



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)**

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| <p>\$ FT19416 Thursday 7:00AM - 7:00PM \$40.00</p> <p> 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.</p> <p>\$ FT19418 Thursday 7:00AM - 4:30PM \$35.00</p> <p> 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.</p> <p>\$ FT19415 Thursday 8:00AM - 2:00PM \$25.00</p> <p> TEXAS MINING AND RECLAMATION ASSOCIATION
 "Mine-ful of the Future". This is an opportunity to see really big equipment moving 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.</p> <p>FT19417 Thursday 9:00AM - 11:00AM</p> <p> ENTOMOLOGY
 Center for Urban Entomology & Medical Forensics Entomology/ Demos, hands-on activities including fire ants, roaches, and termites.</p> <p>FT19401 Thursday 9:00AM - 11:00AM</p> <p> 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.</p> <p>FT19407 Thursday 11:00AM - 12:00PM</p> <p> 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.</p> <p>FT19421 Thursday 11:00AM - 12:00AM</p> <p> 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.</p> <p>FT29412 Thursday 1:00PM - 2:00PM</p> <p> 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!</p> <p>\$ FT29413 Thursday 1:00PM - 3:00PM \$3.00</p> <p> 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.</p> | <p>FT29431 Thursday 1:00PM - 2:30PM</p> <p> WAVE TANK
 Tour</p> <p>FT29469 Thursday 1:00PM - 3:00PM</p> <p> ENTOMOLOGY
 Center for Urban Entomology & Medical Forensics Entomology/ Demos, hands-on activities including fire ants, roaches, and termites.</p> <p>FT29403 Thursday 1:30PM - 3:00PM</p> <p> 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.</p> <p>FT29428 Thursday 1:30PM - 2:30PM</p> <p> 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.</p> <p>\$ FT29430 Thursday 1:30PM - 4:00PM \$7.00</p> <p> 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.</p> <p>FT29437 Thursday 1:30PM - 4:00PM</p> <p> 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.</p> <p>FT29402 Thursday 1:30PM - 2:30PM</p> <p> 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.</p> <p>FT29470 Thursday 1:30PM - 2:30PM</p> <p> DEPARTMENT OF CHEMISTRY
 See the X-ray crystallography lab, the Mass Spec Lab, the NMR lab, a chemistry research lab, and a teaching lab.</p> <p>FT29408 Thursday 2:00PM - 3:00PM</p> <p> OCEAN DRILLING PROGRAM
 Marine Geology - Tour of the facility of the ocean drilling program and display of core samples.</p> <p>FT29423 Thursday 2:00PM - 3:00PM</p> <p> FIREFIGHTING SCHOOL
 Walking tour of the fire fighting training school.</p> <p>FT29425 Thursday 2:00PM - 3:00PM</p> <p> TEXAS COOPERATIVE WILDLIFE COLLECTION
 Vertebrate Natural History Collection</p> <p>FT29424 Thursday 2:30PM - 4:00PM</p> <p> 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.</p> |
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CAST 2000 Session Listing

FT29438 Thursday 2:30PM - 5:00PM



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.

\$ FT29467 Thursday 2:30PM - 5:00PM **\$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.

FT29456 Thursday 2:30PM - 3:30PM



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.

FT29432 Thursday 3:00PM - 4:30PM



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.

FT29463 Thursday 3:00PM - 4:00PM



OCEAN DRILLING PROGRAM

Marine Geology - Tour of the facility of the ocean drilling program and display of core samples.

FT29477 Thursday 3:00PM - 4:00PM



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.

FT29420 Thursday 3:00PM - 4:00PM



TAMU VISITOR'S CENTER

"History and Traditions Tour" A tour of the Texas A&M Campus with information concerning campus life, tradition, and activities.

FT29492 Thursday 3:30PM - 4:30PM



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.

FT29434 Thursday 3:30PM - 5:00PM



TAMU WEATHER STATION

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

SHORT COURSES
TAMU

SC11293 Thursday 9:00AM - 12:00PM



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

\$ 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

\$ 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. Build/fly 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



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



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

CAST 2000 Session Listing

\$ SC21263 Thursday 1:10PM - 4:25PM **\$10.00**

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 Christiti ISD*
- *Jane Lee-Rhodes - Corpus Christi ISD*
- *Nancy Long - Corpus Christiti ISD*

Middle/Jr. High School • Physics

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!

- *Jaelyn 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 **\$10.00**

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 Thursday 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

SC21094 Thursday 2:20PM - 5:20PM

DIGITAL NATURE, AN OXYMORON OR A GREAT NEW TEACHING TOOL?

Although computers may seem far removed from the world of nature, our award-winning CD-ROMS can be used to trigger a lifelong interest in the natural sciences. Find out how.

- *Celia Clark - Digital Frog International*
- *Andrea Sangster - Digital Frog International*

All Levels • Life Science

\$ SC21266 Thursday 2:20PM - 5:20PM **\$25.00**

OPERATION PHYSICS (O.P.) "ELECTRICITY"

Gain a better understanding of the concepts behind both static and current electricity. O.P. is a program of the American Institute of Physics. TEKS 5.7A, 5.8AB, 6.9AB, 8.8B.

- *Joel Palmer - Mesquite ISD*

Elem.School and Middle/Jr. High • Physics

SC21131 Thursday 2:20PM - 5:20PM

HANDS-ON MIDDLE AND HIGH SCHOOL LABS

Innovative hands-on labs appropriate for multiple ages and disciplines.

- *Don Allen - Ward's Natural Science*

All Levels • Interdisciplinary Sciences

SC21102 Thursday 2:20PM - 5:20PM

BUGS & BUNNIES

Enjoy a fun-filled journey of discovering the balance between mining natural resources and protecting the environment. Teaching science won't bug you if you hop on down to our workshop.

- *Francye Hutchins - TMRA*
- *Vicky Selznick - Plano ISD*
- *Marty Swim - Alcoa Sandow Mine*

All Levels • Interdisciplinary Sciences

SC21129 Thursday 2:20PM - 5:20PM

TEXAS HUMMINGBIRD ROUNDUP

Presentations on the Hummingbirds of Texas, Gardening for Hummingbirds, & The Texas Hummingbird Roundup - how to integrate it into the Life Sciences, Earth Sciences, & other curricula.

- *Mark Klym - Texas Parks & Wildlife*

All Levels • Interdisciplinary Sciences

SC21201 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

\$ SC21234 Thursday 2:20PM - 5:20PM **\$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, Ph.D. - University of Texas at Dallas*
- *Cynthia E. Ledbetter, Ph.D. - University of Texas at Dallas*

All Levels • Interdisciplinary Sciences

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/fly 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 'Icehouse' 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 platinated 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 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**
 "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.
- 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 RANGELAND ECOLOGY 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 (JMGSMS) program, a new garden based on curriculum produced through the Texas Agricultural Extension Service. JMGSMS 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 JMGSMS 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

 **FT49462** Friday 2:30PM - 3:30PM
**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.

 **FT49493** Friday 2:30PM - 3:30PM
**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.

 **FT49454** Friday 3:00PM - 4:00PM
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.

 **FT49453** Friday 3:00PM - 4:00PM
TAMU VISITOR'S CENTER

"History and Traditions Tour" A tour of the Texas A&M Campus with information concerning campus life, tradition, and activities.

 **FT49490** Friday 3:00PM - 4:00PM
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.

 **FT49457** Friday 3:30PM - 5:00PM
**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 platinated animals.

 **FT49480** Friday 3:30PM - 4:30PM
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.

 **FT49427** Friday 4:00PM - 5:00PM
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.

 **FT49471** Friday 7:30PM - 9:30PM
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 progression for teaching astronomy to anyone of any age.

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*

All Levels • Other

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*

All Levels • Earth

PL33360 Friday 9:50AM - 10:50AM

 **CIRCADIAN RHYTHMS**

• *Vincent Cassone - Biology, Texas A&M University*

All Levels • Biology

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 - Chemisrty, Texas A&M*

All Levels • Chemistry

PL33352 Friday 9:50AM - 10:50AM

 **CUSTOMER CHOICE IN THE RESTRUCTURED
 POWER INDUSTRY**

• *Karen L. Butler - Electrical Engineering, Texas A&M
 University*

All Levels • Physical

CAST 2000 Session Listing

PL33353 Friday 9:50AM - 10:50AM

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

PL33350 Friday 9:50AM - 10:50AM

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

PL33285 Friday 9:50AM - 10:50AM

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. How will the new focus on secondary schools affect your program? How will the new demand for science change instruction at the elementary school level? This session will give you access to the latest curriculum trends across the nation and tools to move your program forward.

• Irene Pickhardt - *Texas Education Agency*

All Levels • Other

PL33342 Friday 9:50AM - 10:50AM

THE QUEST FOR ABSOLUTE ZERO: LOW TEMPERATURE DEMONSTRATIONS

A series of demonstrations involving low temperature physics by a leader in the field.

• Glenn Agnolet - *Physics, Texas A&M University*

All Levels • Physics

SHORT COURSES TAMU

SC31378 Friday 8:00AM - 10:45AM

DIGITAL NATURE, AN OXYMORON OR A GREAT NEW TEACHING TOOL?

Although computers may seem far removed from the world of nature, our award-winning CD-ROMS can be used to trigger a lifelong interest in the natural sciences. Find out how.

• Celia Clark - *Digital Frog International*

• Andrea Sangster - *Digital Frog International*

All Levels • Life Science

SC31553 Friday 8:40AM - 11:40AM

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

\$ 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. Pfeifle - *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*
- *Francye Hutchins - TMRA*
- *Vicky Selznick - Plano ISD*

Middle/Jr. High School • Earth Science

SC31340 Friday 8:40AM - 12:00PM

BIOETHICS UNDER THE MICROSCOPE - CHOICES, RESPONSIBILITIES AND ISSUES SURROUNDING THE LIFE SCIENCES

Discussion of history and overview of bioethics, development of the domesticated animal, fetal tissue issues, xenotransplantation, organ transplantation, etc.

- *Dr. Fred Clubb - Texas Heart Institute*
- *Dr. Egeene Daniels - University North Texas Health Science Center*

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

SC31010 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**

SC31012 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. Door prize will be a drawing for "Teaching Science with Toys" books.

- *Judi Falen - Glencoe McGraw-Hill*
- *Anne Barefoot - Glencoe McGraw-Hill*

Middle and High School • All Fields

SC31015 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

SC31023 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

\$ SC31071 Friday 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 Session Listing

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 developments, 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

SC41222 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

\$ SC41191 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 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. 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, horny toads, monarchs, mussels, hummingbirds, and more. Get training and materials to begin monitoring projects with students. TEKS science process skills (.1)(.2)(.3)(.4) + more.

• *Ann Miller - Texas Parks and Wildlife*

• *Lee Ann Linam - Texas Parks and Wildlife*

All Levels • Life Sciences

CAST 2000 Session Listing

SC41074 Friday 1:15PM - 4:20PM

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

SC41091 Friday 2:20PM - 5:20PM

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

SC41158 Friday 2:20PM - 5:20PM

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

SC41550 Friday 2:20PM - 5:25PM

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

\$ SC41329 Friday 2:20PM - 5:25PM **\$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

SC41279 Friday 2:20PM - 5:25PM

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

SC41290 Friday 2:20PM - 5:20PM

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

SC41364 Friday 2:20PM - 5:25PM

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

SC41049 Friday 2:20PM - 3:15PM

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

SC41379 Friday 2:20PM - 5:25PM

SEX, DRUGS, AND TAAS

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

- Ellen Fowlkes - Consultant

All Levels • Interdisciplinary Sciences

SC41125 Friday 2:20PM - 5:25PM

CLOUDIOLOGY 101

6.3D; 6.6C; 6.8B; 6.14C; 7.14A, 8.12AB. This web-based interdisciplinary weather unit is easily adaptable to 6, 7, & 8 grade students and TEKS. Handouts provided.

- Gina G. Gola - Grand Prairie ISD

Middle/Jr. High School • Earth Science

SC41021 Friday 2:20PM - 5:20PM

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

SC41026 Friday 2:20PM - 3:15PM

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

SC41039 Friday 2:20PM - 5:20PM

SETTING UP A COMPUTER LAB FOR THE SCIENCES AND MATH

Setting up a computer lab for Sciences and Math. For teachers and lab techs: the latest integration of computers, software, and curriculum for Science, Math, and Labs.

- Joe Marcinkowski - Laser Professor

Middle and High School • Life Sciences

CAST 2000 Session Listing

SC41043 Friday 2:20PM - 5:20PM

FLUTTER, WIGGLE, AND HOP

Life cycle studies of the lady bug, silkworm caterpillar, and the frog will be presented with a cross-curricular theme. Hand-outs will be presented to participants.

- *Pat Golar - Grand Prairie ISD*
- *Susie Bellah - Humble ISD*

Elem. School • Interdisciplinary Sciences

\$ SC41075 Friday 2:20PM - 5:25PM **\$15.00**

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

\$ SC41315 Friday 2:20PM - 5:25PM **\$20.00**

FUNDAMENTAL 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*
- *Beckie Hannegan - Bridge City ISD*
- *Mary Jane Moore - Port Neches Grove*

Elem. School • Physics

SC41017 Friday 3:25PM - 5:25PM

GEOBLOX GEOLOGY MODELS

Geoblox models are three-dimensional paper models of important landforms. Participants in this workshop will be provided with several designs and an opportunity to make at least one of them.

- *John Koonz - Geobox*

Middle/Jr. High School • Earth/Space Science

SC41050 Friday 3:25PM - 4:20PM

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

SC41311 Friday 3:45PM - 5:25PM

DOES DARWINISM OR INTELLIGENT DESIGN BEST EXPLAIN ALLEGED ID EVIDENCE? - OPPOSING VIEWS

In scientific literature and mainstream media, some scientists raise the question if intelligent design may better explain recently observed features of both the universe and life itself. Opposing Views.

- *Dr. Walter Bradley - Houghton Publishing*
- *Dean Anderson - Foundation for Thought & Ethics*

High School • Life Science

WORKSHOPS TAMU

WK32085 Friday 9:50AM - 10:50AM

TITRATIONS USING ONE MILLILITER SYRINGES AS BURETS

The participants will do a variety of titrations using one milliliter syringes as burets.

- *Eva Lou Apel - George Seidel & Associates*
- *Barbara Schumann - George Seidel & Associates*

High School • Chemistry

WK42547 Friday 11:00AM - 12:00PM

HOW TO HOST A FAMILY SCIENCE NIGHT

Learn how to host a "Family Science Night" at your school. You will leave this workshop with numerous activities that provide an opportunity for families to have enjoyable science experiences.

- *Pam Vaughan - Hurst-Euleless-Bedford*

Elementary School • Integrated/Interdisciplinary Science

WK32228 Friday 11:00AM - 12:00PM

CREATE A CLASSROOM MUSEUM

Transform your elementary classroom into a paleontology museum with your students acting as docents to invited guests. This culminating activity is a great showcase for student products.

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

Elem. School • Earth Science

WK32256 Friday 11:00AM - 12:00PM

SIX BILLION AND COUNTING: POPULATION EDUCATION FOR THE NEW MILLENNIUM

Discover innovative activities for using the new world population milestone to launch thought-provoking lessons on human-environment interactions and global quality of life. Free materials!

- *Susan Feller Hollier - McCullough Jr. High*

Middle/Jr. High School • Life Science

WK32146 Friday 11:00AM - 12:00PM

ROUGHING IT THROUGH THE BARRIERS

McKinney Roughs Environmental Learning Center is committed to removing barriers to environmental education. Background information and demonstrations of activities that accommodate for physical, learning, and psychological barriers will be presented.

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

All Levels • Interdisciplinary Sciences

CAST 2000 Session Listing

WK32042 Friday 11:00AM - 12:00PM

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

WK32118 Friday 11:00AM - 12:00PM

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

WK32188 Friday 11:00AM - 12:00PM

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

WK32286 Friday 11:00AM - 12:00PM

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

WK32058 Friday 11:00AM - 12:00PM

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

WK32219 Friday 11:00AM - 12:00PM

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

WK32227 Friday 11:00AM - 12:00PM

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

WK32155 Friday 11:00AM - 12:00PM

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

WK32231 Friday 11:00AM - 12:00PM

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 Thiessin - Austin ISD*

High School • Chemistry

WK32124 Friday 11:00AM - 12:00PM

ROLLER COASTER: FUNTASTIC MOTION

6.6AB; 7.6 AB; 8.7A. Teaching force and motion can be easy and fun by utilizing the magical world of roller coasters. Handouts provided.

- *Gina G. Gola - Grand Prairie ISD*

Middle/Jr. High School • Physics

WK32320 Friday 11:00AM - 12:00PM

TITRATIONS USING ONE MILLILITER SYRINGES AS BURETS

The participants will do a variety of titrations using one milliliter syringes as burets.

- *Eva Lou Apel - George Seidel & Associates*
- *Barbara Schumann - George Seidel & Associates*

High School • Chemistry

WK32187 Friday 11:00AM - 12:00PM

CHEMISTRY IN A BAG OF HOT AIR

Integrate atmospheric chemistry into existing curricula using novel, inexpensive, and disposable equipment. Engage in hands-on activities that will leave you breathless.

- *Tyra Montgomery - University of Houston - Downtown*

High School • Chemistry

WK32277 Friday 11:00AM - 12:00PM

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. K-2 (5)(9); 3-4 (8); 5 (9)

- *Dr. Dawn Parker - Texas A&M University*

Elem. School • Life Science

CAST 2000 Session Listing

WK32003 Friday 11:00AM - 12:00PM

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 McInerney - Copperas Cove ISD*

• *Ina Rivera - Copperas Cove ISD*

Middle/Jr. High School • Life Sciences

WK32210 Friday 11:00AM - 12:00PM

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.*

All Levels • Other

WK32115 Friday 11:00AM - 12:00PM

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*

Middle/Jr. High School • Interdisciplinary Sciences

WK32380 Friday 11:00AM - 12:00PM

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 School •

Interdisciplinary Sciences

WK32366 Friday 11:00AM - 12:00PM

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

WK32169 Friday 11:00AM - 12:00PM

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*

Elem. School • Life Science

WK32145 Friday 11:00AM - 12:00PM

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*

Elem. School • Interdisciplinary Sciences

WK32308 Friday 11:00AM - 12:00PM

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*

Elem. and Middle/Jr. High School •

Interdisciplinary Sciences

WK32154 Friday 11:00AM - 12:00PM

USING LEARNING ACTIVITIES TO EXTEND BEYOND THE CLASSROOM

Ideas will be shared, with handouts, on ways to have students keep up with science in the news, develop reading and writing skills, and create, experiment, and explore outside the classroom. (TEKS 8.1-8.4, 8.8, 8.15)

• *Virginia Adian - Victoria ISD*

• *Ruth Ann Hackney - Victoria ISD*

Middle/Jr. High School • Interdisciplinary Sciences

WK32309 Friday 11:00AM - 12:00PM

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*

All Levels • Interdisciplinary Sciences

WK32274 Friday 11:00AM - 12:00PM

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*

All Levels • Other

WK32295 Friday 11:00AM - 12:00PM

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

CAST 2000 Session Listing

WK42036 Friday 1:15PM - 2:10PM

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

WK42181 Friday 1:15PM - 2:10PM

CREATING BENEFICIALLY WILD CLASSROOMS

The presenters will demonstrate how to care for organisms in the classroom setting. 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

WK42200 Friday 1:15PM - 2:10PM

ENRICH YOUR SCIENCE CLASSES WITH MARINE 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

WK42229 Friday 1:15PM - 2:10PM

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

WK42287 Friday 1:15PM - 2:10PM

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

WK42513 Friday 1:15PM - 2:10PM

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 - Tulosso-Midway ISD*

All Levels • Earth Science

WK42183 Friday 1:15PM - 2:10PM

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

WK42180 Friday 1:15PM - 2:10PM

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

WK42139 Friday 1:15PM - 2:10PM

THE 12 STEPS OF PYROMANIACS ANONYMOUS (EXPLOSIONS "R" STILL US)

They're back! The Explosions "R" Us gang will share their newest combustion and explosion demonstrations as well as some new variations on tried and true demonstrations. 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 (5, 7, 10, 11, 15); 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

WK42319 Friday 1:15PM - 2:10PM

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 effective teaching using free Sea Grant specimen kits.

• *William R. Younger - Texas Marine Advisory*

• *John O'Connell - Texas Marine Advisory Services*

• *Logan Respass - Texas Marine Advisory Services*

• *Rich Tillman - Texas Marine Advisory Services*

All Levels • Life and Earth Sciences

WK42194 Friday 1:15PM - 2:10PM

LIGHT UP YOUR LIGHT UNIT

Come meet "Trans" and "Paque" as they take you through their fun-filled adventures into the three levels of opacity (transparent, translucent, and opaque). TEKS 1.2DE, 1.3AB, 1.5A, 1.6A, 3.1B, 2.3A.

• *Hettie Pollock - Longview ISD*

Elem. School • Physics

WK42065 Friday 1:15PM - 2:10PM

LIGHT - ACTION - SCIENCE

Experience the behavior of light with a unique magnifier, a spoon, and a spectrum viewer. Participants will leave with a complete unit on light. TEKS 5.8

• *Jenny Wallace - Whitehouse ISD*

Elem. School • Physics

WK42162 Friday 1:15PM - 2:10PM

QUICK AND EASY INTERNET PROJECTS FOR IPC

This session provides you with 4 individual, week-long Internet projects you will feel confident enough to implement into your classes immediately. Topics: Endangered species, Satellites, Periodic Table, and Space Exploration.

• *Tammy Kirk - Hawkins ISD*

High School • IPC

CAST 2000 Session Listing

WK42004 Friday 1:15PM - 2:10PM

SCIENCE ALIVE EARNS \$

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 Grajzar - 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.

• *Nedaro 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, Textteams, 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 Principe - Hawkins ISD*

Middle/Jr. High School • Physics

CAST 2000 Session Listing

WK42251 Friday 2:20PM - 3:15PM

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 Friday 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*

Elem. School • Physics

WK42127 Friday 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, 10C, 11B, 12C, 13AB.

- *Peggy Henson - Dallas Public Schools*
- *Tanya Tovar - Dallas Public Schools*

All Levels • Life Science

WK42243 Friday 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 Friday 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 • Life Science

WK42175 Friday 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

WK42212 Friday 2:20PM - 3:15PM

ALL STRESSED OUT - EXPLORING LECHATLIER'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

WK42009 Friday 2:20PM - 3:15PM

REMOVE THE SOUR AND BITTER TASTE FROM ACID BASE CHEMISTRY

Students often find it difficult to conquer Acid Base Chemistry. During this workshop a collection of resources, notes, activities, demonstrations, experiments and strategies will be introduced to help students win the battle with Acid Base Chemistry. Participants will receive a copy of the materials.

- *Rhonda M. Alexander - Tyler ISD*

Middle and High School • Chemistry

WK42034 Friday 2:20PM - 3:15PM

BAGS OF FUN

Two experienced physical science teachers share their best demonstrations and labs for a variety of topics. Handouts provided. Come enjoy the fun.

- *Meg Young - Conroe ISD*
- *Roberta Young - Arlington ISD*

All Levels • IPC, Physics, Chemistry

WK42257 Friday 2:20PM - 3:15PM

MYOLOGY WORKSHOP - LEARN HOW TO BUILD A BODY, MUSCLE BY MUSCLE

Discover a hands-on, step by step system, applicable to TEKS, utilizing models to understand body form and function. Build muscles of the arm in clay and place on Maniken™ models.

- *Starla Ewan - Zahourek Systems*

High School • Life Science

WK42128 Friday 2:20PM - 3:15PM

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

WK42314 Friday 2:20PM - 3:15PM

ENHANCING QUALITY, QUANTITY, AND ACCOUNTABILITY OF SCIENCE PROFESSIONAL DEVELOPMENT

Learn how Project ESTT (Empower Science Teachers of Texas), an NSF project, has impacted science classrooms across Texas by integrating knowledge about science with knowledge about teaching.

- *Dr. Kamil A. Jbeily - Science Education Center*
- *Dr. James P. Barufaldi - Science Education Center*

All Levels • Other

WK42176 Friday 2:20PM - 3:15PM

CIRCLE OF LIFE IN A JUG

The use of common materials to create environmental chambers. This shows a natural progress and interaction of the environment.

- *Ted Renshaw - Lewisville ISD*
- *Linda Gray - LISD*

All Levels • Life Science

WK42111 Friday 2:20PM - 3:15PM

IS THAT YOUR FINAL ANSWER?

Learn how to use interactive games along with competition to introduce and master a variety of science topics through the use of electronic quiz games.

- *Jim Moore - New Caney ISD*
- *Debra Slade-Redden - New Caney ISD*

All Levels • Other



Registration & Housing Forms

October 12-14, 2000
College Station, Texas

CAST 2000

October 12-14 • College Station

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..

Thursday 8:00 am – 7:00 pm

Friday 7:00 am – 5:00 pm

Saturday 7:30 am – 10:30 pm

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 you 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.

STAT I.D. (your social security number) _____ Date _____

Name-Last _____ First _____ Middle _____

Address _____

City _____ State _____ ZIP _____

School/Campus _____

District/Business _____ ESC Region _____

Day Phone _____ PM Phone _____ Fax _____

Email _____

Job Description (Mark all that apply)	Grades Taught (Mark all that apply)	Subjects Taught (Mark all that apply)
<input type="checkbox"/> STUDENT TEACHER	<input type="checkbox"/> K <input type="checkbox"/> 9	<input type="checkbox"/> ELEMENTARY SCIENCE
<input type="checkbox"/> TEACHER	<input type="checkbox"/> 1 <input type="checkbox"/> 10	<input type="checkbox"/> INTEGRATED SCIENCE (K-8 ONLY)
<input type="checkbox"/> SUPERVISOR/CONSULTANT	<input type="checkbox"/> 2 <input type="checkbox"/> 11	<input type="checkbox"/> ANATOMY & PHYSIOLOGY
<input type="checkbox"/> DEPARTMENT HEAD	<input type="checkbox"/> 3 <input type="checkbox"/> 12	<input type="checkbox"/> BIOLOGY
<input type="checkbox"/> PRINCIPAL/ADMINISTRATOR	<input type="checkbox"/> 4 <input type="checkbox"/> TWO YEAR COLLEGE	<input type="checkbox"/> IPC (INTEGRATED PHYSICS & CHEMISTRY)
<input type="checkbox"/> COLLEGE/UNIVERSITY PROFESSOR	<input type="checkbox"/> 5 <input type="checkbox"/> COLLEGE/UNIVERSITY	<input type="checkbox"/> PHYSICS
<input type="checkbox"/> SCIENCE SPECIALIST	<input type="checkbox"/> 6	<input type="checkbox"/> CHEMISTRY
<input type="checkbox"/> STUDENT	<input type="checkbox"/> 7	<input type="checkbox"/> GMO (GEOLOGY/METEOROLOGY/OCEANOGRAPHY)
<input type="checkbox"/> BUSINESS	<input type="checkbox"/> 8	<input type="checkbox"/> AQUATIC SCIENCE
<input type="checkbox"/> RETIRED		<input type="checkbox"/> ENVIRONMENTAL SCIENCE
<input type="checkbox"/> NONE OF THE ABOVE	School/Business Type (Mark ONE)	<input type="checkbox"/> AP (ADV. PLACEMENT); IB (INTL. BACCALAUREATE)
	<input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE	<input type="checkbox"/> INFORMAL SCIENCE EDUCATION
		<input type="checkbox"/> TEACHER EDUCATION

- Mark here if you are a National Science Teachers Association Point of Contact.
- Mark here if you are a National Science Teachers Association Key Leader.
- Mark here if you do not want additional mailings about science events and opportunities.
- Mark here if you would like to preside at a CAST workshop. Please indicate the workshop numbers _____

\$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.

CAST 2000 Registration Subtotal \$ _____

Affiliate Membership Subtotal (from Form 2) \$ _____

Social Events Subtotal (from Form 3) \$ _____

Ticketed Event Subtotal (from Form 4) \$ _____

GRAND TOTAL \$ _____

Registrations cancelled after October 1, 2000 will not be refunded. Refund requests must be made in writing to:
Virginia Woods, STAT, P.O. Box 5095, Round Rock, TX, 78683-5095

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.) Check Credit Card

Card No. _____ Exp. _____ /20 _____

Name on Card _____

Signature _____

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



CAST 2000
October 12-14 • College Station
AFFILIATE MEMBERSHIP APPLICATION



**NOTE: This is page two of a four-page form. Incomplete registrations will NOT be processed.
 THIS FORM MUST BE SUBMITTED WITH FORM 1 TO BE VALID**

STAT I.D. (your social security number) _____ Day Phone _____

Name _____

A complimentary one year STAT membership is included in the Advance and Regular CAST Registration Rates.

	<u>ORGANIZATION</u> <u>NAME</u>	RENEW	NEW	Code* (420.)	RECRUITED BY	AMOUNT PAID
		(check one)				
ACT₂	Associated Chemistry Teachers of Texas	<input type="checkbox"/>	<input type="checkbox"/>	\$7 (01.1)	_____	\$ _____
ISEA	Informal Science Education Association	<input type="checkbox"/>	<input type="checkbox"/>	\$10 (02.1)	_____	\$ _____
ISSET	Integrated Science Educators in Texas					\$ _____
	Regular and Student	<input type="checkbox"/>	<input type="checkbox"/>	\$7 (03.1)		
	Life Member	<input type="checkbox"/>	<input type="checkbox"/>	\$100 (03.2)		
	Institutional Member	<input type="checkbox"/>	<input type="checkbox"/>	\$100 (03.3)		
	Corporate Member	<input type="checkbox"/>	<input type="checkbox"/>	\$300 (03.4)		
TABT	Texas Association of Biology Teachers	<input type="checkbox"/>	<input type="checkbox"/>	\$7 (04.1)	_____	\$ _____
TAE	Texas Association for Environmental Education	<input type="checkbox"/>	<input type="checkbox"/>	\$10 (05.1)	_____	\$ _____
TCES	Texas Council of Elementary Science					\$ _____
	Regular and Student	<input type="checkbox"/>	<input type="checkbox"/>	\$7 (06.1)		
	Life Member	<input type="checkbox"/>	<input type="checkbox"/>	\$100 (06.2)		
	Institutional Member	<input type="checkbox"/>	<input type="checkbox"/>	\$100 (06.3)		
	Corporate Member	<input type="checkbox"/>	<input type="checkbox"/>	\$300 (06.4)		
TESTA	Texas Earth Science Teachers Association					\$ _____
	Regular Membership	<input type="checkbox"/>	<input type="checkbox"/>	\$10 (07.1)		
	Life Membership	<input type="checkbox"/>	<input type="checkbox"/>	\$100 (07.2)		
	Corporate Membership	<input type="checkbox"/>	<input type="checkbox"/>	\$125 (07.4)		
	Family Membership	<input type="checkbox"/>	<input type="checkbox"/>	\$18 (07.5)		
	Full-time Student Teacher	<input type="checkbox"/>	<input type="checkbox"/>	\$2 (07.6)		
TMEA	Texas Marine Education Association	<input type="checkbox"/>	<input type="checkbox"/>	\$10 (08.1)	_____	\$ _____
TSAAPT	Texas Section Amer. Assn. of Physics Teachers	<input type="checkbox"/>	<input type="checkbox"/>	\$5 (09.1)	_____	\$ _____
TSELA	Texas Science Education Leadership Association	<input type="checkbox"/>	<input type="checkbox"/>	\$10 (10.1)	_____	\$ _____
TTOPS	Texas Teachers of Physical Science	<input type="checkbox"/>	<input type="checkbox"/>	\$7 (11.1)	_____	\$ _____

Affiliate Membership Subtotal (enter amount on Form 1) \$ _____



CAST 2000
October 12-14 • College Station
SOCIAL EVENTS (Additional Fee Required)
GALA, STAT LUNCHEON AND AFFILIATE LUNCHEON



NOTE: This is page three of a four-page form. Incomplete registrations will NOT be processed. THIS FORM MUST BE SUBMITTED WITH FORM 1 TO BE VALID

STAT I.D. (your social security number) _____ Day Phone _____
 Name _____

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.

	Under Southwestern Stars. 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). \$12.50 per person.
	Celebrating Teachers. 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.) \$15 per person.
	Gourmet Dinner and Wine Pairing at Messina Hof. 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. \$65 per person.

GALA Subtotal \$ _____

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.

	Dinner with the Corps of Cadets (Thursday, 6:15 pm, \$8.00 each)
	Breakfast with the Corps of Cadets (Friday, 6:30 am, \$6.00 each)
	STAT Luncheon (Friday, 12:10-1:30 pm, \$9.00 each)

STAT Social Subtotal \$ _____

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.

	ACT ₂ (\$16.00 each)
	ISSET (\$7.00 each)
	TABT (\$16.00 each)
	TAAE (\$7.00 each)
	TCEA (\$7.00 each)
	TESTA (\$7.00 each)
	TMEA (\$7.00 each)
	TSAAPT & TTOPS (\$7.00 each)
	TSELA (\$7.00 each)
	Box Lunch but not attending affiliate meeting (\$7.00 each)

Lunch Subtotal \$ _____

Social Events Subtotal (total from events above) (enter on Form 1) \$ _____



CAST 2000
October 12-14 • College Station
WORKSHOPS, SHORT COURSES AND FIELD TRIPS



**NOTE: This is page four of a four-page form. Incomplete registrations will NOT be processed.
 THIS FORM MUST BE SUBMITTED WITH FORM 1 TO BE VALID**

STAT I.D. (your social security number) _____ Day Phone _____

Name _____

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>

Workshops, Short Courses and Field Trips

DAY	CHOICE #1	COST \$	CHOICE #2	COST \$	CHOICE #3	COST \$
Thursday All Day						
Thursday AM						
Thursday PM						
Friday All Day						
Friday AM						
Friday 8:40-9:40am						
Friday 9:50-10:50am						
Friday 11:00-12:00pm						
LUNCH						
Friday PM						
Friday 1:15-2:10pm						
Friday 2:20-3:15pm						
Friday 3:25-4:20pm						
Friday 4:30-5:25pm						
Saturday All Day						
Saturday AM						
Saturday 8:00-9:20am						
Saturday 9:40-10:40am						
Saturday 10:50-11:50am						
LUNCH						
Saturday PM						
Saturday 1:00-1:50pm						
Saturday 2:00-2:50pm						
Saturday 3:00-3:50pm						
Saturday 4:00-4:50pm						

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/>
- 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.

Map #	Hotel	Rank	Single	Double	Triple	Quad	Smoking
1	Best Western		\$65	\$65	\$65	\$65	
2	Brazos Inn		\$55	\$55	\$55	\$55	
3	Comfort Inn		\$60	\$60	\$60	\$60	
4	Days Inn		\$60	\$60	\$60	\$60	
5	EZ Travel Inn		\$50	\$50	\$50	\$50	
6	Hampton Inn		\$70	\$70	\$70	\$70	
7	Hilton CS		\$70	\$70	\$70	\$70	
8	Holiday Inn		\$75	\$75	\$75	\$75	
9	La Quinta		\$69	\$69	\$79	\$79	
10	Manor House		\$52	\$52	\$57	\$57	
11	Motel 6		\$36.99	\$40.99	\$42.99	\$44.99	
12	Preference Inn		\$50	\$50	\$55	\$55	
13	Quality Suites		\$76	\$76	\$76	\$76	
14	Ramada Inn		\$59	\$59	\$59	\$59	
15	Super 8 Motel		\$60	\$60	\$60	\$60	
16	TownePlace Suites		\$65	\$82			
17	Vineyard Court		\$69	\$89			

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).

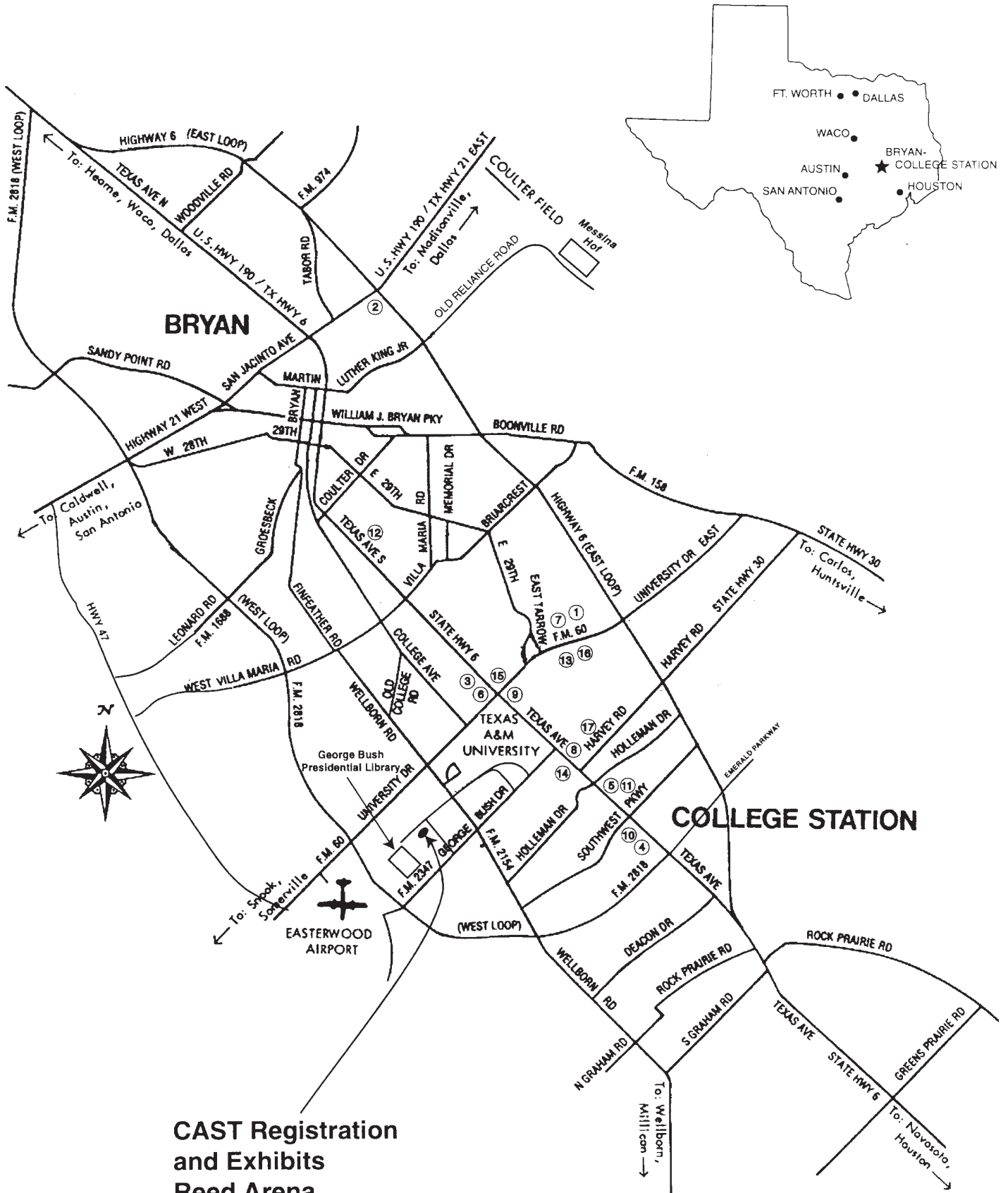
Credit Card: _____ Card # _____

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

BRYAN-COLLEGE STATION



**CAST Registration
and Exhibits
Reed Arena**

CAST 2000 Session Listing

WK42220 Friday 2:20PM - 3:15PM

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 C.ISD*
- *Dinny Barnes - Shepherd ISD*
- *Dawn Cody - Goodrich ISD*
- *Keith Tippit - Onalaska ISD*

Middle and High School • Life Science

WK42223 Friday 2:20PM - 3:15PM

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

WK42168 Friday 2:20PM - 3:15PM

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

WK42116 Friday 2:20PM - 3:15PM

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

WK42044 Friday 2:20PM - 3:15PM

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

WK42276 Friday 2:20PM - 3:15PM

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

WK42271 Friday 2:20PM - 3:15PM

TEA SCIENCE UPDATE - THE LANDSCAPE OF SCIENCE IN TEXAS

LEARN about the new directions for science education in Texas. HEAR 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

WK42280 Friday 2:20PM - 3:15PM

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

WK42138 Friday 3:25PM - 4:20PM

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

WK42061 Friday 3:25PM - 4:20PM

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

WK42002 Friday 3:25PM - 4:20PM

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

WK42078 Friday 3:25PM - 4:20PM

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 Mascola - 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 Dibenedeito - 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 TEKS TEAM Leaders. Activities range from CBL applications to Kitchen science.

- *Saundra Coffey - Cypress-Fairbanks ISD*
- *Lisa Stinson - St. Agnes Academy*

High School • Physical Science

WK42545 Friday 3:25PM - 4:20PM

USABLE SCIENCE ACTIVITIES

Keep the year moving with TEKS/TAAS 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 Session Listing

WK42157 Friday 3:25PM - 4:20PM

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

WK42113 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 - Phillip 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! Handouts 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 Stanco - Texas Forestry Association*
- *Pat Harrison - Botanical Research Institute of Texas*

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

WK42136 Friday 3:25PM - 4:20PM

EQUITY ISSUES AND STRATEGIES IN SCIENCE EDUCATION

Major issues and strategies for equity in science education will be presented for all grade levels (K-16). Handouts will be distributed.

- *R. Lynn Jones Eaton - University of Texas*

All Levels • Interdisciplinary Sciences

WK42306 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*
- *Shiela 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 - Tulosso-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 (DEMOS 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

WK42140 Friday 4:30PM - 5:25PM

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 - Lewisville ISD*

• *Don Holt - Denton ISD*

Middle/Jr. High School • Physics

WK42245 Friday 4:30PM - 5:25PM

WHEN YOU WISH UPON A STARLAB

Come into the STARLAB PLANETARIUM and learn how to enrich your curriculum, excite your students, and meet the TEKS in several content areas all at once!

• *R. Joyce Hill - Eagle Mt. Saginaw ISD*

All Levels • Interdisciplinary Sciences

WK42278 Friday 4:30PM - 5:25PM

INQUIRING MINDS WANT TO KNOW

Session participants will be involved in inquiry project activities in science and mathematics. Helpful suggestions for the development and planning of inquiry lessons will be provided. K-5 (2) a-e

• *Dr. Dawn Parker - Texas A&M University*

Elem. School • Interdisciplinary Sciences

WK42260 Friday 4:30PM - 5:25PM

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

WK42317 Friday 4:30PM - 5:25PM

G.L.O.B.E. (GLOBAL LEARNING AND OBSERVATIONS 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 - Denton ISD*

All Levels • Interdisciplinary Sciences

WK42502 Friday 4:30PM - 5:25PM

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

CAST 2000 Session Listing

WK42053 Friday 4:30PM - 5:25PM

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

WK42060 Friday 4:30PM - 5:25PM

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

WK42236 Friday 4:30PM - 5:25PM

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

WK52373 Friday 4:30PM - 5:25PM

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

WK42510 Friday 4:30PM - 5:25PM

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

WK42275 Friday 4:30PM - 5:25PM

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

WK42209 Friday 4:30PM - 5:25PM

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

WK42533 Friday 4:30PM - 5:25PM

HOW DO OUR SCHOOLS COMPARE WITH JAPAN?

Come learn about Japanese schools and about an opportunity for you to visit Japan. Learn about applying for a Fulbright Memorial Fund Scholarship. Lesson Ideas.

• *Sylvia Saavedra-Chastain - Grand Prairie ISD*

Elem. School • Other

WK42164 Friday 4:30PM - 5:25PM

ENGAGE, EXCITE, ENTERTAIN, AND EDUCATE: WHAT WE DO!

In this workshop, teachers participate in the Houston Museum of Natural Science's most successful science activities and discuss why these activities are so engaging to children.

• *Cecelia Ottenweller - Houston Museum of Natural Science*

• *Karen Stocco - HMNS*

All Levels • Interdisciplinary Sciences

WK42297 Friday 4:30PM - 5:25PM

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 W. Oleksak - Showboard, Inc.*

All Levels • Other

WK42041 Friday 4:30PM - 5:25PM

AIRBORNE OBJECTS 'N KIDS

Join us for a fun session designed to highlight several hands-on activities that serve to teach the principles of flight! These activities were developed for our fall semester University Hour program. The activities presented will include investigations with paper airplanes, gliders, and tetrahedron kites. Handouts and a free kite will be given to each participant!

• *Jean Gill - Grapevine - Colleyville ISD*

Elem. School • Interdisciplinary Sciences

WK42005 Friday 4:30PM - 5:25PM

BEYOND THE SCIENCE FAIR

Ever wanted to have an in-school science competition? Here are some guidelines, rules, and suggestions for conducting one at your school. Student-built entries will be on hand for examination and simple testing.

• *Teresa Guevara - Tolar ISD*

Middle and High School • IPC, Physics, Chemistry

WK42268 Friday 4:30PM - 5:25PM

TEA SCIENCE UPDATE - ENVIRONMENTAL EDUCATION IN TEXAS

Science educators nationwide are rediscovering the benefits of working with informal science sites in their communities. Learn about the exciting workshops you can attend all around the state that qualify you for TEEAC and State Board of Educator Certification hours -- & fulfill your PDAS professional development requirements. From "Seaside Sampling" at the Texas State Aquarium to the "Dynamism of Texas Desserts" at the Botanical Research Institute of Texas, you can energize your teaching. Interested in presenting? Learn how to become a TEEAC workshop provider. Handouts include the 2000 TEEAC Workshop Directory and a copy of Eye on Earth television program.

• *Chris Castillo-Comer - Texas Education Agency*

• *Irene Pickhardt - Assistant Director of Science - TEA*

All Levels • Other

CAST 2000 Session Listing

FIELD TRIPS (DEPARTING FROM TAMU)

\$ FT59435 Saturday 8:00AM - 3:00PM \$35.00

 **K/T BOUNDARY**

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.

\$ FT59466 Saturday 8:30AM - 12:00PM \$15.00

 **LAMAR UNIVERSITY DEPARTMENT OF GEOLOGY**


Collecting 'Hothouse' Fossils in an 'Icehouse' Climate -- Visit to Whiskey Bridge Bluff to collect samples. Fee includes transport and guide book

FT59404 Saturday 9:00AM - 11:00AM

 **COLLEGE OF AG AND LIFE SCIENCE**

Discussions and demonstrations related to the new Masters Of Agriculture & Life Sciences Program; Distance degree program for K-12 teachers.

FT59481 Saturday 9:00AM - 10:00AM

 **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.

\$ FT59472 Saturday 9:30AM - 12:00PM \$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.

FT59429 Saturday 10:00AM - 11:00AM

 **DEPARTMENT OF BIOCHEMISTRY/BIPHYSICS**

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.

FT59452 Saturday 11:00AM - 12:00PM

 **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.

FT69441 Saturday 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.

FT69442 Saturday 2:30PM - 5:00PM

 **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.

GENERAL SESSIONS TAMU

GS54356 Saturday 8:00AM - 9:20AM

 **CLONING MAMMALS : THE PAST, THE PRESENT, THE FUTURE**

• *Mark Westhusin - College of Veterinary Medicine, Texas A&M University*

All Levels • Life Science

PLENARY SESSIONS TAMU

PL53354 Saturday 9:40AM - 10:40AM

 **IF IT ISN'T GROWN-- IT MUST BE MINED**

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.

• *Christopher C. Mathewson - Geology and Geophysics, Texas A&M University*

All Levels • Earth

PL53361 Saturday 9:40AM - 10:40AM

 **EVOLUTION AND THE CONTROVERSY REGARDING EVOLUTION**

• *Randy Moore - Biology, University of Minnesota*

Life Science

PL53358 Saturday 9:40AM - 10:40AM

 **CHEMISTRY DEPARTMENT'S ROADSHOW**

• *John Hogg - Chemistry, Texas A&M University*

All Levels • Chemistry

PL53357 Saturday 9:40AM - 10:40AM

 **SEARCH FOR DARK MATTER**

• *James White - Physics, Texas A&M University*

All Levels • Physical

PL53351 Saturday 9:40AM - 10:40AM

 **THE SCIENCE BEHIND CURRENT CONTROVERSIES IN NUTRITION**

A lecture on the frontiers of nutritional science by the holder of the William W. Allen Endowment in Nutrition at Texas A&M University.

• *Joanne R. Lupton - Regents Professor, Texas A&M University*

All Levels • Life Science


PL53359 Saturday 9:40AM - 10:40AM

 **FORENSIC ENTOMOLOGY**

• *James Olsen - Biology, Texas A&M University*

All Levels • Life Science

PL53068 Saturday 9:40AM - 10:40AM

 **RESOURCES FOR K-12 SCIENCE TEACHERS: THE SCIENCE TEKS TOOLKIT**

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.

• *James W. Collins - Charles A. Dana Center*

All Levels • All Fields

CAST 2000 Session Listing

SHORT COURSES TAMU

SC51529 Saturday 8:00AM - 10:40AM



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 8:00AM - 9:20AM



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 8:00AM - 1:00PM **\$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 8:00AM - 10:40AM



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 8:00AM - 9:20AM



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

\$ SC51063 Saturday 8:00AM - 12:00PM **\$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 9:00AM - 5:00PM



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 9:00AM - 12:00PM



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 9:00AM - 11:50AM **\$12.00**



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 ISD*
- *Kathy Glidewell - Ranger ISD*
- *Jack Willis - Muleshoe ISD*

All Levels • Physics

\$ SC62544 Saturday 9:00AM - 12:00PM **\$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 9:00AM - 10:30AM



EXPLORING ELECTROPHORESIS AND FORENSICS

Participants cast agarose gels, load predigested 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 9:00AM - 12:00PM **\$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 9:00AM - 12:00PM **\$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

CAST 2000 Session Listing

SC51048 Saturday 9:00AM - 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 prize will be a drawing for "Teaching Science with Toys" books.

• *Anne Barefoot - Glencoe McGraw-Hill*

Middle and High School • All Fields

SC51025 Saturday 9:00AM - 12:00PM



LAB WORKS - THE LEARNING SYSTEM

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.

• *David Sinay - SCI Technologies*

Middle and High School • IPC, Physics, Chemistry, Life and Interdisciplinary Sciences

SC51033 Saturday 9:00AM - 12:00PM



SEX, DRUGS, AND TAAS

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.

• *Ellen Fowlkes - Ellen Fowlkes, Consultant*

All Levels • Interdisciplinary Sciences

SC51047 Saturday 9:00AM - 10:40AM



SCIENCE KIT PRESENTS: MORE TEACHER DEVELOPED PRODUCTS

Science Kit has developed many labs, demos, and manipulatives with teachers. Check out these great products.

• *Lynn Hesse - Science Kit*

Middle and High School • Interdisciplinary Sciences

\$ SC51233 Saturday 9:00AM - 12:00PM **\$10.00**



BRINGING PROJECTS TO THE CLASSROOM

Open the "windows to the Wilderness." 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!

• *Lucinda Sohn - Texas State Aquarium*

All Levels • Life Science

SC51066 Saturday 9:00AM - 12:00PM



CYSTIC FIBROSIS, AN APPROACH TO UNDERSTANDING THE HUMAN GENOME PROJECT IN CORRELATION WITH GENETIC DISORDERS

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.

• *Tom Avery - Science Kit*

• *Lynne Hesse - Science Kit*

High School • Life Science

SC51362 Saturday 9:00AM - 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 - EPI*

All Levels • All Fields

SC51363 Saturday 9:00AM - 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 - AIMS Multimedia*

All Levels • Life, Earth/Space, IPC, Physics, Chemistry and Interdisciplinary Sciences

SC61088 Saturday 9:00AM - 12:00PM



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

SC51073 Saturday 9:00AM - 12:00PM



PROTEIN FINGERPRINTING: THERE'S SOMETHING FISHY ABOUT EVOLUTION!

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.

• *Kirk Brown - Bio-Rad Labs*

• *Stan Hitomi - Bio-Rad Labs*

• *Dr. Patti Taranto - Bio-Rad Labs*

High School • Life Sciences

SC51534 Saturday 9:40AM - 12:00PM



CBL AND CBR IN THE HIGH SCHOOL SCIENCE LABORATORY

Experiments involving numerical data collection via the CBL or CBR, and appropriate for the high school physics and chemistry laboratory, will be demonstrated.

• *Vincent Schielack - Texas A&M University, College of Science*

High School • Physical

SC51281 Saturday 10:30AM - 11:30AM



USING A MODEL RAILROAD FOR INTEGRATED AND INTERDISCIPLINE INSTRUCTION

Our large problem solving exercise employing the scientific method, Newton's laws, electrical conductivity, resistance, insulation, simple machines, scale relationships, scenic techniques, etc.

• *Raymond L. Koch - Athens F.S.P*

High School • Physics

CAST 2000 Session Listing

SC51020 Saturday 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

\$ SC61500 Saturday 12:30PM - 3:30PM \$12.00

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

SC61288 Saturday 1:00PM - 3:50PM

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

SC61253 Saturday 1:00PM - 3:50PM

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 Science*

• *Kay Tobola - Clearcreek ISD*

All Levels • Interdisciplinary Sciences

SC61532 Saturday 1:00PM - 4:00PM

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

SC61527 Saturday 1:00PM - 3:50PM

HOW ABOUT A LITTLE SCIENCE? INTEGRATING SCIENCE TEKS INTO THE KINDERGARTEN CURRICULUM

The natural excitement that science generates in children is tapped when 26 science "friends" from varying Earth habitats teach life and earth science with 26 thematic, multi-sensory, integrated units. With participatory lessons, the writers give you a taste of this science based complete kindergarten curriculum. Applicable TEKS include: K1a,b; K2a,c,d,e;K3a,b,c; K4a,b; K5a,b,c; K6a,b,c,d,e; k8a,b; K9a,b,c; K10a,b.

• *Carol Dusek - Austin ISD*

• *Faye Inglis - Lake Travis ISD*

Elem. School • Interdisciplinary Sciences

SC61519 Saturday 1:00PM - 4:00PM

WATER QUALITY MONITORING WITH ENVIRONMENTAL EDUCATION CLASSES

How to select a monitoring site(s), what parameters to monitor, possible pitfalls, monitoring with CBL and TI graphing calculators, as well as using wet chemistry methods.

• *Berry L. Elmore - Magnolia High School*

• *Pat Sournal - Magnolia High School*

• *Karla Sparks - Magnolia High School*

• *Sheryl Tamborello - Magnolia High School*

High School • Life Science

\$ SC62543 Saturday 2:00PM - 4:00PM \$20.00

AC-DC RULZ

In this session, participants will construct an electrical device that can be used to demonstrate the difference between alternating and direct current.

• *Dan Hembree - Stratford ISD*

High School • Physical Science

SC61518 Saturday 3:00PM - 4:30PM

CHEMISTRY FOR THE CLASS CLOWN

Twelve very entertaining chemistry experiments that will excite your students. Included is a twenty page book and items to follow along.

• *Steve Cox - Loose in the Lab*

Elem. School • Chemistry

SPECIAL SESSIONS TAMU

SP56540 Saturday 8:15AM - 9:15AM

ROBOTIC LIGHT SHOW

A high energy, technically advanced robotic light show. A combination of lights, music and special effects controlled by computers. Technical discussion as well as entertainment will be included.

• *Amarante L. Lucero - Dept. of Theatre and Dance, Univ. of Texas at Austin*

• *Ryan Hogg*

All Levels • All Fields

SP56539 Saturday 10:50AM - 11:50AM

TIMELY ISSUES IN THE MEDICAL FIELD-PREVENTATIVE ACTION AND TREATMENT

Dr. Duke, who is a widely recognized television personality in his field, has labored tirelessly to educate the public about health issues and to fight against traumatic injury.

• *Dr. James "Red" Duke - The University of Texas-Houston Health Science Center*

All Levels • All Fields

CAST 2000 Session Listing

WORKSHOPS TAMU

WK52555 Saturday 9:40AM - 10:40AM

FOSS AND TEKS- "NEW REVISED FOSS PROGRAM" FOR GRADES 5 & 6

Experience "New Revised FOSS Program for Grades 5 & 6. Includes student books(Science Stories), Interactive FOSS website, Spanish edition, & much more. TEKS Correlation, Pilot Information, Hand-outs & Door Prize.

- *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, 3.8-3.

- *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 • All Fields

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 • Interdisciplinary Sciences

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

MILLENNIUM 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

CAST 2000 Session Listing

WK52217 Saturday 10:50AM - 11:50AM

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

WK52312 Saturday 10:50AM - 11:50AM

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

WK52261 Saturday 10:50AM - 11:50AM

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

WK52238 Saturday 10:50AM - 11:50AM

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

WK52193 Saturday 10:50AM - 11:50AM

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

WK52099 Saturday 10:50AM - 11:50AM

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

WK52325 Saturday 10:50AM - 11:50AM

USING MODEL AVIATION TO TEACH AERODYNAMICS AND, OF COURSE, FOLLOWING DIRECTIONS

Teach aerodynamics using paper and/or balsa wood model airplanes. This course is under TEKS 125.4, Aircraft Services

• *Verne B. Bell - White Settlement ISD*

All Levels • Physics

WK52208 Saturday 10:50AM - 11:50AM

INNOVATIVE WAYS TO TEACH THE CIRCULATORY SYSTEM

This presentation will explore fun and innovative ways to make the circulatory system, or the lack of one, meaningful and relevant to the young learner.

• *Janet Kelly - Texas Christian University*

Elem. School • Life Science

WK52135 Saturday 10:50AM - 11:50AM

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

WK52199 Saturday 10:50AM - 11:50AM

WERE THE KARANKAWA INDIANS "SAVAGES" OR REALLY ECOLOGISTS?

Participate in activities to determine how the Karankawas lived and interacted with their environment. Will receive activities correlated to the TEKS.

• *Violetta Lien Ph.D. - University of Texas*

Middle/Jr. High School • Life Science

WK52252 Saturday 10:50AM - 11:50AM

WAHOO!! SCIENCE FOR THE ENTHUSIASTICALLY CHALLENGED

Presentation of chemistry and physics demons with the "whys." Also examples of labs that will entertain and enthrall your IPC student.

• *Tammy Crabtree - Conroe ISD*

• *Michael Crabtree - St. Tammany Oil & Gas*

• *Jennifer Hedges - Conroe ISD*

• *Charlotte Schramm - Conroe ISD*

High School • Physical Science

WK52345 Saturday 10:50AM - 11:50AM

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

WK52318 Saturday 10:50AM - 11:50AM

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

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

WK52390 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 TEXTEAMS OFFER?

TEXTEAMS, 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 Respass - 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 Goerdel - 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

Hands-on 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*

• *Janice Barras - 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*

• *Cathy 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 (DEMOS 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

WK62149 Saturday 1:00PM - 1:50PM

INTEGRATIVE SCIENCE CONCEPTS FOR ELEMENTARY AND MIDDLE SCHOOL CLASSROOMS

Want interesting and fun activities? Do you want strategies to integrate reading, mathematics, and science concepts within your lessons? This hands-on session will answer these questions and promote inquiry based instruction with connections to other content areas.

- *Nedaro Bellamy - Houston 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

Explore genetics concepts in the classroom using imaginary organisms. Covers TEKS 6.11C, 7.10C, 8.11C, High School Biology 6.D

- *David Allard - Texas A&M University*
- *Mark Storey - Texarkana College*

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

CAST 2000 Session Listing

WK62316 Saturday 1:00PM - 1:50PM

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 Esprivalo Harrell - Irving ISD
- Jill Bailer - HISD

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

WK62110 Saturday 1:00PM - 1:50PM

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

Middle/Jr. High School • Life Science

WK62258 Saturday 1:00PM - 1:50PM

ANGIOLOGY AND NEUROBIOLOGY WORKSHOP - BLOOD AND NERVES - UNRAVELING THE NETWORK

Step-by-step build major vascular harnesses of the arm in colored clays onto the Maniken™ model. Hands-on experience are TEKS applicable.

- Starla Ewan - Zahourek Systems

High School • Life Science

WK62249 Saturday 1:00PM - 1:50PM

DSM FLIGHT AND ROCKETRY

To understand the fundamentals of flight, students must first grasp the properties of air, especially that air exerts of 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.

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

Elem. School • Physics

WK62382 Saturday 1:00PM - 1:50PM

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 • Interdisciplinary Sciences

WK62536 Saturday 1:00PM - 1:50PM

NAUTICAL ARCHEOLOGY

A look at Nautical Archeology projects in progress.

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

All Levels • Earth Science

WK62369 Saturday 1:00PM - 1:50PM

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

WK62524 Saturday 1:00PM - 1:50PM

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

All Levels • Other

WK62134 Saturday 1:00PM - 1:50PM

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

High School • Life Science

WK62397 Saturday 1:00PM - 1:50PM

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

WK62070 Saturday 1:00PM - 1:50PM

LABORATORY, CLASSROOM, AND FIELD INVESTIGATION SAFETY PROCEDURES FOR MIDDLE AND HIGH 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 ISD

Middle and High School • Other

WK62521 Saturday 1:00PM - 1:50PM

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.

- Dr. Ben Shaw - Texas Education Agency

All Levels • Other

WK62372 Saturday 2:00PM - 2:50PM

USING LEARNING ACTIVITIES TO EXTEND BEYOND THE CLASSROOM

Ideas will be shared, with handouts, on ways to have students keep up with science in the news, develop reading and writing skills, and create, experiment, and explore outside the classroom. (TEKS 8.1-8.4, 8.8, 8.15)

- Virginia Adian - Victoria ISD
- Ruth Ann Hackney - Victoria ISD

Middle/Jr. high School • Interdisciplinary Sciences

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-Isbell - 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 • Earth 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 packets, 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 Hanna - 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

CAST 2000 Session Listing

WK62159 Saturday 2:00PM - 2:50PM

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*

Middle/Jr. High School • Interdisciplinary Sciences

WK62211 Saturday 2:00PM - 2:50PM

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

WK62089 Saturday 2:00PM - 2:50PM

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*
- *Joann Deluna - South San Antonio ISD*

All Levels • Physics

WK62221 Saturday 2:00PM - 2:50PM

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*

All Levels • Interdisciplinary Sciences

WK62173 Saturday 2:00PM - 2:50PM

EXPLORING 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*

All Levels • Interdisciplinary Sciences

WK62174 Saturday 2:00PM - 2:50PM

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*

High School • Physics

WK62344 Saturday 2:00PM - 2:50PM

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

WK62517 Saturday 2:00PM - 2:50PM

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

WK62143 Saturday 2:00PM - 2:50PM

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*

High School • Life Science

WK62112 Saturday 2:00PM - 2:50PM

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*

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

WK62542 Saturday 2:00PM - 2:50PM

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*

High School • Integrated/Interdisciplinary Science

WK62548 Saturday 2:00PM - 2:50PM

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*

Middle School/Jr. High • Physical Science

WK62501 Saturday 2:00PM - 2:50PM

G.L.O.B.E. (GLOBAL LEARNING AND OBSERVATIONS 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*

All Levels • Interdisciplinary Sciences

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*
- *Claran 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

WK52520 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 Session Listing

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. 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

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

WK62396 Saturday 3:00PM - 3:50PM

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

CAST 2000 Session Listing

WK62506 Saturday 3:00PM - 3:50PM

INTEGRATIVE SCIENCE CONCEPTS FOR ELEMENTARY AND MIDDLE SCHOOL CLASSROOMS

Want interesting and fun activities? Do you want strategies to integrate reading, mathematics, and science concepts within your lessons? This hands-on session will answer these questions and promote inquiry based instruction with connections to other content areas.

- *Nedaro Bellamy - Houston ISD*
- *Sandy Antalis - Houston ISD*

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

WK62394 Saturday 3:00PM - 3:50PM

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

WK62541 Saturday 3:00PM - 3:50PM

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

WK62395 Saturday 3:00PM - 3:50PM

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

WK62336 Saturday 3:00PM - 3:50PM

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

WK62504 Saturday 3:00PM - 3:50PM

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

WK62514 Saturday 3:00PM - 3:50PM

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

WK62387 Saturday 3:00PM - 3:50PM

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

WK62389 Saturday 3:00PM - 3:50PM

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 C.ISD*
- *Keith Tippit - Onalaska ISD*

Middle and High School • Life Science

WK62525 Saturday 3:00PM - 3:50PM

PHYSICAL SCIENCE HAZARDS

Guidelines for the safe use of physics' types of equipment and materials will be provided. This session is for any science class that teaches physics concepts.

- *Debbie O'Maine*
- *Shelley Abernathy*
- *Kathy Glidewell*
- *Dr. Bill Russell*

All Levels • Physical Science

WK62526 Saturday 3:00PM - 3:50PM

SCIENCE FACILITIES

Guidelines for research-based designs for safe science facilities will be provided. This session is for anyone who is in a district that is growing, has plans for new facilities, or thinks that new facilities might be a possibility. An ounce of prevention is worth a pound of cure.

- *Dr. Sandra West - Southwest Texas University, Biology*

All Levels • Other

WK62304 Saturday 3:00PM - 3:50PM

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

WK62376 Saturday 3:00PM - 3:50PM

BEYOND THE SCIENCE FAIR

Ever wanted to have an in-school science competition? Here are some guidelines, rules, and suggestions for conducting one at your school. Student-built entries will be on hand for examination and simple testing.

- *Teresa Guevara - Tolar ISD*

Middle and High School • IPC, Physics, Chemistry

CAST 2000 Session Listing

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