p>10:30 a.m. - 12:00 p.m. <b>General Session</b> <b>Featured Speaker:</b> <b>Brady Barr</b> <b>“Chasing Crocs &amp; other Herps”</b></p> <p>12:30 p.m. - 4:00 p.m. Concurrent Sessions</p> <p>4:15 p.m. - 5:00 p.m. Association Meetings</p> <p>5:30 p.m. - 7:30 p.m. HASTI Social</p>	<p>7:00 a.m. - 12:00 p.m. Registration Open</p> <p>8:00 a.m. - 1:00 p.m. Exhibits Open</p> <p>8:30 a.m. - 10:15 a.m. Concurrent Sessions</p> <p>9:00 a.m. - 12:00 p.m. Field Trips</p> <p>10:30 a.m. - 12:00 p.m. <b>General Session</b> <b>Featured Speaker:</b> <b>Paul G. Hewitt</b> <b>“The Rules of Nature”</b></p> <p>12:30 p.m. - 3:15 p.m. Concurrent Sessions</p>

**HASTI Social**      **Thursday, Feb. 20**

Come meet your friends, enjoy refreshments, and win a door prize. The social hour is sponsored jointly by select exhibitors and HASTI. Registration badge is necessary for entry.

**5:30 - 7:30 p.m.**      **Marriott Downtown**



## Convention Information and Events

### Location

Workshops, concurrent sessions, exhibits, and speakers are located at the Indiana Convention Center, 100 S. Capitol Ave., Indianapolis, IN 46225.

### Parking

Parking garages are located off Maryland Street, Capitol Avenue, Georgia Street, and Illinois Street. Circle Centre Mall parking prices range from \$1.00 for 3 hours to \$8.00 per day. Plaza Parking, on Capitol Avenue across from the Indiana Convention Center, ranges from \$3.00 per hour to \$6.00 per day (subject to change). Handicap parking is available in these garages.

### Services Available

An information booth will be located at the registration area to help those with questions and to help attendees find attractions and restaurants in the Indianapolis downtown area. You may meet your HASTI Board of Directors here also.

### Registration

Advanced registration is due no later than January 31, 2003. Please use the form in the back of this booklet (page 40). Copy the form and pass it along to colleagues. A special gift will be given to those who register for the convention so don't delay! To register online, visit our secure website at [www.hastireg.com](http://www.hastireg.com).

### Housing Reservations

The headquarter hotel is the Indianapolis Marriott Downtown. The Embassy Suites Downtown and the Courtyard by Marriott Downtown are also holding rooms for HASTI attendees. All of the hotels' rooms are offered at a discounted rate for HASTI attendees and are conveniently located in downtown Indianapolis. To make reservations, please call the hotels directly and ask for the HASTI Convention rate. Check the rates and deadlines for reservations on the next page.

### Extended Workshops

Attend workshops to be held on Wednesday, February 19th. See Pages 4-5.

### Field Trips

Attend tours that will take you to National Weather Service, Indianapolis Zoo, White River Gardens, DOW AgroSciences LLC, and Indiana Medical History Museum. See pages 6-8.

### Wednesday Night

Enjoy the flair of James Edward Weigand at the Convention Center Sagamore Ballroom 5-7 at 7:00 p.m. There will be a sneak preview of the Exhibit Hall after the presentation.

### First Time Attendees

Sessions are scheduled for Thursday and Friday at 8:30 a.m. to help you get the most from the convention. Carol Chen, HASTI President, will conduct these sessions. First-time attendee ribbons will be given to those who are present.

### HASTI Social

Don't forget the HASTI Social Thursday evening, 5:30 p.m. -7:30 p.m. at the Indianapolis Marriott Downtown Hotel Ballroom.

### Speaker Presentations

The featured speakers this year will be Paul G. Hewitt, Brady Barr, National Geographic Reptile Expert; and James Edward Welgand, Professor Emertius, Indiana University.

### Association Meetings

Current Indiana science associations will hold their meetings in the Indiana Convention Center at 4:15 p.m. on Thursday. Come share information with your subject area colleagues. See page 24.

# Convention Directions & Hotel Information

## 1. Indiana Convention Center (ICC)

100 South Capitol Avenue  
Indianapolis, Indiana 46225

Located on the corner of Capitol Ave.  
and Maryland St.

From:

**US 31 North or South:** Turns into Meridian St., follow  
and turn West on Washington St. and South on  
Capitol Ave.

**I-70 East:** Exit Illinois St., turn West on Washington St.  
and South on Capitol Ave.

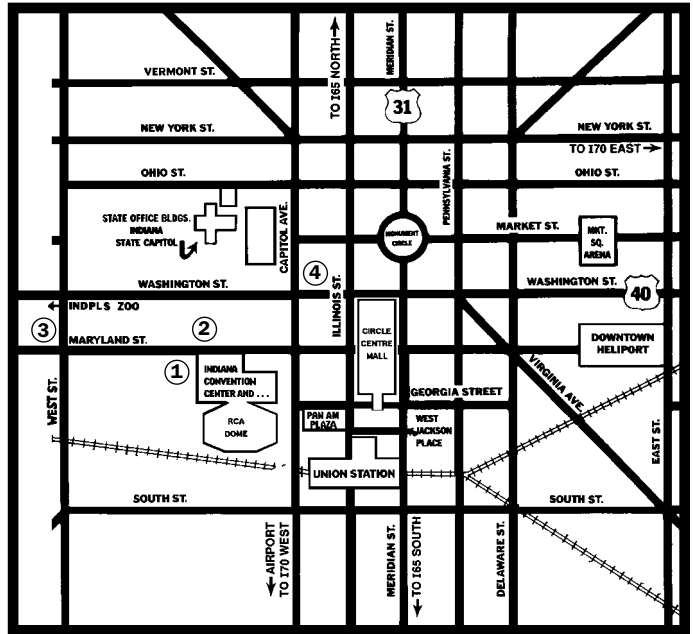
**I-70 West:** Exit Michigan St., turn South on Capitol Ave.

**US 40 East:** Turns into Maryland St.

**US 40 West:** Turns into Washington St., follow and turn  
South on Capitol Ave.

**I-65 North:** Follow to I-70 West, exit West St., turn East  
on Maryland St.

**I-65 South:** Exit West St., turn East on Maryland St.



## 2. Indianapolis Marriott Downtown\*

350 West Maryland Street  
Indianapolis, Indiana 46225  
317.822.3500

Single .....	\$112	Triple .....	\$112
Double .....	\$112	Quad .....	\$112

The Marriott is connected to the ICC via a skywalk.  
Reservation Deadline: January 24, 2003  
Parking: \$14.00 per day (self park)

## 3. Courtyard by Marriott Downtown

501 West Washington Street  
Indianapolis, Indiana 46204  
317.635.4443

Single .....	\$97	Triple .....	\$97
Double .....	\$97	Quad .....	\$97

Reservation Deadline: January 24, 2003  
Parking: Free (self park)

## 4. Embassy Suites Hotel Indianapolis Downtown

110 West Washington Street  
Indianapolis, Indiana 46204  
317.236.1800

Single .....	\$119	Triple .....	\$129
Double .....	\$119	Quad .....	\$129

*Evening refreshments & full breakfast included*  
Reservation Deadline: January 19, 2003  
Parking: \$8.00 per day (self park)

**HASTI encourages all convention attendees to  
utilize the rooms reserved for the HASTI convention  
at the hotels holding HASTI special rates. To make  
reservations, please call the hotel directly and ask  
for the HASTI Convention rate.**

**Hotel check-in time is 3:00 p.m. Checkout time is  
12:00 p.m. Early departures may incur a financial  
charge.**

**\*Indianapolis Marriott Downtown is the headquarter  
hotel for the HASTI Convention.**



**CW** = Commercial Workshop

## Extended Workshops

8:00 a.m. sessions available only to pre-registrants.

**All Extended Workshops will be located at the Indianapolis Marriott Downtown. All meeting rooms are located on the first floor. The Marriott is located directly across from the Convention Center on Maryland Street.**

**Wednesday, February 19, 2003**

**8:00 a.m.**

**CW** **Bringing Excitement to Middle School Science-Go Ahead, Make My Data!**

**Science/Technology/Society  
Indiana D**

**Middle Level**

PASCO's standards-based thematic units make it easy to integrate hands-on science and technology into your classroom. Engage your students in the practice of science, using PASCO's hand-held data loggers, sensors, and graphing software.

Presenter(s): Kevin Mather (PASCO Scientific)

Fee: \$0.00; Attendance is limited to the first 50 registrants

**CW** **Engaging Youth-Using Nonformal Environmental Education**

**Interdisciplinary  
Indiana C**

**High School**

Teachers will sample the following nonformal curriculum: exploring the Great Lakes (CD-ROM), new wildlife manuals, biological control of purple loosestrife, and nonpoint source pollution resources.

Presenter(s): Natalie Carroll (Purdue University)

Fee: \$0.00; Attendance is limited to the first 25 registrants

**NASA Science for K-8 Educators**

**Elementary Level Science  
Indiana A**

**Elementary**

Take an adventure in space science. Learn what's hot. Engage in standards-based activities. Finally, navigate NASA's resources to bring the excitement of space science into your classroom.

Presenter(s): Jim Sweitzer, Bernhard Beck-Winohatz (De Paul University), Lyn Klosowski (Harding), Debbie Vannalter (Daniel Wertz Elementary)

Fee: \$0.00; Attendance is limited to the first 24 registrants

**Bringing Exotic Aquatics into the Classroom - A Team Approach**

**Ecology/Environment  
Indiana B**

**High School**

Learn to use this topic for student inquiry and problem-based learning at all grade levels. Two teachers share their classroom experiences using 14 existing activities.

Presenter(s): Robin G. Goettel, Valerie Eichman (Illinois-Indiana Sea Grant College Program- Purdue University and University of Illinois), Patrice Charlebois, Kristin TePas (Lake Michigan Biological Station), Diana Vermeulen, Meg Buss (Elkhart Memorial High School)

Fee: \$20.00; Attendance is limited to the first 30 registrants



## Extended Workshops

8:00 a.m. sessions available only to pre-registrants.

Thursday, February 7, 2003

1:00 p.m.

### **Standards-Based Integrated Science Instruction Middle Level**

**Interdisciplinary  
Indiana A**

This half-day workshop is a follow-up to the weeklong Standards-Based Integrated Science Instruction (SISI) workshop hosted by Purdue University in July 2002. Twenty-eight middle level teachers attending the workshop used physical, chemical, biological and earth science concepts to solve crime. (participation limited to teachers participating in SISI Summer program)

Presenter(s): Wilella Burgess, Jerry Krockover (Purdue University)

Fee: \$0.00; Attendance is limited to the first 30 registrants

### **CW It's Never too Late to Integrate...Probeware, the Path to Better Science Understanding**

**Science/Technology/Society  
Indiana B**

#### **High School**

Use PASCO's hand-held data logger, Xplorer, and probes to examine a variety of physical phenomena. Create an inquiry-based, hands-on environment to safely and easily study light, temperature, voltage, current and more.

Presenter(s): Kevin Mather (PASCO Scientific)

Fee: \$0.00

### **Sedimentary Rocks, Fossils and Paleogeography of Indiana General**

**Earth Science  
Indiana C**

Workshop will review the classification of sedimentary rocks and fossils by professional geologists. Rocks and fossils will be provided. Class will also review Indiana paleogeography.

Presenter(s): Todd Thompson, Brian Keith, John Rupp, Erik Kvale (Indiana Geological Survey, Indiana University)

Fee: 0.00; Attendance is limited to the first 25 registrants

### **Movin' & Groovin' General**

**Interdisciplinary  
Indiana D**

A hands-on workshop to explain different forces: including gravity orbits, atomic structure, and magnetism.

Materials for class activities will be given to participants

Presenter(s): Gail Schwoebel (Arlington High School)

Fee: \$25.00; Attendance is limited to the first 20 registrants



## Field Trips

**Tours leave from the Convention Center North Entrance, Maryland Street, at the time specified. Pre-registration is required for all field trips on Wednesday afternoon and strongly encouraged for all field trips.**

### **National Weather Service\***

Wednesday, February 19

1:30 p.m. – 4:00 p.m.

**Limit: 20 Persons**

Fee: \$10.00

The tour of the National Weather Service at the Indianapolis International Airport will provide teachers with an opportunity to observe the instruments used today in forecasting weather, to review the nature of the information gleaned from each of these instruments and to see how this information is merged in formulating weather forecasts. Teachers will have opportunities to discuss, with practicing meteorologists, weather service careers available to their students and their educational requirements.

\* Due to increased security concerns everyone going on this field trip will need to sign-in and provide a picture ID.

### **White River Gardens and Hilbert Conservatory**

Wednesday, February 19

1:30 p.m. – 4:00 p.m.

**Limit: 50 Persons**

Fee: \$10.00

The White River Gardens continues the Indianapolis Zoological Society's mission of connecting animals, plants, and people. With over one thousand varieties of plants on display, the Gardens are an international showplace for Indiana where visitors can enjoy and learn about the flora of the world. Whether you are new to plants or a proven "green thumb," the White River Gardens field trip will guide you in the exploration of this "global garden."

### **Dow AgroSciences LLC**

Thursday, February 20

10:15a.m. – 3:00 p.m.

**Limit: 50 Persons**

Fee: \$10.00

Dow AgroSciences LLC, based in Indianapolis, Indiana, USA, is a global leader in providing pest management and biotechnology products that improve the quality and quantity of the earth's food supply and contribute to the safety, health and quality of life of the world's growing population. Dow AgroSciences has approximately 6,000 people in over 50 countries dedicated to its business, and has worldwide sales of more than U.S. \$3 billion. Dow AgroSciences is a wholly owned indirect subsidiary of The Dow Chemical Company.

The DAS world headquarters is located on a 250 acre site in the northwest corner of Indianapolis. The highlight of your visit to Dow AgroSciences will be a tour of their world class Research & Development Center which is a 600,000 SF (14 acres) facility that houses 600 scientists. The R&D Center has 100 state of the art laboratories, 2 acres (36 bays) of computer controlled greenhouses, growth chambers, and the only indoor soil handling system with a capability of filling many thousands of containers daily. Highlights of the tour include biotechnology greenhouses, laboratories, product storyboards, research demonstrations by scientists, a natural products research video, and other hi tech tour stops along a tour path.



# Field Trips

## New Indiana State Museum

Thursday, February 20 1:30 p.m. – 4:00 p.m.  
**Limit: 50 Persons** Fee: \$10.00

Visit the new Indiana State Museum to catch a glimpse of what might be in store for your next class fieldtrip. Professional curators will guide you through the natural history galleries as you explore the geologic birth of our state and the animals that once lived here from ocean-dwelling trilobites to mighty mastodonts, to the extinct passenger pigeon. Learn how to incorporate the interactive Naturalist’s Lab into a class visit. Participate in activities from our science workshops and receive free fossils and minerals for use in your classroom.

## Indianapolis Zoo, Behind the Scenes in the Water Area

Thursday, February 20 1:30 p.m. – 4:00 p.m.  
**Limit: 50 Persons** Fee: \$10.00

The Indianapolis Zoo is involved in many research efforts, including a number of projects involving endangered species such as the ring-tailed lemurs, Grand Caymen Island blue and Jamaican iguanas, bottle-nosed dolphins, the African elephant, and many others. The Zoo’s professional staff is constantly pursuing important scientific work in understanding and learning more about the animals in its collection. Join the zoo staff in discussion about their Conservation Projects and take a look at the behind-the-scenes care involved in our Marine Mammal area.

## Indiana Medical History Museum

Thursday, February 20 1:30 p.m.– 4:00 p.m.  
**Limit: 50 Persons** Fee: \$10.00

The Indiana Medical History Museum is a unique destination for anyone curious about medicine at the turn-of-the-last-century. The museum is located in the Old Pathology Building on the grounds of what used to be Central State Hospital. There are three clinical laboratories and a photography laboratory where scientists tried to find the physical cause of mental illness. The laboratory opened in 1896 and was considered state-of-the-art. A 100 seat amphitheater served medical students until 1956.

## National Weather Service\*

Friday, February 21 9:30 a.m. – 12:00 p.m.  
**Limit: 20 Persons** Fee: \$10.00

The tour of the National Weather Service at the Indianapolis International Airport will provide teachers with an opportunity to observe the instruments used today in forecasting weather, to review the nature of the information gleaned from each of these instruments and to see how this information is merged in formulating weather forecasts. Teachers will have opportunities to discuss with practicing meteorologists weather service careers available to their students and their educational requirements.

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## **General Session Speaker Biographies**



### **James Edward Weigand, Professor Emeritus Indiana University**

James Weigand has served Indiana University since 1962. He has been Dean of the School of Continuing Studies, Assistant to the President, Chairman of Science Education, Teaching Associate in Elementary Education, and Professor of Science & Environmental Education. Jim earned his undergraduate degree from Augustana College, Rock Island, IL, and was honored by the college as an Outstanding Alumnus in 1999. His doctorate is from Indiana University. He has numerous honors including the following: Sagamore of the Wabash, Julius M. Nolte Award for Extraordinary Leadership, and three outstanding teaching awards from Indiana University. In addition, he received the Brown Derby Award from the students of Indiana University who recognized him as the professor who merits highest respect. Furthermore he received the Phi Delta Kappa's Outstanding Leadership in Education Award. He is a member of the Association for Continuing Education, the Association for the Education of Teachers in Science, the National Association for Research in Science Teaching, the National Science Teachers Association, National University Continuing Education Association, Phi Delta Kappa, and the School Science & Mathematics Teachers. He has served as a board member and officer in several of these organizations. As Dean, Professor Weigand established Educational programs in South Africa, Malaysia, Iran, and Saudi Arabia and served as a consultant in Thailand. He has been a popular speaker and demand for his services as a speaker continues to be very high.

### **Wednesday Opening General Session - 7:00 p.m.**

#### **What is Teaching?**

James Weigand has taught kindergarten children, elementary children, high school physics students, pre-service teachers, graduate students, adults of all varieties and senior citizens. You probably cannot name an audience he has not taught. He will share with everyone his special magic, his flair for communication, and his intense interest in life and living. We have asked him to bring some of his magic to us and to share with us his answer to the question, **"What is Teaching?"**

**"Has now captured and studied 16 of the 23 species of crocs..."**

## **General Session Speaker Biographies**



### **Dr. Brady Barr, National Geographic Reptile Expert**

Herpetologist Brady Barr, Ph.D., has pursued his lifelong passion for reptiles and turned it into several of the most ambitious field studies ever conducted. Dr. Barr, host of National Geographic Channel's series Reptile Wild with Dr. Brady Barr, is an expert on the modern crocodilian species and has conducted field research on crocs in every continent in which they exist (five). The research includes his dietary study of alligators in the Florida Everglades and his ongoing research, supported by the National Geographic Society, into conservation of the American crocodile in Costa Rica. He also has participated in countless other research projects throughout the world.

The year 2002 has been a busy one for Dr. Barr, with his research expeditions taking him to Cambodia, French Guiana, Brazil, Africa, Sri Lanka, and Thailand. In Cambodia he seemingly pulled off the impossible, by capturing a species of croc thought to be extinct in the wild. His capture of a wild Siamese Crocodile was a first for the scientific community in over 70 years. Dr. Barr has now captured and studied 16 of the 23 species of crocs on the planet, and is on the verge of a monumental achievement. He stands to become the first person to ever capture all 23 species of crocodilians in the wild, a goal he hopes to achieve in early 2003... if he can

survive. While filming the latest season of Reptile Wild Dr. Barr was involved in a plane crash in the Brazilian Pantanal, bitten in the face by a large Boa Constrictor, entangled in ropes and pulled overboard by an angry crocodile, covered in blood sucking Buffalo leeches, and received a severe back injury compliments of an aggressive alligator. He can't wait for the next season to begin!

In 2001, Dr. Barr assisted renowned paleontologist, Dr. Paul Sereno, in his effort to recreate SuperCroc, a prehistoric fossil discovery that at ten tons and 40 feet was among the largest crocodiles to ever roam the planet. Working together, they traveled the globe to study the anatomy and behavior of modern crocodilian species, looking for clues to put flesh on bone and create a life-size reconstruction of this ancient beast.

In 1997, Dr. Barr signed on with National Geographic as a field specialist for the weekly EXPLORER series, becoming National Geographic's resident herpetologist. A few of his National Geographic film credits include "Gator Doc," "Savage Salties," "Velvet Killers," "Crocodile Wild," "Outback Venom," "Diving Shark Alley," "Paradise in Peril," "Clan of the Snake Catchers," "Cuban Crocs," "Man-Eaters of Malawi," "Snake Island," and the kids' videos "Comets and Asteroids," "Earth Alive," and "Where Storms Begin."

Dr. Barr was born in Fort Worth, Texas, and raised in Bloomington, Indiana. He received a Bachelor of Science in science education from Indiana University in 1987 and, shortly thereafter began his teaching career at Indianapolis' North Central High School. Dr. Barr taught such subjects as zoology, biology, and earth and life sciences, championing an interactive classroom style by encouraging his students to "touch, see, and feel the animals firsthand."

Moving to Florida to pursue graduate degrees at the University of Miami, Dr. Barr began extensive diet studies on alligators in Everglades National Park. The results of his ambitious research project have helped preserve the unique Everglade ecosystem. Dr. Barr received a Master of Science (1994) and a Ph.D. (1997) in Biology from the University of Miami.

His recent work in Costa Rica as a National Geographic Society grantee focuses on conservation and preservation of the American crocodile. The Conservation of the American Crocodile project has three goals: education, restocking of rivers, and relocation of crocodiles.

Dr. Barr's vital style and infectious sense of humor help make science concepts especially accessible for children, and he continually makes educating young minds a focus of his research and conservation work. In Costa Rica, a key component of his work has been working with local schoolchildren to coordinate baby crocodile release efforts that help them understand the importance of the crocodile to their ecosystem.

## **Thursday General Session - 10:30 a.m.**

### **Chasing Crocs and Other Herps**

Brady Barr began his teaching career in Indiana and has continued his teaching career on national television as National Geographic's Herpetologist. Brady has traveled extensively in search of crocodiles. He has personally captured sixteen of the twenty-three known species including one species thought to be extinct. He has had some wild experiences and will share some of them with us.

## General Session Speaker Biographies



### **Paul G. Hewitt**

Born in 1931, Dr. Paul G. Hewitt was a silver medallist flyweight champion of New England in 1949, served in the U.S. Army 1953-55, uranium prospector 1955-57, college student 1958-1964, physics teacher from 1964-99, and a speaker now in Indiana, 2003. He wrote Conceptual Physics after teaching for 5 years at City College of San Francisco, published in 1971, and a high-school version in 1987. He wrote Conceptual Physical Science in 1992 with daughter Leslie and nephew, John Suchocki, and more recently a book targeted at 9th grade students—Conceptual Physical Science: Explorations, which came out in February, 2002. Now retired, Paul lives in both Hawaii and Florida, favoring palms and balmy weather.

### **Friday General Session - 10:30 a.m.**

#### **Physics—The Rules of Nature**

When physics is taught as applied mathematics, with emphasis on problem solving, it is relevant to a small percentage of today's students. But when physics is presented qualitatively as being the rules of the physical world, then physics is relevant to all learners. Just as one cannot appreciate a sports game, a computer game, or a party game without knowing the rules of the game, one cannot fully appreciate nature without knowing something about nature's rules. This re-emphasis of introductory physics courses may increase the pitifully small number of people in the United States who are never exposed to physics in their education.



# Convention Session Schedule

**CW** = Commercial Workshop

**PS** = Poster Session

**Thursday, February 20, 2003** **8:30 a.m.**

**CW** **Astrotrek (+) Overnight Adventure: U.S. Space and Rocket Center** **Aerospace**  
**General**

Students will participate in Astrotrek Aerospace or Aviation Challenge programs. Simulators and lots of "hands-on" activities allow many unique explorations through the world's largest interactive space education classroom, the U.S. Space and Rocket Center, Huntsville, Alabama.  
Presenter(s): Phil Campbell (500 Tours, Inc.)

**Icons of Education: A Critical Review** **Biology**  
**High School**

A three-step approach to analyzing each of Jonathon Well's "Icons"  
1) Summary of Well's arguments,  
2) Summary of scientific communities response.  
3) Suggested pre-emptive classroom strategies and recourses.  
Presenter(s): Tony Hiatt (South Newton High School)

**A Few Simple, Safe, And Inexpensive Chemical Demonstrations** **Chemistry**  
**High School**

A few simple yet memorable chemical demonstrations that anyone can do on a limited budget will be presented.  
Presenter(s): Richard Smierciak (Indiana Academy for Science, Mathematics, & Humanities)

**Exploring Earth Science Misconceptions** **Earth Science**  
**General**

This session will provide an overview of common earth science misconceptions held by 1500+ non-science students at U.S. colleges and universities.  
Presenter(s): William Boone, Meredith Beilfuss (Indiana University), Julie Libarkin (Howard Smithsonian), Steve Andennam (Black Hills State University)

**So What's El Nino?**  
Come learn new ways to teach about the interaction of the wind and ocean in forming El Nino and La Nina. Handouts will be provided.  
Presenter (s): Kim Giesting (Connersville High School)

**Let's Get Wet** **Ecology/Environment**  
**General**

The best way to help young people learn about the environment is to get them out-doors to experience it. Analyzing water quality is one of the many ways to do just that.  
Presenter(s): Karen Henman, Nancy Forsyth (Woodrow Wilson Middle School)

**Calculating Our Ecological Footprint** **Ecology/Environment**  
**Middle Level**

Integrate science with math while boosting students' environmental I.Q. Participate in memorable, hands-on activities illustrating the impacts of population and lifestyles on the environment. Free Materials!  
Presenter(s): Linda Airey (Franklin College)



**Thursday, February 20, 2003**

**8:30 a.m.**

**Link Literacy with Science through Journaling**  
**Elementary**

**Elementary Level Science**

This workshop will present materials and techniques for linking literacy with the elementary science curriculum through children's journaling. Sample copies to take away!

Presenter(s): Daniel Shepardson, Susan Britsch (Purdue University)

**Monarchs Can Help You Teach to the Standards**  
**Elementary**

**Elementary Level Science**

Monarch butterflies can provide an intriguing and inexpensive way to develop enthusiastic students while meeting several elementary science standards.

Presenter(s): Margaret Zimmerman, Marcia Rhoads (Hose Elementary)

**Getting Families Involved With Science**  
**General**

**Interdisciplinary**

Family Science Night and take home labs encourage parents to work with their students on science projects. Handouts and disks with activities included.

Presenter(s): Tina Harris (Indiana University), Sue Switzer (Indiana Center for Family, School and Community Partnerships)

**Taking Care of Business**  
**High School**

**Interdisciplinary**

Learn about a project where skills in writing, business, science, public speaking, debate and commercial art are put into practice as students represent competing energy companies.

Presenter(s): Jan Dubbeld, Martha Goings (Huntington North High School)

**CW Labs, Labs, and More Labs**  
**Middle Level**

**Middle Level Science**

Need Some new ideas for labs that will grab your students' attention? Labs that are meaningful and fun? Come join us and add some spice to your life! Limited Complimentary materials available.

Presenter(s): Patrick Wenzl (Holt, Rinehart and Winston)

**Leadership and Mentoring in Research Based Science Education**  
**General**

**Science Education**

Teachers at Northview High School will discuss their experiences in a national program in research based science education and teacher leadership.

Presenter(s): Jeff Sayers, Jamie Elwell, Scott Buell, Phil Leonard (Northview High School)

**CW Data Collection Your Way, with Vernier LabPro®**  
**High School**

**Science Education**

In this demonstration, you will learn how to use the award-winning Vernier LabPro® interface to collect data with computers, Texas Instruments graphing calculators, and Palm™ handhelds.

Presenter(s): David Braunschweig (Vernier Software & Technology)

**Terrific Science Demos**  
**General**

**Middle Level Science**

Simple attention getters and discrepant events. Hand-outs included

Presenter(s): David Burch (Eastern Greene JR-SR High School)



**Thursday, February 20, 2003** **8:30 a.m.**

**Using Building Blocks (Lego type) in Science** **Elementary Level Science**  
**Elementary**

Legos or any building block can offer a high interest, fun way to integrate elementary science and math standards into the classroom.

Presenter(s): Barbara Peacock (Galena Elementary School - New Albany Floyd Co. Schools)

**Lilly Super Science Teacher Contest** **General**  
**General**

Come watch as area science teachers compete for the title of "Lilly Super Science Teacher". Based upon the Exploratorium's Iron Science Teacher program, area teachers will use a "secret" ingredient to create a unique hands-on science activity or demonstration. Competing teachers will present their activity in a witty amazing program tht's sure to have lots of surprises. Handouts of the activities will be provided.

Presenter(s): Julie O'Brien, Lisa Muegge, (Eli Lilly and Company)

\*\*This will be a 90 minute session

**Reach for the Stars- Grade 2/3 - Paper Airplanes, Bird Beaks, Phases of the Moon, and 2 New Titles.** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**Is This Your First Convention?** **General**

Find out where to go and what to see to make your first HASTI Convention a success. Learn the fine art of Conventioneering.

Presenter(s): Carol Chen (President of Hoosier Association of Science Teachers)

**Thursday, February 20, 2003** **9:30 a.m.**

**Reach for the Stars - Grade 4 - Magnets, Mass - Balance Scale and 2 New Titles.** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**Inquiry in the Classroom** **Middle Level Science**  
**Middle Level**

Teachers participating in the Standards-Based Science Education program will present posters describing implementation of inquiry activities in their classroom.

Presenter(s): Wilella Burgess, Jerry Krockover (Purdue University)

**Top Ten Science Needs Questions To Share With Your Principal** **Elementary Level Science**  
**Elementary**

Bring your science needs questions and join us to identify ways to overcome obstacles in order to teach elementary science in your classroom.

Presenter(s): Gerald Krockover (Purdue University), Marie Roth (Glen Acres Elementary School)



**CW** = Commercial Workshop

**PS** = Poster Session

**Thursday, February 20, 2003**

**9:30 a.m.**

**The Iron Teacher Challenge**

**Middle Level Science**

**Middle Level**

This is a shameless rip-off of the San Francisco Exploratorium competition as written up in NSTA Reports! Come watch people compete designing lessons impromptu.

Presenter(s): Jane Hunn (Tippecanoe Valley Middle School), Dan Royer (Manchester College), Sharon McElroy (Eastern High School)

**CW** **It's Never too Late to Integrate...Probeware, the Path to Better Science Understanding**

**High School**

**Science/Technology/Society**

Use PASCO's hand-held data logger, Xplorer, and probes to examine a variety of physical phenomena. Create an inquiry-based, hands-on environment to safely and easily study light, temperature, voltage, current and more!

Presenter(s): Kevin Mather (PASCO Scientific)

**Discovering Japan**

**Ecology/Environment**

**High School**

This session covers Japan's environmental issues and how the economy and culture impacts them. I'll cover how to apply for the Toyota International Teacher Program.

Presenter(s): Darla Smith (Bedford North Lawrence High School)

**The Ten Commandments- Salvation With Newton's Second Law**

**Physics**

**High School/College**

Use a foolproof method with your students for tackling problems with Newton's Second Law of Motion. Handouts and PowerPoint file provided.

Presenter(s): Marvin Giesting (Connersville High School)

**The Force Be With You**

**Elementary Level Science**

**Elementary**

This session is designed to give elementary teachers some hands-on experience with magnets and some tips for teaching Indiana Science Standards.

Presenter(s): Jane Lundy, Tammy Morey (St. Joseph Central)

**Tied Up in the Out-Of-Doors**

**Interdisciplinary**

**General**

Learn what ancient people used for making cordage (twine and rope), and how to make some of your own.

Presenter(s): Karen Dalman, Brenda Potter (Purdue University)

**Use of Online Videos as a Professional Development Tool**

**Interdisciplinary**

**General**

This session demonstrates how you can use FREE online videos as a professional development tool while viewing in the privacy of your own home.

Presenter(s): Tahsin Khalid (Southeast Missouri State University)

**Inquiry Equals Good Science and Good Writing**

**Elementary Level Science**

**Elementary**

Feisty crawdads, whistling winds, bouncy balls, mysterious white powders, and so much more- the stuff of good science and good writing. How to meet the language arts and science standards with meaningful activities that engage student curiosity and expression.

Presenter(s): Susan Johnson (Ball State University), Sharon Orr, Naomi Heidelberg (Glenwood Park Elementary), Jessie Bloom (Fort Wayne South Bend), Dick Dettmer (Fort Wayne Community- Holland School), Kathy Flatter (Selma Elementary), Bobbi Speicher (Shenandoah Schools)



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**Thursday, February 20, 2003**

**9:30 a.m.**

**Reducing Mercury in School and the Environment**

**Ecology/Environment**

**General**

Panel presentation of mercury reduction activities and class materials. Experts in mercury recycling and school issues.

Presenter(s): Brent Ladd, Cathy Burwell (Purdue University), Chad Trinkle (Indiana Department of Environmental Mgmt.), Stephanie Biehn (Regionals H.H.W. Task Force)

**Molar Reflections - Celebrate Mole Day**

**Chemistry**

Do you want to integrate the mole concept in an engaging and entertaining way? The National Mole Day may be just the ticket! Two chemistry teachers will share ideas and experiences from recent Mole Days!

Presenter(s): Paulette Berger, Mary Testin (Zionsville Community High School)

\*25 minute Session

**Tune into AP Teaching Tips**

**Science Education**

**High School**

The Indiana Academy presents professional development modules addressing problem topics in teaching Advanced Placement courses. Training is available on campus and thru several distance learning methods.

Presenter(s): Jeff Smith, Dr. Tom Adams, Allison Imel, Raychelle Estep (The Indiana Academy)

**Developing Solar Models**

**Earth Science**

**High School**

Integrate math into your earth science classroom. Convert a one-foot measure into its decimal equivalent for calculator use and develop solar models to scale.

Presenter(s): Orvil White (Indiana University)

**"The Real Jurassic Park" Digging With Dr. Bob Bakker**

**Earth Science**

**General**

Information on Wyoming dinosaur digs with hand-outs. Teachers at Central Middle School will show how they took students on digs the last three years.

Presenter(s): Ed Pulver, Ben Noel (Central Middle School)

**Biotechnology Opportunities for High School Students**

**Biology**

**High School**

The new Biotechnology Training Program at IU School of Medicine prepares individuals for academic and industrial careers in Indiana biotechnology. We want to know what high school teachers need to bring biotechnology to their students.

Presenter(s): Betsy Ingle (IUPUI Indiana University School of Medicine- Graduate Division)

\*25 minute Session

**PS Teaching About Weird Things: Pseudoscience and the Paranormal**

**Interdisciplinary**

**General**

This poster will describe classroom projects and activities designed to promote a healthy skeptical attitude in students. Examples of student work will be provided.

Presenter(s): Duane Nickell (Franklin Central High School)

**Who Dunit - Crime Scene Investigation (CSI) with Powdery Mildew Fungi**

**Biology**

**High School**

Stimulate the investigative nature of your students as they use forensic plant pathology technique to prove their innocence in a murder trial. Lab materials and CDs provided.

Presenter(s): Gail Ruhl (Purdue University)

\*Limited to first 50 attendees



**Thursday, February 20, 2003** **9:30 a.m.**

**Reach for the Stars - Grade 4 - Magnets, Mass - Balance Scale and 2 New Titles.** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**Thursday, February 20, 2003** **10:00 a.m.**

**Fun and Games with Dry Ice** **Chemistry**  
**High School**

Six very brief demonstrations for high school teachers using dry ice.

Presenter(s): Mary Testin, Paulette Berger (Zionsville Comm. High School)

\*25 minute Session

**Agriculture Biotechnology Education** **Interdisciplinary**  
**High School**

Discover new curriculum for teaching biotech in the classroom.

Presenter(s): Kathryn Orvis (Purdue University)

\*25 minute Session

**Thursday, February 20, 2003** **10:30 a.m.**

**General Session**

**Chasing Crocs and Other Herps**

**General**  
Special Session. See page 9.  
Presenter(s): Brady Barr (National Geographic)

**Thursday, February 20, 2003** **12:30 p.m.**

**Making Biology Exciting** **Biology**  
**High School**  
Special Session. Questions encouraged  
Presenter(s): Brady Barr (National Geographic)

**CW** **The Virtual Chemistry Lab-Computer Simulation** **Chemistry**  
**High School**  
Enhance student's chemistry lab experience with interactive, fun-to-use software. Use Crocodile Chemistry as a simulated laboratory where students can create realistic experiments that could not be done in an actual lab. Free demo disks will be available.  
Presenter(s): Dave Barnes (Arbor Scientific)

**Demonstration and Ideas Which Teach Chemistry Standards** **Chemistry**  
**High School**  
Several teachers from IACT, (Indiana Alliance of Chemistry Teachers) will share demonstrations, lab, and classroom activities which meet Indiana's chemistry standards.  
Presenter(s): Patricia Mason (Delphi Community High School)



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<b>Thursday, February 20, 2003</b>	<b>12:30 p.m.</b>
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**Mission Geography** **Earth Science**  
**Elementary and Middle**

Participants will use images of Earth to connect geography and earth science to teach science concepts.  
Presenter(s): Marge Lehky (NASA Glenn Research Center)

**ENVISION** **Ecology/Environment**  
**General**

ENVISION teachers will share examples of environmental science activities and student research projects.  
Presenter(s): Daniel Shepardson, Jon Harbor, Bryan Wee, Julie Werth (Purdue University)

**Let's Go For a Walk!** **Ecology/Environment**  
**General**

What does the out-of-door have to offer my class and what "tips and tricks" can I use? Come walk with Wil into your out of doors.  
Presenter(s): Wil Reding (Rent a Rambling Naturalist)

**Moving from Activities to Inquiry** **Elementary Level Science**  
**Elementary**

The presenter will give examples and model how to move your hands-on science activities into inquiry-oriented activities.  
Presenter(s): Julie Saam (Indiana University Kokomo)

**Designing Lessons from Children's Conceptions** **Elementary Level Science**  
**Elementary**

Designing lessons from children's perceptions is basic to classroom instruction. This session shares students' unexpected conceptions and offers suggestions to improve teachers' understanding and student learning.  
Presenter(s): Michael Cohen, Charles Barman, Natalie Barman, Theresa Gutzwiller, Kim Hartman, Carolyn Hodges, Cara Mendenhall, Jordan Mendenhall, Danna O'Hare, Gaylene Rubin, Cassandra Truman, Jamie Winters, Jenenne Young, Jessica Baumgartner, Ann Cook, Jennifer Eichenauer (IUPUI), Nurdan Kalayci (Gazi University, Ankara, Turkey/IUPUI), Geoff Davis, Hazel Tribble, Beverly Holtke, Kathy Sahn (Key Learning Community)

**Second Hand Science Fair Projects** **Elementary Level Science**  
**Elementary**

Pulled from our 'garbage can' bag of tricks, find a second life for easily accessible everyday objects to create stellar science fair projects.  
Presenter(s): Becky Barloga, Rita Mazza (Lake County Solid Waste)

**Income Tax for Teachers** **Interdisciplinary**  
**General**

This session will give teachers a chance to ask questions they have concerning their personal tax returns. This year there is a new deduction for teachers only. Questions will be answered.  
Presenter(s): Charles Gwaltney (Retired)

**Integrating Seismology into the Physics Curriculum** **Interdisciplinary**  
**High School**

Participation in a regional seismic network allows physics students to integrate real world applications and scientific research into their study of physics.  
Presenter(s): Jeff Sayers (Northview High School)



**CW** = Commercial Workshop

**PS** = Poster Session

**Thursday, February 20, 2003** **12:30 p.m.**

**Sound is PHUN!**

**Physics**

**High School**

A series of high school physics classroom demonstrations for use in a discussion of waves and sound will be presented.

Presenter(s): Charles Emmert (Noblesville High School)

**CW Science and the Struggling Reader**

**Science Education**

**Middle Level and High School**

Examine nine different skills or thought patterns that help students successfully read and understand their science textbooks. Specific activities and exercises will be explored.

Presenter(s): Patrick Wenzl (Holt, Rinehart and Winston)

**Whose Inquiry Is It?**

**Science Education**

**General**

Use an analysis tool to determine the level of teacher and student involvement in inquiry-based activities.

Presenter(s): Cheryl Bell (Indiana University Northwest)

**Inquiry and Beyond**

**Science/Technology/Society**

**General**

Want to be part of an online K-12 learning community? Learn more about the Inquiry Learning Forum, which features math and science classrooms complete with videos, lesson plans, discussion forums and more.

Presenter(s): Suzanne Sanborn (Indiana University)

**Bringing New Physics to the Middle School Classroom**

**Middle Level Science**

**Middle Level**

High-energy particle physics seems unreachable to many teachers, yet we are being bombarded by some of these particles every day. Come experience the workshop that I have designed for students in grades 6-8.

Presenter(s): Beth Beiersdorf (University of Notre Dame)

**CW Guidelines for Excellence: EE Standard Correlated with State Standards**

**Ecology/Environment**

**Elem/Middle/High School**

The North American Association of Environmental Education has created guidelines that have been correlated with National Science Standards and Mathematics, English, and others. Come see what EEAI has done with the state standards.

Presenter(s): Paul D. Steury (Merry Lea Environmental Learning Center and the Environmental Education Association)

**PS A Comparative Study of Substrate Tardigrade Populations in Relationship to Urban and Rural pH.**

**Biology**

**General**

A student research project comparing tardigrade populations in Southern Indiana due to the effects of environmental pH.

Presenter(s): Clayton Marshall (Eastern High School)

**PS Determining the Relationship Between Macroinvertebrates and Coliform Bacteria in Selected Creeks in Southern Indiana.**

**Biology**

**General**

A student research project studying two creeks in Southern Indiana by identifying macroinvertebrates and coliform bacteria.

Presenter(s): Dawn Dietrich (Eastern High School)



<b>Thursday, February 20, 2003</b>	<b>12:30 p.m.</b>
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**PS Influence of Selected Estrogen Mimics on Certain Properties of the Human Estrogen Receptor of Produced *Saccharomyces Cerevisiac*** **Biology**  
**General**  
 A student research project studying certain effects of selected estrogen mimics on the human estrogen receptor and in yeast.  
 Presenter(s): Sheena Hayes (Eastern High School)

**Reach for the STARS - Grade 5 - Conduction, Microfossils** **Elementary Level Science**  
**Elementary**  
 Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.  
 Presenter(s): Rick Crosslin (Reach for the Stars)

**Experience an Interactive Presentation and Discover the Indiana State Museum's High-Tech Environment** **Science/Technology/Society**  
**High School**  
 Experience an interactive presentation to discover about the Indiana State Museum's hi-tech environment where students explore future choices about cloning, genetics, and more.  
 Presenter(s): Emily King (Indiana State Museum)

<b>Thursday, February 20, 2003</b>	<b>1:30 p.m.</b>
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**NASA MARS UPDATE** **Aerospace**  
**General**  
 Learn about the NASA Mars 2003 Missions, presented by the NASA Jet Propulsion Laboratory's Indiana Solar System Educator. Free NASA Posters sponsored by the Indiana Space Grant Consortium.  
 Presenter(s): Peggy Motes (Muncie Community Schools Planetarium)

**CW Investigating Ecosystems through Owl Pellet Dissection** **Biology**  
**High School**  
 Use inquiry-based, hands-on products to determine the niche of owls in the food chain. Explore ways to incorporate kits into your classroom study of food webs and ecosystems.  
 Presenter(s): Carolina Biological Supply Co.

**PS The Incidence of the Causal Inference Error in Human Memory** **Biology**  
**General**  
 The purpose was to determine the rate of incidence of the causal inference error in human memory.  
 Presenter(s): Drew Schoenian (Northwestern High School)

**PS The Interactions of Prednisone and Asthma Medications on *Bacillus subtilis*, *Escherichia coli*, and *Serratia marcescens*.** **Biology**  
**General**  
 The purpose was to determine effects from Prednisone in combination with asthma medications as applied to *Bacillus subtilis*, *Escherichia coli*, and *Serratia marcescens*.  
 Presenter(s): Kelley Lancelle (Northwestern High School)



**Thursday, February 20, 2003**

**1:30 p.m.**

**Improving Instruction of the Macroscopic, Particle and Symbolic Levels of Chemistry Through Active Learning Techniques**

**Chemistry**

**High School**

Learn how to improve your student's understanding of chemistry by integrating the three levels of understanding chemistry through ConcepTests, CAs and MAs.

Presenter(s): Dorothy L. Gabel (Indiana University)

**Demonstration and Ideas Which Teach Chemistry Standards**

**Chemistry**

**High School**

Several teachers from IACT, (Indiana Alliance of Chemistry Teachers) will share demonstrations, lab, and classroom activities which meet Indiana's chemistry standards.

Presenter(s): Patricia Mason (Delphi Community High School)

**Project LAVA**

**Earth Science**

The June 2002 Lava flow on Kilauea in Hilo, Hawaii lead to an eruption of hot ideas and a crater full of hands-on activities.

Presenter(s): Pam Roller (Galveston Elementary)

**Meeting the Indiana Academic Science Standards via a field trip to the river through kinesthetic or hands on learning.**

**Ecology/Environment**

**Middle Level**

Taking a field trip to the river will incorporate seven state science standards. Teachers will learn strategies to enhance learning at both the river site and in the classroom.

Presenter(s): Jerry Gerwig (Geyer Middle School)

**LABS- Leadership Alliance in the Biological Sciences**

**Ecology/Environment**

**High School**

LABS, a FREE graduate course, offers teacher training, activities, and equipment for conservation biology; teaching science by inquiry; and measuring genetic diversity using gel electrophoresis.

Presenter(s): Kirsten Carlson (Madison Consolidated High School), Robin Beck (Kokomo High School)

**PS The Implications of Excess Nitrates on a Wetland Ecosystem**

**Ecology/Environment**

**General**

The problem is to determine the effects of too much nitrogen on organisms in an ecosystem.

Presenter(s): Melissa Hartman (Northwestern High School)

**Metric Measuring Unit (Grade 4-5)**

**Elementary Level Science**

**Elementary**

Most teachers do not have enough of the same item equipment for each student or team (ex. 12 pan balances) This unit is divided into 7 labs. A teacher only needs two of each item.

Presenter(s): Linda Weintraut (Waldron Elementary)

**Journey to Adventure**

**Elementary Level Science**

How to plan a curriculum enriching, standards-supporting field trip to a science museum with several examples of activities for elementary students.

Presenter(s): Karen Stucky, Sonja Wolen (WonderLab Museum)



**Science in a Shoebox** **Interdisciplinary**  
**Middle Level**

It's amazing what activities you can do with a \$1.00 plastic shoebox and some imagination. Additional money crunching lesson ideas and handouts included.  
Presenter(s): Tina Harris (Indiana University)

**CW Science Kit Presents: More Teacher Developed Products** **Interdisciplinary**  
**General**

For several years, Science Kit, Inc. has been developing products with teachers. Check out these great ideas. Maybe you have one, too. Giveaways by drawing.  
Presenter(s): Paula Loggans (Science Kit Inc.)

**Don't Give M&M'S® a Bad Rap** **Middle Level Science**  
**Middle Level**

Classroom tested lessons for general science that engage the rap generation. Standards correlated, handouts collated, snacks....  
Presenter(s): Jane Hunn (Tippecanoe Valley Middle School)

**Eggsact Copy** **Middle Level Science**  
**Middle Level**

Participants will use plastic eggs representing an egg and sperm. Eggs contain the genotypes of the parents and participants must find if phenotype matches parent.  
Presenter(s): Barbara Reger, Christine Schneider (Creston Middle School)

**CW GEMS- Only One Ocean** **Middle Level Science**  
**Middle Level**

Participate in an exciting lesson that guides children in hands-on and modeling activities which convey and build knowledge about our oceans.  
Presenter(s): Robin Hullinger (Science Central), DeDee Ludwig

**Performance-Based Finals** **Physics**  
**High School**

A workable plan for final exams where students demonstrate actual application knowledge of physics.  
Presenter(s): Michael Kelley (Harrison High School)

**PS The Effect of Tire Pressure on the Efficiency of Travel** **Physics**  
**General**

The purpose of the project was to determine the effects of different tire pressures on distance, speed and efficiency of travel.  
Presenter(s): Kaleb Naegeli (Northwestern High School)

**Turning Physics Demos into Hands-on Activities** **Physics**  
**Middle Level and High School**

Hand-outs available! Discuss labs consisting of demos turned into hands-on activities. New, old, and inexpensive demos discussed! For physics, physical science and middle school teachers.  
Presenter(s): Greta Faurote, Tom Ferguson (Kokomo High School)



**CW** = Commercial Workshop

**PS** = Poster Session

**Thursday, February 20, 2003**

**1:30 p.m.**

**PS Winning Research Methods for Science Projects**

**Science Education**

Award winning methods and examples of science projects will be demonstrated in the display.

Presenter(s): Patricia Zeck (Northwestern High School)

**DASH Into Elementary Science (Gr. K-6)**

**Elementary Level Science**

**Elementary**

Learn how to use hands-on activities as a catalyst to spark interest in reading, writing, math AND uncrowd your curriculum. DASH (Developmental Approaches in Science and Health), a National Science Teachers Association award winning science program from the University of Hawaii, can help you create success for ALL students. Handouts will be provided.

Presenter(s): Judith Longfield (Indiana University)

**The 2002 AP Biology Essay Exam Standards**

**Biology**

**High School**

The presenter will distribute and go over copies of the 2002 AP Biology Essay Exam Standards.

Presenter(s): Jeff Smith (Indiana Academy for Science, Mathematics, & Humanities, Ball State University)

**Reach for the STARS - Grade 6 - Light, Phases of the Moon**

**Elementary**

**Elementary Level Science**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**Thursday, February 20, 2003**

**2:30 p.m.**

**Science Puzzlers, Twisters and Teasers**

**Middle Level Science**

**Middle Level**

Wakeup sleepy brains in the morning, focus school-weary brains in the afternoon, and add an air of mystery to the science classroom at any time of the day with Science Puzzlers, Twisters and Teasers.

Presenter(s): Patrick Wenzl (Holt, Rinehart, and Winston)

**Using Technology in Science Classes**

**Science/Technology/Society**

**High School**

Various assignments incorporating technology will be presented for biology, chemistry, integrated chemistry/physics and plant science classes. Hand-outs will be available.

Presenter(s): Judy Harris, Christy Swindell (Kokomo High School)

**CW Design a New/Remodeled Science Lab**

**Science Education**

**General**

Join us for an informative session on new/remodeled science rooms. Topics will include lab safety issues, space allocations, and layout proposals. Bring your room layout and imagination.

Presenter(s): Bud Wittner, Julie Law (Sargent-Welch)

**10th Annual Middle Level Sharathon**

**Middle Level Science**

**Middle Level**

Teachers share favorite lessons and ideas to motivate hormonally challenged youth to do science. Bring lessons, hand-outs, friends, or just come listen.

Presenter(s): Jane Hunn (Tippecanoe Valley Middle School), Michelle DeBaets (TVMS)



<b>Thursday, February 20, 2003</b>	<b>2:30 p.m.</b>
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**Art and Science: Star Books** **Interdisciplinary**  
**General**

Learn to make a simple, non-traditional book shaped like a star that makes a great journal, lab book, or project book.  
 Presenter(s): Wyndham Carter (Carroll Elementary/ Carroll JR-SR High School)

**SOS Tech** **Science/Technology/Society**  
**General**

This session will demonstrate software our science students can use to increase their understanding of scientific concepts.  
 Presenter(s): Jan Barbee (Terre Haute South Vigo High School)

**A Potpourri of Physics Teaching Ideas** **Physics**  
**High School**

The presenter will share some favorite physics labs, activities, and demonstrations. Handouts will be provided.  
 Presenter(s): Duane Nickell (Franklin Central High School)

**CW Exploring the Virtual Forests** **Ecology/Environment**  
**General**

Through interactive CD's, participants will "hike" through a forest, measure trees and forest plots, identify trees and much more. CD's available for purchase following program.  
 Presenter(s): Sam Carman (DNR- Division of Forestry)

**Grant Writing** **Interdisciplinary**  
**General**

General plans and personal keys to focus on in successful grant writing for science education.  
 Presenter(s): Kevin Leineweber (McCutcheon High School)  
 \*25 minute Session

**Forces of Nature: Uses of Air Pressure** **Science Education**  
**Elementary/Middle**

The presentation will illustrate at least four hands-on activities that meet the state standards for the Forces of Nature. Each participant will experience the labs.  
 Presenter(s): Stanley Shimer (Indiana State University)

**Taking Your Outdoor Lab to the Web!** **Ecology/Environment**  
**General**

Purdue University is increasing the educational impact of a small forest property with a website. Do the same with your outdoor lab or butterfly garden.  
 Presenter(s): Brenda Potter, Karen Dalman (Purdue University)  
 \*25 minute Session

**When All Else Fails, Get Moving** **Elementary Level Science**  
**Elementary**

This workshop will present two common science themes, the digestive system and the rock cycle, in a fun interactive way-MOTION!!  
 Presenter(s): Debbie Hanson (Indiana University)



**Thursday, February 20, 2003**

**2:30 p.m.**

**"Quick Hits" Biology Lessons  
High School**

**Biology**

Members of the Indiana Association of Biology Teachers present classroom and student tested lessons and activities that they have found to work.

Presenter(s): Kirk Janowiak (Indiana Association of Biology Teachers), Tony Hiatt (South Newton High School), Bridget Thuente (Roncalli High School), Frank Drumwright (Pike High School)

**Indiana Earth Science Teachers Association (IESTA) Share A Thon  
General**

**Earth Science**

Come and share lesson ideas with earth science teachers from across Indiana! Plenty of handouts and information on how to join IESTA. *(Presenters pre-registration required)*

Presenter(s): Tina Harris (Indiana University)

**Bolting Into Engineering, Science & Technology (BEST) Camp  
Middle Level**

**Middle Level Science**

An overview of Northeastern Indiana's newest summer camp for middle school students. Handouts from one of the camp exercises will be provided.

Presenter(s): David Finley (Tri-State University)

\*25 minute Session

**Demonstrations and Ideas Which Teach Chemistry Standards  
High School**

**Chemistry**

Several teachers from IACT (Indiana Alliance of Chemistry Teachers) will share demonstrations, lab, and classroom activities which meet Indiana's Chemistry Standards.

Presenter(s): Patricia Mason (Delphi Community High School)

**Now You See It! Now You Don't!  
Elementary**

**Elementary Level Science**

Participate in a hands-on activity that explores the concept of camouflage using insects as the model system. Receive the lesson plan for this inquiry-based activity and learn about additional related activities.

Presenter(s): Martha Hill (Eiteljorg Museum), Kelly Rathert (Purdue University)

**Project TAKEOFF  
General**

**Aerospace**

Exciting, creative, and educational are a few words to describe this unique teaching module that utilizes aerospace as a medium to teach science.

Presenter(s): Troy Allen (Indiana State University)

\*25 minute Session

**Thursday, February 20, 2003**

**3:00 p.m.**

**Virtual and Actual Nature  
Elementary**

**Ecology/Environment**

ACRES, Inc., a land trust based in northeast Indiana, introduces school children to nature incorporating reading, mathematical, problem solving, and computer skills.

Presenter(s): Carolyn McNagly (ACRES, Inc.), Nancy Leininger (Northwest Allen County), Nancy Bradtmiller and Jeff Britton

\*25 minute Session



<b>Thursday, February 20, 2003</b>	<b>3:00 p.m.</b>
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**Helping Your Students Colonize the Solar System** **Middle Level Science**  
**Middle Level**  
 Use the theme of colonizing other planets to initiate a study of the solar system and as a capstone project for 5th-through 8th-graders.  
 Presenter(s): Glen Simonelli (Indiana University, Lakeview Elementary School)  
 \*25 minute Session

<b>Thursday, February 20, 2003</b>	<b>4:15 p.m.</b>
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<b>Association Meetings</b>	IMAST • N-AAPT • IESTA • IACT • IABT
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<b>Friday, February 21, 2003</b>	<b>8:30 a.m.</b>
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**Surviving the Middle School Science Standards - A Guide for 7th Grade Teachers** **Middle Level Science**  
**Middle Level**  
 Participants will receive 26 activities (from A-Z) that are aligned with the Indiana Science Standards. The activities can easily be modified for 6th and 8th grades.  
 Presenter(s): Steve Park (Riverview Middle School)

**Take Another Look!** **Elementary Level Science**  
**Elementary**  
 New Ideas for building kaleidoscopes from reusable and recyclable materials. Teachers will construct one kaleidoscope to keep and receive integrated lesson plans with connections to State Standards.  
 Presenter(s): Nancy Leonard, Dinah Fuller (Eastern Elementary), Susan DeMoss (Edgewood Intermediate)

**Plants A to Z** **Elementary Level Science**  
**Elementary**  
 Activities for teaching a unit on plants will be presented. Examples of ways to make plants come alive in your classroom will be shown.  
 Presenter(s): Michael Gibson (New Haven Middle School), Michelle Gibson (Harlan Elementary)

**CW Project Learning Tree's Energy and Society Project** **Ecology/Environment**  
**General**  
 Activities and materials explore the concepts that energy powers natural and human endeavors and provides opportunities to explore the energy and environmental connections to our daily lives.  
 Presenter(s): Donna Rogler (Indiana Project Learning Tree)

**Viewing and Creating Excellent and Useful Science Websites** **Science/Technology/Society**  
**General**  
 Presentation of outstanding science websites including virtual field trips, web cams, and web quests followed by a step-by-step demo of the creation of a classroom website.  
 Presenter(s): Janet Jordan, Ken Jordan (Indiana Purdue Ft. Wayne Education)

**Infrared Remote Controls** **Physics**  
**High School**  
 Modify the voltage probe on a computer or calculator graphing program to use a photogate as an infrared monitor. Can be used to display an infrared remote signal.  
 Presenter(s): Peter Berg (Decatur Central High School)



**CW** = Commercial Workshop

**PS** = Poster Session

**Friday, February 21, 2003**

**8:30 a.m.**

**CW The Classroom of the Future is Now**

**Aerospace**

**General**

Teleconferencing... the new frontier for the classroom. Challenger Center can join your class to explore different facets of space education. Preview our standards-based programs.

Presenter(s): Janet Krebs (Brownsburg Challenger Learning Center)

**Nature's Classroom - Merom, Indiana**

**Interdisciplinary**

**Elementary**

Bringing classroom learning into action. We provide an outdoor environment where students apply their classroom education through experiments and exploration.

Presenter(s): Susie Larson (Nature's Classroom, Merom Conference Center), Jack Gettinger, Darrell Roundtree, Dale Dressler (Merom Conference Center)

**Teachers on the Road to Trinity and Beyond**

**Interdisciplinary**

**High School**

Extending an interdisciplinary project, a physics teacher and an English teacher explore Trinity Site and other destinations related to the creation of the atomic bomb.

Presenter(s): Patricia Mason, Patricia Brettnacher (Delphi Community High School)

**Fort Wayne Children's Zoo Leatherback Initiative in Playa Giande (F.L.I.P)**

**Ecology/Environment**

**Elementary**

F.L.I.P. is a cross cultural curriculum that teaches Indiana Students and Costa Rican Children rudimentary skills using the endangered Leatherback sea turtle. A secondary component provides children with a humanitarian project.

Presenter(s): Karen Reilly (Fort Wayne Children's Zoo)

**Cheap & Easy: Invertebrates in Your Classroom**

**Biology**

**High School**

Presenters share tips, tricks, & tools to help you obtain, culture, and use small invertebrates in your biology classes. Lots of tested ideas!

Presenter(s): Kirk Janowiak (Delphi Community High School), Clare McKinney, Jonathon Eifler (Lafayette Jefferson High School)

**Inquiry Through Field Trips**

**Science Education**

**General**

Learn how three Indiana Field trips covering environmental science, earth science, and botany were designed to provide experience in inquiry for both elementary and secondary students. Examples of assessment tools will be provided for each field trip.

Presenter(s): Carolyn Hayes (Center Grove High School), Jabhber Al-Jabber, Meridith Beilfuss, Joshua Elder, Lisa Freeman, Abdulkadir Genel, Austin Hitt, Jeff Marshall, Maria Nix and Teddie Phillipson

**Mineral Detective**

**Earth Science**

**Elementary**

Visit the Happy Hoosier Mine. Take part in hands-on activities as you choose a pet rock, identify minerals, and discover the difference in rocks and minerals.

Presenter(s): Mike Lovell (Indiana Mineral Aggregate Association), Karen Mappas (Hanson Aggregates), John Havens (Irving Materials, Inc)



<b>Friday, February 21, 2003</b>	<b>8:30 a.m.</b>
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**EdVenture Lab - The Next Generation** **Science/Technology/Society**  
**Elementary**

EdVenture lab is a multi-media rich environment developed in conjunction with the National Challenger Center for Space Science Education using national and state standards.

Presenter(s): Sue Keene (MSD of Decatur Township - Adventure Lab), Jean Trusedell (Stephen Decatur Elementary), Rhonda McCort (Valley Mills Elementary)

**Different Perspectives for Environmental Education** **Ecology/Environment**  
**General**

The aim of this paper is to illuminate different dimensions of environmental education.

Presenter(s): Ozgur Taskin (Indiana University)

\*25 minute Session

**An Analysis of Scientific Americans, "Answers to Creationist Nonsense"** **Science Education**  
**General**

A look at the author's answers to 15 creationist questions concerning evolution.

Presenter(s): Christopher Gieschen (Concordia Lutheran High School)

**Reach for the Stars- Grade 2/3 - Paper Airplanes, Bird Beaks, Phases of the Moon, and 2 New Titles.** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**Using Meaningful Projects to Teach the State Science Standards in a Meaningful Manner** **Interdisciplinary**  
**General**

The presenters will describe how meaningful inquiry-based projects aligned with the State Science Standards can lead to the development of social and critical thinking skills while inspiring elementary and middle school students to love science.

Presenter(s): Jeffrey Nowak (Indiana-Purdue, Fort Wayne), Kyle Spencer (Perry Hill Elementary), Joel Guthrie (Blackhawk Christian School)

**Is This Your First Convention?** **General**

Find out where to go and what to see to make your first HASTI Convention a success. Learn the fine art of Conventioneering.

Presenter(s): Carol Chen (President of Hoosier Association of Science Teachers)

<b>Friday, February 21, 2003</b>	<b>9:30 a.m.</b>
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**PS Forensic Science Lesson: Questioned Documents** **Interdisciplinary**  
**General**

Students sharpen their observational skills by studying a series of questioned documents. Handouts will be provided.

Presenter(s): Sherry Annee (Brebeuf Jesuit Preparatory School)

**Snake Alive in the Classroom!** **Middle Level Science**  
**General**

Practical guide to keeping snakes in class. Improve your students' interest in science! Different species will be available for hands-on inspection. Photo opportunities possible.

Presenter(s): Ed Ferrer (Decatur Middle School)



**Friday, February 21, 2003**

**9:30 a.m.**

**Ag in the Classroom: Farm to Table  
Elementary**

**Elementary Level Science**

Educators can try out and learn about the variety of hands-on educational materials available from the USDA Ag in the Classroom program.

Presenter(s): Natalie Carroll (Purdue University)

**Science Education in Indiana-An Update from the Indiana Department of Education  
General**

**Science Education**

An update regarding science academic standards, assessment, and other relevant information will be provided to participants. Handouts will be available.

Presenter(s): Karen Rogers (Indiana Department of Education)

**New Workshop for Teachers: Protein Purification and Crystalization: From the Classroom  
to Space Stations  
High School**

**Biology**

Protein purifications and crystallization of a model protein from egg will be used to introduce teachers and students to techniques essential to biological and biomedical science.

Presenter(s): Pamela Hanratty (Indiana University), Len Holmes (University of North Carolina Pembroke)

**Planning and Assessment with ICAN Technology  
General**

**Science/Technology/Society**

ICAN is a web-based software program designed to help teachers use standards-based approaches to education in planning, assessment, and reporting.

Presenter(s): Norman Leonard (ICAN/Indiana Humanities Council)

**No Fear Science Fairs: Increasing Enthusiasm - Reducing Anxiety  
Middle Level**

**Science Education**

Find out how to create enthusiasm for science fairs in your classroom or school, motivate your students, and help parents take a supportive role. Participants will receive materials to use with students and parents.

Presenter(s): Deb Robertson (IUPUI)

**Creative Ways to Demonstrate Electrical Energy Production  
High School**

**Physics**

Two summers of working with engineers and technicians at a local high-tech firm have yielded several interesting physics demonstrations.

Presenter(s): Tim Ferree (New Albany High School)

**Survivor?  
Elementary**

**Ecology/Environment**

This activity is to help students learn about the interactions between humans and the environment by forming a living model of the food web.

Presenter(s): Li-Ling Yang, Austin M. Hitt (Indiana University, Bloomington)

**Experiencing Japanese Education Via a Teacher Exchange Program  
General**

**Interdisciplinary**

Find out how to participate in a FREE teacher exchange program in Japan for three weeks. Learn more about the actual program, education, culture, and ecology.

Presenter(s): Patty Zeck (Northwestern High School)



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<b>Friday, February 21, 2003</b>	<b>9:30 a.m.</b>
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**Science That Is Not Just For School - Family Fun** **Elementary Level Science**  
**General**

Use family night science activities to enhance your curriculum or excite your children or grandchildren about science. Easy-to-follow plans will be included.

Presenter(s): Gordon Hopp (Carmel Jr. High School), Carolyn Hopp (Mohawk Trails Elementary)

**Who Invited You? Sharing Indiana with Un-invited Pests** **Ecology/Environment**  
**General**

Non-native insect pests of trees can cause problems in Indiana. Citizens can lesson the impact of these insects through learning of their biology and habits.

Presenter(s): Jodie Ellis, Cliff Sadof (Purdue University)

**CW Wolves, Coyotes and Foxes of Indiana - Your Dog's Wild Cousins** **Ecology/Environment**  
**General**

This presentation will utilize slides, skulls, and skins to help describe the basic biology of the canids in Indiana, including the now extirpated wolf.

Presenter(s): Gale Motter (Wolf Park)

**Integrating The Indiana Essential Skills With The Curriculum** **Science Education**  
**High School**

Learn how to provide state certified job skills to students who develop and integrate the concepts and skills taught in your high school science class.

Presenter(s): Kirsten Carlson (Madison Consolidated High School), Melodie Busch (BMT/ Indiana Department Work Force Development)

**"These Boots Were Made For Walking"...The Life of a Scientist** **Middle Level Science**  
**Middle Level**

A student's view of a scientist is skewed. Through a team approach, this science teacher and media center specialist will demonstrate methods of engaging students to discover and model the life of a scientist.

Presenter(s): Stacie Stoffregen, Anne Krutulic (Greencastle Middle School)

**Caving: Classroom and Beyond** **Earth Science**  
**General**

Understanding the unique relationship that exists in caves will help develop an awareness of Karst environments in Indiana and elsewhere. Demonstrating the significance of caves as a natural resource will encourage and motivate students to act responsibly and respectfully toward them.

Presenter(s): Kari Hanson (Bradford Woods Outdoor Center)

**Relieve Student (and Teacher) Homework Stress with CALM** **Chemistry**  
**High School**

CALM (Computer Assisted Learning Method) allows teachers to monitor student homework - paper free. Originally developed for IU, it is now available for high schools.

Presenter(s): Julie Randolph (Bloomington High School North), Paulette Berger (Zionsville Community High School)

**Time, Weather & Sky Thematic Science Activities (K-5)** **Elementary Level Science**  
**Elementary**

Enhance learning by involving your students in hands-on science and math activities. Connect lessons on Time, Weather, and Sky to create integrated, thematic lessons. Discover how you can involve students in real life problem-solving using inexpensive and recycled materials. Handouts will be provided.

Presenter(s): Judith Longfield (Indiana University)



**CW** = Commercial Workshop

**PS** = Poster Session

**Friday, February 21, 2003** **9:30 a.m.**

**PS Family Math and Family Science** **Elementary Level Science**  
**Elementary**

Looking for a way to encourage parents to take a more active role in their children's education? Try Family Math and Family Science!

Presenter(s): Peggy Branstrator (IU East)

**Reach for the Stars - Grade 4 - Magnets, Mass - Balance Scale and 2 New Titles.** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.

Presenter(s): Rick Crosslin (Reach for the Stars)

**South Carolina Governor's School for Math & Science** **Science Education**  
**General**

When science teachers, state science teachers' groups and the National Science Teachers Association work together, everyone succeeds. There are many ways that all can work together and cooperate so that everyone is a "winner".

Presenter(s): Carolyn Randolph (South Carolina Governor's School for Math & Science)

\*NSTA President

**Friday, February 21, 2003** **10:30 a.m.**

**General Session**

**Physics - The Rules of Nature**

**General**

Special Session. See page 10.

Presenter(s): Paul G. Hewitt

**Friday, February 21, 2003** **12:30 p.m.**

**PS Simply Science** **Elementary Level Science**  
**Elementary**

Exhibit the Simply Science program to make the teaching population (specifically elementary aged) aware of the program.

Presenter(s): Margaret Elmer, Claire Baker, Katie Miller, Kathleen Kelley, Annie Pascuzzi, John Hegde (Brebeuf Jesuit)

**PS Science Scape, A Science Experience for Middle School Girls** **Interdisciplinary**  
**Middle Level**

Hands on science activities, female scientists as role models, and excellent mentoring make this one week experience both fun and rewarding.

Presenter(s): Barbara Cooper, Kristen Johnson, Barbara Pipher (Purdue University)



**Friday, February 21, 2003** **12:30 p.m.**

**Awesome Science Activities** **Middle Level Science**  
**Middle Level**  
Games, creative activities and projects designed to interest diverse middle school learners while meeting state standards.  
Presenter(s): Deb Smith (Elwood Community Middle School)

**Expand Your Physical Science Repertoire** **Elementary Level Science**  
**Elementary**  
Experience a variety of demonstrations and hands-on activities focusing on physical science topics appropriate for elementary students.  
Presenter(s): Margaret Zimmerman (Hose Elementary)

**CW The Best New Physics Software** **Physics**  
See our latest physics software: Interactive Physics 2000, Crocodile Physics, Force and Motion, and Oscillations eWaves. Innovative, student centered simulation software for high school and middle school. Free demo disks will be available.  
Presenter(s): Dave Barnes (Arbor Scientific)

**CW Return of the Limberlost** **Science Education**  
**General**  
Experience the mystique of Limberlost's flora and fauna, sample its soil, make inexpensive monoliths. Get prairie grass, wetland education ideas, win a video and more.  
Presenter(s): Ken Brunswick, Dwain Michael (Friends of Limberlost State Historic Site Inc.)

**Alliance for Improved Education in Chemistry** **Chemistry**  
**High School**  
University and high school chemistry teachers cooperate with one another in an effort to improve chemical education at both levels.  
Presenter(s): Sandra Allen, Michele Shultz (Indiana State University)

**One Hundred and One "Variations"** **Biology**  
**General**  
This session will demonstrate the range of variation in the skulls of *Canis familiaris*, the common pet dog. A discussion of how variation in a species complicates the fossil record will be included.  
Presenter(s): Luke L. Hunt (Whitko High School)

**Youth Gardening in Indiana** **Interdisciplinary**  
**Elementary/Middle**  
Learn about classroom and community gardening curriculum, including Junior Master Gardener® program.  
Presenter(s): Kathryn Orvis (Purdue University)

**How To Use Homemade Molecular Models** **Interdisciplinary**  
**Middle/High School**  
This hands-on workshop will show middle/high school teachers how to construct materials for making simple molecular models. Teachers will also learn how to assess students in modeling activities.  
Presenter(s): David Vessell (Indiana University), Nancy Vessell



<b>Friday, February 21, 2003</b>	<b>12:30 p.m.</b>
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**A Step Towards Science and Technology Literacy** **Interdisciplinary**  
**General**

Middle and high school teachers who participated in an Eisenhower funded program at DePauw will share inquiry learning with the learning cycle. (Lesson handouts included)

Presenter(s): Jamie Stockton (DePauw University), Charles Barman (IUPUI), Greg Crum, Susi Jordan (Cloverdale Middle School), Jim Glen (Cloverdale High School), Matt Griswold (South Putnam Jr/Sr High), Annette Maier (North Putnam High School)

**EGADS (Experiments, Games, Activities, Demonstrations and Strategies)- It's K-5 Science** **Elementary Level Science**  
**Elementary**

A toolbox of experiments, games, activities, demonstrations, and strategies linked to the K-5 Indiana Academic Standards for science will be presented. Handouts will be provided.

Presenter(s): Deb Sachs (University of Indianapolis)

**Connections: Humane Education and Science** **Ecology/Environment**  
**Elementary**

A Hands-on presentation that provides a sampling of humane programming activities that focus on key concepts: animal adaptations, habitats, limiting factor: carrying capacity and niches.

Presenter(s): Alberta Greene (Humane Society of Indianapolis)

**KTK (Kids Teach Kids)** **Science/Technology/Society**  
**Elementary**

Interactive Distance Learning Demonstration featuring a hands-on science experiment being "taught" by IPS students at #109 to other IPS students via distance learning.

Presenter(s): Patty Reeves, Jeff McMahon (Indianapolis Public Schools)

**How To Avoid The Winter Blues: Innovations in Science Education** **Science Education**  
**High School**

This presentation will focus on the two courses that our Science Department offered during our 2002 January Term - Animal Behavior and Organic Qualitative Analysis.

Presenter(s): Carolyn Bradley, Laura Stocum (University High School Of Indiana)

**Simulating Atmospheric Motion Using Everyday Materials** **Earth Science**  
**High School**

This hands-on workshop will present an experiment that can be used in the earth science classroom to determine the conditions which generate winds.

Presenter(s): Meridith Beilfuss (Indiana University)

**Making Connections: Connecting Art & Language Arts to Science** **Middle Level Science**  
**Middle Level**

Learn ways to hook kids on science content using art and language arts activities. Student work will be shared along with many ideas about how to incorporate art and reading and writing into science class.

Presenter(s): Vicki Holloway (Indiana University (Tri-North Middle School)

**Reorganizing the Standard Approach to Chemistry** **Chemistry**  
**High School**

Relatively mind changes in subject ordering coupled with philosophical changes bring about a different way of presenting and thinking about chemistry

Presenter(s): George Devendorf (Indiana Academy)



<b>Friday, February 21, 2003</b>	<b>12:30 p.m.</b>
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**PS NASA Protein Crystallization Project - A Team Effort** **Chemistry**  
**High School**

Bloomington High School North and South chemistry teachers will share their experience working with NASA and how community support was critical for this unique opportunity.  
 Presenter(s): Jean Schick, Neil Rapp (Bloomington High School South)

**CW MEL: Merry Lea's Mobile Environmental Laboratory** **Ecology/Environment**  
**Middle/High School**

Merry Lea is willing to lend junior high and high school teachers EPA + IDEM Quality Instruments to expand their horizons  
 Presenter(s): Paul Steury (Merry Lea Environmental Learning Center)

**Science Equipment Roadshow** **General**  
**General**

Do you have equipment that you inherited from another teacher? Do you need help identifying it? Or, perhaps you'd just like some examples of other possible uses for the equipment. Bring a photo or sketch of that mysterious lab equipment you've inherited.  
 Presenter(s): Julie O'Brien, Lisa Muegge (Eli Lilly)

**Reach for the STARS - Grade 5 - Conduction, Microfossils** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.  
 Presenter(s): Rick Crosslin (Reach for the Stars)

<b>Friday, February 21, 2003</b>	<b>1:30 p.m.</b>
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**Roller Coasters: Integrating Science and Math Skills** **Middle Level Science**  
**Middle Level**

Examples of how to use roller coasters to teach middle level science and math content. Participants will build model roller coasters and learn how to use this high interest topic in their classroom.  
 Presenter(s): Susan Harrison, Jennifer Kuntz (Park Tudor Middle School)

**FREE Resources for Teachers of Marion and Adjacent Counties** **Elementary Level Science**  
**Elementary**

Want to get your students excited about learning math and science? K-8 teachers participate in hands-on class and obtain information about the Teacher's Resource Center  
 Presenter(s): Deb Robertson (Teachers Resource Center IUPUI)

**CW Tree Identification For All Ages** **Science Education**

Two tree identification CDs for beginners and advanced students will be previewed along with a "crash" course in tree identification skills.  
 Presenter(s): Sally Weeks, Rita McKenzie (Purdue University)

**Teaching Physics Conceptually** **Physics**  
**High School/College**

Special Session. Questions encouraged  
 Presenter(s): Paul Hewitt (San Francisco State)



**CW** = Commercial Workshop

**PS** = Poster Session

**Friday, February 21, 2003** **1:30 p.m.**

**CW** **Bringing Excitement to Middle School Science-Go Ahead, Make My Data!**

**General** **Science/Technology/Society**

PASCO's standards-based thematic units make it easy to integrate hands-on science and technology into your classroom. Engage your students in the practice of science, using PASCO's hand-held data loggers, sensors, and graphing software.

Presenter(s): Kevin Mather (PASCO Scientific)

**4-H Chicken Embryology - Teaching Science and Life Skills**

**Science Education**

**Elementary**

This project combines Incubators in the classroom, an activity for teaching science and science skills, with curriculum and activities to teach character education and life skills.

Presenter(s): Colleen Brady, Aadron Rausch (Purdue University)

**Brassica + Butterflies = Inquiry + Fun**

**Biology**

**General**

Learn how to combine fast plants and butterflies into inquiry in the science classroom. Experiments designed by students and others using these organisms will be demonstrated, as well as, techniques in raising these organisms.

Presenter(s): Carolyn Hayes (Center Grove High School)

**CW** **Experiential Education in the Indiana Dunes**

**Ecology/Environment**

**General**

Experience a sampling of residential, day, and outreach programs offered by Indiana Dunes Environmental Learning Center. Presentation will include demonstrated and hands-on activities.

Presenter(s): Christine Kirk, Roe Johnson (Indiana Dunes Environmental Learning Center)

**CW** **Lab Renovation! What Do I Do?**

**Interdisciplinary**

**General**

Lab layout and design. Learn what other teachers and designers have done. A discussion covering the basics, options, future trends, safety, and costs.

Presenter(s): Mark Skole (Harry J. Kloeppe & Assoc., Inc)

**3....2.....1 Lift Off (It is Rocket Science)**

**Aerospace**

**Elementary**

Build simple, safe rocket models using basic classroom materials and develop science, mathematics, technology and English/language art skills.

Presenter(s): Deborah Vannatter (Daniel Wertz Elementary)

**2+2= Science**

**Elementary Level Science**

**Elementary**

Participants will receive objects that are man made and from nature to observe, sort, count, and graph. These activities will give hands on experience to connect science with other subject areas.

Presenter(s): Joan Runyan, Jane Bowman (St. Joe Central Elementary)

**Everyday Science - Bringing Together a Community of Learners**

**Ecology/Environment**

**General**

Hear how one community collaborated to bring environmental education training to area formal, non-formal and pre-service educators. Learn about community stakeholders that funded the initiative and the outcome of the event that produced community action projects.

Presenter(s): Lana Zimmer, Heather Hall (Rensselaer Central Middle School), Jennifer Barce (St. Joseph's College)



**Friday, February 21, 2003** **1:30 p.m.**

**CW Protecting Our Watersheds - A Guide for Taking Action in Your Community** **Interdisciplinary**  
**General**

Try out this excellent resource for guiding students through the process of analyzing water quality data, determining pollution sources, and implementing a community action project.  
Presenter(s): Jan Hosier, Lyn Hartman (Hoosier Riverwatch)

**The Development of Performance Assessment Portfolios** **Science Education**  
**General**

This session provides science teachers, mentors, administrators, and teacher educators opportunities to examine different methods of conducting and interrogating action research into performance assessment portfolios.  
Presenter(s): Brenda Capobianco (Purdue University)

**The Day Southern Indiana Shook!** **Earth Science**  
**High School**

Using data available on the internet teachers incorporate local, regional, and distant earthquakes into the curriculum.  
Presenter(s): Greg Small (Harrison High School)

**Demos and Labs: Kid Tested-Teacher Approved** **Middle Level Science**  
**General**

Students thrive in hands-on environments. Come see fun, interactive demos, and labs that capture students' attention while also helping them understand difficult concepts in science.  
Presenter(s): Lori Ashley, Judy Harrison (Avon Intermediate School)

**Integrating ICP and Everyday Life** **Chemistry**  
**High School**

Strategies to help ICP teachers answer the question, "When will we ever have to know this stuff?"  
Handouts available.  
Presenter(s): Chris Gibson (F.J. Reitz High School)

**Reach for the STARS - Grade 6 - Light, Phases of the Moon** **Elementary Level Science**  
**Elementary**

Participate in exciting hands on thematic investigations for elementary teachers. Each session will focus on specific standards-based, "must do" science activities.  
Presenter(s): Rick Crosslin (Reach for the Stars)

**Reflections of Our First Time Field Experience** **Science Education**  
**General**

College students will discuss their feelings concerning first time field experiences in teaching science.  
Presenter(s): Maria Nix (Indiana University)

**Friday, February 21, 2003** **2:30 p.m.**

**Momentum Before Force** **Physics**  
**High School**

Consider a non-traditional sequence of topics in a classical mechanics for the introductory physics course. Examine the student response to such a syllabus.  
Presenter(s): Mervin Koehlinger (Concordia Luthern High School)



**Friday, February 21, 2003** **2:30 p.m.**

**Cellulary Catastrophe: A Cancer Webquest** **Biology**  
**High School**

Participants will have the opportunity to experience and view a method of introducing students to cancer using the internet and video. Handouts will be provided.  
Presenter(s): Dave Butler (Southern Wells High School)

**Mission in Space, Living and Working in Microgravity** **Aerospace**  
**Elementary**

Utilize the excitement of space exploration to actively engage students in cross-curricular, investigative activities. Handouts include procedures, data-collection sheets, graphic organizers, and resources.  
Presenter(s): Deborah Vannatter (Daniel Wertz Elementary)

**NSF / NSTA WebWatchers Website** **Science/Technology/Society**  
**General**

An overview of the WebWatchers website that was developed by NSF/ NSTA, and teachers. It will be an awesome benefit for K-12 teachers of science.  
Presenter(s): Kim Elpers (Saints Peter and Paul School)  
\*25 minute Session

**Dancing with the Periodic Table** **Middle Level Science**  
**Middle Level**

Interactive lesson for teaching the periodic table - students learn movements for different parts of the table and associated vocabulary. Guaranteed - after the dance students will be able to draw and label the periodic table without ever seeing one.  
Presenter(s): Deborah Keller (Scribner Middle School)  
\*25 minute Session

**Meeting: The IU - PEPP Seismic Network** **Earth Science**  
**General**

Participants in the IU-PEPP network will meet to discuss projects and activities and to plan for the spring student research symposium.  
Presenter(s): Jeff Sayers (Northview High School), Michael Hamburger (Indiana University)

**NASA Cassini Mission to Saturn** **Aerospace**  
**General**

Learn about the NASA Cassini Mission to Saturn presented by the NASA Jet Propulsion Laboratory's Indiana Solar System Educator. Free Cassini Paper Models sponsored by the Indiana Space Grant Consortium.  
Presenter(s): Peggy Motes (Muncie Community Schools Planetarium)

**Butterflies and Metamorphosis in the Early Childhood Classroom** **Elementary Level Science**  
**Elementary**

A hands on study of the butterfly life cycle can reinforce young students' observation skills and understanding of metamorphosis.  
Presenter(s): Susan Butler (St. Simon the Apostle School)

**PlayDoh® Chemistry** **Chemistry**  
**Middle Level**

This activity is designed to introduce students to the concept of the particle nature of matter using PlayDoh® models.  
Presenter(s): Austin M. Hitt, Li-Ling Yang (Indiana University, Bloomington)



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<b>Friday, February 21, 2003</b>	<b>2:30 p.m.</b>
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**The Science of the Lewis & Clark Expedition Through Project WILD Activities** **Ecology/Environment**  
**General**

Explore the scientific discoveries of the Lewis and Clark expedition using activities from the Project WILD curriculum as a hands-on way to teach about the journey.

Presenter(s): Warren Gartner (IN Department of Natural Resources, Division of Fish and Wildlife)

**Rose-Hulman Homework Hotline: Supporting Indiana Youth Science Education** **Science Education**  
**Middle Level/High School**

The Rose-Hulman Homework Hotline provides free math and science tutoring for Indiana students in grades 6-12. In 2002-2003, the program began a statewide expansion and now supports the needs of approximately 148,000 students in a total of 50 Indiana school districts. In addition to providing an overview of the program, the presentation will focus on using telecommunication and computer technologies to effectively reach Indiana students, parents and educators.

Presenter(s): Chesley Cuicchi (Rose-Hulman Institute of Technology)

**CW Hands-on Stream Monitoring Through Hoosier Riverwatch** **Interdisciplinary**  
**General**

Learn how to monitor water quality using physical, chemical and biological assessment through Hoosier Riverwatch - Indiana's statewide volunteer stream monitoring program.

Presenter(s): Jan Hosier, Lyn Hartman (Hoosier Riverwatch)

**Scientific Method WebQuest** **Middle Level Science**  
**Middle Level**

Students utilize Internet research, teamwork, laboratory, activities, and critical thinking skills to solve a mystery incorporating the scientific method.

Presenter(s): Pamela Kendall (Turkey Run Jr.-Sr. High School)

**Project SEAM: Professional development for "SEAMing" the Gap** **Science Education**  
**High School**

Twenty-three Central Indiana high schools and 6 universities are collaborating on content specific professional development. Come find out tested techniques experienced through this process.

Presenter(s): Richard French (Central Indiana Educational Service Center), Gary Cooper (Pike High School), Libby Thomas (Hamilton Southeastern High School)

**CW ODD BALLS and ODD PENDULUMS in the Classroom** **Interdisciplinary**  
**General**

Demonstrate the use of ODD BALLS in teaching fractions and in making TOPS. Demonstrate ODD PENDULUMS as an intriguing and counterintuitive device for explaining a lot of physics.

Presenter(s): Ben Sherman (ORBIX Corporation)

**Adapting Curricula to Focus on Inquiry - What Works?** **Elementary Level Science**  
**Elementary**

Elementary teachers describe and lead others through their process for adapting lessons to an inquiry and nature of science focus.

Presenter(s): Julie Comerford, Kathy Hollinger, Melissa Rooney, Andrea Greene (Arlington Heights Elementary), Deborah Hanuscin, Valerie Akerson (Indiana University)



**Friday, February 21, 2003**

**2:30 p.m.**

**The Effect of Pre-Service Training on Laboratory Safety in the Science Classroom**

**General**

**Science Education**

Results of a survey of second year science teachers are presented to determine the effectiveness of pre-service training of secondary science teachers in laboratory safety.

Presenter(s): Carolyn Hayes (Center Grove High School)

\*25 minute Session

**The Magic of Physics**

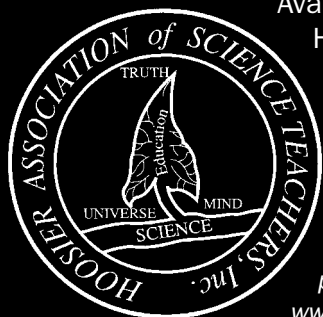
**Physics**

**High School**

Physics demos that are presented as Magic Tricks with tips on how to "Do More! Teach!!"

Presenter(s): Bob Kasting (East HS Columbus)

**HASTI T-Shirts and Polos!**



Available only through your pre-registration, T-shirts and polo golf shirts. HASTI Green w/ oatmeal HASTI logo. Available sizes are small, medium, large, x-large, xx-large, xxx-large & xxxx-large.

- Polo golf shirt w/ HASTI logo .....\$20**
- T-shirt w/ HASTI logo .....\$10**

*HASTI T-shirts and polo golf shirts are available only through the pre-registration form in the back of this program (Page 40) or online at [www.hastireg.com](http://www.hastireg.com). Orders will be filled and distributed at the conference.*

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## **HASTI Planning CRU's for Eligible Convention Attendees**

HASTI has submitted appropriate paperwork to the Indiana Professional Standards Board to request approval to offer Continuing Renewal Units (CRUs) for eligible attendees at this year's convention. To be eligible, a person must have his/her Masters Degree or 36 hours of academic credit after his/her Bachelor's. There will be a form in the Convention Program for the teacher to use to collect the signature of each presenter whose session he/she attends. For the three MAIN GENERAL SESSIONS, HASTI personnel will be at the back of the Sagamore Ballroom to validate the form. General Session speakers will not be signing. Please note that you must do the following:

**Take the signed form home, add the appropriate letter from principal/superintendent, and mail both to the following address by March 1, 2003:**

**Karen Rogers**

Indiana Department of Education  
Office of Program Development  
Room 229, State House  
Indianapolis, Indiana 46204-2798

*CRUs are awarded as follows:*

“One (1) CRU is earned for every two (2) contact (clock) hours of participation in an approved program...(CRU's will be only in whole units)” The Guidelines further require that the sponsor of the program (HASTI) “...should advise the participant that she/he will be held responsible for submitting verification of CRUs to Teacher Licensing for license renewal. The school superintendent or chief executive officer will serve as agent to verify CRUs for renewal of teachers residing or teaching in her/his corporation.”

For questions contact Karen Rogers at the following:  
phone: (317) 232-9153  
Email: [krogers@doe.state.in.us](mailto:krogers@doe.state.in.us)



# Remember...

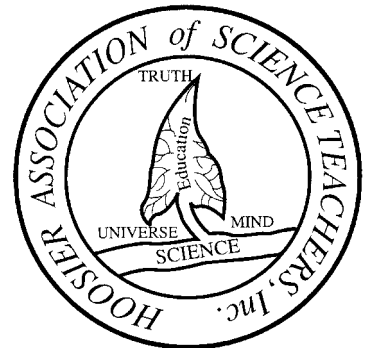
## HASTI 2003 Online Advance Registration

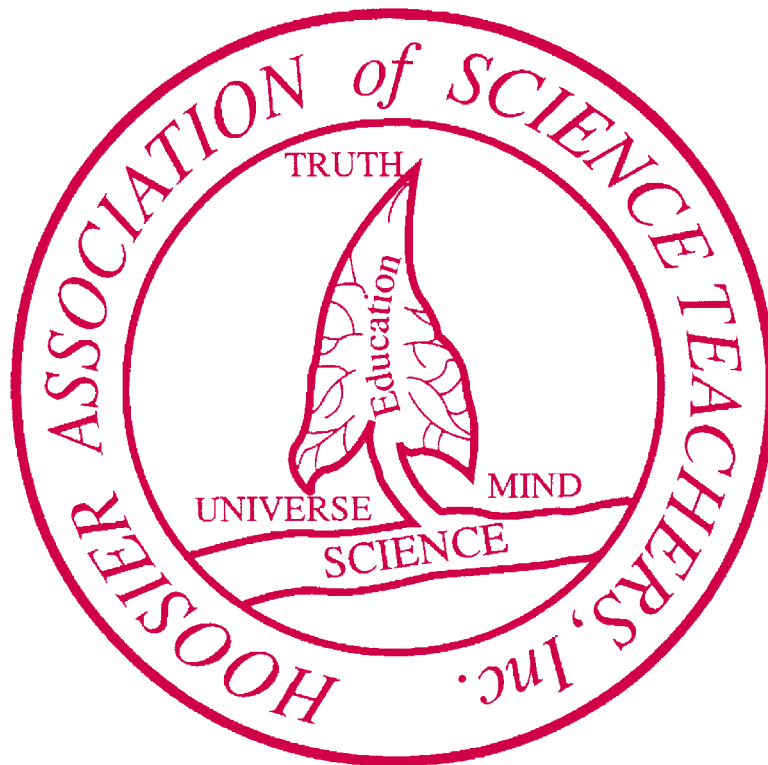
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visit  
[www.hastireg.com](http://www.hastireg.com)

**Must use  
a credit card.  
(website is secure)**

**HASTI T-shirts and Polos are only  
available at the time of pre-registration.**





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**Hoosier Association of Science Teachers, Inc.**  
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