CAST 2000 Program

October 12-14, 2000
College Station, Texas
CAST 2000

CAST 2000 will be held at Texas A&M University from October 12 through 14, 2000. CAST 2000 is shaping up to be a very large conference and we recommend that everyone reserve space in Short Courses, Workshops, and Field Trips. In order to register electronically, see http://www.statweb.org for details. If you are unable to register electronically, you can mail in the form located later in this issue of the STATellite. Almost all sessions will require tickets for admission. For motel or hotel reservations call (979) 260-9999 or check the web site – http://www.chem.tamu.edu/class/fyp/CAST2000/

Schedule of Events for CAST 2000

WEDNESDAY  (October 11, 2000)
8:00 a.m. - 5:00 p.m.  Texas Science Education Leaders Association (TSELA) Meeting (Reed Arena)
5:00 p.m. - 9:00 p.m.  STAT Board of Directors Meeting
6:00 p.m. - 9:00 p.m  Informal Science Education Association Reception (Rudder Exhibit Hall)

THURSDAY  (October 12, 2000)
7:00 a.m. - 7:00 p.m.  FIELD TRIPS (Some have a fee.)
8:00 a.m. - 7:00 p.m.  REGISTRATION  (Reed Arena; $65 Advance/$75 On-Site Rate)
8:00 a.m. - 5:30 p.m.  SHORT COURSES (Some have a fee; MSC or Reed Arena)
8:00 a.m. - 12:30 p.m. Texas Science Education Leaders Association (TSELA) Meeting
1:00 p.m.  Shuttle buses begin pick up at hotels
4:00 p.m. - 4:15 p.m.  Opening Ceremonies (Reed Arena)
4:00 p.m. - 8:00 p.m.  EXHIBITION (Reed Arena)
5:30 p.m. - 7:00 p.m.  RECEPTION (Reed Arena)
6:15 p.m. - 7:30 p.m.  DINNER WITH THE CORPS of CADETS ($8)
8:00 p.m. - 11:00 p.m. STREET FEST (Celebration in the Northgate Area)
11:00 p.m.  Shuttle bus service ends for the day
FRIDAY  (October 13, 2000)

6:30 a.m. - 7:30 a.m.  BREAKFAST with THE CORPS of CADETS ($6)
7:00 a.m.          Shuttle buses begin pick up at hotels
7:00 a.m. - 8:00 a.m. STAT Past Presidents’ and Honorary Members’ Breakfast
7:00 a.m. - 5:00 p.m. REGISTRATION (Reed Arena; $65 Advance/$75 On-Site Rate)
8:00 a.m. - 7:00 p.m. FIELD TRIPS (Reed Arena; some have a fee.)
8:00 a.m. - 5:30 p.m. SHORT COURSES (Some have a fee.)
8:30 a.m. - 9:50 a.m. GENERAL SESSION(I) (Rudder Tower)
9:00 a.m. - 5:00 p.m. EXHIBITION (Reed Arena)
10:00 a.m. - 10:50 a.m. PLENARY LECTURES
11:10 a.m. - 12 Noon   WORKSHOPS
12:10 p.m. - 1:30 p.m. STAT LUNCHEON, AWARDS PRESENTATIONS
                        (Duncan Hall)
1:40 p.m. - 5:30 p.m.  WORKSHOPS
2:00 p.m. - 3:30 p.m.  ROCK RAFFLE  (TESTA) (Halbouty Hall)
3:40 p.m. - 4:00 p.m.  TESTA Business Meeting (Halbouty Hall)
6:30 p.m. -10:00 p.m. EVENING SOCIALS ($12.50 to $65; 3 events to choose
                        from- see registration form for descriptions)
10:45 p.m.           Shuttle bus service ends for the day

SATURDAY  (October 14, 2000)

7:00 a.m.          Shuttle buses begin pick up at hotels
7:00 a.m. - 8:00 a.m. STAT Regional Directors’ Breakfast
7:30 a.m. - 10:30 a.m. REGISTRATION (Reed Arena; $65 Advance/$75 On-Site Rate)
8:00 a.m. - 12 Noon  FIELD TRIPS (Some have fees.)
8:00 a.m. - 1:00 p.m. SHORT COURSES (Some have fees.)
8:00 a.m. - 9:30 a.m. GENERAL SESSION(II) (Rudder Theatre)
9:00 a.m. - 1:00 p.m. EXHIBITS
9:30 a.m. - 10:30 a.m. PLENARY LECTURES
10:50 a.m. - 11:40 a.m. SPECIAL LECTURE by Dr. “Red” DUKE (Rudder Auditorium)
10:50 a.m. - 11:40 a.m. WORKSHOPS
12 (noon) - 1:00 p.m. LUNCHEON, AWARDS PRESENTATIONS ($7 to $16 depending on menu)
1:10 p.m. - 2:30 p.m. MEGA SHAR-A-THONS (MSC)
1:00 p.m. - 4:30 p.m.  WORKSHOPS
6:00 p.m.          Shuttle bus service ends for the day
6:00 p.m. - 9:30 p.m. STAT Board Dinner and Meeting
CAST 2000 Session Listing

**FIELD TRIPS (DEPARTING FROM TAMU)**

$ FT19416 Thursday 7:00AM - 7:00PM $40.00
DEPARTMENT OF GEOLOGY / GEOPHYSICS
"What You Always Wanted to Know About Geology...But Forgot". A bus tour from College Station to Llano designed to teach observational skills with an emphasis on interpretation. Participants will walk away with a better understanding of land form, land cover, and land use. Fee includes box lunch, transport, and guidebook.

$ FT19418 Thursday 7:00AM - 4:30PM $35.00
LOWER COLORADO RIVER AUTHORITY
"Exploring McKinney Roughs: An Experiential Opportunity". McKinney Roughs represents Central Texas just as our ancestors knew it. The Learning Center includes classrooms, hiking and environmental interpretive trails, and other facilities. Participants will rotate through three different experiential opportunities: an overview of the environmental education curricula used for teacher workshops, a nature hike, and experiential activities to guide students to a better understanding of their personal strengths and the strengths of others. $35 fee includes lunch and transport.

$ FT19415 Thursday 8:00AM - 2:00PM $25.00
TEXAS MINING AND RECLAMATION ASSOCIATION
"Mine-ful of the Future". This is an opportunity to see really big equipment move large amounts of earth. The Texas Mining and Reclamation Association offers this trip to the Walnut Creek Mine to see the process of restoring the mined land for future use. Topics covered include natural resource exploration and selections of native grasses for reclamation. Fee includes lunch and transport.

FT19417 Thursday 9:00AM - 11:00AM
ENTOMOLOGY
Center for Urban Entomology & Medical Forensics Entomology/ Demos, hands-on activities including fire ants, roaches, and termites.

FT19401 Thursday 9:00AM - 11:00AM
DEPARTMENT OF AGRICULTURAL ENGINEERING
A tour similar to what is given to incoming students. It is designed to showcase the department and some of its current research projects. Demonstrations will be given.

FT19407 Thursday 11:00AM - 12:00PM
DEPARTMENT OF BIOLOGY: AQUATICS
Aquatics research facilities. See aquatic and reef tanks including fish, turtles, slugs, and alligators. Information on animals and current research projects included.

FT19421 Thursday 11:00AM - 12:00AM
STUDENT HEALTH (HEALTH ED.)
SEX(ed) Activities For Your Classroom Take home thought provoking activities that will initiate and facilitate discussion about sexual health issues in your classroom.

FT29412 Thursday 1:00PM - 2:00PM
SYSTEM MONITORING PROGRAM
Translink lab tour - Want to drive without ever getting on the road? Want to see how technology is helping our complex transportation system work more efficiently? Visit the Texas Transportation Institute and learn this and more. You’ll have an opportunity to see a state-of-the-art research laboratory where transportation engineers discover ways to better manage highways and intersections and provide information to users via emerging technologies. You’ll also see a driving simulator that helps human factors experts stimulate the driving environment and learn how drivers perform under various conditions. So come along and learn about what we’re doing today with transportation and what we’ll do in the future!

$ FT29413 Thursday 1:00PM - 3:00PM $3.00
BUSH LIBRARY AND MUSEUM
"George Bush Presidential Library and Museum" Come explore the past 50 years of American history and politics. The Bush Library and Museum portrays the life and career of George Bush within the broad context of American history. See an actual TBM Avenger aircraft from WWII, view Camp David, and walk through Air Force One.

FT29431 Thursday 1:00PM - 2:30PM
WAVE TANK
Tour

FT29469 Thursday 1:00PM - 3:00PM
ENTOMOLOGY
Center for Urban Entomology & Medical Forensics Entomology/ Demos, hands-on activities including fire ants, roaches, and termites.

FT29403 Thursday 1:30PM - 3:00PM
DEPARTMENT OF WILDLIFE AND FISHERIES: AQUACULTURE
Department of Wildlife and Fisheries Sciences, Aquaculture and Fisheries Facility Tour. This tour will provide an overview of teaching and research activities in aquaculture and fisheries. Aquaculture, which is the fastest growing segment of U.S. agriculture, involves the controlled production of plants and animals in water. Fisheries is concerned with the management of fish stocks in natural and artificial aquatic ecosystems.

FT29428 Thursday 1:30PM - 2:30PM
COLLEGE OF VETERINARY MEDICINE
Visit the only College of Veterinary Medicine in Texas and the largest of 27 in the country, graduating 10% of the country’s veterinarians each year. Tour clinical facilities where 25,000 animals are treated annually. See anatomy laboratory and pathology museum.

$ FT29430 Thursday 1:30PM - 4:00PM $7.00
MESSINA HOF WINE CELLAR
Messina Hof Wine Cellar: Learn about all parts of the wine-making process from the vineyards to the aging room. Tasting of 4 wines and a souvenir wineglass included.

FT29437 Thursday 1:30PM - 4:00PM
TWIN CITY HERITAGE TOUR
Bus tour including on-off bus privileges at eight different locations, including: Bush Library, Downtown Bryan, Messina Hof Winery and the Natural History Museum. Fee of $15 paid upon boarding.

FT29402 Thursday 1:30PM - 2:30PM
CYCLOTRON INSTITUTE
A superconducting cyclotron, in operation since 1987, provides the latest technology for studying nuclear reactions. Existing detector systems and systems under construction will also be on display.

FT29470 Thursday 1:30PM - 2:30PM
DEPARTMENT OF CHEMISTRY
See the X-ray crystallography lab, the Mass Spec Lab, the NMR lab, a chemistry research lab, and a teaching lab.

FT29408 Thursday 2:00PM - 3:00PM
OCEAN DRILLING PROGRAM
Marine Geology - Tour of the facility of the ocean drilling program and display of core samples.

FT29423 Thursday 2:00PM - 3:00PM
FIREFIGHTING SCHOOL
Walking tour of the fire fighting training school.

FT29425 Thursday 2:00PM - 3:00PM
TEXAS COOPERATIVE WILDLIFE COLLECTION
Vertebrate Natural History Collection

FT29424 Thursday 2:30PM - 4:00PM
NUCLEAR REACTOR
"Tour of the Nuclear Science Center" A short tour of the Nuclear Science Center including descriptions of the reactor and the fuel, basic reactor control methods, and the control room. There will also be a live demonstration of a reactor pulse: an event that causes the power to rise from 300 Watts to 600 Megawatts in less than a second.
CAST 2000 Session Listing

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**BUSH LIBRARY AND MUSEUM**
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**CYCLOTRON INSTITUTE**
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**TAMU HORTICULTURAL GARDENS**
The tour will include the approximately 5-7 acres of landscaped gardens, research beds and trial beds, a large nursery used primarily for research, and a small greenhouse used for plant propagation and some research. Handouts will be available.

**WIND TUNNEL**
"Tour of the Low Speed Wind Tunnel" The facility is used by the university, government, and industry to perform tests on a variety of models including trucks, bicycles, airplanes, helicopters, space vehicles, buildings, and any structure on which wind will have an effect. The tour will show the facility balance system, test section, and control room areas as well as typical models used during previous tests.

**TAMU VISITOR'S CENTER**
"History and Traditions Tour" A tour of the Texas A&M Campus with information concerning campus life, tradition, and activities.

**COLLEGE OF VETERINARY MEDICINE**
Visit the only College of Veterinary Medicine in Texas and the largest of 27 in the country, graduating 10% of the country’s veterinarians each year. Tour clinical facilities where 25,000 animals are treated annually. See anatomy laboratory and pathology museum.

**TAMU WEATHER STATION**
See the observatory, radar room, and computer weather maps used for forecasting.

**SHORT COURSES TAMU**

**SC11224 Thursday 9:00AM - 12:00PM $10.00**
**PROJECT LEARNING TREE - FOCUS ON FORESTS**
PLT is a supplementary, interdisciplinary environmental education curriculum designed to promote environmental awareness and enhance critical thinking skills. Several secondary modules are now available including Focus on Forests which teachers will receive at completion of workshop. TEKS correlation provided!

- Cheryl Stanco - Texas Forestry Association

**High School • Life Science**

**SC11374 Thursday 9:50AM - 1:15PM $10.00**
**UP, UP, AND AWAY . . . !**
Learn versatile, multi-level ways to teach principles of pressure, volume, density, and temperature. Buildify your own hot air balloon! Includes hummingbird feeders, egg-in-the-bottle, Cartesian diver, s.c.u.b.a., and others.

- Craig Johnson Smith - Whitehouse ISD

**All Levels • Physical Science**

**SC21559 Thursday 1:10PM - 4:25PM $30.00**
**BRINGING SCIENCE BACK TO COOL WITH ELECTRONIC MEASUREMENT LABS**
Learn why teachers say e-measure labs increase student engagement, excitement, and success--in short, that e-measure works! You will work with a variety of sensors, including Temperature, Heart Rate, pH, Motion, and Force. You will explore electronic workbooks, as well as our new EZscreens, and see that data collection, display, and analysis can be easy and fun. You can examine our new standards-based PASPORT exemplars and see how PASPORT can enhance your science class. Attend this workshop and enter to win a Temperature Lab!

- Sue Bobey - PASCO Scientific

**Middle/Jr. High • Life Science, Physical, Integrated/Interdisciplinary**

**SC21552 Thursday 1:10PM - 4:25PM $50.00**
**FOSS-MIDDLE SCHOOL”PLANETARY SCIENCE” AND “EARTH HISTORY” MINI-COURSES**
Experience “FOSS-Middle School Program” for Grades 6-8. Enjoy an active session led by Lawrence Hall of Science FOSS Developer. TEKS Correlation, FOSS-MS Handouts, & Door Prize.

- Teri Dannenberg - FOSS Author
- Verne Isbell - Delta Education

**Middle School/Jr. High • Integrated/Interdisciplinary Science**

**SC11064 Thursday 9:00AM - 12:00PM $60.00**
**TEKS-ING THROUGH PENNY ANTE SCIENCE™**
Come enjoy these hands-on activities that help your students master the TEKS and engage in problem solving/critical thinking. Participants receive the four Penny Ante Science books and the new TEKS correlation grid.

- Fred Fifer - University of Texas at Dallas
- Cynthia E. Ledbetter, Ph.D. - University of Texas at Dallas

**All Levels • Interdisciplinary Sciences**

**SC11062 Thursday 2:30PM - 5:00PM $3.00**
**BUILDING A PRESENCE: KEY LEADER**
Are you a Key Leader for your area? If not, do you know who is? This short course will be a training session on the duties of a Key Leader.

- Vanessa Westbrook - Charles A. Dana Center

**All Levels • Other**
### FORCE AND MOTION FOR THE MIDDLE SCHOOL

A comprehensive overview of force and motion content as required by TEKS for grades 6-8 will be shared. A notebook with hands-on activities, data analysis and suggested assessments will be provided to participants. Workshop emphasis is on participant experience of activities. These materials were developed by Corpus Christi ISD, middle school science teachers.

- Eve Escobedo - Corpus Christi ISD
- Lola Farmer - Corpus Christi ISD
- Jane Lee-Rhodes - Corpus Christi ISD
- Nancy Long - Corpus Christi ISD

Middle/Jr. High School • Life Science

#### SC21095 Thursday 1:30PM - 3:00PM

### SAFE USE, HANDLING, STORAGE, AND DISPOSAL OF LABORATORY CHEMICALS

Science teachers of all disciplines regularly deal with hazardous substances. We will discuss the use, storage, handling, and disposal of these products in-depth. Many definitive solutions will be shared.

- Larry Flinn - Flinn Scientific, Inc.

High School • Chemistry

#### SC21292 Thursday 1:30PM - 4:20PM

### BUILDING A PRESENCE: POINT OF CONTACT TRAINING SESSION FOR EDUCATORS IN THIS POSITION

Are you a Point of Contact (POC) for your school? If you are not, do you know who is your building's POC? This short course will be a training session on the duties of a Point of Contact.

- Vanessa Westbrook - Charles A. Dana Center

All Levels • Other

#### SC21384 Thursday 2:00PM - 5:00PM

### EXPLORING THE SOLAR SYSTEM - A HANDS-ON APPROACH

Activities by NASA scientists and teachers focus on integrating planetary science with existing curriculum. They focus on TEKS for the 5-8 grades. Share real science not blockbuster movie science!

- Jaclyn Allen - Johnson Space Center NASA
- Becky Collier - Killeen ISD
- Karen Stocco - Houston Museum of Natural Sciences
- Kay Tobola - Clearcreek ISD

All Levels • Interdisciplinary Sciences

#### SC21105 Thursday 2:20PM - 5:10PM

### ASTRONOMY WITH TEXAS'S LARGEST TELESCOPE

Explore the construction and use of Hobby-Eberly Telescope at McDonald Observatory. Activities include optics, colors, spectroscopy, and analysis of starlight. Handouts will be provided.

- Mary Kay Hemenway - University of Texas at Austin
- Brad Armosky - University of Texas at Austin

Middle/Jr. High School • Physics

#### SC21109 Tuesday 2:20PM - 5:10PM

### BUGS IN YOUR CLASSROOM

Learn to keep live insects in your classroom, and discover how to make inks and dyes from insect products. Extract soil organisms and learn other hands-on techniques to "bug" your students.

- Richard Ashley - Fossil Rim Wildlife Center

Elem. School and Middle/Jr. High School • Life and Interdisciplinary Science

#### SC21129 Tuesday 2:20PM - 5:10PM

### TEXAS HUMMINGBIRD ROUNDUP

Introduce participants to activities from a marine education resource manual developed for grades 6-12 funded by the Texas A&M University Sea Grant. Will include geology of Gulf Coast, watershed of Gulf, sand, sediments, beaches, dunes, and physical features.

- Violetta Lien, Ph. D. - University of Texas

Middle and High School • Earth Science

#### SC21120 Thursday 2:20PM - 5:10PM

### INTEGRATE YOUR EARTH SCIENCE TOPICS WITH TEXAS AND GULF OF MEXICO MARINE EXAMPLES

Introduce participants to activities from a marine education resource manual developed for grades 6-12 funded by the Texas A&M University Sea Grant. Will include geology of Gulf Coast, watershed of Gulf, sand, sediments, beaches, dunes, and physical features.

- Violetta Lien, Ph. D. - University of Texas

Middle and High School • Earth Science

#### SC21124 Thursday 2:20PM - 5:20PM

### CAST 2000 Session Listing

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<th>Session Code</th>
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<th>Time</th>
<th>Duration</th>
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CAST 2000 Session Listing

$ SC21080 Thursday 2:20PM - 5:20PM $30.00

LEAP INTO HIGHER ORDER THINKING SKILLS USING THE PHASING PHILOSOPHY!
Change your favorite “cookbook” labs into performance assessments by incorporating scenarios. Learn how to use the phasing lab manual included with the short course.
• Lisa Duvall - Ron Jon Publishing
• Cindy Martinez - Pasadena ISD
Middle/Jr. High School • Interdisciplinary Sciences

$ SC21184 Thursday 2:20PM - 5:30PM $10.00

UP, UP, AND AWAY . . .!
Learn versatile, multi-level ways to teach principles of pressure, volume, density, and temperature. Build/dify your own hot air balloon! Includes hummingbird feeders, egg-in-the-bottle, Cartesian diver, s.c.u.b.a., and others.
• Craig Johnson Smith - Whitehouse ISD
All Levels • Physical Science

$ SC21084 Thursday 2:20PM - 5:20PM $11.00

ENVIRONMENTAL ASSESSMENT OF YOUR TOWN - WATER, SOILS, ROCKS, AND POLLUTION
Your students will use maps (provided) and Web resources to assess the environment of your town. How well are you protecting the environment? How safe are you from disasters?
• Susan Hovorka - University of Texas
Middle/Jr. High School • Earth Science

$ SC21302 Thursday 2:20PM - 5:30PM $40.00

LABORATORY & FIELD SAFETY PROCEDURES FOR K-12: TRAINER-OF-TRAINERS
This 3-hour short course provides professional development on laws, rules, regulations, and safety procedures for classroom, laboratory, and field investigations required in the TEKS. Participants receive a Safety Standards Manual and Trainer’s Manual.
• James W. Collins - Carles A. Dana Center
• Donna Wise - Jacksonville ISD
All Levels • Other

SC21076 Thursday 2:20PM - 5:20PM

COMPUTER TECHNOLOGY FOR THE CLASSROOM
The use of computers and their applications of Intel microscopes, data projectors, digital cameras, and TI CBL system. Instruction on simple Windows applications & software tricks will be included.
• Johna Sue Nelson - Texas City ISD
• Abigail Davalos - Texas City ISD
• Janie O’Neil - Texas City ISD
All Levels • Other

FIELD TRIPS (DEPARTING FROM TAMU)

$ FT39451 Friday 7:00AM - 7:00PM $40.00

DEPARTMENT OF GEOLOGY / GEOPHYSICS
“What You Always Wanted to Know About Geology…But Forgot”. A bus tour from College Station to Llano designed to teach observational skills with an emphasis on interpretation. Participants will walk away with a better understanding of land form, land cover, and land use. Fee includes box lunch, transport, and guidebook.

$ FT39419 Friday 8:30AM - 12:00PM $15.00

LAMAR UNIVERSITY DEPARTMENT OF GEOLOGY
"Collecting 'Hothouse' Fossils in an 'Icenhous' Climate". Visit Whiskey Bridge Bluff on the Brazos River to view conditions on the Texas coast shortly before global climatic changes began to shift. Participants should bring small plastic bags and a small hand tool for digging into soft claystone. $15 fee includes transport and guidebook.

$ FT39436 Friday 8:30AM - 5:30PM
TAMU EMS/ SCOTT AND WHITE
“Emergency!” Both a Texas A&M University EMS ambulance and a Scott & White MedEvac helicopter will be parked outside the exhibition hall. Medical professionals will be available to answer questions regarding the workings of these incredible emergency vehicles.

$ FT39433 Friday 9:00AM - 10:30AM
DEPARTMENT OF VETERINARY ANATOMY AND PUBLIC HEALTH
Tour of the Vet School Gross Anatomy Lab. In spite of the development of modern technology, some subjects are better learned when all five senses are used. Gross anatomy is one of these subjects. This tour will show some of the specimens and technology used to teach undergraduate and professional students gross anatomy. The use of models, cadavers and related computer programs will be demonstrated.

$ FT39478 Friday 9:30AM - 11:30AM $3.00
BUSH LIBRARY AND MUSEUM
“George Bush Presidential Library and Museum” Come explore the past 50 years of American history and politics. The Bush Library and Museum portrays the life and career of George Bush within the broad context of American history. See an actual TBM Avenger aircraft from WWII, view Camp David, and walk through Air Force One.

$ FT39409 Friday 9:30AM - 10:30AM
DEVELOPMENTAL AND MOLECULAR BIOLOGY
Explanatory lecture and facilities tour of the Plant Molecular Biology and Genetic Engineering programs.

$ FT39405 Friday 10:00AM - 11:30AM
DEPARTMENT OF VETERINARY ANATOMY AND PUBLIC HEALTH
“Functional Anatomy of Lungs and Associated Respiratory Structures” This session includes a slide presentation on the function of the respiratory system and its anatomical components. Hands-on activities include examination of dried lungs, the silicon filled air spaces of lungs from different animals, and the respiratory system in plasinated animals.

$ FT39439 Friday 10:00AM - 12:30PM
TWIN CITY HERITAGE TOUR
Bus tour including on-off bus privileges at eight different locations, including: Bush Library, Downtown Bryan, Messina Hof Winery and the Natural History Museum. Fee of $15 paid upon boarding.

$ FT39465 Friday 10:00AM - 11:30AM
TAMU HORTICULTURAL GARDENS
The tour will include the approximately 5-7 acres of landscaped gardens, research beds and trial beds, a large nursery used primarily for research, and a small greenhouse used for plant propagation and some research. Handouts will be available.

CAST 2000 Program - Page 4
CAST 2000 Session Listing

**FT39476** Friday 10:00AM - 11:30AM

**NUCLEAR REACTOR**

"Tour of the Nuclear Science Center" A short tour of the Nuclear Science Center including descriptions of the reactor and the fuel, basic reactor control methods, and the control room. There will also be a live demonstration of a reactor pulse: an event that causes the power to rise from 300 Watts to 600 Megawatts in less than a second.

$ **$ **

**FT39491** Friday 10:00AM - 12:00PM $3.00

**BUSH LIBRARY AND MUSEUM**

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**FT39468** Friday 10:00AM - 11:30AM

**TAMU WEATHER STATION**

See the observatory, radar room, and computer weather maps used for forecasting.

**FT39406** Friday 10:30AM - 12:00PM

**BIOLOGICAL IMAGING LAB**

"Current Imaging Techniques in Biological Science" A session that covers the basics of current microscopy, staining techniques, microphotography, and computer analysis.

**FT39440** Friday 11:00AM - 1:30PM

**TWIN CITY HERITAGE TOUR**

Bus tour including on-off bus privileges at eight different locations, including: Bush Library, Downtown Bryan, Messina Hof Winery and the Natural History Museum. Fee of $15 paid upon boarding.

**FT39461** Friday 11:00AM - 12:00PM

**DEPARTMENT OF BIOLOGY: AQUATICS**

Aquatics research facilities. See aquatic and reef tanks including fish, turtles, slugs, and alligators. Informative tour includes information on animals and current research.

$ **$ **

**FT49411** Friday 1:00PM - 5:00PM $20.00

**DEPARTMENT OF RANGE AND MANAGEMENT**

"Reading the Landscape, an Outdoor Adventure" Visit an outdoor research area with remnants of the Post Oak Savannah plus disturbance from various man-induced changes. Hands-on activities include plant identification and collection, measurements of current vegetation cover, observation of landscape characteristics, and evaluation of stream banks. The present and future of land resource management will be discussed. Fee includes snack and notebook.

**FT49482** Friday 1:00PM - 2:30AM

**TAMU HORTICULTURAL GARDENS**

The tour will include the approximately 5-7 acres of landscaped gardens, research beds and trial beds, a large nursery used primarily for research, and a small greenhouse used for plant propagation and some research. Handouts will be available.

**FT49410** Friday 1:00PM - 2:00PM

**DEPARTMENT OF ENGINEERING TECHNOLOGY AND INDUSTRIAL DISTRIBUTION**

Engineering Technology and Industrial Distribution: Watch Computers Take Control!! See how they manipulate machines as no human could! Come see our Computer Aided Design, Computer Aided Manufacturing, and Integrated Circuit Assembly laboratories.

**FT49414** Friday 1:00PM - 2:00PM

**DEPARTMENT OF ENGINEERING TECHNOLOGY AND INDUSTRIAL DISTRIBUTION**

"Why the Titanic Sank and Other Material Facts" A workshop on the testing of materials using experiments designed for teachers to use in the classroom. The experiments and demonstrations are applicable for children ages 4-18; this session can be enjoyed by everyone.

**FT49464** Friday 1:00PM - 2:00PM

**DEVELOPMENTAL AND MOLECULAR BIOLOGY**

Explanatory lecture and facilities tour of the Plant Molecular Biology and Genetic Engineering programs.

**FT49458** Friday 1:30PM - 2:30PM

**COLLEGE OF VETERINARY MEDICINE**

Visit the only College of Veterinary Medicine in Texas and the largest of 27 in the country, graduating 10% of the country's veterinarians each year. Tour clinical facilities where 25,000 animals are treated annually. See anatomy laboratory and pathology museum.

**FT49459** Friday 1:30PM - 2:30PM

**SYSTEM MONITORING PROGRAM**

Translink lab tour - Want to drive without ever getting on the road? Want to see how technology is helping our complex transportation system work more efficiently? Visit the Texas Transportation Institute and learn this and more. You'll have an opportunity to see a state-of-the-art research laboratory where transportation engineers discover ways to better manage highways and intersections and provide information to users via emerging technologies. You’ll also see a driving simulator that helps human factors experts stimulate the driving environment and learn how drivers perform under various conditions. So come along and learn about what we’re doing today with transportation and what we’ll do in the future!

**FT49460** Friday 1:30PM - 3:00PM

**DEPARTMENT OF WILDLIFE AND FISHERIES: AQUACULTURE**

Department of Wildlife and Fisheries Sciences, Aquaculture and Fisheries Facility Tour. This tour will provide an overview of teaching and research activities in aquaculture and fisheries. Aquaculture, which is the fastest growing segment of U.S. agriculture, involves the controlled production of plants and animals in water. Fisheries is concerned with the management of fish stocks in natural and artificial aquatic ecosystems.

**FT49422** Friday 1:30PM - 2:30PM

**DEPARTMENT OF CHEMISTRY**

See the X-ray crystallography lab, the Mass Spec Lab, the NMR lab, a chemistry research lab, and a teaching lab.

**FT49483** Friday 2:00PM - 3:30PM

**TAMU WEATHER STATION**

See the observatory, radar room, and computer weather maps used for forecasting.

**FT49426** Friday 2:00PM - 4:00PM

**DEPARTMENT OF HORTICULTURE**

Experience the Department of Horticulture Sciences through a hands-on tour that is sure to turn you on to gardening with your students! The tour will introduce you to the world of horticulture using, hands-on activities from the junior Master GardenerSM (JMGS) program, a new garden based on curriculum produced through the Texas Agricultural Extension Service. JMGS program activities are correlated to the TEKS for ease of use in planning, and utilize active student involvement to teach many basic concepts in science, language arts, math, and social studies through garden-themed activities. Check out the JMGS website at http://juniormastergardener.tamu.edu to learn more about this program. Activities will take place in the Horticulture Department gardens and greenhouses located adjacent to the Horticulture-Forestry Sciences Building-- conveniently close to Reed Arena!

**FT49455** Friday 2:00PM - 3:00PM

**WAVE TANK Tour**

**FT49475** Friday 2:00PM - 3:00PM

**CYCLOTRON INSTITUTE**

A superconducting cyclotron, in operation since 1987, provides the latest technology for studying nuclear reactions. Existing detector systems and systems under construction will also be on display.
CAST 2000 Session Listing

**DEPARTMENT OF ENGINEERING TECHNOLOGY AND INDUSTRIAL DISTRIBUTION**

**DEPARTMENT OF ENGINEERING TECHNOLOGY AND INDUSTRIAL DISTRIBUTION**
"Why the Titanic Sank and Other Material Facts" A workshop on the testing of materials using experiments designed for teachers to use in the classroom. The experiments and demonstrations are applicable for children ages 4-18; this session can be enjoyed by everyone.

**WIND TUNNEL**
"Tour of the Low Speed Wind Tunnel" The facility is used by the university, government, and industry to perform tests on a variety of models including trucks, bicycles, airplanes, helicopters, space vehicles, buildings, and any structure on which wind will have an effect. The tour will show the facility balance system, test section, and control room areas as well as typical models used during previous tests.

**TAMU VISITOR'S CENTER**
"History and Traditions Tour" A tour of the Texas A&M Campus with information concerning campus life, tradition, and activities.

**CYCLOTRON INSTITUTE**
A superconducting cyclotron, in operation since 1987, provides the latest technology for studying nuclear reactions. Existing detector systems and systems under construction will also be on display.

**DEPARTMENT OF VETERINARY ANATOMY AND PUBLIC HEALTH**
"Functional Anatomy of Lungs and Associated Respiratory Structures" This session includes a slide presentation on the function of the respiratory system and its anatomical components. Hands-on activities include examination of dried lungs, the silicon filled air spaces of lungs from different animals, and the respiratory system in plasinated animals.

**COLLEGE OF VETERINARY MEDICINE**
Visit the only College of Veterinary Medicine in Texas and the largest of 27 in the country, graduating 10% of the country’s veterinarians each year. Tour clinical facilities where 25,000 animals are treated annually. See anatomy laboratory and pathology museum.

**DEPARTMENT OF SOIL AND CROP SCIENCES**
"Creating Desirable Foods from Agricultural Products" The goal is to transform some products into foods we want to consume. This presentation will discuss many value-added transformations that transform cereal flours into nutritious and delicious food.

**PHYSICS OBSERVATORY**
A visit to the Teaching Observatory within the Department of Physics will offer insight into creating or expanding educational programs in astronomy. Specifically, learn about the resources and progress for teaching astronomy to anyone of any age.

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**GENERAL SESSIONS TAMU**

**GS34269**
**Friday** 8:15AM - 9:40AM

**THE TEXAS EDUCATION AGENCY: SCIENCE ASSESSMENT IN TEXAS**
How will the state assess the science knowledge and skills in our schools? Science educators have the challenge of a more rigorous statewide assessment structure with the implementation of Senate Bill 103. Will you be ready to meet this challenge? Issues and answers regarding science accountability K-12 are critical information for all science educators charged with this responsibility. Session participants will receive copies of the new TAAS Assessment Schedule and valuable information regarding the most important topic facing Texas science education today.

- **Chris Castillo-Comer** - Texas Education Agency

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**PLENARY SESSIONS TAMU**

**PL33355**
**Friday** 9:50AM - 10:50AM

**SCIENCE CAN TAKE YOU TO FAR AWAY PLACES- FROM ANTARCTICA TO JUPITER'S MOONS**
- **Mahlon C. Kennicutt** - Geochemical and Environmental Research Group, Texas A&M University

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**PL33360**
**Friday** 9:50AM - 10:50AM

**CIRCADIAN RHYTHMS**
- **Vincent Cassone** - Biology, Texas A&M University

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**PL33343**
**Friday** 9:50AM - 10:50AM

**A BEHIND THE SCENES LOOK AT DRUG DISCOVERY**
Human ailment is alleviated to a great extent by the discoveries made by synthetic organic chemists working alongside biologists and biochemists. Medical doctors depend on these discoveries of small organic (carbon based) compounds to enable them to prescribe drugs to their patients. This lecture will take a "behind the scenes" look at modern drug discovery including natural products (medicines derived from Nature), new approaches to drug discovery, possible impacts of sequencing the human genome on drug discovery, and the development of various medicines including immunosuppressants, antibiotics, anti-AIDS, and anti-cancer agents.

- **Daniel Romo** - Chemistry, Texas A&M

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**PL33352**
**Friday** 9:50AM - 10:50AM

**CUSTOMER CHOICE IN THE RESTRUCTURED POWER INDUSTRY**
- **Karen L. Butler** - Electrical Engineering, Texas A&M University

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THE SILICON CEILING: THE URGency OF BREAKING HIGH-TECH'S COLOR AND GENDER BARRIERS
The current and future projected shortage of information technology (IT) workers is a matter of tremendous urgency. It is estimated that more than 1.3 million IT workers will be needed by 2006. While the number of students pursuing undergraduate and graduate degrees in IT has seen a modest increase, the number of women and minorities choosing these career paths is unchanged, or in some cases, has decreased. It is also clear that the solution must be a broad-based effort from industry and academia, and that the teachers in our K-12 classrooms must play a pivotal role in both designing and implementing our response to this national emergency.

* Nancy Amato - Computer Science, Texas A&M University

All Levels • Computer Science

MINING THE GENOME: A BIOLOGICAL BONANZA
A lecture by a leader in Texas A&M's department of Veterinary Pathology specializing in the mapping of the bovine genome.

* James E. Womack - W.P. Luce Endowed Professor, Texas A&M University

All Levels • Life Science

TEA SCIENCE UPDATE-K-12: CURRICULUM TRENDS IN SCIENCE
Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you. Whether you work in a school, at the district level, or in a university, learn about trends that impact your science program. Emerging fields in science like Earth System Science are exploding on the horizon. Who are the innovators in curriculum? Understand the shifts in policy that affect you.

* Irene Pickhardt - Texas Education Agency

All Levels • Other

THE QUEST FOR ABSOLUTE ZERO: LOW TEMPERATURE DEMONSTRATIONS
A series of demonstrations involving low temperature physics by a leader in Texas A&M's department of Veterinary Pathology specializing in the mapping of the bovine genome.

* Glenn Agnolet - Physics, Texas A&M University

All Levels • Physics

FOSS AND SCIENCE TEKS: GRADES K-2
OVERVIEW & ACTIVITIES
Full Option Science System is an inquiry-based, hands-on science curriculum for Grades K-8. Enjoy active session of Grades K-2 FOSS and learn how FOSS meets TEKS. Handouts & Door Prize.

* Ellen Yates-Ishbell - FOSS Consultant

* Winston Hoskins - FOSS Consultant

Elementary School • Integrated/Interdisciplinary Science

$ SC31190 Friday 8:40AM - 12:00PM $2.00

HANDHELD TECHNOLOGY: TI, VERNIER, PASCO & CASIO -- YOU CHOOSE!

CHEMISTRY
Participants will be given the opportunity to attempt six commonly practiced high school laboratories utilizing handheld technology. This session provides the participant with an opportunity to utilize handheld technology from a variety of sources: TI, Vernier, Pasco & Casio.

* Ervin A. Pfeife - El Paso ISD

* Shelley Abernathy - Baird ISD

* Kathy Glidewell - Ranger ISD

Middle and High School • Chemistry

$ SC31265 Friday 8:40AM - 12:00PM $25.00

OPERATION PHYSICS (O.P.) MOTION AND FORCE
Use a fluid accelerometer to study Newton's Laws of Motion. O.P. is a program of the American Institute of Physics. TEKS K.7A, 1.7A, 3.6A, 6.6AB, 7.6D, 8.7A.

* Joel Palmer - Mesquite ISD

Elem. School and Middle/Jr. High • Physics

$ SC31538 Friday 8:40AM - 3:30PM $95.00

TOUR OF LOCAL SCIENCE FACILITIES
Join the author of the "NSTA Guide to School Science Facilities" and a school architect in learning how to design a safe and effective science lab and touring local science facilities. Fee includes transportation, lunch, materials and the "NSTA Guide."

* Dr. Sandra West - Southwest Texas University, Biology

* Martha Pena-Weiss

All Levels • All Fields

$ SC31291 Friday 8:40AM - 2:00PM $10.00

COMPREHENSIVE CONCEPTUAL CURRICULUM FOR PHYSICS (C3P)
The C3P Project was developed with the support of the NSF and provides an inquiry-based curriculum for use in physics and physical science classes (grades 9-12). Participants are encouraged to bring their own laptops. The CD will be available to purchase on site for $150.00.

* Karen Jo Matsler - Arlington ISD

* Janie Head - Lamar Consolidated ISD

High School • Physics

$ SC31024 Friday 8:40AM - 12:00PM

ARCHEOLOGY DOWN UNDER - UNCOVERING THE FUN IN DUSTY CLUES.
Upper elementary level activities for a science booth. Trace how tools change over time, tell an origin story in pictures, uncover evidence of building posts long since gone, discover the use of tools with experimental archeology.

* Margaret Russell - Aquarena Center

Elem. school • Interdisciplinary Sciences
CAST 2000 Session Listing

SC31101 Friday 8:40AM - 12:00PM
BUILDING GEOLOGIC CROSS-SECTIONS
Using well logs, participants will be able to interpret and correlate geologic data. This hands-on activity illustrates the application of science concepts to real-world situations.
- Jim Luppens - Phillips Coal Company
- Franeye Hutchins - TMRA
- Vicky Selznick - Plano ISD
Middle/Jr. High School • Earth Science

SC31102 Friday 8:40AM - 9:40AM
MIDDLE SCHOOL DATA COLLECTION WITH VERNIER LABPRO™
Experiments from our new middle-school lab manuals will be performed using the new Vernier LabPro with smart sensors, including temperature probes, motion detectors, pH systems, and light sensors.
- Robyn Johnson - Vernier Software
Middle/Jr. High School • IPC, Physics, Chemistry

SC31103 Friday 8:40AM - 12:00PM
TEACHING SCIENCE WITH TOYS 'N TREATS
Learn fun, practical, and engaging hands-on teaching ideas using toys and treats. Easy accessible strategies are usable immediately. Door prizes.
- Judi Falen - Glencoe McGraw-Hill
- Anne Barefoot - Glencoe McGraw-Hill
Middle and High School • All Fields

SC31104 Friday 8:40AM - 12:00PM
TEACHING STUDENTS HOW TO GIVE EFFECTIVE PRESENTATIONS FOR PROJECTS AND FAIRS
A step by step process on teaching students effective organizational techniques for presentations.
- Chris Ebert - Educational Products Inc.
- Tammie Kickarillo - Educational Products Inc.
All Levels • All Fields

SC31105 Friday 8:40AM - 12:00PM
EASY TO USE, AWARD WINNING CD ROM AND DVD PROGRAMS CORRELATED TO TEKS
AIMS Multimedia CD ROM and DVD programs will supplement hundreds of lessons. Each program contains a full video, a test, a quiz, a glossary, a teaching module, and more.
- Lee Ann Ray - Texas Representative
All Levels • All Fields

SC31029 Friday 8:40AM - 9:40AM
INTRODUCING SEPUP'S FULL YEAR MIDDLE SCHOOL ISSUE-ORIENTED SCIENCE COURSES
Join us in hands-on overview of Issues, Evidence and You and Science and Life Issues. Topics relate to water quality, material science, energy, our bodies, health/disease, genetics, and evolution.
- Mark Koker - Lab Aids
Middle/Jr. High School • Interdisciplinary Sciences

SC31014 Friday 8:40AM - 12:00PM
USING CASIO’S EA100 DATA ANALYZER IN MATHEMATICS AND SCIENCE TEACHING
Come see hands-on interactive lessons involving Casio’s data collection device and graphing calculators.
- Susan Bendele - Casio Inc.
Middle and High School • Interdisciplinary Sciences

SC31348 Friday 8:40AM - 12:00PM
SCIENCE AND TECHNOLOGY FOR CHILDREN™ PROGRAM OVERVIEW
Learn about the philosophy and goals of Science and Technology for Children™ through activities adapted from the second-grade STC™ unit Changes. STC™ uses investigation, discovery, and application to help children learn developmentally appropriate concepts central to the life, earth, and physical sciences and technology. Participants will gain a better understanding of how STC™ meets the National Science Standards using activities from different units to illustrate developmental appropriateness and the accommodation of diverse learning styles. Also, participants will study how the educational impact of inquiry-based science can be measured. Science and Technology for Children™ was developed by the National Science Resources Center and is exclusively published and distributed by Carolina Biological Supply Company.
- Donna Brown - Carolina Biological Supply Company
Elementary • Interdisciplinary Sciences

SC31119 Friday 8:40AM - 12:00PM
GEARING UP FOR THE NATIONAL OCEAN SCIENCES BOWL TEXAS REGIONAL 2001 COMPETITION
The National Ocean Sciences Bowl (NOSB) is a rapid-fire question and answer competition patterned after the National Science Bowl. The workshop includes a brief history and description of the competition, information on student participation, and incorporates a hands-on demonstration with teacher participation.
- Susan Childs - Gulf of Mexico Foundation
High School • All Fields

SC31017 Thursday 8:40AM - 12:00PM $40.00
LABORATORY & FIELD SAFETY PROCEDURES FOR K-12: TRAINER-OF-TRAINERS
This 3-hour short course provides professional development on laws, rules, regulations, and safety procedures for classroom, laboratory, and field investigations required in the TEKS. Participants receive a Safety Standards Manual and Trainer's Manual.
- James W. Collins - Charles A. Dana Center
- Donna Wise - Jacksonville ISD
All Levels • Other

SC31171 Friday 8:40AM - 12:00PM
CREATING A SCHOOL HABITAT IN TEXAS
Create a place where students experience nature first-hand - where plants and wildlife provide the lessons. Learn habitat basics, plus specific plants to attract wildlife. Handbook provided.
- Diana Foss - Texas Parks and Wildlife
All Levels • Interdisciplinary Sciences
CAST 2000 Session Listing

SC31018 Friday 8:40AM - 12:00PM
SETTING UP A COMPUTER LAB FOR ANATOMY & PHYSIOLOGY
Teachers and lab techs are invited to review the latest integration of computers, software, and curriculum for Anatomy & Physiology.
• Joe Marcinkowski - Laser Professor
Middle and High School • Life Sciences

SC31282 Friday 8:40AM - 12:00PM
CRITTER ENCRYPTION - CREATIVE WRITING IN SCIENCE
Students use journaling as a tool for learning many scientific concepts, while incorporating techniques from across the curriculum as creative writing, artistic expression, math calculations, etc. TEKS 1-3, 8, 11-12.
• Jane C. Compton - Brazosport ISD
Middle and High School • Interdisciplinary Sciences

SC31300 Friday 8:40AM - 10:20AM
ENVIRONMENTAL SCIENCE ACROSS THE CURRICULUM
A hands-on workshop offering cross-curricular environmental education activities for elementary educators through National Wildlife Federation’s Classroom Program Animal Tracks. Focus will be placed on TEKS and TAAS objectives.
• Shawn McLallen - National Wildlife Federation
Elem. school • Interdisciplinary Sciences

SC31332 Friday 8:40AM - 4:00PM
BECOME A PROJECT WILD FACILITATOR
Teachers who would like to become teacher trainers must have taken a Project WILD/Aquatic WILD or Project Wild training.
• Charles Kowaleski - Texas Parks & Wildlife
All Levels • Biology

SC31202 Friday 8:40AM - 12:00PM
MARINATE YOUR LIFE SCIENCE TOPICS WITH TEXAS AND GULF OF MEXICO MARINE ACTIVITIES
Introduce participants to activities from a marine education resource manual developed for grades 6-12 funded by the Texas A&M University Sea Grant. Will cover interaction of marine organisms, marine ecosystems, and Texas coastal problems and issues.
• Violetta Lien, Ph.D. - University of Texas
Middle and High School • Life Science

SC31072 Friday 8:40AM - 12:00PM
PGLO: BACTERIAL TRANSFORMATION AND PROTEIN PURIFICATION WITH BIO-RAD’S PGLO SYSTEM
Perform bacterial transformation with a gene from a bioluminescent jellyfish. Use chromatography to purify the green fluorescent jellyfish protein from the bacteria. It's all about: DNA>RNA>PROTEIN>TRAIT - Green Fluorescence! Make the invisible visible.
• Patti Taranto - Bio-Rad Labs
• Kirk Brown - Bio-Rad Labs
• Stan Hitomi - Bio-Rad Labs
High School • Life Sciences

SC31030 Friday 9:50AM - 10:50AM
SEPUP’S SUPPLEMENTARY MODULES
SEPUP’s twelve supplementary modules highlight the science behind environmental issues: groundwater solution, toxic waste disposal, plastics, food additives, etc. Join us for a hands-on overview of this early secondary program.
• Mark Koker - Lab Aids
Elem. school • Interdisciplinary Sciences

SC31011 Friday 10:30AM - 11:30AM
DATA COLLECTION EVERYWHERE -- WITH VERNIER LABPRO™
Learn how you can collect data using the exciting, new Vernier LabPro -- the versatile interface that can be connected to a computer or a TI Graphing Calculator.
• Robyn Johnson - Vernier Software
High School • IPC, Physics, Chemistry

SC31301 Friday 10:30AM - 12:00PM
ENVIRONMENTAL SCIENCE ACROSS THE CURRICULUM
A hands-on workshop offering cross-curricular environmental activities for middle school educators through National Wildlife Federation’s classroom Program: Animal Tracks®. Focus will be placed on TEKS and TAAS objectives.
• Shawn McLallen - National Wildlife Federation
Middle/Jr. High School • Interdisciplinary Sciences

SC31560 Friday 11:00AM - 2:10PM
21ST CENTURY SOLUTIONS FOR HANDS-ON SCIENCE
Learn why teachers say e-measure labs increase student engagement, excitement, and success--in short, that e-measure works! You will work with a variety of sensors and DataStudio software, our easy-to-use data collection, analysis, and reporting software. You will do a variety of our hands-on, standards-based e-measure labs for high school students in chemistry, physics, biology, math, and earth sciences. Attend this workshop and enter to win a Temperature Lab!
• Sue Bobey - PASCO Scientific
High School • Life Science, Physical, Integrated/Interdisciplinary

SC31337 Friday 11:00AM - 12:00PM
ECOLOG- HANDS-ON TECHNOLOGY FOR GRADES 4-9
Integrate instruction technology that middle school students can understand. Come learn how data loggers allow students to collect, graph, and analyze real-world data.
• Cary Busby - Arbor Scientific
Middle School • Interdisciplinary Sciences

SC31031 Friday 11:00AM - 12:00PM
CHEM-2, AN ISSUE-ORIENTED SCIENCE PROGRAM FROM SEPUP
CHEM-2, an elementary science program that utilizes environmental topics to motivate students is cost effective, safe, and easy to use. Join us for a hands-on overview of the program.
• Mark Koker - Lab Aids
Elem. school • Interdisciplinary Sciences

SC31383 Friday 11:00AM - 2:00PM
COME AND LEARN HOW TO FINGERPRINT YOUR OWN DNA
Adapted from FBI protocols without sputum sample collection, this SAFE procedure employs DNA Fingerprinting by extraction and PCR amplification of DNA from Cheek Cells.
• Karen Graf - Edvotek, Inc.
• Jack Chirikjian - Edvotek, Inc.
All Levels • Life Science

CAST 2000 Program - Page 9
SC31096 Friday 11:00AM - 12:00PM
**HOW TO DESIGN A SAFE, EFFICIENT SCIENCE LABORATORY FOR THE 21ST CENTURY.**
Get answers to all of your laboratory design questions. We will share design priorities, tips, and safety information gathered from years of experience helping science teachers plan their laboratory construction and remodeling projects. You will learn what features to include in your laboratory and what common mistakes to avoid.
- Larry Flinn - Flinn Scientific, Inc.
High School • Chemistry

SC41347 Friday 1:15PM - 5:10PM
**SCIENCE AND TECHNOLOGY CONCEPTS FOR MIDDLE SCHOOL™ ... LOOKING FORWARD.**
Science and Technology Concepts for Middle School™ strands build upon the knowledge gained through the Science And Technology for Children™ curriculum. The focus of the STC/MS™ materials is based upon students' level of cognitive development, is aligned with the National Science Standards, is characterized by an inquiry approach with a balance among the physical, life earth sciences and technology. STC/MS™ is being developed by the National Science Resources Center and will be exclusively published and distributed by Carolina Biological Supply Company.
- Shirley Alba - Carolina Biological Supply Company
Middle/Jr. High School • Interdisciplinary Sciences

SC41027 Friday 1:15PM - 4:20PM
**DOING ASTRONOMY-BASED PHYSICAL SCIENCE IN THE CLASSROOM**
Discover how astronomy-based hands-on activities can lead to deep understanding of key ideas in physical science. TEKS: using models; formulating hypotheses, predicting trends; explaining seasons, length of day, cyclical phases of the moon.
- Donald Robb - Charlesbridge Publishing
Middle/Jr. High School • Physical Science
$ SC41098 Friday 1:15PM - 4:25PM $5.00
**GOLD PANNING. ROCK & MINERAL IDENTIFICATION**
Rock, mineral, and fossil identification is the focus of this hands-on presentation. Participants will also pan for real gold.
- Pat Napolitano - Earthworks
All Levels • Earth Science
$ SC411191 Friday 1:15PM - 4:00PM $2.00
**HANDHELD TECHNOLOGY: TI, VERNIER, PASCO & CASIO -- YOU CHOOSE! PHYSICS**
Participants will be given the opportunity to attempt six commonly practiced laboratory remodeling projects. This session provides the participant with an opportunity to utilize handheld technology from a variety of sources: TI, Vernier, Pasco & Casio.
- Ervin A. Pfeifle - El Paso ISD
- Shelley Abernathy - Baird ISD
- Kathy Glidewell - Ranger ISD
Middle and High School • Physics
$ SC41241 Friday 1:15PM - 4:20PM $5.00
**YOU LIGHT UP MY LIFE**
Learn how to incorporate fun and exciting spectroscopy activities into your physics or chemistry curriculum. Some of the demos include flaming ferris wheel and the poor man's spectroscope. Make and take session.
- Norma E. Moreno - Dallas ISD
- Stacy Foster - Dallas ISD
Middle and High School • Physical Science

SC41365 Friday 1:15PM - 4:20PM
**ENVIRONMENTAL ASSESSMENT OF YOUR TOWN - WATER, SOILS, ROCKS, AND POLLUTION**
Your students will use maps (provided) and Web resources to assess the environment of your town. How well are you protecting the environment? How safe are you from disasters?
- Susan D. Hovorka - Bureau of Economic Geology
All Levels • All Fields

SC41294 Friday 1:15PM - 4:20PM
**NOT JUST A FIELD TRIP, BUT A FIELD EXPERIENCE FOR YOUR STUDENTS.**
More than just a field trip, museums, zoo, and other science-rich informal learning institutions will showcase experiences that include pre and post visit resources and activities correlated of the TEKS.
- Vanessa Westbrook - Charles A. Dana Center
- Charlie Walter - Fort Worth Museum of Science and History
All Levels • Interdisciplinary Sciences

SC41013 Friday 1:15PM - 4:30PM
**ESCAPE FROM COOKBOOK LABS**
Come participate in and leave with engaging hands-on ideas for your classroom that will help move students away from structured labs toward more independence in experimental design. Door-prizes given!
- Judi Falen - Glencoe McGraw-Hill
Middle and High School • All Fields

SC41016 Friday 1:15PM - 2:45PM
**EVOLUTION AND COSMOLOGY; TEACHING THE STORY OF OUR ORIGINS**
Evolution and cosmology are central to modern science. This session will present some basic strategies for effectively teaching these fascinating subjects.
- John Koonz - Geobox
All Levels • Life Sciences

SC41046 Friday 1:15PM - 4:20PM
2 + 2 = SCIENCE
Designed for K-5 teachers featuring a variety of activities linking math and science.
- Lisa Batte - Harcourt School Publishers
Elem. School • Interdisciplinary Sciences

SC41032 Friday 1:15PM - 2:30PM
**INTRODUCING SEPUP’S FULL YEAR ISSUE-ORIENTED, HIGH SCHOOL LEVEL SCIENCE PROGRAM**
New! Join us for a hands-on overview of Science and Sustainability. Topics relate to human survival, material resources, energy needs, feeding the world, and population.
- Mark Koker - Lab Aids
High School • Interdisciplinary Sciences
$ SC41027 Friday 1:15PM - 5:30PM $10.00
**TEXAS NATURE TRACKERS - INVOLVE YOUR STUDENTS IN WILDLIFE RESEARCH**
Field Studies! Help TP&W biologists monitor amphibians, horned toads, monarchs, mussels, hummingbirds, and more. Get training and materials to begin monitoring projects with students. TEKS science process skills (1.1)(2.9)(3.4) + more.
- Ann Miller - Texas Parks and Wildlife
- Lee Ann Linam - Texas Parks and Wildlife
All Levels • Life Sciences
DNA FINGERPRINTING: WHO DONE IT?
Perform restriction digests of five DNA samples, use agarose electrophoresis to analyze banding patterns of DNA, and determine relatedness based on DNA evidence. Learn how restriction enzymes function to cleave DNA, how electrophoresis is used to separate and visualize DNA fragments, and how these techniques can be used to obtain a DNA fingerprint.
- Stan Hitomi - Bio-Rad Labs
- Kirk Brown - Bio-Rad Labs
- Dr. Patti Taranto - Bio-Rad Labs
High School • Life Sciences

UP, UP, AND AWAY!
Participants will construct and launch hot air balloons. Each participant will need to bring a glue stick. Door prizes will be awarded!
- Cheryl Willis - Houston ISD
All Levels • Interdisciplinary Sciences

FOSS AND TEKS- REVISED FOSS FOR GRADES 3-6
Experience “New Revised FOSS Program” for Grades 3-6. Includes student books (Science Stories), interactive FOSS web site, Spanish translations, & much more. TEKS Correlation, Pilot Information, Hand-outs & Door Prize.
- Winston Hopkins - FOSS Consultant
- Ellen Yates-Isbell - FOSS Consultant
Elementary School • Integrated/Interdisciplinary Science

ROCKS AND MINERALS FOR BREAKFAST WITH THE SCIENCE PLACE
Come enjoy a hands-on approach to teaching earth science 3rd to 8th grade using GEMS guides. Brought to you by the Science Place, Fair Park in Dallas. Great prizes!
- Raul Perez, Jr. - Frisco ISD
- Katy Henderson - The Science Place
Elem. School and Middle/ Jr. High School • Earth Science

INTRODUCING SEPUP'S FULL YEAR MIDDLE SCHOOL ISSUE ORIENTED SCIENCE COURSES
Join us in hands-on overview of Issues, Evidence and You and Science and Life Issues. Topics relate to water quality, material science, energy, our bodies, health/disease, genetics, and evolution.
- Mark Koker - Lab Aids
Middle/Jr. High School • Interdisciplinary Sciences

LIGHT & COLOR: HANDS ON - MINDS ON DEMONSTRATIONS
See how easily Ray Optics, Reflection, Refraction, Color Addition and Subtraction, and Diffraction may be taught. The Arbor Scientific Light Box will be utilized with lessons from the new Teachers Guide.
- Cary Busby - Arbor Scientific
High School • Physics

HERE’S LOOKING AT YOU, KID - FROM SPACE!
Space photography gives teachers a wonderful opportunity to teach topics already taught in the classroom from a totally different perspective.
- Laurie Murphy - Space Center Houston
All Levels • Interdisciplinary Sciences

WATER-ING YOUR CURRICULUM
Water quality professional facilitate a hands-on intro to the highly regarded Water Sourcebook (WS). All participants will receive a complimentary WS and a supplemental TEKS correlation guide.
- Karen Bick - Water Environment Association of Texas
All Levels • Interdisciplinary Sciences

REAWAKENING TEACHING/LEARNING IN THE SCIENCE CLASSROOM - HANDS-ON SCIENCE FOR SUCCESS
Patty Bray will guide teachers through materials that support the National Science Standards and students’ learning styles as well as expanding their scientific exploration skills.
- Patty Coleman Bray - Gourmet Curriculum Press
Elem. School • Interdisciplinary Sciences
SAND DETECTIVES
Utilizing beach sand, the participants will identify the remains of organisms from Caribbean coral reefs. Digital images of your samples will be made. Participants will then reconstruct the various reef environments based on sand samples. Take-away samples provided.
• Fred Fifer - University of Texas at Dallas
• Homer Montgomery - University of Texas at Dallas
All Levels • Earth Science
$ SC41075 Friday 2:20PM - 5:25PM $15.00

PHUNDAMENTAL PHYSICS WITH A PHYZZ
Teachers will explore and learn methods, demonstrations, and simple hands-on activities covering such topics as sound, motion, surface tension, and inertia that are fun and motivational for them and their students.
• Denise Delboy - Retired - Beaumont ISD
• Becky Hannegan - Bridge City ISD
• Mary Jane Moore - Port Neches Grove
Elem. School • Physics
$ SC41315 Friday 2:20PM - 5:25PM $20.00

SEPUP'S SUPPLEMENTARY MODULES
SEPUP's twelve supplementary modules highlight the science behind environmental issues; groundwater solution, toxic waste disposal, plastics, food additives, etc. Join us for a hands-on overview of this early secondary program.
• Mark Koker - Lab Aids
Elem. school • Interdisciplinary Sciences
$ SC41537 Friday 3:25PM - 4:45PM

GUESS WHO'S COMING TO DINNER
Have a hands-on adventure exploring the living community of animals associated with an oyster reef and receive handouts, TEKS-considered lesson plans and information on Sea Camp.
• Judy Wern, Ph.D. - Sea Camp - Texas A&M University at Galveston
All Levels • Life Sciences
$ SC41097 Friday 3:25PM - 4:20PM

NEW GENETIC ACTIVITIES FROM FLINN SCIENTIFIC
Teacher developed and student tested genetic activities will make it easier to teach fundamental genetic concepts. Activities range from basic genetic topics to advanced placement activities and include paper/pencil activities as well as advanced lab activities.
• Norris Ross - Flinn Scientific, Inc.
High School • Life Science
$ SC41075 Friday 2:20PM - 5:25PM

CAST 2000 Session Listing

CAST 2000 Program - Page 12
TWINKLE, TWINKLE . . . THE SKY IS FULL OF LITTLE STARS

A workshop of hands-on activities, music, and movement, drama, fingerplays, and center activities designed to get kids excited about the solar system and space exploration. Specifically geared for K-3, the ideas can be adapted for all grade levels.

- Laurie Drum - Navasota ISD
- Dee Mock - Navasota ISD

Elem. School • Earth Science

VOLVO'S AROUND-THE-WORLD YACHT RACE: WHAT A GREAT WAY TO TEACH MATH, SCIENCE, AND GEOGRAPHY!

Volvo is sponsoring the next two around-the-world yacht races; and they will have lots of activities for teachers and students. Learn to follow the yachts, get information from them, integrate the race into your classroom activities, and work with thousands of other math, science, and geography teachers from around the world.

- Robert Stewart - Texas A&M University
- Margaret Hammer - Texas A&M University

Middle/Jr. High School • Interdisciplinary Sciences

ATTACK OF THE KILLER PINE TREES OR HOW I LEARNED TO LOVE DIVERSITY

Investigating how pine trees aggressively defend their territory is an activity used to teach life science concepts in this exciting curriculum under development.

- Teri Dannenberg - Lawrence Hall of Science, University of California

Middle/Jr. High School • Life Science

MAGICAL WORLD OF SCIENCE

Various demonstrations of physical and chemical science.

- Marjorie Verner - N/A
- Elizabeth El Turk - N/A
- Daryl Hegedus - NISD
- Erika Moreno - N/A

Elem. and Middle/Jr. High School • Physical Science

MENDELEEV PERIODIC TABLE SIMULATOR

Watch the periodic table develop before your eyes! Uses cards to teach classification and organization of elements. Use this lab exercise as an exciting new method to introduce your students to the periodic table!

- Ronald E. Hammond - Carolina Biological

High School • Chemistry

HOW TO PRODUCE YOUR OWN CHEMISTRY SHOW

All the information and inspiration you need to have your class present their own chemistry show.

- Patti Roberts - Whitehouse ISD

High School • Chemistry

BEFORE YOUR VERY EYES

You will participate in hands-on activities that demonstrate physical and chemical changes. These activities are recommended for middle school students. Grades 6-8. TEKS 7.2, 7.7A.

- Lisa Ransom - Jacksonville ISD

Middle/Jr. High School • Physics

A POLYMER FRENZY

Use this practical unit to teach beginning organic chemistry to middle school students using polymer chemistry. Find out about exciting demonstrations, hands-on activities, lab exploration, and the "SLIME OLYMPICS."

- JoBeth Cloud - Aledo ISD
- Nancy Palmer - Mansfield ISD

Middle/Jr. High School • Chemistry

THE SPECTRONIC 20 IN THE CHEMISTRY LAB

Learn about the many different experiments that can be performed using the Spec 20 or its CBL equivalent.

- Robert Sader - Austin ISD
- Marcie Thiessin - Austin ISD

High School • Chemistry

MEETING THE NATIONAL STANDARDS AND TEKS WITH INSECTS IN THE CLASSROOM

Session participants will be involved in hands-on activities that focus on insects and their use in the classroom. Activities meet the National Science Standards and the TEKS. 3-4 (8); 5 (9)

- Dr. Dawn Parker - Texas A&M University

Elem. School • Life Science
CAST 2000 Session Listing

**HOW TO STUDY A FROG FROM RESEARCH TO DISSECTION**

This is a complete study of the frog designed for 6th grade students. It is teacher friendly and has been tested for over 18 years in the classroom. The unit can be used as an across-the-curriculum study or self-contained class. The lessons cover from researching the Leopard frog to writing the report. Each subject area is covered to make a well rounded research paper. Before dissection is undertaken, extensive concept mapping notes are taken over each system of the frog. Lessons include test, experiments, and TEKS.

- Judy McIernerney - Copperas Cove ISD
- Ina Rivera - Copperas Cove ISD

**THE CUTTING EDGE - HANDS-ON SCIENCE - THE BEST SUPPLEMENTAL CURRICULUM BOOKS & GADGETS**

A brief explanation & demonstration of outstanding resources from a variety of publishers & manufacturers guaranteed to stimulate, fascinate, & excite your students about science.

- Bob Krueger - SMG Inc.

**ACTIVE ASSESSMENT FOR ACTIVE SCIENCE**

Does your assessment accurately measure the abilities of your students? Join us to receive many strategies of how to assess student abilities through unique evaluation tools.

- Lisa Duvall - Ron Jon Publishing
- Cindy Martinez-Bagwill - Pasadena ISD

**HANDS-ON LOW COST SCIENCE PROFESSIONAL DEVELOPMENT: LEARNING BY DOING DURING THE SUMMER**

Learn about a variety of hands-on summer opportunities that will help you teach scientific concepts and research skills in your classroom, all personally experienced by the presenter. TEKS K-6 (all).

- Mary Nied Phillips - Waco ISD

**FISHES DON’T NEED FLOATIES**

Hold your breath! Fishes don’t need floaties and neither do you to uncover underwater mysteries of fishes. Prepare your students to become young conservationists through hands-on inquiry lessons. TEKS 1AB; 2A-E; 3D; 4AB, 8AB, and NSE standards.

- Sandra Keel - Fort Worth Zoological Association
- Cindy McMahon - Fort Worth Zoological Association

**AMARILLO COLLEGE NATURAL HISTORY MUSEUM CHECKOUT KITS & BIOLOGY PROFESSIONAL DEVELOPMENT INSTITUTE**

The workshop will showcase the ACNHM checkout kits, the Biology Professional Development Institute, and activities that are correlated to the TEKS.

- Dan Porter - Amarillo College

**INTEGRATING MATH & SCIENCE USING NATURE**

This session will provide a brief overview of an integrated, hands-on math/science enrichment program for K-4 students. Participants will explore several activities illustrating different strategies of integration.

- Karen Mattingly - Rock Prairie Elementary

**A NEW STAR ON THE HORIZON - THE INTERNATIONAL SPACE STATION**

The International Space Station will be an earth orbiting laboratory assembled in space by 16 nations. Find out how you can bring the station down to your classroom with exciting, hands-on activities.

- Susan Tortotici - Space Center Houston

**HERE’S LOOKING AT YOU, KID - FROM SPACE!**

Space photography is a phenomenal tool for teaching many interdisciplinary subjects for all grade levels. Learn how to access these photos from the Internet for your classroom.

- Laurie Murphy - Space Center Houston

**TEA UPDATE -- TEXAS EDUCATION AND ACCOUNTABILITY**

Now in its sixth year, the Texas Public School accountability system received national recognition from a variety of organizations in 1999. This national recognition was due to continued improvement in student performance on national and state assessments, especially among minority and economically disadvantaged students! You have been a major part of the success of Texas Education. Come hear about the gains and challenges facing K-12 Education in Texas. Handouts will include the Pocket Edition of the Texas Public School Statistics.

- Chris Castillo-Comer - Texas Education Agency
- Irene Pickhardt - Assistant Director of Science - TEA

**WHAT RESOURCES DOES THE DANA CENTER HAVE FOR ME?**

Attend this session and learn about the various resources available for K-12 educators from the Dana Center.

- Mary Jane V. Schott - Charles A. Dana Center
TEACHING CLEAN AIR: PRACTICAL APPLICATIONS OF ENVIRONMENTAL TOPICS

The Conservancy will use its curriculum module to present environmental topics and activities for middle school science teachers. Free lesson plans and worksheets are available.

- Heidi Taylor - The Clean Air Conservancy

Elem. school Middle/Jr. High School • Earth/Space Science

CREATING BENEFICIALLY WILD CLASSROOMS

The presenters will demonstrate how to care for organisms in the classroom. Participants will learn hands-on activities to integrate organisms into learning experiences and bring nature into the classroom. Applicable to TEKS.

- Dr. Betsy Carpenter - McKinney Roughs
- Jennifer McCay - McKinney Roughs

All Levels • Life Science

ENRICH YOUR SCIENCE CLASSES WITH EXPLORATIONAL EXAMPLES!!

Learn about activities using Texas and Gulf of Mexico organisms (fish, shrimp, sea turtles, marine mammals, etc.) from a marine education resource manual from Texas A&M University Sea Grant Program.

- Violetta Lien, Ph.D. - University of Texas

Middle and High School • Life Science

RAINFOREST: LAYERS OF LEARNING

Transform your elementary classroom into one of the world’s most ecologically diverse regions. Use a layered learning approach that raises awareness about the rainforests’ value to our planet.

- Jo Williams - Fort Worth ISD
- Roberta Marshall - Fort Worth ISD

Elem. School • Earth Science

ENHANCING EARTH SCIENCE- USING NATIONAL GEOGRAPHIC PRODUCTS IN AN INTEGRATED SETTING

Participants will be shown how to use integrated thematic approaches for teaching rocks and minerals using National Geographic School Products. Participants will receive handouts/lesson activities.

- Philip Rodriguez - Southwest ISD

Middle/Jr. High School • Earth Science

CHANGES OVER TIME

This is an inquiry based lesson that incorporates technology through the use of videos, HyperStudio and PowerPoint presentations. Investigations into erosion, dissolving, and weathering are included.

- Cheryl Gillenwater - Corpus Christi ISD
- Don Gillenwater - Tuloso-Midway ISD

All Levels • Earth Science

WELL FED WILDLIFE: USING THE MARINE ENVIRONMENT TO TEACH LIFE SCIENCE

Intriguing biological, geological, and man-made items from the waters and shores of the Gulf stimulate the curiosity of most students (PK-12). TEKS 112.2B (K.7); 112.3B (1.7); 112.4B (2.7); 112.5B (3.6); 112.6B (4.6); 112.7B (5.8); 112.226 (6.8), 112.23B (7.8); 112.24B (8.10); 112.42B (6); 112.45B (6); 112.47B (4,5,6,7); 112.62B; 112.63B; 112.64B.

- Kathleen Holley - North Crowley H.S.
- Trey Seastrunk - Active Science Unlimited, Inc.

All Levels • Chemistry

OUT TO SEA

Would you like to be a “Teacher at Sea?” Come and find out about conducting scientific research aboard a NOAA ship! Ocean floor mapping activities/labs also included! (TEKS 8.2, 8.3-8.5, 8.12, 8.14).

- Tammy Earnest - Lewisville ISD
- Mona Rouk - Lewisville ISD
- Celeste Steinman - Lewisville ISD

All Levels • Earth Science

GIS IN THE CLASSROOM: GETTING STARTED

A brief overview describing Geographic Information Systems and how it can be used in the classroom.

- Melynda Ann Bailey - Texas A&M University

Middle/Jr. High School • Interdisciplinary Sciences

THE MAGIC OF SEA TREASURES IN THE CLASSROOM

Intriguing biological, geological, and man-made items from the waters and shores of the Gulf stimulate the curiosity of most students (PK-12). TEKS 112.2B (K.7); 112.3B (1.7); 112.4B (2.7); 112.5B (3.6); 112.6B (4.6); 112.7B (5.8); 112.226 (6.8), 112.23B (7.8); 112.24B (8.10); 112.42B (6); 112.45B (6); 112.47B (4,5,6,7); 112.62B; 112.63B; 112.64B.

- William R. Younger - Texas Marine Advisory Services
- John O’Connell - Texas Marine Advisory Services
- Rich Tillman - Texas Marine Advisory Services

All Levels • Life and Earth Sciences
CAST 2000 Session Listing

WK42004 Friday 1:15PM - 2:10PM

SCIENCE ALIVE EARN $
Students earn money by teaching others about science concepts through hands-on exploration on a Saturday.
- Debra Heath - Carroll ISD
- Jill Jetton - Carroll ISD
- Sherry Sickler - Carroll ISD
All Levels • Interdisciplinary Sciences

WK42142 Friday 1:15PM - 2:10PM

WORKSTATION WONDERS: LIFE SCIENCE FOR PRIMARY KIDS
Teachers will experience life science workstations with an emphasis on process skills, TEKS (2A-E, 4, 6), and integration of subject areas. Participants will leave with a handout of ideas.
- Suzanne Milstead - Alief ISD
- Cindy Wilson - Alief ISD
Elem. School • Life Science

WK42230 Friday 1:15PM - 5:00PM

LET'S BUGGIE
Let's Buggie is an interactive session designed for upper elementary and middle school teachers interested in activities for the classroom that incorporate insects. Teachers will share hands-on activities with making collecting equipment and using insects in the classroom. Teachers are invited to come and go at this session.
- Dr. Pete Teel - Texas A&M University
- Dr. John Jackman - Texas A&M University
Elem. School and Middle/Jr. High • Life Science

WK42055 Friday 1:15PM - 2:10PM

CLASSROOM WONDERS: WISCONSIN FAST PLANTS AND C-FERN
Experience hands-on, minds-on activities. Receive free materials. Quick growing plants are ideal teaching tools for exploring life cycles, environmental effects, genetic variation, population biology and more while teaching students process of doing science.
- Brian Graizbr - Carolina Biological
All Levels • Life Science

WK42161 Friday 1:15PM - 2:10PM

WHIZ-BANG CHEMISTRY
Several dandy, dramatic demos. Most are easy to prepare and require a minimum of cleanup and disposal. The handout contains some teaching tips that have worked for me.
- Tom Kinkead - Archdiocese of San Antonio
High School • Chemistry

WK42239 Friday 1:15PM - 2:10PM

COMPOSTING - A SCIENTIFIC PROCESS
Composting is an outdoor, hands-on, long-term project that can easily flow through the steps of the scientific process. Grades 4-8 include TEKS 1-5 including many others at specific grade levels.
- Gipsy Schneider - Hawkins ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK42008 Friday 1:15PM - 2:10PM

MIND-BOGGLING BALANCE
Equilibrium is a fundamental concept in chemistry that can be mind-boggling to students. During Mind-Boggling Balance, a collection of resources, notes, activities, demonstrations, experiments and strategies will be illustrated. Participants will receive a copy of the materials.
- Rhonda M. Alexander - Tyler ISD
Middle and High School • Chemistry

WK42324 Friday 1:15PM - 2:10PM

THE SPECTRONIC 20 IN THE CHEMISTRY LAB
Learn about the many different experiments that can be performed using the Spec 20 or its CBL equivalent.
- Robert Suder - Austin ISD
- Marcie Thiessen - Austin ISD
High School • Chemistry

WK42284 Friday 1:15PM - 2:10PM

IT'S A NATURAL
Presenters will model the learning cycle as they share 3 hands-on activities; missing moths, cardus rectangulatus, and bird beak seed lab, that help students grasp the concept of natural selection.
- Janet Mangin - Lewisville ISD
- Estella Rupard - Lewisville ISD
Middle and High School • Life Science

WK42153 Friday 1:15PM - 2:10PM

KIDS KICK WITH CHEMISTRY
Usable chemistry ideas presented for Grades 4-6 Teachers of Science. Witness motivating demonstrations, experience hands-on activities, learn strategies for successful labs, and receive tips for reviews. Handouts included. (TEKS 1A, 2A-E, 4AB, 7AB).
- Nona Hall - Judson ISD
- Maralee Wilmotte - Judson ISD
Elem. School • Chemistry

WK42117 Friday 1:15PM - 2:10PM

ARE YOU USING YOUR PROCESS SKILLS TO SOLVE SCIENTIFIC PROBLEMS?
In a round robin lab setting, you will be given examples of process skills (classifying; collecting data; measuring; predicting) as a hands-on presentation. We will emphasize TEKS 1-4.
- Celeste Steinman - Lewisville ISD
- Mona Rouk - Lewisville ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK42001 Friday 1:15PM - 2:10PM

TEACH SCIENCE AND STILL COVER TAAS? YOU BET!
Integrated units, focused on science, is the most exciting way to cover the elementary TEKS. Let me show you how! Handouts and ready to use activities.
- Donna Wise - Jacksonville ISD
Elem. school • Interdisciplinary Sciences

WK42551 Friday 1:15PM - 2:10PM

FOSS- MIDDLE SCHOOL- OVERVIEW & ACTIVITIES FROM THE NEW FOSS-MS MINI-COURSES
Experience “FOSS-Middle School Program” for Grades 6-8. Enjoy an active session led by Forth Worth FOSS-MS Trial Center Teachers. TEKS Correlation, FOSS-MS Handouts, & Door Prize.
- Melissa Gibbons - Dunbar High School
- Barbara A. Cabbil - Morningside Middle School
- Verne Isbell - FOSS Program Rep.
Middle School/Jr. High • Integrated/Interdisciplinary Science
CAST 2000 Session Listing

WK42195  Friday  1:15PM - 2:10PM

NASA ASTROBIOLOGY -- LOOKING FOR LIFE IN EARTH AND SPACE ROCKS
Share new hands-on, cross-discipline, earth science and biology activities for grades 5-10. Examine biomarkers research through activities developed by teacher/scientist teams from JSC-NASA Astrobiology Institute.
• Jaclyn Allen - NASA Johnson Space Center
• Becky Collier - Killeen ISD
• Cheryl Pittman - Pearland ISD
• Karen Stocco - Houston Museum of Natural Sciences
All Levels • Interdisciplinary Sciences

WK42328  Friday  1:15PM - 2:10PM

SCIENCE HISTORY: NIKOLA TESLA
Part one in a planned series on scientists through history. If you have to pick a starting point, why not the most controversial figure in American science history?
• Brian Self - Sherman ISD
High School • Science History

WK42092  Friday  1:15PM - 2:10PM

JUMPIN' JEHOSEPHAT! ELEMENTARY TEACHERS CAN TEACH INQUIRY - BASED SCIENCE.
K-8 teachers and other interested people will use spring-loaded hopping frogs and meter sticks to explore integrated, inquiry-based science instruction and learning.
• Glenda Love Bell - Texas A&M - Commerce
Elem. School and Middle/Jr. High School • Interdisciplinary Sciences

WK42150  Friday  1:15PM - 2:10PM

INQUIRY FOR YOUNG MINDS
How to teach science inquiry for the young minds. Learn the "in's" and "out's" of inquiry based science for grades K-3. This session will focus on questioning strategies and activities to incorporate the TEKS.
• Diana Morgan - Houston ISD
Elem. School • Interdisciplinary Sciences

WK42299  Friday  1:15PM - 2:10PM

SCIENCE INDOORS AND OUT
This session explains how to bring labs that students perform outside into the classroom to help students explain what they did at a higher level of thinking.
• Lila Walling - Lamar Consolidated ISD
• Diane Brewer - Lamar Consolidated ISD
• Leslie McDowell - Lamar Consolidated ISD
All Levels • Interdisciplinary Sciences

WK42546  Friday  1:15PM - 2:10PM

INTEL FORMS BUSINESS/EDUCATION PARTNERSHIP; TECHNOLOGY EDUCATION FOR TEACHERS
Intel Teach to the Future program in Texas operates 2000 through 2002. Using the train-to-trainer model and partnering with other computer industry giants, program is part of Intel’s worldwide initiative to address barriers that teachers face in effectively applying technology to improve learning.
• Jan Fernandez - Texas A&M University
• Terri Metcalf - Texas A&M University
All Levels • Integrated/Interdisciplinary Science

WK42141  Friday  1:15PM - 2:10PM

DESIGNED BY NATURE . . . USING PLANTS TO DEMONSTRATE PHYSICAL SCIENCE CONCEPTS
Discover how many modern inventions have been inspired by adaptations plants have developed to survive. Use real-life applications to integrate the natural and physical sciences.
• Pat Harrison - Botanical Research Institute of Texas
• Dr. Fiona Norris - Fort Worth Botanic Garden
All Levels • Interdisciplinary Sciences

WK42367  Friday  1:15PM - 2:10PM

A SPOONFUL OF SUGAR
If you have trouble teaching concepts such as protein synthesis, mitosis, and meiosis, this session is for you. By using simple manipulatives, you can help your students understand abstract concepts with ease. TEKS: 7E, 8C, 12.
• Lisa Gathright - Pine Tree ISD
• Ivy Crawford - Pine Tree ISD
High School • Life Science

WK42310  Friday  1:15PM - 2:10PM

PACKING A SPACE SHUTTLE PAYLOAD
In this hands-on activity, use problem-solving skills, algebra and geometry to determine where payloads need to be placed in the shuttle to maintain an acceptable center of mass.
• Paul Mlakar - Space Center Houston
High School • Interdisciplinary Sciences

WK42081  Friday  1:15PM - 2:10PM

ARE YOU "FRIZZLED" WITH MIDDLE SCHOOL SCIENCE?
Select Science Series presents unique activities and demos to fire up your classroom! Come learn some new strategies for teaching middle school science. Vertically aligned, TEKS aligned, and teacher friendly.
• Lisa Duvall - Ron Jon Publishing
• Cindy Martinez - Padadena ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK42370  Friday  1:15PM - 2:10PM

INTRODUCTION OF THE SOILS EXPLORER SOFTWARE PROGRAM AND ITS CLASSROOM APPLICATIONS
We will demonstrate how the USDA/NRCS Soils Explorer package easily facilitates the use of digital aerial photograph, digitized soil maps, and soil interpretations for various land use planning activities.
• Glen Chervenka - USDA-Natural Resources
• Rick P. Leopold - USDA-Natural Resources Conservation Service
High School • Earth Science

WK42549  Friday  1:15PM - 2:10PM

USING GIS IN SCIENCE EDUCATION
This session will describe GIS, share examples of its use in science education, and discuss tools and resources available. Computer demonstrations will show data and projects, such as earthquake data monitoring, water quality research, and demographic analysis. Participants will receive a CD of GIS resources, data, and software.
• George Dailey - ESRI Schools & Libraries Program
All Levels • Integrated/Interdisciplinary Science
CAST 2000 Session Listing

WK42331 Friday 1:15PM - 2:10PM
NEW CURRICULUM MATERIALS FOR IPC
The NSF-supported modular curriculum, Active Physics, is joined with the just-released Active Chemistry program to provide Texas educators with a standard-based, inquiry-driven course for Integrated Physics and Chemistry.
• Jon Harkness - It's About Time Publishing
High School • IPC
WK42203 Friday 1:15PM - 2:10PM
PROJECT CLEAR: AN INSTRUCTIONAL PLANNING TOOL FOR SCIENCE
Clarifying Learning to Enhance Achievement Results: (CLEAR). This innovative session will provide examples from the Houston Independent School Districts Science Project CLEAR grades K-8. This planning tool clarifies what is to be taught and assessed in science based on state science curriculum requirements.
• Nedarol Bellamy - Houston ISD
• Sandy Antalis - Houston ISD
• Janice Arceneaux - Houston ISD
Elem. School and Middle/Jr. High • Interdisciplinary Sciences
WK42040 Friday 1:15PM - 2:10PM
BLOW INTO SCIENCE WITH PUFFMOBILES AND OTHER AERODYNAMIC CREATIONS
Experience engaging activities to stimulate students in understanding concepts of flight, aerodynamics, energy, friction, and forces. Handouts and cross-curricular activities will be provided.
• Patricia Wiercinski - Houston ISD
Elem. School • Interdisciplinary Sciences
WK42368 Friday 1:15PM - 2:10PM
MOVERS AND SHAKERS
Participants will receive three literature-based interdisciplinary units. A study of natural phenomena will form the base for lessons that include content-area TEKS as well as those required for technology.
• Jennifer Hanna - Del Valle ISD
• Debra Arroyo - Del Valle ISD
• Sami Kinsey - Del Valle ISD
• Charlene Postell - Del Valle ISD
Elem. School • Earth Science
WK42273 Friday 1:15PM - 2:10PM
TEA SCIENCE UPDATE --CURRICULUM K-12
Curricular issues involving certification, TEKS implementation, safety in the science laboratory, Facilities, Texteams, Regional Collaboratives for Excellence in Science Teaching, staff development and more will be discussed. Participants will receive K-12 TEKS charts, TEKSerts 2000 booklets, website information handouts, certification update sheets, Environmental education materials, and many more timely handouts. Don't miss this session!
• Chris Castillo-Comer - Texas Education Agency
• Irene Pickhardt - Assistant Director of Science - TEA
All Levels • Other
WK42069 Friday 1:15PM - 2:10PM
CLASSROOM, LABORATORY, AND FIELD INVESTIGATION SAFETY PROCEDURES FOR ELEMENTARY SCHOOL TEACHERS
This session will provide classroom teachers with the safety procedures, rules, regulations, and guidelines for conducting investigations in the laboratory, classroom, and during field experiences. Participants will receive a copy of the Texas Safety Standards Manual.
• James W. Collins - Charles A. Dana Center
• Donna Wise - Jacksonville High School
Elem. School • Other
WK42107 Friday 2:20PM - 3:15PM
AN INTRODUCTION TO THE TREASURES OF TROPICAL RAINFORESTS
Experience and explore the wonderment of tropical rainforests with emphasis on the application and significance of the plant/animal relationship and ALL they offer.
• Sandy Richbook - Moody Gardens
• Cheryl Watson - Lewisville ISD
All Levels • Interdisciplinary Sciences
WK42289 Friday 2:20PM - 3:15PM
WHAT'S COOKING IN SPACE?
Eating and drinking are favorite everyday activities on Earth. However, how they are packaged and eaten is greatly affected by the unique microgravity environment of space. Learn about food preparation and menu development for space flight. Handouts include Space Food and Nutrition Teacher Activity Guide.
• Angelo A. Casaburri - Aerospace Education Services Program
Elem. and Middle/Jr. High School • Life Science
WK42398 Friday 2:20PM - 3:15PM
INTRODUCING THE NEW NSF-SUPPORTED EARTH SCIENCE CURRICULUM PROJECTS
Two new NSF-supported curriculum projects, Investigating Earth Systems (targeted for grades 5-8) and EarthComm (targeted for grades 9-12) will be introduced. TEKS: Earth Science grades 6-8, EMO)
• Jon Harkness - It's About Time Publishing
Middle/Jr. High School and High School • Earth
WK42197 Friday 2:20PM - 3:15PM
OZONE AND THE WEATHER. WHAT'S THE CONNECTION?
Integrated series of lab activities and technology applications designed to teach upper elementary and middle school students basic concepts relating ozone levels to weather conditions and health and environmental concerns. Handouts containing lab sheets, Internet sites, bibliography, materials list, applicable TEKS, and suggestions for cross curriculum integration will be provided.
• Rebecca Williams - Denton ISD
• Elaine Everett - Denton ISD
Elem. School and Middle/Jr. High School • Earth Science
WK42341 Friday 2:20PM - 3:15PM
GIS IN THE CLASSROOM: GETTING STARTED
A brief overview describing Geographic Information Systems and how it can be used in the classroom.
• Melynda Ann Bailey - Texas A&M University
Middle/Jr High School • Interdisciplinary Sciences
WK42045 Friday 2:20PM - 3:15PM
TECHNOLOGY . . . WE DID IT!
This session describes a successful technology program and how it was implemented in College Station ISD. A campus facilitator and two teachers discuss goals, training, and integration.
• Danielle Benjamin - College Station ISD
• Jenny Walterscheid - College Station ISD
All Levels • Interdisciplinary Sciences
WK42122 Friday 2:20PM - 3:15PM
MAKING A GREAT BIG IMPACT WITH JUST A LITTLE BIT OF STUFF
This hands on session will involve lessons dealing with volume, motion, density, magnetism, and pressure. Lab set-ups, student worksheets, teacher's guides and TEKS alignment will be provided to each participant.
• Shelley Prinipe - Hawkins ISD
Middle/Jr. High School • Physics
**BRAIN STATIONS**

Teachers will be "actively" involved with between 30-40 mini-learning stations dealing with the nervous system. A complete Brain Station "guide" will be given to all participants with instructions and other brain "goodies". Students will definitely not "think" they are ... learning!!

- **Kathy Ingram - Lewisville ISD**
- **Marilyn Riedinger - Lewisville ISD**

**MIDDLE/JR. HIGH SCHOOL • INTERDISCIPLINARY SCIENCES**

**WK42177** 2:20PM - 3:15PM

**MAGNIFICENT, MARVELOUS, MOTIVATING MAGNETS!**

This hands-on session will REV-UP your science lessons with fun and easy, yet relevant magnetism labs. Lab kit, student worksheets, teacher’s guides and TEKS alignment are provided to each participant.

- **Rachel Canfield - Lindale ISD**
- **Elephant School • Physics**

**WK42127** 2:20PM - 3:15PM

**"SOCK IT TO 'EM" FUN AND CREATIVE IDEAS FOR THE STUDY OF PLANTS!**

Bring the creative abilities of your students to the forefront with the construction of "sock-heads." It is fun! It is creative! It is science! TEKS 1.AB, 2.ABCD, 10.C, 11.B, 12.C, 13.AB.

- **Peggy Henson - Dallas Public Schools**
- **Tanya Tovar - Dallas Public Schools**
- **ALL LEVELS • LIFE SCIENCE**

**WK42243** 2:20PM - 3:15PM

**AQUARIUM EXPERIMENTS FOR AQUATIC SCIENCE, BIOLOGY, AND ENVIRONMENTAL SCIENCE**

Laboratories comparing fresh and salt water aquariums will be demonstrated. Laboratory investigations involving scientific method, data collection, and organism culture will be introduced.

- **Elaine L. Smith - College Station ISD**
- **HIGH SCHOOL • LIFE SCIENCE**

**WK42054** 2:20PM - 3:15PM

**WORKING WITH WOWBUGS**

Simple to use and excellent for hands-on science activities. Short developmental period allows investigations for cooperative learning and inquiry-based activities. Establish a culture. Receive sample materials. Meets National Science Standards.

- **Brian Grajzar - Carolina Biological**
- **ALL LEVELS • IPC, PHYSICS, CHEMISTRY**

**WK42175** 2:20PM - 3:15PM

**CHEMISTRY DEMOS FOR CRITICAL THINKING**

This session will show several chemistry demos that will enrich and demonstrate chemistry concepts and encourage critical thinking.

- **R. Vasan - Lewisville ISD**
- **Loydeen Fadely - Lewisville ISD**
- **HIGH SCHOOL • CHEMISTRY**

**WK42211** 2:20PM - 3:15PM

**ALL STRESSED OUT - EXPLORING LECHATTELIER'S PRINCIPLE**

Come join us for a variety of hands-on activities for teaching the concept of equilibrium. Perfect for general or Pre-AP Chemistry. Detailed handouts (and answer keys!) provided.

- **Pamela Rodgers - Azle ISD**
- **Debbie Byrd - Azle ISD**
- **Laurie Wheeler - Azle ISD**
- **HIGH SCHOOL • CHEMISTRY**
Registration & Housing Forms

October 12-14, 2000
College Station, Texas
REGISTRATION
We are offering online registration!
We apologize for the tight schedule, but online registration will begin August 1, 2000 and close September 6, 2000.
Registration will be first come, first served based on date received.
Advance Rate registration forms must be postmarked on or before September 6, 2000.
Forms postmarked after September 6, 2000 will be returned and you will have to register on site.
You will receive a registration confirmation by mail.

COMPLETING REGISTRATION FORMS
You may complete your registration form online at http://www.statweb.org
Each person registering for the conference must complete a registration form.
Only register one person per form. Incomplete forms or forms submitted without payment will be returned.
If you will be attending any ticketed events, social events, or are adding or renewing an affiliate membership,
you must complete the appropriate forms and send them in with form 1.
When choosing field trips and short courses, please make sure that there are no time conflicts.
Check your math carefully, and remit one check to cover the cost of registration, dues, short courses, and field trips.
Print out your online registration or make copies of your registration forms before mailing.

Mail registration forms and payments to:
CAST 2000
P.O. Box 10194
College Station, TX 77842

Registration confirmations by September 25, 2000. If you do not receive your confirmation by October 6, 2000, please call Conference Management Services at (979) 693-6000.

ON-SITE REGISTRATION
On-site registration will be held in the Reed Arena.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
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<tbody>
<tr>
<td>Thursday</td>
<td>8:00 am – 7:00 pm</td>
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<tr>
<td>Friday</td>
<td>7:00 am – 5:00 pm</td>
</tr>
<tr>
<td>Saturday</td>
<td>7:30 am – 10:30 pm</td>
</tr>
</tbody>
</table>

Registration on site will not guarantee availability of field trips or short courses.
Be sure to complete the necessary forms before you step up to the counter.

REFUNDS
No refunds will be made after October 1, 2000. Requests for refunds must be made in writing and postmarked on or before October 1, 2000. Refunds for early registration ticketed events will be made only if they are filed as of postmarked early registration date or in the event of cancellation. You will receive notification of any refunds in your registration packet.
CAST 2000
October 12-14 • College Station
REGISTRATION AND STAT MEMBERSHIP APPLICATION
REGISTER ONLINE AT http://www.statweb.org

NOTE: This is page one of a four-page form.
ALL COMPLETED PAGES MUST BE SUBMITTED WITH FORM 1
Forms which are missing information will NOT be processed.

<table>
<thead>
<tr>
<th>Name-Last</th>
<th>First</th>
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<tbody>
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<td>STAT I.D. (your social security number)</td>
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<td>City</td>
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<td>ESC Region</td>
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<td>Email</td>
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Job Description (Mark all that apply)

<table>
<thead>
<tr>
<th>STUDENT TEACHER</th>
<th>TEACHER</th>
<th>SUPERVISOR/CONSULTANT</th>
<th>DEPARTMENT HEAD</th>
<th>PRINCIPAL/ADMINISTRATOR</th>
<th>COLLEGE/UNIVERSITY PROFESSOR</th>
<th>SCIENCE SPECIALIST</th>
<th>STUDENT</th>
<th>BUSINESS</th>
<th>RETIRED</th>
<th>NONE OF THE ABOVE</th>
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</thead>
<tbody>
<tr>
<td>STUDENT TEACHER</td>
<td>TEACHER</td>
<td>SUPERVISOR/CONSULTANT</td>
<td>DEPARTMENT HEAD</td>
<td>PRINCIPAL/ADMINISTRATOR</td>
<td>COLLEGE/UNIVERSITY PROFESSOR</td>
<td>SCIENCE SPECIALIST</td>
<td>STUDENT</td>
<td>BUSINESS</td>
<td>RETIRED</td>
<td>NONE OF THE ABOVE</td>
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</table>

Grades Taught (Mark all that apply)

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</table>

Subjects Taught (Mark all that apply)

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<tr>
<th>ELEMENTARY SCIENCE</th>
<th>INTEGRATED SCIENCE (K-8 ONLY)</th>
<th>ANATOMY &amp; PHYSIOLOGY</th>
<th>BIOLOGY</th>
<th>IPC (INTEGRATED PHYSICS &amp; CHEMISTRY)</th>
<th>PHYSICS</th>
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</thead>
<tbody>
<tr>
<td>GEOLOGY/METEOROLOGY/OCEANOGRAPHY</td>
<td>ENVIRONMENTAL SCIENCE</td>
<td>AP (ADV. PLACEMENT); IB (INTL. BACCALAUREATE)</td>
<td>INFORMAL SCIENCE EDUCATION</td>
<td>TEACHER EDUCATION</td>
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</tbody>
</table>

$65.00 Advance Rate (Must be postmarked by 9/6/2000)
$75.00 Regular Rate (Registration Onsite)
$20.00 Non-Teaching Spouse/Family Rate

Please note: The Advance and Regular rates include access to all Workshops, General Sessions, and Exhibit Hall, as well as a complimentary one year STAT membership. The Spouse/Family rate includes access to General Sessions and Exhibit Hall ONLY. Ticketed events may be purchased separately as space allows.

Do not mail forms after September 6, 2000.
After this date, all registrations must be done on site.

REGISTRATION
MAIL FORMS AND PAYMENT INFORMATION TO:
CAST 2000
P.O. BOX 10194
COLLEGE STATION, TX 77842
Do not mail forms after September 6, 2000

Payment Method (No purchase orders will be accepted.)

<table>
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<th>Card No.</th>
<th>Exp.</th>
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<td>Name on Card</td>
<td>Signature</td>
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</table>

There will be a $25.00 charge for returned checks or for the disputing of valid credit card charges.
Charges will be billed to your statement as Conference Management Services. STAT Federal Tax ID: 75-2262301
A complimentary one year STAT membership is included in the Advance and Regular CAST Registration Rates.

<table>
<thead>
<tr>
<th>ORGANIZATION NAME</th>
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<th>Code*</th>
<th>RECRUITED BY</th>
<th>AMOUNT PAID</th>
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<td>ACT \textsubscript{1} Associated Chemistry Teachers of Texas</td>
<td>☐</td>
<td>☐</td>
<td>$7 (01.1)</td>
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<td>$10 (02.1)</td>
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<td>ISET Integrated Science Educators in Texas</td>
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<td>Regular and Student</td>
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<td>Institutional Member</td>
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<td>TABT Texas Association of Biology Teachers</td>
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<td>TCES Texas Council of Elementary Science</td>
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<td>$300 (06.4)</td>
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<td>TESTA Texas Earth Science Teachers Association</td>
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<td>$100 (07.2)</td>
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<td>Corporate Membership</td>
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<td>TMEA Texas Marine Education Association</td>
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<td>$10 (08.1)</td>
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<tr>
<td>TSAAPT Texas Section Amer. Assn. of Physics Teachers</td>
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<td>$5 (09.1)</td>
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<td>$__________</td>
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<tr>
<td>TSELA Texas Science Education Leadership Association</td>
<td>☐</td>
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<td>$10 (10.1)</td>
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<td>$__________</td>
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<tr>
<td>TTOPS Texas Teachers of Physical Science</td>
<td>☐</td>
<td>☐</td>
<td>$7 (11.1)</td>
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<td>$__________</td>
</tr>
</tbody>
</table>

Affiliate Membership Subtotal (enter amount on Form 1) $__________

*Account code is for STAT use only.
## GALA EVENTS
Instructions: If you wish to attend a Gala event, please indicate the function you wish to attend by indicating the quantity in the appropriate box. Please note: you may only attend ONE Gala event Friday, 6:30-10:00 pm.

<table>
<thead>
<tr>
<th>Gala Event</th>
<th>Description</th>
<th>Fee per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Southwestern Stars</td>
<td>A BBQ dinner, Aggie Wranglers, Lonetooth, and Terri Hendrix (an up-and-coming western singer) combine for an evening of good food, dancing, yodeling and story telling, and enjoyable music. Wolf Pen Creek Amphitheater in College Station. (In case of inclement weather, we will be in the MSC).</td>
<td>$12.50</td>
</tr>
<tr>
<td>Celebrating Teachers</td>
<td>A buffet dinner; lecture by Janice Van Cleave who is a popular writer of introductory science activity books; a high-energy robotic light show; and exciting demos as selected by TTOPS. Bush Presidential Conference Center. (Tours of the Library are not available Friday evening.)</td>
<td>$15</td>
</tr>
<tr>
<td>Gourmet Dinner and Wine Pairing at Messina Hof</td>
<td>A five-course dinner paired with 4 of Messina Hof Winery’s best wines. A wine connoisseur will discuss the wine selections during the course of the meal. Chocolate Suicide Cake and Port Wine will top off the meal. Messina Hof Winery, Bryan, TX. Fee includes bus transportation. Pick up site is Reed Arena.</td>
<td>$65</td>
</tr>
</tbody>
</table>

### STAT SOCIAL EVENTS
Instructions: If you wish to attend a STAT social event, please indicate the function you wish to attend here by indicating the quantity in the appropriate box.

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Event Name</th>
<th>Fee per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinner with the Corps of Cadets</td>
<td>Thursday, 6:15 pm</td>
<td>$8.00</td>
</tr>
<tr>
<td>Breakfast with the Corps of Cadets</td>
<td>Friday, 6:30 am</td>
<td>$6.00</td>
</tr>
<tr>
<td>STAT Luncheon</td>
<td>Friday, 12:10-1:30 pm</td>
<td>$9.00</td>
</tr>
</tbody>
</table>

### AFFILIATE & BOX LUNCHEONS (SATURDAY ONLY)
Saturday, October 14, 2000 • 12:00 pm - 1:00 pm
Select the ONE Affiliate Luncheon you wish to attend and indicate the number of tickets you wish to purchase. The $7.00 lunches will be box lunches. Box lunches will be distributed near Rudder Fountain.

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>Fee per Ticket</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 2</td>
<td>$16.00</td>
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<tr>
<td>ISET</td>
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<td>TABT</td>
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<td>TAEE</td>
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<td>TESTA</td>
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<td>TMEA</td>
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<td>TSAAPT &amp; TTOPS</td>
<td>$7.00</td>
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<tr>
<td>TSELA</td>
<td>$7.00</td>
</tr>
<tr>
<td>Box Lunch but not attending affiliate meeting</td>
<td>$7.00</td>
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</tbody>
</table>

Social Events Subtotal (total from events above) (enter on Form 1) $
REGISTRATION INSTRUCTIONS (ADMISSION TO ALL SESSIONS IS BY TICKET ONLY):

1. Workshop, Short Course and Field Trip registration is on a first-come first-serve basis.
2. Choose three items in order of preference for each time slot, if an alternative is desired.
3. If you are selecting an all day and a half day event as alternative choices, please indicate which is more preferable. 
   (For example, if an all day event is your first choice, put it in the choice 1 column and leave the half day spaces under choice 1 blank. Fill in your second choices in the choice 2 column.)
4. Record the event number in the box.
5. Pay for the most expensive event for each time slot.
6. Refunds for overpayments will be processed within two months after the conference.

PLEASE NOTE: BY REGISTERING ONLINE, YOU WILL KNOW IMMEDIATELY WHICH SESSIONS YOU ARE IN. YOU MAY REGISTER AT http://www.statweb.org

<table>
<thead>
<tr>
<th>DAY</th>
<th>CHOICE #1</th>
<th>COST $</th>
<th>CHOICE #2</th>
<th>COST $</th>
<th>CHOICE #3</th>
<th>COST $</th>
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<tbody>
<tr>
<td>Thursday All Day</td>
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<td>Thursday AM</td>
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<td>Thursday PM</td>
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<td>Friday All Day</td>
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<td>Friday AM</td>
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<td>Friday 8:40-9:40am</td>
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<td>Friday 9:50-10:50am</td>
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<td>Friday 11:00-12:00pm</td>
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<td>LUNCH</td>
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<td>Friday PM</td>
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<td>Friday 1:15-2:10pm</td>
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<td>Friday 2:20-3:15pm</td>
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<td>Saturday All Day</td>
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Ticketed Event Subtotal (enter on Form 1) $__________
## Official Housing Request Form

### CAST 2000

**Science Teachers Association of Texas**  
Bryan-College Station, Texas  
October 11-14, 2000

- Please print or type all information. Complete each part below in detail for accurate and prompt processing.
- One form for each room is required. A confirmation will be sent to each individual.
- Reservation deadline **NO LATER THAN:** September 17, 2000
- For information on housing availability or on B&B’s, campgrounds, RV Parks and facilities in surrounding towns—call 979-260-9999 or check the web site — [http://www.chem.tamu.edu/class/fyp/CAST2000/](http://www.chem.tamu.edu/class/fyp/CAST2000/)
- Changes after deadline date must be made directly with the hotel.
- Hotel placement will be made in the order received. Your first choice will be assigned if rooms are available. Otherwise, you will be assigned to one of your other hotel choices, according to preference and room availability.

<table>
<thead>
<tr>
<th>Map #</th>
<th>Hotel</th>
<th>Rank</th>
<th>Single</th>
<th>Double</th>
<th>Triple</th>
<th>Quad</th>
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Arrival Date/Time: ___________________________________  Departure Date/Time: ___________________________________

Name: ____________________________________________  School: ______________________________________________

Address: ___________________________________________  City/State/Zip: _________________________

Day Phone: ____________________________  Fax: _______________________

I require special arrangements for a handicapped condition: ____________________________________________

Names of additional occupants sharing this room: ____________________________________________

Reservations MUST be guaranteed by providing a deposit of first night’s fee by major credit card or check made payable to hotel (mail check after you receive confirmation).

Credit Card: ____________________________  Card #: ____________________________

Expiration Date: ____________________________  Signature: ____________________________

- Tax Information must be presented at check-in!
- Reservations not guaranteed may be subject to cancellation.
- In the event of a no-show, the first night’s rental will be billed to credit card.

Return form to: Bryan-College Station Convention & Visitors Bureau  
715 University Drive E  College Station, TX  77840  979-260-9800 fax
FIELD STUDIES AND TECHNOLOGY - THE LLAC PROJECT
Come and see this field study project. Students and teachers are developing various field study projects around Lake Livingston. As students gather data in various studies, they share their findings with other students around the Lake with various types of technology. Handouts available.

- Karen Hewitt - Coldspring-Oakhurst CISD
- Dinny Barnes - Shepherd ISD
- Dawn Cody - Goodrich ISD
- Keith Tippit - Onalaska ISD

Middle and High School • Life Science

DRIVING MS. DAISY CRAZY
Microcomputer based laboratory integration into the science classroom produces many surprises. Learn how to keep these potholes from becoming pitfalls that will drive you crazy.

- Stephen R. Speer - Northwest ISD
- Lisa Klein - Northwest ISD

High School • Physics

CHEAP THRILLENIUM
As always, Cheap Thrills bring you the best hands-on activities that can be found this new millennium. We will provide materials incorporating many space, life, and environmental TEKS objectives.

- Cheryl Pittman - Pearland High School
- Karen Stocco - Houston Museum of Natural Sciences

Middle/Jr. High School • Interdisciplinary Sciences

PHASE YOUR WAY INTO SUCCESSFUL SCIENCE
Learn how to "wean" your students from just following directions in cookbook labs and have them designing, writing, and performing experiments applicable to real world situations.

- Lisa Duvall - Ron Jon Publishing
- Cindy Martinez-Bagwill - Pasadena ISD

Middle/Jr. High School • Interdisciplinary Sciences

ENHANCING SCIENCE TEACHING IN URBAN ELEMENTARY CLASSROOMS: THE POTENTIAL OF PROJECT U.S.A.
Find out how a collaborative project between the Houston Zoo, Texas Southern University, and the Houston Independent School District is impacting instruction in participating schools. Sample materials will be shared.

- Dr. Pamela Norwood - Houston Zoological Gardens
- Jamie Eustace - Cage Elementary School

Elem. School • Life Science

INQUIRY TEACHING: A WHOLE LOT MORE THAN ASKING QUESTIONS!
Come explore a series of hands-on activities to gain insight and planning strategies for implementing inquiry science lessons across the curriculum. Leave with copies of activities for sharing at your site in the future.

- Diana Bernshausen - University of North Texas
- Betty Crocker - University of North Texas

Elem. School • Other

TEA SCIENCE UPDATE - THE LANDSCAPE OF SCIENCE IN TEXAS
Learn about the new directions for science education in Texas. Hears about the latest testing results on statewide and national indicators. This Year in Science Education will give participants a "big picture" of the state of science in Texas. Handouts will include statewide testing results, enrollment statistics, and year by year testing schedule.

- Chris Castillo-Comer - Texas Education Agency
- Irene Pickhardt - Assistant Director of Science, TEA

All Levels • Other

HOW TO BECOME A TEXTEAMS LEADER
Please join me to discover how and why to become involved with our TEKS based Professional Development for teachers. I will explain new Leader requirements, review forms and demo how to locate everything you need to know online!

- Jacqueline Powell Coffey - Charles A. Dana Center

All Levels • Other

PRIMARILY POLYMERS FOR PRIMARY GRADES
Discover the world of polymers for the primary grades! Integrated, hands-on science experiments extending the states of matter to include polymers. Explore inquiry science methods while playing with everyday products. (Materials provided.)

- Randee Hodgkins - Beaumont ISD
- Marvie Bonnette - Beaumont ISD

Elem. School • Chemistry

ARCHEOLOGY XPEDITION: STUDENTS
Archeology introduces scientific inquiry and critical thinking to students (TEKS). View a web site created by students after a field experience with archeologists and educators from Houston Museum of Natural Science. Learn to use archeological research techniques in the classroom.

- Pam Wheat - Houston Museum of Natural Science+J205

All Levels • Interdisciplinary Sciences

BRING CURRENT NASA MISSIONS INTO THE CLASSROOM!
Participants will use current NASA data to explore such topics as the el niño phenomena and protein crystal growth. Handouts provided.

- Shannon Miller - Llano ISD

Middle and High School • Earth/Space Science

THE STARS AT NIGHT ARE BIG AND BRIGHT
Hands-on techniques for locating stars and constellations. Lunar observation strategies, interdisciplinary correlation with art and literature. Will be related to TEKS.

- Rebecca Gaston - Edinburg ISD
- Dianne Gohil - Edinburg ISD

Elem. School • Earth Science
**CAST 2000 Session Listing**

**WK42178** Friday 3:25PM - 4:20PM

**TEXAS TEACHER INTERNSHIP PROGRAM (TTIP) - A SUMMER TO REMEMBER**

TTIP is a unique professional development opportunity for teachers to serve a summer internship in industry agency or research/university settings. Come explore opportunities to earn stipends and write curriculum based on “real world” experiences.

- Adrienne Bentz - Texas Alliance for Science, Technology & Mathematics Education - TAMU
- Dr. Robert James - Texas Alliance for Science, Technology & Mathematics Education - TAMU

All Levels • Other

**WK42006** Friday 3:25PM - 4:20PM

**WHY DOES WATER IN THE TOILET GO UP AND DOWN**

A fast paced, enthusiastic presentation of 30 demonstrations directed toward discrepant events in the areas of sound, heat, light, chemical reaction, and physical science.

- Ken Burnham - Galveston-Houston Catholic Diocese
- Louis Moscato - Humble ISD

All Levels • IPC, Physics, Chemistry and Interdisciplinary Sciences

**WK42246** Friday 3:25PM - 4:20PM

**SOAR WITH SCIENCE OLYMPIAD**

Create a passion for learning science on your campus by starting a science olympiad program. Involve your students in events such as battery buggy, amphibians and reptiles, science crime busters, trajectory, and water quality.

- Sharon Wilder - Cypress-Fairbanks ISD
- Mike Dibenedetto - Cypress-Fairbanks ISD
- Josie Kesler - Cypress-Fairbanks ISD

Middle/Jr. High School • Interdisciplinary Sciences

**WK42170** Friday 3:25PM - 4:20PM

**TO TREE OR NOT TO TREE: TREES AS TOOLS FOR SCIENTIFIC INVESTIGATION**

Participants will identify parts of information-rich tree rounds, use forestry tools to measure tree height and diameter, and learn how to create a vegetation map of their school.

- Brenda Swirczynski - Botanical Research Institute of Texas

Middle/Jr. High School • Life Science

**WK42120** Friday 3:25PM - 4:20PM

**COLORS OF PHYSICS**

Demonstrations and lab activities showing how the use of colors can enhance physics topics. TEKS 2A, 3A, 8A, B, C, 9B.

- Evelyn Restivo - Maypearl High School

High School • Physics

**WK42326** Friday 3:25PM - 4:20PM

**MODEL ROCKETRY FOR USE IN A COLLEGE PREPARATORY HIGH SCHOOL PHYSICS COURSE**

Use model rocketry to teach physics at a meaningful level to expose students to some of the real problems NASA works through to achieve a launch.

- Verne Bell - White Settlement ISD

High School • Physics

**WK42062** Friday 3:25PM - 4:20PM

**BUGGY FEVER**

Practical ideas for the classroom, grades 4-8, dealing with animal diversity, populations and communities. TEKS addressed 4.2, 4.3, 4.4, 4.5, 4.8, 5.2, 5.3, 5.9, 6.2, 6.3, 6.4, 6.10, 7.2, 7.3, 7.12, 8.2, 8.3, 8.4, and 8.6.

- Ann Guilbert - UT Tyler

Elem. School and Middle/Jr. High • Life Science

**WK42057** Friday 3:25PM - 4:20PM

**CRIME SCENE: FORENSIC SCIENCE IN THE CLASSROOM**

Participants conduct a systematic “investigation” utilizing deductive reasoning and observational skills, to solve a realistic “crime.” This exciting, entertaining, yet highly educational activity is guaranteed to enhance your middle or high school science laboratory.

- Ronald E. Hammond - Carolina Biological

All levels • Life Science

**WK42182** Friday 3:25PM - 4:20PM

**IPC: ACTION-PACKED & HANDS-ON!**

IPC activities, labs, and alternative assessment ideas will be presented by IPC TEAM Leaders. Activities range from CBL applications to Kitchen science.

- Sandra Coffey - Cypress-Fairbanks ISD
- Lisa Stinco - St. Agnes Academy

High School • Physical Science

**WK42545** Friday 3:25PM - 4:20PM

**USABLE SCIENCE ACTIVITIES**

Keep the year moving with TEKS/TASS activities that have students involved and wondering what will happen next. Hands-on activities, demonstrates, handouts, door prizes, and lots of fun.

- Joan Ragland - Hudson Middle School
- Cindi Pointer - All Saints Episcopal School

Middle School/Jr. High • Integrated/Interdisciplinary Science

**WK42086** Friday 3:25PM - 4:20PM

**HANDS-ON LOW COST SCIENCE PROFESSIONAL DEVELOPMENT: LEARNING BY DOING DURING THE SUMMER**

Learn about a variety of hands-on summer opportunities that will help you teach scientific concepts and research skills in your classroom, all personally experienced by the presenter. TEKS K-6 (all).

- Mary Nied Phillips - Waco ISD

Elem. School and Middle/Jr. High • Interdisciplinary Sciences

**WK42083** Friday 3:25PM - 4:20PM

**THE SCIENTIFIC PROCESS THROUGH SEEDS**

Hands-on activities from start to finish that will allow your students to have fun while actively engaging them in the scientific process.

- H. Craig Wilson - Texas A&M University
- Robert James - Texas A&M University

All Levels • All Fields

**WK42133** Friday 3:25PM - 4:20PM

**INEXPENSIVE WAYS TO MAKE BIOLOGICAL MANIPULATIVES OUT OF TENNIS BALL CONTAINERS**

A multitude of ways to teach biological concepts using tennis ball containers. The workshop will demonstrate the making of the following manipulatives: bacteria cell, atom, baby for genetic study, and blood vessels.

- Sharon Spencer - Keystone School

High School • Life Science

CAST 2000 Program - Page 21
CAST 2000 Session Listing

**TEXAS GLOBE TEACHERS SHARE IMPLEMENTATIONS OF TEKS**
Texas GLOBE Trained Teachers and GLOBE franchise trainers are invited to meet and share their successes, new strategies, and concerns in implementing GLOBE while addressing the TEKS.
- Kathleen A. Ward - Our Lady of the Lake University
- Peggy Carnahan - Our Lady of the Lake University

All Levels • Interdisciplinary Sciences
WK42157 Friday 3:25PM - 4:20PM

**PHILIP HARRIS USA HANDS-ON PREMIER SCIENCE OVERVIEW**
Do you want to make your students excited about science? Do you want your students to conduct inquiries that require minimal teacher preparation? Our integrated curriculum includes lessons based on the 5-E model for inquiry science, content that is aligned with the National Standards, interactive technology, hands-on equipment, and assessments.
- Gerald A. Beer - Philip Harris USA
- Donna Sablecki - Philip Harris USA

Middle/Jr. High School • Interdisciplinary Sciences
WK42214 Friday 3:25PM - 4:20PM

**COMMUNICATION, COLLABORATION & CREATIVITY: INTEGRATING REAL-WORLD TECHNOLOGY INTO SCIENCE EDUCATION**
Learn strategies for choosing/using new technology tools/resources. Hands-on activities use process skills included in all fundamental TEKS. Exercise your personal creativity to transform anxiety into productivity! Handsouts provided.
- Rebekah K. Nix - University of Texas at Dallas
- Cynthia E. Ledbetter, Ph.D. - University of Texas at Dallas

All Levels • Interdisciplinary Sciences
WK42123 Friday 3:25PM - 4:20PM

**AKA SCIENCE - ALL KIDS ARE SCIENTISTS**
aka Science offers a three year cycle of after school science classes. Class offerings are all hands-on, age-specific activities in which students learn about science processes and concepts related to anatomy, chemistry, earth science, physics, solar energy, and architecture and engineering.
- Suzanne Bissell - Prairie Area Health Education Center
- Heather Love - Lake Country AHEC

Elem. School and Middle/Jr. High School • All Fields
WK42225 Friday 3:25PM - 4:20PM

**PLANTS PROVIDE A FERTILE MEDIUM FOR TEKS**
Join Texas Botanical Educators in exploring plant families and discover many ways to ground your use of TEKS. Participants will practice observation skills using herbarium mounts, determine age of trees using tree cookies, and weave history and culture of plants through story telling.
- Cheryl Stano - Texas Forestry Association
- Pat Harrison - Botanical Research Institute of Texas

Elem. School and Middle/Jr. High • Life Science
WK42136 Friday 3:25PM - 4:20PM

**ENERGIZE YOUR CLASSROOM**
This interdisciplinary workshop focuses on fossil and alternative fuels. Participants will explore classroom Discovery Kits. They will receive a CD-ROM, a 30-minute video, and lessons designed to energize their classrooms. TEKS 112.21A, 2, 3, 5B, 6.1B, 6.2E, 6.3C, 6.6C, 6.8B, 6.9AB, 6.14A.
- Jennifer L. Paschke - Houston Museum of Natural Science

Elem. and Middle/Jr. High School • Earth Science
WK42067 Friday 3:25PM - 4:20PM

**INQUIRING MINDS WANT TO LEARN**
Are you looking for lesson starters that promote student-centered learning in a hands-on way? In this session receive a variety of inquiry based activities applicable in science and other areas.
- Sharon Betty - Denton ISD
- Sheila Becker - Denton ISD
- Katie Cass - Denton ISD

Elem. School • Interdisciplinary Sciences
WK42106 Friday 3:25PM - 4:20PM

**EXPLORE THE SUN**
Play shadow games and build a sundial. TEKS aligned activities for grades 3-6 on the sun from McDonald Observatory. Poster and handouts provided.
- Mary Kay Hemenway - University of Texas at Austin
- Brad Armosky - University of Texas at Austin

Elem. School • Earth Science
WK42272 Friday 3:25PM - 4:20PM

**TEA SCIENCE UPDATE -- K-12: TEXTBOOKS AND INSTRUCTIONAL MATERIALS**
What instructional materials will be available to science educators in Texas? How are instructional materials chosen? When will you get a new textbook or instructional materials in science? Would you like to serve on the state textbook committee? Answers to these questions and more will be discussed. Proclamation ’99 will include adoption of middle school science and most high school science course textbooks. Issues relating to this adoption of new instructional materials will be presented. Plenty of handouts, including the Textbook Adoption Schedule and committee forms will make you an expert at your campus!
- Chris Castillo-Comer - Texas Education Agency
- Irene Pickhardt - Assistant Director of Science - TEA

Middle and High School • Other
WK42270 Friday 3:25PM - 4:20PM

**INTEGRATE SCIENCE AND CATE (CAREERS & TECHNOLOGY EDUCATION) ON YOUR HIGH SCHOOL CAMPUS**
Learn about an innovative pilot program that integrates science and CATE. Hear from teams of teachers from around the state who share what they have learned from their summer workshop at Southwest Texas State University and receive packages of lesson plans that integrate science with Trade and Industrial Agriculture Science, Home Economics, and Health Science Technology. Handouts include lesson plans and activities.
- Ben Shaw - Texas Education Agency
- Irene Pickhardt - Assistant Director of Science - TEA

All Levels • Other
WK42247 Friday 4:30PM - 5:25PM

**PUT CURRICULUM INTO YOUR COMPUTER**
This session will focus on a number of science activities using the computer.
- Joyce E. Ramig - Houston ISD
- Larry M. Bradshaw - Houston ISD

All Levels • Interdisciplinary Sciences
CAST 2000 Session Listing

WK42349 Friday  4:30PM - 5:25PM  
MINING: IS IT FOR YOU?  
Come join me in exploring labs which look at mining for coal and coal burning power plants. (TEKS 1A, 5C, 6A, 7C, and 8A for Environmental Systems.) Detailed handouts provided.  
• Debbie Byrd - Azle High School  
All Levels • Earth and Life Science
WK42103 Friday  4:30PM - 5:25PM  
3-D MAPPING  
Does your contouring leave you in a depression? Let us color your world and put you on a topographic high! Free admission with 3-D glasses and popcorn included. Math and science TEKS, grades 6-12.  
• Vicky Selznick - Plano ISD  
• Francye Hutchins - TMRA  
Middle/Jr. High School • Earth Science
WK42121 Friday  4:30PM - 5:25PM  
CHANGES OVER TIME  
This is an inquiry based lesson that incorporates technology through the use of videos, HyperStudio and PowerPoint presentations. Investigations into erosion, dissolving, and weathering are included.  
• Cheryl Gillenwater - Corpus Christi ISD  
• Don Gillenwater - Tuloso-Midway ISD  
All Levels • Earth Science
WK42179 Friday  4:30PM - 5:25PM  
ENGAGING YOUR COMMUNITY - PARTNERS FOR YOUR CLASSROOM  
This session will present information on how to form partnerships for the classroom and provide participants with how-to handouts to use in getting started.  
• Adrienne Bentz - Texas Alliance for Science, Technology & Mathematics Education - TAMU  
• Dr. Robert James - Texas Alliance for Science, Technology & Mathematics Education - TAMU  
All Levels • Other
WK42038 Friday  4:30PM - 5:25PM  
TESTING FOR LIFE ON MARS - A PREPARATION FOR TAAS LAB  
Motivate your students to do their best by putting them in a futuristic setting. Only the top chemist will be selected for the 1st human exploration of Mars! We must be ready!  
• Judy McInerney - Copperas Cove ISD  
• Ina Rivera - Copperas Cove ISD  
Middle/Jr. High School • IPC, Physics, Chemistry
WK42244 Friday  4:30PM - 5:25PM  
PASSING THE MANTLE TO THE NEW TEACHER (DEMONS FOR CHEMISTRY AND PHYSICS)  
Using demos in chemistry and physics to excite students and reinforce concepts.  
• June Strohsahl - Pine Tree ISD  
• Luna Hood - Pine Tree ISD  
High School • Physical Science
CAST 2000 Session Listing

**ENVIRONMENTAL SCIENCE FROM ABIOTIC TO ZOOLOGIC**

Let Carolina and our ECO-Seeker Environmental Data Logger expand your ecological studies into the next millennium. Participate in multiple hands-on field simulations covering activities from aquatic to the exotic. Free take-home activity.

- **Brian Grajzar** - Carolina Biological
- All Levels • Life Science

**IT'S A VIRTUAL OCEAN!**

Educators receive and partially recreate a unit to design, implement and analyze a marine issue using the Internet, labs, and multimedia. TEKS: methods, tools, and critical thinking; land-forms, processes, interactions, cycles, structure / function.

- **Charlee Hagan** - Arlington ISD
- Middle/Jr. High School • All Fields

**EXPLORE CONSTRUCTIVIST METHODOLOGIES THAT INTEGRATE PHYSICAL SCIENCE CONCEPTS AND PROCESS SKILLS.**

Empower your students to create their knowledge by using hands-on Project DESIGNS. Engineering curriculum in combination with teaching, learning and assessment strategies which promote an understanding of science concepts and development of process skills. Handouts!

- **Terry Jimarez** - Science Education Department of Harvard University
- **Oscar Leyva** - Ysleta ISD
- All Levels • Physical Science

**SCIENCE HISTORY: NIKOLA TESLA**

Part one in a planned series on scientists through history. If you have to pick a starting point, why not the most controversial figure in American science history?

- **Brian Self** - Sherman ISD
- High School • Science History

**IMPROVING STUDENT ACHIEVEMENT IN SCIENCE**

This presentation will highlight research-based classroom practices to improve student achievement including the learning cycle approach, cooperative learning, analogies, wait time, and concept mapping.

- **Steven J. Rakow** - University of Houston - Clear Lake
- High School • Interdisciplinary Sciences

**WHAT DOES INTELLIGENT DESIGN MEAN TO THE SCIENCE TEACHER?**

This presentation will define the intelligent design movement, explain the arguments for and against intelligent design, and discuss the negative implications of intelligent design for science education and scientific research.

- **Cliff Hamrick** - Baylor University
- All Levels • Other

**TEACHING OUT OF THE BOX**

A single unit of study will be used to demonstrate how to implement a variety of resources to meet the science TEKS and national science standards. Get ready for ATEKS 2003!

- **Stacey Beckworth** - Longview ISD
- **Gwen Skinner** - Longview ISD
- Elem. School • Interdisciplinary Sciences
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<td>$ FT59435 Saturday 8:00AM - 3:00PM $35.00</td>
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<td>The extinction of the dinosaurs at the end of the Cretaceous period has been linked to a large meteorite impact. The proposed killer impact site, Chicxulub, is in Yucatan, Mexico. The fall out from this impact include anomalous iridium layers and tsunami deposits. The local record of this event can be observed near Rosebud on the Brazos River. The purpose of this trip is to review the elements of this scientific debate and to carefully inspect a site to test the hypothesis. There will be good fossil collecting and healthy debate about the evidence. The 3/4 day trip will include a guidebook, lunch, and transportation.</td>
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<td>$ FT59466 Saturday 8:30AM - 12:00PM $15.00</td>
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<tr>
<td>LAMAR UNIVERSITY DEPARTMENT OF GEOLOGY</td>
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<td>Collecting 'Hothouse' Fossils in an 'Icehouse' Climate -- Visit to Whiskey Bridge Bluff to collect samples. Fee includes transport and guide book</td>
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<td>FT59404 Saturday 9:00AM - 11:00AM</td>
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<td>COLLEGE OF AG AND LIFE SCIENCE</td>
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<td>Discussions and demonstrations related to the new Masters Of Agriculture &amp; Life Sciences Program; Distance degree program for K-12 teachers.</td>
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<td>FT59481 Saturday 9:00AM - 10:00AM</td>
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<td>DEPARTMENT OF ENGINEERING TECHNOLOGY AND INDUSTRIAL DISTRIBUTION</td>
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<td>$ FT59472 Saturday 9:30AM - 12:00PM $7.00</td>
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<td>MESSINA HOF WINE CELLAR</td>
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<td>Messina Hof Wine Cellar: Learn about all parts of the wine-making process from the vineyards to the aging room. Tasting of 4 wines and a souvenir wineglass included.</td>
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<td>Using graphics and models to teach science. Although vital, biomolecules are complex and therefore exceedingly difficult to teach and to learn. Science and technology combine to make it possible to visualize these complex structures and their interactions. This laboratory tour will tell about several biological macromolecules (enzymes) and display 3-D images that can be incorporated into curricula at all levels.</td>
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<tr>
<td>Bus tour including on-off bus privileges at eight different locations, including: Bush Library, Downtown Bryan, Messina Hof Winery and the Natural History Museum. Fee of $15 paid upon boarding.</td>
</tr>
<tr>
<td>FT69442 Saturday 2:30PM - 5:00PM</td>
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</tbody>
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<table>
<thead>
<tr>
<th>GENERAL SESSIONS TAMU</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS54356 Saturday 8:00AM - 9:20AM</td>
</tr>
<tr>
<td>CLONING MAMMALS: THE PAST, THE PRESENT, THE FUTURE</td>
</tr>
<tr>
<td>• Mark Westhusin - College of Veterinary Medicine, Texas A&amp;M University</td>
</tr>
<tr>
<td>All Levels • Life Science</td>
</tr>
<tr>
<td>PLENARY SESSIONS TAMU</td>
</tr>
<tr>
<td>PL53354 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>IF IT ISN'T GROWN-- IT MUST BE MINED</td>
</tr>
<tr>
<td>Uses and properties of minerals and their products. Garnet equals sandpaper, calcite is why Bon Ami doesn't scratch, kaolinite and chocolate equals candy, etc.</td>
</tr>
<tr>
<td>• Christopher C. Mathewson - Geology and Geophysics, Texas A&amp;M University</td>
</tr>
<tr>
<td>All Levels • Earth</td>
</tr>
<tr>
<td>PL53361 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>EVOLUTION AND THE CONTROVERSY REGARDING EVOLUTION</td>
</tr>
<tr>
<td>• Randy Moore - Biology, University of Minnesota</td>
</tr>
<tr>
<td>Life Science</td>
</tr>
<tr>
<td>PL53358 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>CHEMISTRY DEPARTMENT'S ROADSHOW</td>
</tr>
<tr>
<td>• John Hogg - Chemistry, Texas A&amp;M University</td>
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<tr>
<td>All Levels • Chemistry</td>
</tr>
<tr>
<td>PL53357 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>SEARCH FOR DARK MATTER</td>
</tr>
<tr>
<td>• James White - Physics, Texas A&amp;M University</td>
</tr>
<tr>
<td>All Levels • Physical</td>
</tr>
<tr>
<td>PL53351 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>THE SCIENCE BEHIND CURRENT CONTROVERSIES IN NUTRITION</td>
</tr>
<tr>
<td>A lecture on the frontiers of nutritional science by the holder of the William W. Allen Endowment in Nutrition at Texas A&amp;M University.</td>
</tr>
<tr>
<td>• Joanne R. Lupton - Regents Professor, Texas A&amp;M University</td>
</tr>
<tr>
<td>All Levels • Life Science</td>
</tr>
<tr>
<td>PL53359 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>FORENSIC ENTOMOLOGY</td>
</tr>
<tr>
<td>• James Olsen - Biology, Texas A&amp;M University</td>
</tr>
<tr>
<td>All Levels • Life Science</td>
</tr>
<tr>
<td>PL53068 Saturday 9:40AM - 10:40AM</td>
</tr>
<tr>
<td>RESOURCES FOR K-12 SCIENCE TEACHERS: THE SCIENCE TEKS TOOLKIT</td>
</tr>
<tr>
<td>Participants will discover the rich collection of resources found on our web-based Internet site. Rated one of the best sites in the nation and it's free and easy to use.</td>
</tr>
<tr>
<td>• James W. Collins - Charles A. Dana Center</td>
</tr>
<tr>
<td>All Levels • All Fields</td>
</tr>
</tbody>
</table>

CAST 2000 Program - Page 25
**SHORT COURSES**

**TAMU**

**SC51529** Saturday 8:00 AM - 10:40 AM

**WHALES IN THE CLASSROOM**

Discover one of the ocean's most majestic animals - the whales. Explore the adaptations of the toothed baleen whales and understand their niche in the ocean environment.

- Sherry Schofield - Sea World, San Antonio
- Catherine Prince - Sea World, San Antonio

Elem. School • Life Sciences

**SC51346** Saturday 8:00 AM - 9:20 AM

**THE BEST NEW PHYSICS SOFTWARE**

See our best physics software: Interactive Physics 5.0, Crocodile Physics, Oscillations and Waves, plus new titles for 2001. See a demonstration, and try them yourself. Free demo disks.

- Cary Busby - Arbor Scientific
  High School • Physics

$ **SC51528** Saturday 8:00 AM - 1:00 PM **$50.00**

**MAKE YOUR SCIENCE PROGRAM SPARKLE WITH GEMS**

GEMS - Great Explorations in Math and Science can serve as a strong support to TEKS and TAAS domains. GEMS guides can be integrated into your curriculum or stand on their own as a stimulating way to involve students in science and mathematics. Join us to find out how to integrate the GEMS guided inquiry approach and literature connections. We will present three new GEMS guides appropriate for grades Pre-K - 8.

- Karen L. Ostlund - Science Education Center
- Betty Crocker - University of North Texas

Elem. School and Middle School • Interdisciplinary Sciences

**SC51022** Saturday 8:00 AM - 10:40 AM

**RECIPE FOR A SUCCESSFUL SCIENCE FAIR**

Hands-on and discussion workshop for science teachers who have minimal experience in planning and organizing a science fair. Free take home information will be handed out.

- Mark Oleksak - Showboards, Inc.
  All Levels • Other

**SC51019** Saturday 8:00 AM - 9:20 AM

**ENVIRONMENTAL SCIENCE ACROSS THE CURRICULUM**

A hands-on workshop offering cross-curricular environmental education activities for elementary educators through National Wildlife Federation's Classroom Program Animal Tracks. Focus will be placed on TEKS and TAAS objectives.

- Shawn McLallen - National Wildlife Federation

Elem. school • Interdisciplinary Sciences

$ **SC51063** Saturday 8:00 AM - 12:00 PM **$35.00**

**FOOD, LAND, AND PEOPLE**

The workshop promotes agricultural and environmental awareness, critical thinking, and problem-solving skills, cooperative attitudes and appreciation of cultural differences. The FLP K-12 educational materials and training is interdisciplinary covering the basic subject areas of math, science, social studies, language arts, and more.

- Clyde Gottschalk - Food, Land, & People
  All Levels • Interdisciplinary Sciences

**SC51558** Saturday 9:00 AM - 5:00 PM

**RADIATION AND HEALTH: A WORKSHOP FOR EDUCATORS**

South Texas Chapter of Health Physics Society, Inc., and Texas A&M Dept. of Nuclear Engineering present a full day workshop on radiation and health. Its is free and the attendees will receive lunch, a radiation detector, interactive software, a video that can be used in the classroom, lesson plans, and teacher's editions of reference material.

- Ian S. Hamilton - Texas A&M University
- Alan Waltar - Texas A&M University

Intermediate and High School • Physics, Chemistry, Biology, and IPC

**SC51531** Saturday 9:00 AM - 12:00 PM

**COMPUTER CHIP COMPANY**

Hands on demonstration of having students simulate a semiconductor company using teamwork, problem solving, and low cost materials.

- Ronald E. Bell, II - Dana Center at the University of Texas

High School • Physical

$ **SC51327** Saturday 9:00 AM - 11:50 AM **$12.00**

**PEPPERS PRESENT LIGHT AND SOUND**

Demo's, hands-on, and make and take projects and teaching strategies on light and sound.

- Brian Self - Sherman ISD
- Shelley Abernathy - Baird ISD
- Kathy Gladwell - Ranger ISD
- Jack Willis - Muleshoe ISD

All Levels • Physics

$ **SC62544** Saturday 9:00 AM - 12:00 PM **$30.00**

**KAZAAM**

Experience “science magic” in the classroom. Activities are aligned with TEKS, easy to master, and will have students actively engaged in process skills. (Teacher’s kit provided; handouts, door prizes).

- Joan Ragland - Hudson Middle School
- Jamie VanWinkle - Mineola ISD

Middle School/Jr. High • Integrated/Interdisciplinary Science

**SC51056** Saturday 9:00 AM - 10:30 AM

**EXPLORING ELECTROPHORESIS AND FORENSICS**

Participants cast agarose gels, load pre-digested DNA, and perform Electrophoresis. Banding patterns of DNA in the gel are used to compare "DNA fingerprints" of two alleged suspects with evidence DNA.

- Ronald E. Hammond - Carolina Biological

Middle and High School • Life Science

$ **SC51028** Saturday 9:00 AM - 12:00 PM **$6.00**

**STUFF A RAT!**

Participants will skin a preserved rat and then be a taxidermist while stuffing and sewing the skin back together. Stuffed skin goes home with participant.

- Linda Lawrence - Andrews ISD

High School • Life Sciences

$ **SC51399** Saturday 9:00 AM - 12:00 PM **$15.00**

**HANDS ON ACTIVITIES WITH ELECTRICAL EFFECTS**

The fundamental process of forces arising from moving charges in wires and in space. An electric generator and a d.c. motor will be constructed with electrical models presented.

- James A. Roberts - Univ of North Texas

Middle/Jr. High School • Physics
<table>
<thead>
<tr>
<th>Session Code</th>
<th>Type</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Audience</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC51048</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>TEACHING SCIENCE WITH TOYS 'N TREATS</td>
<td>• Anne Barefoot - Glencoe McGraw-Hill</td>
<td>Middle and High School • All Fields</td>
<td>Learn fun, practical, and engaging hands-on teaching ideas using toys and treats. Easy accessible strategies are usable immediately. Door prize will be a drawing for &quot;Teaching Science with Toys&quot; books.</td>
</tr>
<tr>
<td>SC51025</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>LAB WORKS - THE LEARNING SYSTEM</td>
<td>• David Sinay - SCI Technologies</td>
<td>Middle and High School • IPC, Physics, Chemistry, Life and Interdisciplinary Sciences</td>
<td>Lab Works is a data acquisition device that focuses student attention and time on the thought-intensive aspects of the process of science-experiment design, data organization, and analysis.</td>
</tr>
<tr>
<td>SC51033</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>SEX, DRUGS, AND TAAS</td>
<td>• Ellen Fowlkes - Ellen Fowlkes, Consultant</td>
<td>All Levels • Interdisciplinary Sciences</td>
<td>This presentation will give educators one more weapon in the battle against failing TAAS scores. The participants will experience a program that can be integrated into the current sex education and drug awareness unit. Numerous activities correlated to Health TEKS will be shared.</td>
</tr>
<tr>
<td>SC51047</td>
<td>Saturday 9:00AM - 10:40AM</td>
<td>SCIENCE KIT PRESENTS: MORE TEACHER DEVELOPED PRODUCTS</td>
<td>• Lynn Hesse - Science Kit</td>
<td>Middle and High School • Interdisciplinary Sciences</td>
<td>Science Kit has developed many labs, demos, and manipulatives with teachers. Check out these great products.</td>
</tr>
<tr>
<td>SC51233</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>BRINGING PROJECTS TO THE CLASSROOM</td>
<td>• Lucinda Sohn - Texas State Aquarium</td>
<td>All Levels • Life Science</td>
<td>Open the &quot;windows to the Wilderness.&quot; You will do selected activities from Project WILD, Project Aquatic WILD, and Project Learning Tree that range from K-12. Teachers have ample opportunity to explore options for presenting material to meet the needs of their students. Applicable to TEKS. Don't miss out on a chance for new and refreshing ideas to bring science into the classroom!</td>
</tr>
<tr>
<td>SC51066</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>CYSTIC FIBROSIS, AN APPROACH TO UNDERSTANDING THE HUMAN GENOME PROJECT IN CORRELATION WITH GENETIC DISORDERS</td>
<td>• Tom Avery - Science Kit • Lynne Hesse - Science Kit</td>
<td>High School • Life Science</td>
<td>This module was designed for senior high students grades 10-12 and can be used in A.P. Biology classes and regular health and research classes. The module contains five hands-on activities that the students can work on in teams of four. The participants will be using hands-on activities, analyzing dot screening, and applying excellent ethical decision-making skills for the student.</td>
</tr>
<tr>
<td>SC51362</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>TEACHING STUDENTS HOW TO GIVE EFFECTIVE PRESENTATIONS FOR PROJECTS AND FAIRS</td>
<td>• Chris Ebert - Educational Products Inc. • Tammie Kickarillo - EPI</td>
<td>All Levels • All Fields</td>
<td>A step by step process on teaching students effective organizational techniques for presentations.</td>
</tr>
<tr>
<td>SC51363</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>EASY TO USE, AWARD WINNING CD ROM AND DVD PROGRAMS CORRELATED TO TEKS</td>
<td>• Lee Ann Ray - AIMS Multimedia</td>
<td>All Levels • IPC, Physics, Chemistry and Interdisciplinary Sciences</td>
<td>AIMS Multimedia CD ROM and DVD programs will supplement hundreds of lessons. Each program contains a full video, a test, a quiz, a glossary, a teaching module, and more.</td>
</tr>
<tr>
<td>SC61088</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>ROCKS AND MINERALS FOR BREAKFAST WITH THE SCIENCE PLACE</td>
<td>• Katy Henderson - The Science Place</td>
<td>Elem. school and Middle/Jr. High School • Earth Science</td>
<td>Come enjoy a hands-on approach to teaching earth science 3rd to 8th grade using GEMS guides. Brought to you by the Science Place, Fair Park in Dallas. Great prizes!</td>
</tr>
<tr>
<td>SC51073</td>
<td>Saturday 9:00AM - 12:00PM</td>
<td>PROTEIN FINGERPRINTING: THERE'S SOMETHING FISHY ABOUT EVOLUTION!</td>
<td>• Kirk Brown - Bio-Rad Labs • Stan Hitomi - Bio-Rad Labs • Dr. Patti Taranto - Bio-Rad Labs</td>
<td>High School • Life Sciences</td>
<td>Explore evolution critically using protein electrophoresis and hands-on, inquiry-based learning. Can biomolecular evidence be used to determine similarities and differences between species? Compare protein profiles in related or divergent organisms.</td>
</tr>
<tr>
<td>SC51534</td>
<td>Saturday 9:40AM - 12:00PM</td>
<td>CBL AND CBR IN THE HIGH SCHOOL SCIENCE LABORATORY</td>
<td>• Vincent Schielack - Texas A&amp;M University, College of Science</td>
<td>High School • Physical</td>
<td>Experiments involving numerical data collection via the CBL or CBR, and appropriate for the high school physics and chemistry laboratory, will be demonstrated.</td>
</tr>
<tr>
<td>SC51281</td>
<td>Saturday 10:30AM - 11:30AM</td>
<td>USING A MODEL RAILROAD FOR INTEGRATED AND INTERDISCIPLINE INSTRUCTION</td>
<td>• Raymond L. Koch - Athens F.S.P</td>
<td>High School • Physics</td>
<td>Our large problem solving exercise employing the scientific method, Newton's laws, electrical conductivity, resistance, insulation, simple machines, scale relationships, scenic techniques, etc.</td>
</tr>
</tbody>
</table>
ENVIRONMENTAL SCIENCE ACROSS THE CURRICULUM
A hands-on workshop offering cross-curricular environmental activities for middle school educators through National Wildlife Federation’s classroom Program: Animal Tracks ®. Focus will be placed on TEKS and TAAS objectives.
- Shawn Mcallen - National Wildlife Federation

Middle/Jr. High School • Interdisciplinary Sciences

PEPPERS PRESENT LIGHT AND SOUND
Demos, hands-on, and make and take projects and teaching strategies on light and sound.
- Brian Self - Sherman ISD
- Shelley Abernathy - Baird High School
- Kathy Glidewell - Ranger ISD
- Jack Willis - Muleshoe ISD

All Levels • Physics

SC61530 Saturday 1:00PM - 4:00PM
SEA WORLD ADVENTURE CAMPS
Sea World offers real world experiences with amazing animals in an unique setting. Learn how students and teachers can have an opportunity of a lifetime at Sea World Adventure Camps. Special door prize offered to a workshop participant.
- Shannon Duepner - Sea World, San Antonio
- Catherine Prince - Sea World, San Antonio

Middle and High School • Life Sciences

ENHANCING EARTH SCIENCE- USING NATIONAL GEOGRAPHIC PRODUCTS IN AN INTEGRATED SETTING
Participants will be shown how to use integrated thematic approaches for teaching rocks and minerals using National Geographic School Products. Participants will receive handouts/lesson activities.
- Philip Rodriguez - Southwest ISD

Middle/Jr. High School • Earth Science

SC61288 Saturday 1:00PM - 3:50PM
EXPLORE THE SOLAR SYSTEM - A HANDS-ON APPROACH
Activities by NASA scientists and teachers focus on integrating planetary science with existing curriculum. They focus on TEKS for the 5-8 grades. Share real science not blockbuster movie science!
- Jaclyn Allen - Johnson Space Center NASA
- Becky Collier - Killeen ISD
- Karen Stocco - Houston Museum of Natural Science
- Kay Tobola - Clearcreek ISD

All Levels • Interdisciplinary Sciences

SC61253 Saturday 1:00PM - 3:50PM
MATHEMATICAL MODELS FOR SCIENCE APPLICATION
This presentation will share “hands-on” science applications for the math models and science classrooms. Math Models TEKS 1-3 and IPC TEKS 1-3.
- Ronald E. Bell, II - Dana Center at the University of Texas High School • Interdisciplinary Sciences
WK52555 Saturday  9:40AM - 10:40AM
**FOSS AND TEKS- “NEW REVISED FOSS PROGRAM” FOR GRADES  5 & 6**

- *Winston Hoskins - FOSS Consultant*
- *Ellen Yates-Isbell - Delta Education*

Elementary School • Integrated/Interdisciplinary Science

WK52371 Saturday  9:40AM - 10:40AM
**THE BEST NEW PHYSICS SOFTWARE**
See our best physics software: Interactive Physics 5.0, Crocodile Physics, Oscillations and Waves, plus new titles for 2001. See a demonstration, and try them yourself. Free demo disks.

- *Cary Busby - Arbor Scientific*

High School • Physics

WK52207 Saturday  9:40AM - 10:40AM
**REVOLUTIONIZE YOUR TEACHING WITH TEKS-BASED CURRICULUM . . . USING ONE COMPUTER IN THE CLASSROOM!**
Present TEKS-based lessons, print worksheets and tests, and keep student attention with “Jeopardy™” style review games . . . using one computer in the classroom! FREE Trivia / Brain-Teaser software for each attendee.

- *Ray Beamish - Qwizdom, Inc.*

All Levels • Interdisciplinary Sciences

WK52522 Saturday  9:40AM - 10:40AM
**LEGAL ASPECTS, FEDERAL AND TEXAS REQUIREMENTS**
Liability issues in the science classroom and the requirement from the federal and state governments will be discussed. Resources for accessing more information on these issues will be provided.

- *Sandra West - Southwest Texas University, Biology*
- *Jim Stockton - TSELA*

All Levels • Other

WK52114 Saturday  10:50AM - 11:50AM
**MAKE AND TAKE A TOW!**
Join us and make a plankton tow out of inexpensive readily available materials. Let us help you prepare for spring field trips!

- *Lisa Duvall - Ron Jon Publishing*
- *Cindy Martinez-Bagwill - Pasadena ISD*

High School • Life Science

WK52218 Saturday  10:50AM - 11:50AM
**AN OUTDOOR EXPERIENCE YOU WILL NEVER FORGET**
Hands-on outdoor activities for students in 5-8 grades.

- *Lee D. Bixler - Northwest ISD*
- *Tommye Rifes - Northwest ISD*

Elem. School and Middle/Jr. High • All Fields

WK52554 Saturday  10:50AM - 11:50AM
**FOSS AND SCIENCE TEKS: GRADES K-2**

**OVERVIEW & ACTIVITIES**
Full Option Science System is an inquiry-based, hands-on science curriculum for Grades K-8. Enjoy active session of Grades k-2 FOSS and learn how FOSS meets TEKS. Handouts & Door Prize.

- *Ellen Yates-Isbell - FOSS Consultant*
- *Winston Hoskins - FOSS Consultant*

Elementary School • Integrated/Interdisciplinary Science

WK52137 Saturday  10:50AM - 11:50AM
**FLYING HIGH WITH A PAINTED LADY**
How about a walk on the wild side? Come with us and explore the life cycle of the butterfly. This session includes hands-on activities, technology, and innovative ideas for K-3 students. TEKS K.1-K.9, 1.1-1.4, 1.6, 1.7-1.9, 2.1-2.4, 2.7-2.9, 3.1-3.3, 3.8-3.

- *Bethany Goerdel - Northwest ISD*
- *Jan Strader - Northwest ISD*

Elem. School • Life Science

WK52508 Saturday  10:50AM - 11:50AM
**DESIGNED BY NATURE . . . USING PLANTS TO DEMONSTRATE PHYSICAL SCIENCE CONCEPTS**
Discover how many modern inventions have been inspired by adaptations plants have developed to survive. Use real-life applications to integrate the natural and physical sciences.

- *Pat Harrison - Botanical Research Institute of Texas*
- *Dr. Fiona Norris - Fort Worth Botanic Garden*

All Levels • Interdisciplinary Sciences

WK52165 Saturday  10:50AM - 11:50AM
**POWERS OF TIME**
From a single heartbeat to the Big Bang, students mark time in ways going beyond the 24 hour day. Time is taught with gobstoppers, marble-meteor impacts, and other creative means.

- *Cecelia Ottenweller - Houston Museum of Natural Science*
- *Karen Stocco - HMNS*

All Levels • Earth Science

WK52198 Saturday  10:50AM - 11:50AM
**SAIL THE SEVEN SEAS**
Hands-on activities that teach all aspects of the oceans and their unique ecosystems covering most TEKS and TAAS skills.

- *Peg Feistel - Del Valle ISD*
- *Kristin Tubb - Del Valle ISD*

Elem. School • Earth Science

WK52330 Saturday  10:50AM - 11:50AM
**INTRODUCING THE NEW NSF-SUPPORTED EARTH SCIENCE CURRICULUM PROJECTS**
Two new NSF-supported curriculum projects, Investigating Earth Systems (targeted for grades 5-8) and EarthComm (targeted for grades 9-12) will be introduced. TEKS: Earth Science grades 6-8, EMO

- *Jon Harkness - It's About Time Publishing*

Middle/Jr. High School and High School • Earth
CAST 2000 Session Listing

WK52093 Saturday 10:50AM - 11:50AM
SCIENCE THEY WILL EAT UP!
Experience and receive a set of lessons and labs that your students will eat up! Literally! Measurement, graphing, fossils, earth science, and much more. We will cover almost all of the TEKS.
• Tammy Crannie - Klein ISD
• Jean Maki - Klein ISD
• Audrey Watts - Klein ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK52507 Saturday 10:50AM - 11:50AM
POPPING IGNEOUS
Exciting activity on the Rock Cycle. Students can learn the process of the rock formation as it occurs before their eyes. Participants will take home hands-on activity materials.
• Stacy Egbo - Houston ISD
Middle/Jr. High School • Earth Science

WK52035 Saturday 10:50AM - 11:50AM
METRIC MADNESS
Are you tired of teaching monotonous metrics? Well, come to our session and learn new and exciting notes, labs, and activities.
• Michelle Apperson - Coppell ISD
• Laura Williams - Coppell ISD
Middle/Jr. High School • All Fields

WK52226 Saturday 10:50AM - 11:50AM
LET'S GET MOVING!
A fun session full of demos and fun labs teaching inertia, force, and motion. Covers TEKS 1-7 for grades K through 8. Also TEKS 5-8; 6-8; 9, 10, & 13; 8-10.
• Lloydina Elliott - Corpus Christi ISD
• Jane Lee-Rhodes - Corpus Christi ISD
All Levels • Physics

WK52185 Saturday 10:50AM - 11:50AM
SPIRALING TOWARD SUCCESS IN MIDDLE SCHOOL SCIENCE
Creating a successful integrated science program for Middle School students. This enhances greater knowledge and understanding of Middle School science concepts.
• Teresa Mills - Denton ISD
• James Moore - Denton ISD
• Barbara Ouellette - Denton ISD
• Paul Tagliabue - Denton ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK52108 Saturday 10:50AM - 11:50AM
MILLENIUM SCIENCE
If you are tired of the same old activities and experiments, we have something new and exciting for you!
• Lori Bradley - Lewisville ISD
• Cheryl Watson - Lewisville ISD
All Levels • Life Science

WK52237 Saturday 10:50AM - 11:50AM
LAB IDEAS FOR YOU
Activities will be shared which address TEKS standards. Topics include Internet activities, animal projects, wildflowers, simple machines, and more. Handouts provided.
• Barbara Brice - Victoria ISD
• Amy Thurlkill - Victoria ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK52254 Saturday 10:50AM - 11:50AM
CELEBRATING CHEMISTRY
Come celebrate chemistry! Many activities that weave chemistry into several holidays will be presented. The goal is to have at least one chemistry celebration a month.
• Dora Karim-Silat - Dallas ISD
High School • Chemistry

WK52156 Saturday 10:50AM - 11:50AM
"MOVE OVER, MR. CLEAN" CREATING A GLASS CLEANER COMPANY
Students will form a glass cleaning company. Using basic chemistry, they will create a glass cleaning compound. Students will lab and field test their products. Finally, the student companies will market their products by writing selling slogans and filming a commercial.
• JoBeth Cloud - Aledo ISD
• Nancy Palmer - Mansfield ISD
Middle/Jr. High School • Chemistry

WK52339 Saturday 10:50AM - 11:50AM
ELECTROMAGNETIC WAVES - UNDERSTANDING BY DEMONSTRATIONS AND ACTIVITIES
How to use bicycle wheels and an oscilloscope to demonstrate the electromagnetic spectrum. A simple way to capture the interest of elementary and middle school students. Demonstrations of wave length, frequency, and speed. TEKS handouts.
• John Bartholomew - Denton ISD
• Monica Bartholomew - Louisville ISD
• Don Holt - Denton ISD
Middle/Jr. High School • Physics

WK52215 Saturday 10:50AM - 11:50AM
ELECTRICAL CIRCUITS TO MEET AND BEAT THE 4TH GRADE TEKS
This hands-on workshop will allow you to use batteries, bulbs, and wires to create open/closed circuits, and a 3x5 card to build a switch. Extension activities will include constructing a "brightness tester."
• Barbara Murphy - Brenham ISD
Elem. School • Physics

WK52151 Saturday 10:50AM - 11:50AM
DOWN AND DIRTY WITH PLANTS - "PLANTENSTEIN"
Come and enjoy a fun and exciting way for your students to learn how plants reproduce. This session will include hands-on activity for students to compare and contrast sexual and asexual reproduction. Hand-outs and materials will be provided.
• Nicole Hancock - Houston ISD
• Stacy Egbo - Houston ISD
Middle/Jr. High School • Life Science

WK52152 Saturday 10:50AM - 11:50AM
MICROSCOPES: A CLOSER LOOK
Resolve the mysteries of the microworld as you focus on proper microscope use. Activities and teaching strategies on plant and animal cells and single celled organisms. Handouts will be provided.
• Virginia A. Meeks - Del Valle ISD
Middle/Jr. High School • Life Science
THE WORLD OF MATERIALS AND GREEN DESIGN: PLANNING PRODUCTS FOR RECYCLING
Today, when people design products, they must plan how they will be recycled at the end of the product life. Green design principles make that easier. Interesting lab activities provided.
- Marilyn Fowler - UT Dana Center
Middle/Jr. High School • Interdisciplinary Sciences

USING COMPUTER INTERFACING IN THE PHYSICS CLASSROOM
Come see some new twists on old activities that can be accomplished using computer interfacing to probe deeper and faster than traditional physics labs.
- Scott Rippetoe - Conroe ISD
High School • Physics

REACTION PREDICTION FOR AP AND PRE-AP CHEMISTRY
Chemical reaction prediction and equation writing will be presented in a progressive manner from the pre-AP Chemistry level to the AP Chemistry Reaction Prediction Unit. TEKS 5A, 11A-C, 12B.
- Kristen Jones - College Station ISD
High School • Chemistry

PANTHERS CAN FLY HIGH - YOU CAN TOO!
Come see how you can involve your students in NASA research microgravity projects, fly on the KC135, and experience weightlessness while teaching science.
- Paulette Petta - Crowley ISD
- Kathleen Holley - Crowley ISD
High School • Interdisciplinary Sciences

A SPOONFUL OF SUGAR
If you have trouble teaching concepts such as protein synthesis, mitosis, and meiosis, this session is for you. By using simple manipulatives, you can help your students understand abstract concepts with ease. TEKS: 7E, 8C, 12.
- Lisa Gathtright - Pine Tree ISD
- Ivy Crawford - Pine Tree ISD
High School • Life Science

IPC - INTEGRATING PHOOD (FOOD) AND CANDY
Using food and candies to reinforce science concepts. Many activities and lab handouts will be supplied. TEKS covered include, but are not limited to, 1A, 2ABCD, 3B, 9AD.
- Jeanne Ruth - Granbury ISD
- Darlene Windham - Granbury ISD
Middle and High School • Physical and Interdisciplinary Sciences

MUSEUM IN YOUR CLASSROOM
The Houston Museum of Natural Science brings the curators to the students. Learn how to incorporate live interactive television programs into your classroom. Ready to use activities correlated to TEKS.
- Amber Schumacher - Houston Museum of Natural Science (Region IV)
Elem. School • Interdisciplinary Sciences

EVERYTHING YOU WANTED TO DO WITH DNA BUT WERE AFRAID TO TRY
Several activities will illustrate the characteristics and functions of the DNA molecule. These activities may include DNA isolation, protein synthesis, enzymatic action, inheritance and DNA uses in forensics. 7.10C; 8.1B; 9, 10, 11 Science Concepts 6 A&B; Science Concepts 10A.
- Fredrica Anderson - Tarrant County College Dis.
High School • Life Science
CAST 2000 Session Listing

WK52248 Saturday 10:50AM - 11:50AM

DSM FORCE AND MOTION
Students use a Delta Education original tool, a push pull meter, to measure units of force. They compare the relative work of moving identical objects different distances and different objects identical distances. Participants will work with levers and pulleys, simple machines, and inclined planes. All activities are hands-on and inquiry based. Participants will walk away with activities and materials to use with a physical science unit in their own 2nd or 3rd grade classroom.

• Colleen Kennedy - Delta Education
• Pat Lewis - Natural Science Consultant

Elem. School • Physics

WK52309 Saturday 10:50AM - 11:50AM

DRIVING MS. DAISY CRAZY
Microcomputer based laboratory integration into the science classroom produces many surprises. Learn how to keep these potholes from becoming pitfalls that will drive you crazy.

• Stephen R. Speer - Northwest ISD
• Lisa Klein - Northwest ISD

High School • Physics

WK52296 Saturday 10:50AM - 11:50AM

I NEED PROFESSIONAL DEVELOPMENT!
WHAT DOES TEXTTEAMS OFFER?
TEXTTEAMS, a Dana Center program, offers professional development based on the TEKS and TAAS. Our sessions are for teachers of kindergarten-grade 2, grades 3-5, grades 6-8, IPC, GMO, and Biology.

• Mary Jane V. Schott - Charles A. Dana Center

All Levels • Other

WK52375 Saturday 10:50AM - 11:50AM

TEACH SCIENCE AND STILL COVER TAAS? YOU BET!
Integrated units, focused on science, is the most exciting way to cover the elementary TEKS. Let me show you how! Handouts and ready to use activities.

• Donna Wise - Jacksonville ISD

Elem. School • Interdisciplinary Sciences

WK52523 Saturday 10:50AM - 11:50AM

CHEMICAL HANDLING AND STORAGE
Guidelines for safe handling and storage of chemicals will be provided. This session is for any science class using chemicals.

• Lisa McGaw - ACT 2 and ISET
• Toby Tomlin

All Levels • Other

WK52147 Saturday 10:50AM - 11:50AM

FUN WITH THE PLANT NUTRIENT TEAM FOR K-4
Fun with Plant Nutrient Team focuses on plants, including the nutrients required for producing food for healthy people. Student activity booklets and teachers' guide (including lesson plans) will be distributed.

• Katherine P. Griffin - Potash & Phosphate Institute
• Dr. Mike Stewart - Potash & Phosphate Institute

Elem. School • Earth Science

WK52126 Saturday 10:50AM - 11:50AM

TEACHING IPC CAN BE FUN!
You can make IPC fun, exciting, and relevant. We will show you many of the projects we use to inspire our students. Handouts of our demonstrations provided.

• Ron Hermes - LaPorte ISD
• Karen Hall - LaPorte ISD

Middle and High School • Physical Science

WK52051 Saturday 10:50AM - 11:50AM

GETTING READY FOR NEW TAAS GRADE 11 EXIT TEST USING OUR PAST SUCCESS
A review of how well Texas has improved student achievement and use what we've learned to get ready for new TAAS.

• Sam Zigrossi - University of Texas
All Levels • Other

WK62206 Saturday 12:00PM - 12:50PM

SAVE TIME & INCREASE STUDENT LEARNING . . . USING ONE LAB COMPUTER!
Join us for "The Bubble-Gum Lab" and see how one computer connected to a balance can provide instant feedback / grading and increase student learning. FREE Brain-Teaser Software and printable lab.

• Ray Beamish - Qwizdom, Inc.

Middle and High School • Chemistry

WK62322 Saturday 1:00PM - 1:50PM

AQUARIUM EXPERIMENTS FOR AQUATIC SCIENCE, BIOLOGY, AND ENVIRONMENTAL SCIENCE
Laboratories comparing fresh and salt water aquariums will be demonstrated. Laboratory investigations involving scientific method, data collection, and organism culture will be introduced.

• Elaine L. Smith - College Station ISD

High School • Life Science

WK62079 Saturday 1:00PM - 1:50PM

THE MAGIC OF SEA TREASURES IN THE CLASSROOM
Intriguing biological, geological, and man-made items from the waters and shores of the Gulf stimulate the curiosity of most students (Pre-K-12). TEKS effective teaching using free Sea Grant specimen kits.

• William R. Younger - Texas Marine Advisory Service
• John O'Connell - Texas Marine Advisory Services
• Logan Respess - Texas Marine Advisory Services
• Rich Tillman - Texas Marine Advisory Services

All Levels • Life and Earth Sciences

WK62509 Saturday 1:00PM - 1:50PM

FLYING HIGH WITH A PAINTED LADY
How about a walk on the wild side? Come with us and explore the life cycle of the butterfly. This session includes hands-on activities, technology, and innovative ideas for K-3 students. TEKS K.1-K.9, 1.1-1.4, 1.6, 1.7-1.9, 2.1-2.4, 2.7-2.9, 3.1-3, 3.8-3.

• Bethany Goerdell - Northwest ISD
• Jan Strader - Northwest ISD

Elem. School • Life Science

WK62166 Saturday 1:00PM - 1:50PM

CAREER CHALLENGE: USING KITS AND MUSEUM EXPERIENCES TO INCREASE INTEREST IN SCIENCE CAREERS
Learn how the Houston Museum of Natural Science has documented increases in career awareness of sixth graders in three minority districts through a Challenger Center simulation, targeted museum exhibits, and career-oriented classroom labs.

• Carolyn Summers - Houston Museum of Natural Science
• Kathleen Irish - Houston Museum of Natural Science

Middle/Jr. High School • Interdisciplinary Sciences
CAST 2000 Session Listing

WK62388 Saturday 1:00PM - 1:50PM
WHAT'S COOKING IN SPACE?
Eating and drinking are favorite everyday activities on Earth. However, how they are packaged and eaten is greatly affected by the unique microgravity environment of space. Learn about food preparation and menu development for space flight. Handouts include Space Food and Nutrition Teacher Activity Guide.

* Angelo A. Casaburri - Aerospace Education Services Program

Elem. and Middle/Jr. High School • Life Science

WK62213 Saturday 1:00PM - 1:50PM

OBSERVATIONAL ASTRONOMY AND ANCIENT SKY Lore
Handson and slide show; winter constellations, planets, moon phases, Jupiter's moons, sky lore; easy 35mm astrophotography. Easy observing activities for your students.

* Sallie Teames - Fort Worth ISD

All Levels • Earth Science

WK62148 Saturday 1:00PM - 1:50PM

POPPING IGNEOUS
Exciting activity on the Rock Cycle. Students can learn the process of the rock formation as it occurs before their eyes. Participants will take home hands-on activity materials.

* Stacy Egbo - Houston ISD

Middle/Jr. High School • Earth Science

WK62087 Saturday 1:00PM - 1:50PM

DEAD PEOPLE CAN BE ELECTRIFIED!
Rewire your burned out Electrical Unit with historical personalities. Students will be "shocked" as they observe through a hands-on Design Unit that integrates TEKS across the curriculum.

* Lee Withers - Beaumont ISD

Elem. school and Middle/Jr. High School • Interdisciplinary Sciences

WK62144 Saturday 1:00PM - 1:50PM

BELIEVE IT OR NOT, EVERYONE IN YOUR CLASS CAN PREPARE A WINNING SCIENCE FAIR PROJECT
Use a planned schedule to help all your students to research a topic, formulate a problem, make a reasonable hypothesis, perform an experiment, collect data, observe and interpret results, and then draw a conclusion. This scheduled plan should help capture your students' interest in science.

* Tommye Rafes - Northwest ISD

* Kathy Thomas - Northwest ISD

Elem. School and Middle/Jr. High School • Other

WK62007 Saturday 1:00PM - 1:50PM

HANDS-ON BRAINS ALIVE
Easy, inexpensive, hands-on experiments designed to benefit students in grades K-6. Experiments included are: UV sources, genetic traits, force and motion, faults, mountain and valley formations, and many more. Handouts provided.

* Cathy Bain - Glen Rose ISD

* Rita Rudolph - Glen Rose ISD

Elem. school • All Fields

WK62321 Saturday 1:00PM - 1:50PM
SPIRALING TOWARD SUCCESS IN MIDDLE SCHOOL SCIENCE
Creating a successful integrated science program for Middle School students. This enhances greater knowledge and understanding of Middle School science concepts.

* Teresa Mills - Denton ISD

* James Moore - Denton ISD

* Barbara Ouellette - Denton ISD

* Paul Tagliabue - Denton ISD

Middle/Jr. High School • Interdisciplinary Sciences

WK62259 Saturday 1:00PM - 1:50PM

FANTASY FOR THE CLASSROOM
Meet Dr. R.U. Thinkn', an unusual character who coaxes even the most reluctant student into learning. Novel lessons for biology will be demonstrated; ideas are applicable to any science course.

* Judith DiMichele - College Station ISD

High School • Biology

WK62204 Saturday 1:00PM - 1:50PM

MOLECULAR MOTIVATION
Come and let us show you some of our tricks for turning abstract concepts in Chemistry and IPC into concrete realities that can be cemented into your students' memories.

* Sharon Williams - Water Valley ISD

* Steve Williams - Water Valley ISD

High School • Chemistry

WK62037 Saturday 1:00PM - 1:50PM

BOOK IT - WRITING A VARIETY OF BOOKS FOR A VARIETY OF PURPOSES
A hands-on workshop presenting writing strategies to use in the science classroom. From note taking to assessment, ideas and patterns for creating books will be shared. Rubrics for evaluation will be included.

* Marty Ross - Lewisville ISD

All Levels • Literature

WK62515 Saturday 1:00PM - 1:50PM

CYBERWAYS AND WATERWAYS
This federally funded grant empowers student and teachers in monitoring water quality data on four Texas river systems and to make a difference in community water issues.

* Dr. Barbara Ten Brink - Round Rock ISD

* Steve Amos

All Levels • Life Science and Earth Science

WK62307 Saturday 1:00PM - 1:50PM

THE SECRET WEAPON - CPS
Looking for technology that'll make your life/job easier, help save time, user friendly, can involve all your students, help raise TAAS scores? Let us share our secret with you!!!

* Thomas Reed - Denton ISD

* Dawn Warren - Denton ISD

All Levels • Interdisciplinary Sciences

WK62385 Saturday 1:00PM - 1:50PM

PASSING THE MANTLE TO THE NEW TEACHER (DEMONS FOR CHEMISTRY AND PHYSICS)
Using demos in chemistry and physics to excite students and reinforce concepts.

* June Strohsahl - Pine Tree ISD

* Luna Hood - Pine Tree ISD

High School • Physical Science

CAST 2000 Program - Page 33
Reaction Prediction Unit. TEKS 5A, 11A-C, 12B.}

**Progressive manner from the pre-AP Chemistry level to the AP Chemistry level.**

Chemical reaction prediction and equation writing will be presented in a progressive manner from the pre-AP Chemistry level to the AP Chemistry level. **TEKS 5A, 11A-C, 12B.**

- Kristen Jones - College Station ISD
- Janice Arceneaux - Houston ISD

**Elem. School and Middle/Jr. High • Interdisciplinary Sciences**

**WK62216 Saturday 1:00PM - 1:50PM**

**Exothermic? Endothermic? It's in the Bag!**

In hands-on investigations, teachers will observe exothermic and endothermic events, use acid-base indicators and model discrepant events. These activities will be correlated with science TEKS.

- William E. Russell - Longview ISD

**Middle/Jr. High School • Chemistry**

**WK62262 Saturday 1:00PM - 1:50PM**

**Integrating Literature and Science -- "Can We Read Today?"**

Want to improve students' interest, decrease discipline problems and increase reading comprehension all at once? Here's your chance - integrate the book "Rocket Boys", a story about a freshman boy and his interest in rockets into the science classroom.

- Stephanie Hubacek - College Station ISD
- Charlotte Wiggins - College Station ISD

**High School • Physics**

**WK62333 Saturday 1:00PM - 1:50PM**

**Colors of Physics**

Demonstrations and lab activities showing how the use of colors can enhance physics topics. TEKS 2A, 3A, 8A, B, C, 9B.

- Evelyn Restivo - Maypearl High School

**High School • Physics**

**WK62090 Saturday 1:00PM - 1:50PM**

**The Key to the Universe: NASA Resources for Educators**

NASA offers a variety of resources to educators. In this session, teachers will have an opportunity to explore NASA educational Internet sites, activities, programs, and curriculum materials.

- Cynthia McArthur - Space Center Houston

**All Levels • Interdisciplinary Sciences**

**WK62516 Saturday 1:00PM - 1:50PM**

**No Cook Book Lab Here**

This session will explore how to coach students in writing sections of their chemical and modeling laboratory experiments.

- Elise R. Windus - Fort Bend ISD

**High School • Chemistry**

**WK62503 Saturday 1:00PM - 1:50PM**

**Reaction Prediction for AP and Pre-AP Chemistry**

Chemical reaction prediction and equation writing will be presented in a progressive manner from the pre-AP Chemistry level to the AP Chemistry Reaction Prediction Unit. TEKS 5A, 11A-C, 12B.

- Kristen Jones - College Station ISD

**High School • Chemistry**

**WK62240 Saturday 1:00PM - 1:50PM**

**From Egg to Chick in the Classroom**

Let's get crackin'! From Egg to Chick in the Classroom is a fun, exciting, and creative way to teach science using an integrated approach. It satisfies many elementary science TEKS.

- Bonnie Bade - College Station ISD
- Brenda Bade - Goliad ISD

**Elem. School • Life Science**

**WK62338 Saturday 1:00PM - 1:50PM**

**Good Vibrations**

Explaining standing waves, resonance and sympathetic vibrations just got easier. You will build two demonstrations that will end your and your students' frustration with the rules for strings and pipes. TEKS IPC 5AB and Physics 8AB.

- Debbie Walker - A&M Consolidated
- Charlotte Wiggins - A&M Consolidated

**High School • Physics**

**WK62235 Saturday 1:00PM - 1:50PM**

**I Can Do This!**

Using candles and water, we will conduct a variety of experiments that demonstrate atmospheric pressure. Children love hands-on experiments and these will build confidence for teachers and students. We will do the experiments exactly as the students work in the classes.

- Kathy Homeniak - Gladwater ISD

**Elem. School • Physics**

**WK62313 Saturday 1:00PM - 1:50PM**

**Building Student Success Through Design Projects**

The Duracell/NSTA Invention challenge is a great way to teach your students about the design process. Come build a simple circuit and see what it takes to win.

- Scott Rippetoe - Conroe ISD

**Middle and High School • Physics**

**WK62255 Saturday 1:00PM - 1:50PM**

**Genetics with Reebops**


- David Allard - Texas A&M University
- Mark Storey - Texas A&M University

**High School • Life Science**

**WK62242 Saturday 1:00PM - 1:50PM**

**Inquiry-Based Body Systems**

Join in a fun exploration of inquiry-based and hands-on activities/labs. These activities will help you circulate through various body systems and add excitement to your existing curriculum.

- Jillian Marie Darcy - Houston ISD
- Claran Johnson - Houston ISD

**Middle/Jr. High School • Life Science**

**WK62077 Saturday 1:00PM - 1:50PM**

**Gardens Galore**

Gardens help the mind to grow - no matter the age. Types of gardens, activities, and experiments will pack this session full of interesting information. Door prizes will be given away!

- Melba K. Sexton - Luling Jr. High

**All Levels • Interdisciplinary Sciences**
<table>
<thead>
<tr>
<th>Session ID</th>
<th>Date</th>
<th>Time</th>
<th>Description</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>WK62316</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>MEALWORMS: YUM! YUM! Use mealworms to teach science process skills. Mealworms are inexpensive, low maintenance, and nontoxic. The workshop will provide free mealworms and handouts.</td>
<td>Biology TEKS 2A-D. • Pamela Espirallo Harrell - Irving ISD • Jill Bailar - HISD</td>
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<td>WK62258</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>ANGIOLOGY AND NEUROBIOLOGY WORKSHOP - BLOOD AND NERVES - UNRAVELING THE NETWORK</td>
<td>• Starla Ewan - Zahourek Systems • Colleen Kennedy - Delta Education • Pat Lewis - Natural Science Consultant</td>
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<td>WK62499</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>DSM FLIGHT AND ROCKETRY To understand the fundamentals of flight, students must first grasp the properties of air, especially that air exerts pressure. They assemble a hangar-full of flying machines. Parachutes, kites, and hot air balloons demonstrating air resistance, wind and angle, and lighter than air flight. All activities are hands-on and inquiry based. Participants will walk away with activities and materials to use with a physical science unit in their own 5th or 6th grade classroom.</td>
<td>• Colleen Kennedy - Delta Education • Pat Lewis - Natural Science Consultant</td>
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<td>WK62382</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>JUMPIN' JEHOSEPHAT! ELEMENTARY TEACHERS CAN TEACH INQUIRY - BASED SCIENCE. K-8 teachers and other interested people will use spring-loaded hopping frogs and meter sticks to explore integrated, inquiry-based science instruction and learning.</td>
<td>• Glenda Love Bell - Texas A&amp;M - Commerce • Jon Harkness - It's About Time Publishing</td>
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<td>WK62536</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>NAUTICAL ARCHEOLOGY A look at Nautical Archeology projects in progress.</td>
<td>• Wayne Smith - Texas A&amp;M University, Department of Archeology • Dr. Ben Shaw - Texas Education Agency</td>
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<td>WK62369</td>
<td>Saturday</td>
<td>1:00PM - 1:50PM</td>
<td>INQUIRY FOR YOUNG MINDS How to teach science inquiry for the young minds. Learn the &quot;in's&quot; and &quot;out's&quot; of inquiry based science for grades K - 3. This session will focus on questioning strategies and activities to incorporate the TEKS.</td>
<td>• Diana Morgan - Houston ISD • Jon Harkness - It's About Time Publishing</td>
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**CAST 2000 Session Listing**

**MEALWORMS: YUM! YUM!**
Use mealworms to teach science process skills. Mealworms are inexpensive, low maintenance, and nontoxic. The workshop will provide free mealworms and handouts. Biology TEKS 2A-D.

- Pamela Espirallo Harrell - Irving ISD
- Jill Bailar - HISD

**INTERDISCIPLINARY SCIENCES**

**TALE OF A SNAIL’S TRAIL OR HABITATS FOR DIVERSITY**
Snails may seem common and ordinary until students begin an in-depth investigation into their unique adaptations for survival. Participants will take home authentic California snails.

- Teri Dannenberg - Lawrence Hall of Science, University of California

**ANNUAL AND INTERDISCIPLINARY SCIENCES**

**JUMPIN’ JEHOSEPHAT! ELEMENTARY TEACHERS CAN TEACH INQUIRY - BASED SCIENCE.**
K-8 teachers and other interested people will use spring-loaded hopping frogs and meter sticks to explore integrated, inquiry-based science instruction and learning.

- Glenda Love Bell - Texas A&M - Commerce
- Jon Harkness - It’s About Time Publishing

**NAUTICAL ARCHEOLOGY**
A look at Nautical Archeology projects in progress.

- Wayne Smith - Texas A&M University, Department of Archeology

**INQUIRY FOR YOUNG MINDS**
How to teach science inquiry for the young minds. Learn the "in's" and "out's" of inquiry based science for grades K - 3. This session will focus on questioning strategies and activities to incorporate the TEKS.

- Diana Morgan - Houston ISD

**BIOLOGICAL HAZARDS**
Guidelines for the safe use of biological materials and equipment will be provided. This session is for any science class that teaches biological concepts.

- Dr. N. Burr Furlong
- Haidee Anthony
- Dr. Jim Isleib

**HOW TO MAKE THE CIRCULATORY SYSTEM FUN AND EASY**
Teachers will be given hands on manipulative activities to teach the circulatory system. The workshop will also include ideas for a skit with costumes to demonstrate the circulation of blood through the heart and information on making clay blood cells.

- Sharon Spencer - Keystone School
- Jon Harkness - It's About Time Publishing
- Donna Wise - Jacksonville ISD

**INVESTIGATION SAFETY PROCEDURES FOR LABORATORY, CLASSROOM, AND FIELD**
This session will provide classroom teachers with the safety procedures, rules, regulations, and guidelines for conducting investigations in the laboratory, classroom, and during field experiences. Participants will receive a copy of the Texas Safety Standards Manual.

- James W. Collins - Charles A. Dana Center
- Donna Wise - Jacksonville ISD

**INTEGRATE SCIENCE AND CATE (CAREERS & TECHNOLOGY EDUCATION) ON YOUR HIGH SCHOOL CAMPUS**
Learn about an innovative pilot program that integrates science and CATE. Hear from teams of teachers from around the state who share what they have learned from their summer workshop at Southwest Texas State University and receive packages of lesson plans that integrate science with Trade and Industrial Agriculture Science, Home Economics, and Health Science Technology. Handouts include lesson plans and activities.

- Dr. Ben Shaw - Texas Education Agency
- Dr. Ben Shaw - Texas Education Agency
CAST 2000 Session Listing

WK62556 Saturday  2:00PM - 2:50PM
FOSS AND TEKS - “NEW REVISED FOSS PROGRAM” FOR GRADES 3 & 4
Experience “New Revised FOSS Program” for Grades 3 & 4. Includes student books (Science Stories), interactive FOSS website, Spanish translations, & much more. TEKS Correlation, Pilot Information, Hand-outs & Door Prize.
- Ellen Yates-Ishell - Delta Education
- Winston Hoskins - FOSS Consultant
Elementary School • Integrated/Interdisciplinary Science

WK62186 Saturday  2:00PM - 2:50PM
FISHES DON'T NEED FLOATIES
Hold your breath! Fishes don't need floaties and neither do you to uncover underwater mysteries of fishes. Prepare your students to become young conservationists through hands-on inquiry lessons. TEKS 1AB; 2A-E; 3DE; 4AB, 8AB, AND NSE standards.
- Sandra Keel - Fort Worth Zoological Association
- Cindy McMahon - Fort Worth Zoological Association
Elem. School • Life Science

WK62160 Saturday  2:00PM - 2:50PM
HOW TO GET UP CLOSE AND PERSONAL TO A PEANUT
Participants will discover how a peanut encourages scientific inquiry, cooperative work between class members, and a Life Skills class and leads both classes on a financial adventure. TEKS 4.2 and 4.4
- D'Ann Douglas - Beaumont ISD
- Jo Ann Kimmel - Beaumont ISD
Elem. School • Life Science

WK62163 Saturday  2:00PM - 2:50PM
EARTH AND SPACE UPDATES
Take home software developed by Rice University and the Houston Museum of Natural Science concerning images of earth and space. Be privy to the latest photographic updates.
- Karen Stocco - Houston Museum of Natural Science
- Karen Nichols - Houston Museum of Natural Science
- Dr. Pat Reiff - Rice University
All Levels • Earth Science

WK62104 Saturday  2:00PM - 2:50PM
HAWAII, ASTRONOMY, TOWARD OTHER PLANETARY SYSTEMS 2000
In this session a presentation will be made about the TOPS 2000 workshop for teachers held each year in Hawaii.
- Creighton G. Wilson, Jr. - Jasper ISD
Middle and High School • Earth and Space Science

WK62267 Saturday  2:00PM - 2:50PM
ROCKS FROM SPACE: METEORITES IN THE CLASSROOM
Meteorites and mystery, information and resources - a kit modeling collaboration between scientific expertise and classroom science designed to stimulate student inquiry. Handouts!
- Roger Stryker - Austin ISD
- Dr. Julie Jackson - University of Texas at Austin
- Dr. Dan Lester - University of Texas at Austin
Elem. School • Earth Science

WK62082 Saturday  2:00PM - 2:50PM
IT’S GRACE (GRAVITY RECOVERY AND CLIMATE EXPERIMENT) - FULL!
How will the GRACE satellite, due to launch in 2001, measure the earth's gravity field? Why is that important? Educators of all levels will experience GRACE during this interactive, hands-on workshop to explore the wonders of space exploration. Sample educational packet, provided to participants, will explain how the satellite operates and provide classroom activities.
- Debbie Bradley - Amarillo ISD
- Margaret Baquio - Texas Space Grant Consortium
- Mark Fischer - Texas Space Grant Consortium
- Shannon Miller - Llano ISD
All Levels • Earth Science

WK62196 Saturday  2:00PM - 2:50PM
MOVERS AND SHAKERS
Participants will receive three literature-based interdisciplinary units. A study of natural phenomena will form the base for lessons that include content-area TEKS as well as those required for technology.
- Jennifer Haana - Del Valle ISD
- Debra Arroyo - Del Valle ISD
- Sami Kinsey - Del Valle ISD
- Charlene Postell - Del Valle ISD
Elem. School • Earth Science

WK62205 Saturday  2:00PM - 2:50PM
SCIENCE TEKS AND TECHNOLOGY IN MIDDLE GRADES
Simple labs using CHS10 EA100 data collectors and probes for temperature, light, and voltage. Results demonstrated on CASIO 9850 graphing calculators. Great TEKS technology and ways to relate science to math.
- Margaret Williams - Pampa ISD
- Debbie Brown - Pampa ISD
- Sue Cree - Pampa ISD
Middle/Jr. High School • Interdisciplinary Sciences

WK62189 Saturday  2:00PM - 2:50PM
TEACHING STUDY SKILLS IN THE BIOLOGY CLASSROOM
Presentation of techniques for study, test taking, laboratory, and graphing skills in the context of your Biology curriculum. Sharing of activities and labs to develop skills in your students.
- Deborah Mims - New Caney ISD
- Tom Wingerson - New Caney ISD
High School • Life Science

WK62192 Saturday  2:00PM - 2:50PM
BIOLOGY: LIVE IT UP
Projects, labs, Internet activities: more for Biology I students including G.T. students.
- Saundra Coffey - Cypress-Fairbanks ISD
- Eileen Newland - Cypress-Fairbanks ISD
High School • Life Science

WK62059 Saturday  2:00PM - 2:50PM
LITERATURE IN THE SCIENCE CLASSROOM
Children's literature will be demonstrated as a springboard and/or follow-up to various science topics. TEKS Reading / literary response 3.10 A, C, & D; Reading / inquiry / research 3.12 G; Science Concepts 3.9 & 3.11
- Georgia Colyer - St. Thomas the Apostle Episcopal School
Elem. School • Interdisciplinary Sciences
MINE YOUR MIDDEN
In this activity, your students will become museum curators, excavators, registrars, and map makers. This activity is part of a 6th grade thematic unit on Ancient Civilizations. This could be adapted for 7th or 8th grade. Scientific Inquiry in Field and Laboratory, Critical Thinking, Problem Solving, Decision Making, and Use of Tools are addressed in this activity.
- Susan Gorman - Birdville ISD
- Vince Burns - Birdville ISD
- Jennifer Ford - Birdville ISD

A "NOVEL" APPROACH TO SCIENCE
For those elementary teachers who want to explore and teach the science concepts that exist within their novel studies.
- Ruth Korb - Del Valle ISD
- Edwina Bagley - Del Valle ISD

GARDENING FOR WILDLIFE
Review 11 steps for wildscaping. See how students use habitat building across the curriculum.
- Debra Heath - Carroll ISD
- Linda Frost - Carroll ISD

EXPLORE AUTHENTIC ENVIRONMENTAL PROBLEMS USING ACTIVEINK.NET
ActiveInk.net is a collaborative online learning environment that uses authentic problem-solving to promote engaged learning. Presenters will demonstrate ActiveInk's environmental curriculum and share methods for integrating technology into your classroom.
- Christine Kelly - ActiveInk Corporation
- Scott Ballew - ActiveInk Corporation

SOME PHYSICS LABS AND PROJECTS
This session will show three different projects and several different labs to enrich and demonstrate physics concepts.
- Ted Renshaw - Lewisville ISD
- Mike McGlune - Lewisville ISD
- Mike Turner - Lewisville ISD

THE KEY TO THE UNIVERSE: NASA RESOURCES FOR EDUCATORS
NASA offers a variety of resources to educators. In this session, teachers will have an opportunity to explore NASA educational Internet sites, activities, programs, and curriculum materials.
- Cynthia McArthur - Space Center Houston

NO COOK BOOK LAB HERE
This session will explore how to coach students in writing sections of their chemical and modeling laboratory experiments.
- Elise R. Windus - Fort Bend ISD

PLANT SCIENCE AND DISTANCE EDUCATION
Two horticulture courses have been developed for delivery over the Internet - students CAN learn plant science on the web. Laboratory instructions and demonstrations are done on our accompanying CD-ROM.
- Ellen B. Peffley - Texas Tech University
- Cynthia McKenney - TTU/ TAMU

INTEGRATING MATH AND SCIENCE: HANDS-ON LESSONS AND THEMATIC UNITS
We will present lessons and thematic units that integrate mathematics and science topic for high school audiences. Sample activities will be demonstrated. Lesson plans, unit guides and other handouts will be distributed.
- Gail D. Carmack - University of Texas at Austin
- Janis Lariviere - University of Texas at Austin

INTEGRATING TECHNOLOGY - WITHOUT GOING CRAZY
Rather than trying to create "new" lessons incorporating computers, learn how to take lessons you already do and give them new life using technology such as Claris Works, Hyper Studio, and Power Point.
- Jan Fechhelm - College Station ISD

QUICK ACTIVITIES TO ENHANCE IPC CLASSROOM
This session will include demos, hands-on activities and make it take it items to enhance integration of Physics amid Chemistry in the science classroom. Come have fun!
- Lisa Stinson - St. Agnes Academy
- Deena Harper - Rains ISD

PERCEPTIONS TO BENEFIT THE ENVIRONMENT
Come visit with a team of G.L.O.B.E. Certified Trainers and find out how you and your students can become involved in an international environmental science education project that connects students and scientists around the world.
- Vicky Christenson - Denton ISD
- Bruce Hunter - University of North Texas
- Rudi Thompson - ISD
CAST 2000 Session Listing

WK62386 Saturday 2:00PM - 2:50PM
INQUIRY-BASED BODY SYSTEMS
Join in a fun exploration of inquiry-based and hands-on activities/labs. These activities will help you circulate through various body systems and add excitement to your existing curriculum.
• Jillian Marie Darcy - Houston ISD
• Ciaran Johnson - Houston ISD
Middle/Jr. High School • Life Science

WK62377 Saturday 2:00PM - 2:50PM
GARDENS GALORE
Gardens help the mind to grow - no matter the age. Types of gardens, activities, and experiments will pack this session full of interesting information. Door prizes will be given away!
• Melba K. Sexton - Luling Jr. High
All Levels • Interdisciplinary Sciences

WK62264 Saturday 2:00PM - 2:50PM
A "REAL" SIMULATION OF TRANSPORT THROUGH A CELL MEMBRANE
Eggs are used to demonstrate osmosis and diffusion. This is a hands-on activity that can be used at any grade level. Optional measuring and calculating methods will be modeled.
• Lance Homeniuk - Kilgore ISD
All Levels • Life Science

WK62283 Saturday 2:00PM - 2:50PM
DISTANCE LEARNING MAKES SCIENCE COURSES AVAILABLE TO ALL STUDENTS
How can small high schools provide a variety of upper level science courses for their students? Come and see how two teachers instruct Anatomy/Physiology, Astronomy, and Physics by distance learning.
• Judy Ball - ESC, Region 20
• Nancy Rodriguez - ESC, Region 20
High School • Interdisciplinary Sciences

WK62232 Saturday 2:00PM - 2:50PM
PROBING POSSIBILITIES IN MIDDLE SCHOOL SCIENCE
TEKS 6.4A, 7.4A, 8.4A: "The student is expected to collect, analyze, and record information using . . . COMPUTER PROBES." How to set up and use probe systems with student-tested experiments will be demonstrated.
• Kathleen Broughton - Lewisville ISD
• Liz Turner - Lewisville ISD
Middle and High School • Interdisciplinary Sciences

WK62100 Saturday 2:00PM - 2:50PM
THE JUNKMAN COMETH
Put some "life" into your Human Biology Unit! Learn how your students can make bodies and body systems from "junk." Handouts and some hands-on.
• Barbara Bakonyi - Del Valle ISD
Elem. School • Life Science

WK62250 Saturday 2:00PM - 2:50PM
DSM NEWTON'S TOY BOX
In Newton's Toy Box, students experiment freely with familiar toys and objects. As they explain their observations, they prove Newton's three laws of motion. Participants engage in races, games, and challenges that emphasize the laws of motion which govern everyday tasks and cosmic interactions. By dealing with scaled down applications, middle school students master these laws and vocabulary of physics with confidence. All activities are hands-on and inquiry based. Teachers will walk away with ideas and materials to use in their own classroom.
• Colleen Kennedy - Delta Education
• Pat Lewis - Natural Science Consultant
Elem. School • Physics

WK62305 Saturday 2:00PM - 2:50PM
WHAT RESOURCES DOES THE DANA CENTER HAVE FOR ME?
Attend this session and learn about the various resources available for K-12 educators from the Dana Center
• Mary Jane V. Schott - Charles A. Dana Center
All Levels • Other

WK62535 Saturday 2:00PM - 2:50PM
DEPARTMENT OF ENERGY SCIENCE BOWL --- JOIN US FOR THIS FUN EVENT!
Science Bowl is a rapid-fire quiz-show format competition for teams of high school students. Competition rules will be discussed and a demonstration round will be played, followed by an overview of the competition at Texas sites.
• Vincent Schielack - Texas A&M University, College of Science
High School • Earth, Life, Physical Sciences

WK62520 Saturday 2:00PM - 2:50PM
PLANTS PROVIDE A FERTILE MEDIUM FOR TEKS
Join Texas Botanical Educators in exploring plant families and discover many ways to ground your use of TEKS. Participants will practice observation skills using herbarium mounts, determine age of trees using tree cookies, and weave history and culture of plants through story telling.
• Cheryl Stanco - Texas Forestry Association
• Pat Harrison - Botanical Research Institute of Texas
Elem. School and Middle School • Life Science

WK62557 Saturday 2:00PM - 2:50PM
EVERYTHIN'S CHANGING
Activities and demos to meet the science TEKS for chemistry and physics concepts. Handouts provided.
• Linda Rhoden - Pasadena ISD
• Kat Baldwin - Dickinson ISD
• Deborah Sanders - Clear Creek ISD
Middle School/Jr. High • Physical Science

WK62512 Saturday 2:00PM - 2:50PM
AKA SCIENCE - ALL KIDS ARE SCIENTISTS
aka Science offers a three year cycle of after school science classes. Class offerings are all hands-on, age-specific activities in which students learn about science processes and concepts related to anatomy, chemistry, earth science, physics, solar energy, and architecture and engineering.
• Suzanne Bissell - Prairie Area Health Education Center
• Heather Love, M.S. - Lake Country AHEC
Elem. School and Middle/Jr. High School • All Fields

WK62511 Saturday 2:00PM - 2:50PM
TEACHING IPC CAN BE FUN!
You can make IPC fun, exciting, and relevant. We will show you many of the projects we use to inspire our students. Handouts of our demonstrations provided.
• Ron Hermes - LaPorte ISD
• Karen Hall - LaPorte ISD
Middle and High School • Physical Science

CAST 2000 Program - Page 38
WK62393 Saturday  2:00PM - 2:50PM
INQUIRY TEACHING: A WHOLE LOT MORE THAN ASKING QUESTIONS!
Come explore a series of hands-on activities to gain insight and planning strategies for implementing inquiry science lessons across the curriculum. Leave with copies of activities for sharing at your site in the future.
• Diana Bernshausen - University of North Texas
• Betty Crocker - University of North Texas
Elem. School • Other

WK62052 Saturday  2:00PM - 2:50PM
A FUTURIST VIEW OF SCIENCE EDUCATION FOR TOMORROW
A summary of future trends in such areas as technology, energy, and communication will be discussed and its implications on science education.
• Sam Zigrossi - University of Texas
All Levels • Other

WK62167 Saturday  3:00PM - 3:50PM
VOYAGES OF DISCOVERY
Activities to teach how to navigate and survive on board ancient vessels both during the day and at night. Hand-outs provided.
• Karen Stocco - Houston Museum of Natural Science
• Kathleen Irish - Houston Museum of Natural Science
• Dr. Carolyn Summers - Houston Museum of Natural Sciences
All Levels • Earth Science

WK62132 Saturday  3:00PM - 3:50PM
MINING: IS IT FOR YOU?
Come join me in exploring labs which look at mining for coal and coal burning power plants. (TEKS 1A, 5C, 6A, 7C, and 8A for Environmental Systems.) Detailed handouts provided.
• Debbie Byrd - Azle High School
All Levels • Earth and Life Science

WK62505 Saturday  3:00PM - 3:50PM
ROCKS FROM SPACE: METEORITES IN THE CLASSROOM
Meteorites and mystery, information and resources - a kit modeling collaboration between scientific expertise and classroom science designed to stimulate student inquiry. Handouts!
• Roger Stryker - Austin ISD
• Dr. Julie Jackson - University of Texas at Austin
• Dr. Dan Lester - University of Texas at Austin
Elem. School • Earth Science

WK62298 Saturday  3:00PM - 3:50PM
INTRODUCTION OF THE SOILS EXPLORER SOFTWARE PROGRAM AND ITS CLASSROOM APPLICATIONS
We will demonstrate how the USDA/NRCS Soils Explorer package easily facilitates the use of digital aerial photograph, digitized soil maps, and soil interpretations for various land use planning activities.
• Glen Chervenka - USDA-Natural Resources
• Rick P. Leopold - USDA-Natural Resources Conservation Service
High School • Earth Science

WK62381 Saturday  3:00PM - 3:50PM
DEAD PEOPLE CAN BE ELECTRIFYING!
Rewire your burned out Electrical Unit with historical personalities. Students will be "shocked" as they observe through a hands-on Design Unit that integrates TEKS across the curriculum.
• Lee Withers - Beaumont ISD
• Janice Barras - Beaumont ISD
Elem. School and Middle/Jr. High • Interdisciplinary Sciences

WK62392 Saturday  3:00PM - 3:50PM
FANTASY FOR THE CLASSROOM
Meet Dr. R.U. Thinkr', an unusual character who coaxes even the most reluctant student into learning. Novel lessons for biology will be demonstrated; ideas are applicable to any science course.
• Judith DiMichele - College Station ISD
High School • Biology

WK62172 Saturday  3:00PM - 3:50PM
PROMOTING READING THROUGH SCIENCE CONTENT
With an increase in non-fiction selections appearing on the TAAS test, students will need a greater exposure to science content which may be accomplished while reinforcing reading skills.
• Linda Barrett - Del Valle ISD
• Becky Rabel - Del Valle ISD
Elem. School • Interdisciplinary Sciences

WK62391 Saturday  3:00PM - 3:50PM
A "NOVEL" APPROACH TO SCIENCE
For those elementary teachers who want to explore and teach the science concepts that exist within their novel studies.
• Ruth Korb - Del Valle ISD
• Edwina Bagley - Del Valle ISD
Elem. School • Interdisciplinary Sciences

WK62130 Saturday  3:00PM - 3:50PM
A JUST-FOR-FUN CHEMISTRY SHOW
We plan to present some rapid fire and exciting demonstrations that have been used in our National Chemistry Week presentations.
• George Hague - St. Mark's School of Texas
• Ken Owens - Private
High School • Chemistry

WK62323 Saturday  3:00PM - 3:50PM
USING A CBL WITH A CHRISTMAS LIGHTS CIRCUIT BOARD
Create a Christmas lights circuit board using discarded lights. Use a CBL w/voltage probe to explore flow of electricity.
• Ana Stafford - South San Antonio ISD
• Joana Deluna - South San Antonio ISD
All Levels • Physics

CAST 2000 Session Listing
**THE JUNKMAN COMETH**

Put some "life" into your Human Biology Unit! Learn how your students can make bodies and body systems from "junk." Handouts and some hands-on.

**Barbara Bakonyi - Del Valle ISD**
**Elem. School • Life Science**

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**FUN WITH THE PLANT NUTRIENT TEAM FOR K-4**

Fun with Plant Nutrient Team focuses on plants, including the nutrients required for producing food for healthy people. Student activity booklets and teachers' guide (including lesson plans) will be distributed.

**Katherine P. Griffin - Potash & Phosphate Institute**
**Angelo A. Casaburri - Aerospace Education Services Program**
**Dr. Mike Stewart - Potash & Phosphate Institute**
**Elem. School • Earth Science**

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**WHO IS RESPONSIBLE FOR TEACHER EDUCATION? THE BENEFITS OF REAL COLLABORATION.**

The UTeach program offers a new and innovative approach to teacher education for math and science secondary teachers. Since its inception in 1997, the program has grown exponentially with an anticipated enrollment of 500 students in the next few years. The program is a partnership between the Colleges of Natural Sciences and Education, and Austin ISD. It includes an uncommon commitment to teacher education from the College of Natural Sciences. We will share the benefits that come to teacher education when colleges who have traditionally contributed the "content" background make teacher development a top priority.

**Janis Lariviere - University of Texas at Austin**
**Gail Carmack - University of Texas at Austin**
**All Levels • Other**

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**FROM EGG TO CHICK IN THE CLASSROOM**

Let's get crackin'! From Egg to Chick in the Classroom is a fun, exciting, and creative way to teach science using an integrated approach. It satisfies many elementary science TEKS.

**Bonnie Bade - College Station ISD**
**Brenda Bade - Goliad ISD**
**Elem. School • Life Science**

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**TO TREE OR NOT TO TREE: TREES AS TOOLS FOR SCIENTIFIC INVESTIGATION**

Participants will identify parts of information-rich tree rounds, use forestry tools to measure tree height and diameter, and learn how to create a vegetation map of their school.

**Brenda Swirczynski - Botanical Research Institute of Texas**
**Middle/Jr. High School • Life Science**

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**A "REAL" SIMULATION OF TRANSPORT THROUGH A CELL MEMBRANE**

Eggs are used to demonstrate osmosis and diffusion. This is a hands-on activity that can be used at any grade level. Optional measuring and calculating methods will be modeled.

**Lance Homeniuk - Kilgore ISD**
**All Levels • Life Science**
WK62303 Saturday  3:00PM - 3:50PM

INTEGRATE SCIENCE AND CATE (CAREERS & TECHNOLOGY EDUCATION) ON YOUR HIGH SCHOOL CAMPUS

Learn about an innovative pilot program that integrates science and CATE. Hear from teams of teachers from around the state who share what they have learned from their summer workshop at Southwest Texas State University and receive packages of lesson plans that integrate science with Trade and Industrial Agriculture Science, Home Economics, and Health Science Technology. Handouts include lesson plans and activities.

• Ben Shaw - Texas Education Agency
• Donna Wise - Jacksonville ISD

All Levels • Other