

Texas Regional Collaboratives for Excellence in Science Teaching

In the Service of Texas Science Teachers



TWELFTH ANNUAL MEETING HIGHLIGHTS

**Synergizing P-16 Science Education Partnerships:
The Role of Policy Makers, Business, and Education Leaders**

JULY 12 - 14, 2006
Hilton Austin Airport Hotel
9515 New Airport Drive
Austin, Texas 78719



TWELFTH ANNUAL MEETING HIGHLIGHTS

Texas Regional Collaboratives Welcomes Legislators, Business Leaders, Higher Education Partners and Science Teachers to Annual Meeting

A record 420 Texas science teachers, policymakers, science professionals, state and federal partners, education service center representatives and corporate leaders attended the three-day 12th Annual Texas Regional Collaboratives for Excellence in Science Teaching (TRC) Meeting that was held July 12, 2006.

The yearly meeting draws TRC partners together for the sharing of ideas and strategies; to celebrate the hard work and successes of participating science teachers; and to acknowledge the numerous dedicated, generous supporters of the Collaboratives. The theme of this year's event was "Synergizing P-16 Science Education Partnerships," emphasizing the crucial role all TRC partners play in preparing students for careers in which science and technology expertise is required.

"The theme of the 12th annual meeting," says Dr. Shirley J. Neeley, Texas State Commissioner of Education, "embodies the spirit and power of collaboration among education leaders, government and business. The impressive quality and caliber of attendees, keynotes, presenters, showcases and sessions make us proud to join forces with the TRC to foster P-16 partnerships across the state."

Highlights of the meeting included a reception and dinner at which the University of Texas System Chancellor Mark G. Yudof delivered the keynote address, as well as an evening showcase of exhibits and demonstrations prepared by TRC science teachers and science specialists.



In honor of a decade of commitment to the TRC, Dr. Jim Barufaldi (left) was named recipient of the 2006 Distinguished Service Award.



"I feel that one of the best things we ever did was move the Texas Regional Collaboratives to the College of Education. Dr. Jbeily and Dr. Barufaldi work very hard for our College and the children of this state and have earned the respect and support of Texans who care about quality science education."
Dean Manuel J. Justiz

"This is my first year in the Collaboratives," says Chris Long, a science teacher at Webb Middle School in Garland who presented an exhibit on how to determine the surface temperature of the sun, "and I'm amazed at how much this particular professional development experience has helped me. In addition to attending professional development training throughout the year, you have this great opportunity, at the annual meeting, to get absolutely incredible ideas from the exhibits and from the sessions we attend.

"Even without all of that, just the benefit of developing a strong support network that you can call upon anytime would make joining worthwhile. I now have a sounding board of around 30 other teachers whom I call when I need suggestions, feedback and help, and they can touch base with me as well and bounce ideas off of me."

Science teachers learned from fellow teachers and science specialists how post-tsunami disaster relief can be used to teach biology, how to build writing skills through science instruction and how Harry Potter and the Goblet of Fire can help students understand genetics as they attended the session entitled "Dragon Genetics, a Novel Approach," one of the many interesting and informative workshop sessions offered during the three-day meeting.

SYNERGIZING P-16 SCIENCE EDUCATION PARTNERSHIPS:

Professional development training also included field trips to McKinney Roughs, where participants hiked and took part in activities related to geology and indigenous species, as well as to the Jack S. Blanton Museum of Art on The University of Texas at Austin campus.

Among the many distinguished guests and speakers attending this year's event were Shell Oil Company president John Hofmeister, UT System Chancellor Yudof, University of Texas at Austin President William C. Powers, Jr., College of Education Dean Manuel J. Justiz, Texas State Representatives Mark Strama and Donna Howard, Toyota Vice President Luis de la Garza, and Stephen C. Beasley, president of El Paso Corporation's Eastern Pipeline Group.



Science teachers participating in the Collaboratives' professional development opportunities showcased and shared their innovative lessons and instructional techniques during a reception at the annual TRC meeting.

Shell Oil has contributed over \$1.0 Million to the TRC since 2000 to facilitate expansion of the Collaboratives. Funds from Shell are being used by the TRC to give science teachers research-based instruction and materials, prepare students for geoscience and environmental science careers, encourage student participation in local and regional science fairs and to create two prototype partnerships in Louisiana that are modeled after the TRC. In addition, AT&T has donated around \$625,000 and Toyota USA Foundation has provided \$690,000 in support of the partnerships. This year, El Paso Corporation joined a growing list of contributors and awarded the TRC a grant for \$60,000.



Distinguished speakers and guests at this year's annual meeting included, from left to right: College of Education Dean Manuel J. Justiz, University of Texas at Austin President William C. Powers, Jr., UT System Chancellor Mark G. Yudof, Shell Oil President John Hofmeister and TRC founder and executive director Dr. Kamil A. Jbeily.

"We are proud to have been part of the TRC's expansion into Louisiana," says Shell Oil Company President Hofmeister, "and are exploring the possibility of expanding the program into other states. The students in math and science classes around Texas and the nation are the individuals who will be leaders in 25 years, and at Shell we care very much about what they are taught and about the quality of teachers who instruct them. We're parents as well as Shell employees, and we feel a great responsibility to these children. We know that they are the ones who will be creating solutions to the energy challenges we're discussing today, and we want them to get the kind of math, science, engineering and technology foundation that the TRC's professional development programs make possible."

THE ROLE OF POLICY MAKERS, BUSINESS AND EDUCATION LEADERS

Along with business partners, the Texas Education Agency has been a major contributor to the TRC since the Collaboratives' inception and recently announced that it will invest in the TRC to establish a professional development support system for Texas mathematics teachers. The mathematics program will be patterned after the highly successful science partnerships.

Now in its 10th year in the College of Education's Center for Science and Mathematics Education, and since its inception over 15 years ago, the TRC has been responsible for developing the knowledge, skills and leadership capacity of around 12,000 Texas science teachers. Many of these teachers mentor other teachers and play a leadership role at the district, regional, and state levels. In addition to strengthening teachers' instruction skills, the TRC has enhanced the learning experiences of over one million students in 200 of Texas 254 counties.



Dr. Kamil A. Jbeily, founder and executive director of the Texas Regional Collaboratives for Excellence in Science Teaching

"In the 35 Texas science collaboratives," says Dr. Kamil A. Jbeily, founder and executive director of the award-winning TRC, "instructional teams consisting of science and education professors, science specialists and master teachers attend professional development academies offered by the TRC. They learn about the latest advances in science instruction as well as current policy changes regarding the teaching of science."

"Each of the 35 instructional teams provides around 105 contact hours of TEKS-based, high-quality, sustained, research-based professional development to an average of 25 teachers, who then become mentors and share science content and pedagogy with science teachers in their school districts. This extraordinarily effective and efficient model will be employed in establishing the mathematics regional collaboratives network and supporting Governor Rick Perry's science and math initiatives."

*Press Release by Kay Randall
Office of the Vice President for Public Affairs
The University of Texas at Austin*



Reception Gathering

EXECUTIVE GATHERING AND VIP BRIEFING



From left to right: **Marilyn Kameen**, Senior Associate Dean, College of Education, The University of Texas at Austin; **Randa Safady**, Vice Chancellor for External Relations, The University of Texas System; **Manuel J. Justiz**, Dean, College of Education, The University of Texas at Austin; **William Powers, Jr.**, President, The University of Texas at Austin; **Mark G. Yudof**, Chancellor, The University of Texas System Administration; **Frank Trogus**, Vice President, Supplier Excellence, Shell Downstream, Inc.; **John Hofmeister**, President, Shell Oil Company; **Tom Rizzo**, Service Manager, Louisiana, Shell Global Solutions US, Inc.; **James P. Barufaldi**, Director, Center for Science and Mathematics Education, The University of Texas at Austin; **Victoria Rivera**, High School Intern, Shell Oil Company; **Terri Drabik-O'Reilley**, Workforce Development Specialist, Corporate Affairs/HR, Shell Oil Company; **Frazier K. Wilson**, Manager, Social Investment, Shell Oil Company; **Kamil A. Jbeily**, Executive Director, Texas Regional Collaboratives; **Kay L. Randall**, Information Writer, Office of Public Affairs, The University of Texas at Austin; **Hasting Stewart**, Vice President, Shell Oil Company Foundation; **Mark Blount**, Director, Office of the Vice President for Development, The University of Texas at Austin.



From left to right: **Susan Anderson**, Director, Center for Curriculum and Instructional Support, ESC Region 14; **Anjela Schlegel**, Director of Instructional Services, ESC Region 9; **Carl Stockton**, Dean, School of Education, The University of Texas at Brownsville; **Deloria Nanze-Davis**, Director, Mathematics and Science Academy, The University of Texas at Brownsville.



Carol Fletcher, Assistant Director, Texas Regional Collaboratives and **Gina Day**, Director of Student Support Initiatives, Texas Education Agency.



Dr. Jbeily and **John Stevens**, Executive Director, Texas Business and Education Coalition.



Dean Justiz and **Frazier K. Wilson**, Manager, Social Investment, Shell Oil Company.



Dr. Jbeily with **Howard Johnson**, Provost and VP of Academic Affairs, University of North Texas.



Dr. Jbeily with **Elizabeth Hall Burns**, Vice Provost, Texas Tech University

GREETINGS AND REMARKS SPEAKERS

Keynote Speaker



Mark G. Yudof

Chancellor

*The University of Texas System
Administration*

“Mr. Wizard majored in general science, but he had a joint major. He also majored in English, a useful language for scientists, and I’d like to think that he combined the two, that he taught science with some drama, that they weren’t totally separate spheres for Mr. Wizard. That is simply what I would urge from you today, to teach science, mathematics and engineering with some drama. You are the people who are going to teach our students why the world wags and what wags it, and I want to thank you for all you do everyday.”



William C. Powers, Jr.

President

The University of Texas at Austin

“We, at the University of Texas at Austin, ask the question: Where are the scientists, mathematicians, and engineers going to come from? I am looking at the people in this room who are rolling up their sleeves, and in a variety of ways, have given financial support, legislative support and leadership at the higher level of education.”



John Hofmeister

*President and US Country Chair
Shell Oil Company*

“Ladies and gentlemen, you will train the mathematicians and the scientists who will create the energy solutions for tomorrow, who will put us on economic path forward. Thank you for your commitment and dedicated help to aid the next generation of Texans lead us in the future as they learn. My hat is off to you.”



Beth Ann Bryan

Senior Education Advisor

Akin Gump Strauss Hauer & Feld LLP

“The many K through 12 teachers in the audience tonight should know that Chancellor Yudof truly cares about elementary and secondary education, and what his universities can do to improve the day to day work in the schools. As a result of this interest, he formed the Institute for Public School Initiatives at UT System.”



Mark Strama

*Representative, District 50
Texas House of Representatives*

“It has never been more important than it is now, to continue to invest in the pedagogical and curricular improvement in science and mathematics education. The work you are doing here this week fits well with the Legislature’s action in requiring an increased investment in science and math education.”



Luis de la Garza

*Vice President Administration
Toyota Motor Manufacturing, Texas, Inc.*

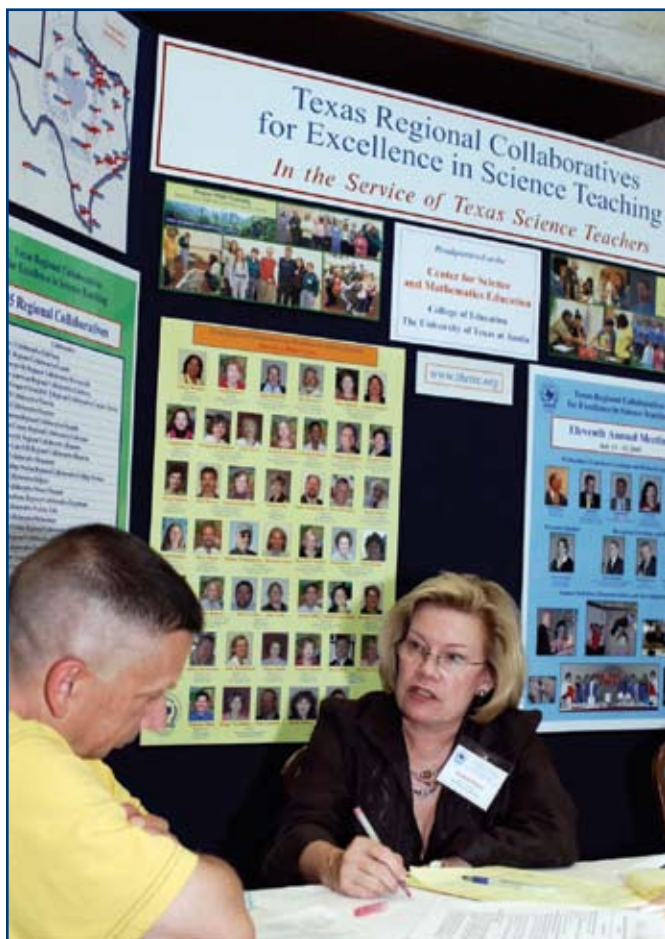
“Toyota has always placed a priority on education in our lives and in our jobs. This goes back to our founder, Shoshiro Toyota, who believed that an investment in our youth is an investment in our future. We never lost sight of that mantra. That’s why we are so proud to support the TRC at The University of Texas at Austin.”

CALENDAR AT A GLANCE

Wednesday, July 12	9:00 - 11:30 a.m.	Gallery Showcase Set-up					Bergstrom Ballroom Lobby - Lower level
	10:00 - 5:00 p.m.	Registration					Main Floor & Bergstrom Ballroom Lobby - Lower level
	12:00 - 2:00 p.m.	Opening Luncheon and Program					Bergstrom Ballroom
	3:30 - 5:00 p.m. SESSION I	1. Bubble Tech. - Solids, Liquids, Gasses Violet Crown I - MF	2. Dragon Genetics, a Novel Approach Violet Crown II - MF	3. Service Learning Partnerships Wildflower - MF	4. Clay Animation in the Classroom Del Valle - LL	5. The Science of Journaling Goldenrod - MF	6. Gooney, Gathering Over a Sticky Situation Longhorn - MF
	3:30 - 4:30 p.m.	VIP Briefing					Chenault - Lower Level
	6:00 - 7:00 p.m.	Showcase and Reception					Bergstrom Ballroom Lobby - Lower Level
	7:00 p.m.	Dinner & Program					Bergstrom Ballroom - Lower Level
Thursday, July 13	6:30 - 7:45 a.m.	Breakfast					Atrium - Main Floor
	8:00 - 9:00 a.m. SESSION II	Teaching for Tomorrow					Bergstrom Ballroom - Lower Level
	9:10 - 10:30 a.m. SESSION III	1. The 4Ds of Problem Solving Bergstrom Ballroom - LL	2. So Much Science, So Little Time Wildflower - MF	3. Visiting the Triple R Ranch - Reduce, Reuse, Recycle Longhorn - MF	4. Bacteria in Your Socks Violet Crown I - MF	5. Squishy, Squashy Sponges Violet Crown II - MF	6. "Taking a Closer Look" Share-a-thon Chenault - LL
	10:30 - 10:45 a.m.	Break					
	10:45 - Noon SESSION IV	1. 21st Century Science Fair Del Valle - LL	2. The Biology of Disaster Relief Violet Crown II - MF	3. Probes and the Inverse Square Law Violet Crown I - MF	4. Space Connections! Effect of Space on Humans Wildflower - MF	5. Critical TEKS-Based Labs/Activities for TAKS Success Longhorn - MF	6. Project Director Forum Chenault - LL
	Noon - 1:30 p.m.	Lunch					Atrium - Main Floor
	1:30 - 5:30 p.m.	Science and Art Educational Field Trips (McKinney Roughs & Blanton Art Museum)					
	5:30 p.m.	Dinner & Evening on your Own					
	7:00 - 9:00 p.m.	Optional Activities					
		Pixel Magic for Your Digital Photography					Chenault - Lower Level
		Spanish Professional Development Academy					Longhorn, Main Floor
		Bridging II TAKS Module 1: Light and Optical Systems					
		Movie Night					Del Valle - Lower Level
Friday, July 14	6:30 - 7:45 a.m.	Breakfast					Atrium - Main Floor
	7:00 - 7:45 a.m.	GLOBE Orientation					Goldenrod - Main Floor
	8:00 - 9:00 a.m. SESSION V	STAGE - Technology-based Instruction for Teachers and Their Students					Bergstrom Ballroom - Lower level
	9:10 - 10:30 a.m. SESSION VI	1. Developing Websites with the TRC Participant in Mind Chenault - LL	2. Yes, We Have No Bananas Violet Crown I - MF	3. Utilizing Collaborative Partners to Teach Critical... Wildflower - MF	4. Transcription and Translation Violet Crown II - MF	5. Fun with Beakmobiles Longhorn - MF	6. Fossils: They're More Than Just Rocks & Dirt Del Valle - LL
	10:30 - 10:45 a.m.	Break					
	10:45 - Noon SESSION VII	1. The Archaic Indians of the Lower Pecos: Teaching TEKS... Violet Crown I - MF	2. Building Writing/Math Skills through Science Instr. Violet Crown II - MF	3. The Water Cycle Wildflower - MF	4. What's in Your Genes? Del Valle - LL	5. Let's Get Physical Longhorn - MF	6. Enhancing Mentor Capacity Chenault - LL
	Noon - 2:30 p.m.	Lunch					Bergstrom Ballroom

LL: Lower Level MF: Main Floor

WEDNESDAY PRESENTATIONS



*TRC Field Trips
Sign-up Booth*



*Region 12 Collaborative
Exhibit*

SESSION I

1. Bubble Technology - Solids, Liquids, Gasses

Elizabeth Carling Deaton, Elem. Teacher, Brownsville ISD, Sessia Wyche and Cynthia Wyche, Elem. Teachers, Harlingen ISD

Presenters show how students explore objects that can be used to blow bubbles, making little bubbles and big bubbles. They use the information gathered to design and draw bubble makers for specialized uses. They experiment with at least 10 different items. Time to share ideas about the use of bubbles will be given.

2. Dragon Genetics, a Novel Approach

Jeanine Wolf, Middle School Teacher, Midway ISD

Want to add interest in your science presentations? Using a novel as a mode of presentation in your science curriculum promotes in-depth student understanding. Explore how Harry Potter and the Goblet of Fire allows students to study the inheritance factors of dragons in a fun way.

3. Service Learning Partnerships

Janette Scott, ESC Region 12; Lisa Bellows, NCTC; Nicole Rogers, OLLU and Kim De La Cruz, Lake Houston Regional Collaborative

Want to get your teachers and students involved in Service Learning? Come join us and learn what is going on in the state, and hear about three different projects from three of our collaboratives that received a Service Learning grant from Shell Oil Company.

4. Clay Animation in the Classroom

Evelyn Zera, Science Specialist, Alief ISD

Looking for an alternative assessment? Learn how easy it is to have your students create clay animation projects. We will go over a day-by-day timeline for the project and show student examples of clay animation projects. Trouble shooting tips will be addressed before participants create their own clay animation projects. Bring a digital camera and laptop if you can.

5. The Science of Journaling

Judy York and Suzanne Phillips, Science Specialists, Region 12 ESC

Science Journals in action: Explore how journaling enhances student productivity and ownership. Participants will get a chance to see journaling "in progress" from real classrooms around Central Texas and each will create his/her own journal. Even if you are a veteran "journalist" please join us and discover new and exciting TEKS-based activities.

6. Gooley, Gathering Over a Sticky Situation

Carey Quick, Elementary Teacher, Salado ISD and Cindy Woods, Elementary Teacher, Corsicana ISD

Groups collaborate and solve problems that come up when their space program has discovered a new planet with an unusual surface. Attendees will investigate the strange planetary surface, discuss and share their findings with the class, and design a craft that can land on the planet's surface.



*“Probes and the Inverse Square Law”
Workshop*



*Region 16 Collaborative
Exhibit*



*“Bacteria in Your Socks”
Workshop*

SESSION II

Teaching for Tomorrow

Ted McCain, Teacher, Author, Consultant and Speaker

What skills will students need after they graduate from high school to be successful in the world of technologically driven change in the 21st century? According to Ted McCain, while a major focus in education over the last fifteen years has been to equip students with up-to-date technology skills, skills alone are not enough. Technology skills are secondary to problem-solving skills. Listen as Mr. McCain describes today's students and how to best prepare them for today's world.

SESSION III

1. The 4Ds of Problem Solving

Ted McCain, Teacher, Author, Consultant and Speaker

You are thoroughly versed in the 5 Es. Now learn the 4 Ds—a structured process for solving problems. Hear the engaging way Mr. McCain uses role play to set up classroom scenarios that encourage students to ask good questions and solve real world problems.

2. So Much Science, So Little Time

Leanna West and Tina Stephens, Teachers, Trent ISD

Plants, soil and ... books – WOW! Let us take a bird's eye view as well as a worm's eye view of nature and see what it entails. Kids love “dirt” so why not use it to get them to love science. In this session we will talk about and experiment with soils, flowers, plants, seeds, and trees and tie it to all subjects, TEKS, and books!

3. Visiting the Triple R Ranch - Reduce, Reuse, Recycle

Tracie Wetzel, Elementary Teacher, Fairfield ISD

Come take a ride on the Triple R Ranch wagon! Experience hands on activities that will have your buckaroos excited about the Triple Rs...Reduce/Reuse/Recycle. YEE HAW!

4. Bacteria in Your Socks

Angie King, Middle School Teacher, Robinson ISD

Create your own plush model of bacilli, cocci, or spirilla bacteria using an old sock.

5. Squishy, Squashy Sponges

Ellen White, Elementary Teacher, Harlandale ISD

This unit provides six activities that are age appropriate and target the process skills, including observing, communicating, comparing, measuring and organizing. Both natural and man-made sponges are used to develop these skills. Discussion will follow regarding appropriateness of activities for young learners age 3 to 6.

6. “Taking a Closer Look” Share-a-thon

Marsha Willis, Professional Development Coordinator and Keith Mitchell, Coordinator for Technology Initiatives, TRC

Join us for a unique experience as we relate information about the West Texas field experience. Walk away with knowledge about how to conduct field experiences and 5E lesson plans in astronomy, geology, and botany.

THURSDAY PRESENTATIONS DESCRIPTION



Region 1 Collaborative Exhibit



“Space Connections! Effect of Space on Humans” Workshop



“Fossils: They’re More Than Just Rocks and Dirt” Workshop

SESSION IV

1. 21st Century Science Fair

Tracey Ramirez, Elementary Teacher, Lackland ISD

In this session participants will explore the use of technology as a tool for students to use in creating Science Fair projects. A step-by-step approach will be shared so that participants can easily manage this project with elementary students. The State Standards for Science that are addressed by this project will be shared.

2. The Biology of Disaster Relief

Tobi McMillan, Texas Tech University – Howard Highes Medical Institute and Sarah Joy Anderson, High School Teacher, Frenship ISD, Jamie Kristinek, Texas Tech University Student

In this engaging session, participants will walk through a unit that addresses the biological topics involved in disaster relief. Based upon events following the tsunami that struck Southeast Asia in 2004. Attendees will receive numerous activities that address topics such as the spread of infection, classification of bacteria, identification of effective antibiotics, and water treatment options.

3. Probes and the Inverse Square Law

Dr. Jim Roberts, Professor, The University of North Texas

Collection and graphing of data are skills that need to be taught at all levels. Activities presented will utilize the property of probes, light and conductivity, which will be constructed from simple components. Data will be collected to show that voltages can be used to measure conductivity of solutions and light sensitive diodes can be used to measure light and to test the “inverse r-square law” of light.

4. Space Connections! New Activities on the Effects of the Space Environment on Humans

Nina Corley, Satori School and Marguerite Sognier, U.T.M.B. and NASA/JSC/USRA

Use the excitement of Space in your classroom to inspire students to learn essential, standards-based skills! Experience unique, engaging, inquiry-based, hands-on classroom activities designed by teachers for teachers. Participants will receive the newly published Space Connections book FREE and have a chance to win door prizes.

5. Critical TEKS-based Labs and Review Activities for TAKS Success

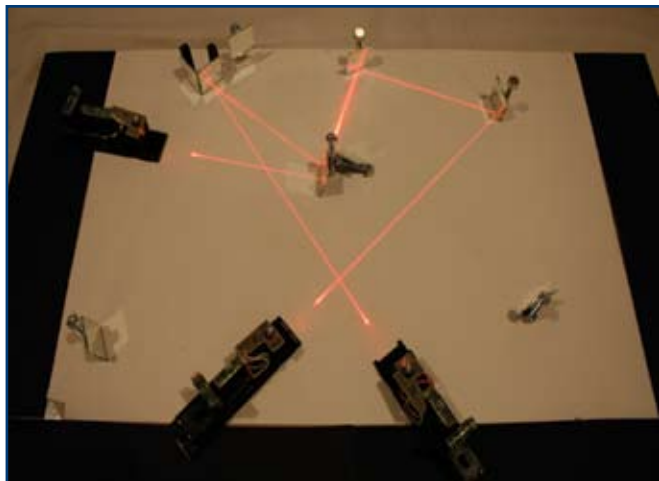
Madeline Sherrill, Elementary Teacher, Medina ISD, and Kathryn Torralva-Villa, Science Specialist, San Antonio ISD

Participants will be divided into four groups – 2 set-ups of the same experiment. Each group will conduct a 20 minute detailed lab that correlates to critical TAKS objectives III-Physical Science & IV-Earth Science. Participants will share out the results and TEKS/TAKS correlations. The whole group will do two activities to address critical TEKS.

6. Project Director Forum

Carol Fletcher, Assistant Director / R&D Coordinator, TRC

Project Directors and ITMs will discuss the challenges and successes they have experienced over the past project year. All Project Directors and ITMs are invited to participate.



*Region 13 Collaborative
Exhibit*



*“Fun with Beakmobiles”
Workshop*

SESSION V

STAGE Technology-based Instruction for Teachers & Their Students **Glen Schuster, Director, U.S. Satellite Systems**

Reflecting on their own content knowledge in the areas of air, life, water, land, Earth systems and space, many science educators seek additional course work in these areas. The breadth of course topics and offerings available for Earth and Space Science Education continues to grow, and new, proven methods of professional development can deliver this content. The presentation will introduce educators to research-based strategies and identify curricular materials that are effective in helping teachers and students understand concepts as well as use guided or open inquiry, and/or authentic science experiences.

SESSION VI

1. Developing Websites with the TRC Participant in Mind **Dr. Rey Ramirez, Professor, and Johnny Hinojosa, Field Based Teaching Specialist, UT Brownsville**

Communication with participants of the Texas Regional Collaboratives has always been difficult when communication structures are not present. Although the ability to communicate is available to all, distance, privacy, and time conflicts are barriers that can be removed with a well designed webpage. The presenters will provide essential elements that anyone with the need to communicate can follow.

2. Yes, We Have No Bananas

Marcia Butcher, Elementary Teacher, Wharton ISD

Yes, We Have No Bananas is an interdisciplinary unit, teaching science, math, reading, writing, and social studies skills. It is a hands-on approach to learning using labs, computers, and TEKS questions.

3. Utilizing Collaborative Partners to Teach Critical & Creative Thinking

Kim Cheek, Middle School Teacher, Wylie ISD

Imagine working in your local zoo with your class to teach science content and skills. Participants will examine how middle school gifted students partnered with the zoo to learn creative problem solving, better understand the TEKS, acquire leadership skills, and gain hours of working in the community. Learn how to put on an Enrichment Day at the Zoo. Handouts of resources will be available.

4. Transcription and Translation

Angelica Kveum, High School Teacher, DeKalb ISD

Your classroom becomes the cell in which your students will carry out transcription and translation. This is a fun way for students to actively experience the role of DNA.

5. Fun with Beakmobiles

Wanda Pagonis, High School Teacher, Lytle ISD and Celina Terrones, High School Teacher, San Antonio ISD

Experience a hands-on activity dealing with linear motion. Make and take a beakmobile that can be used at any grade level. This is a very cheap way to construct a moving object that works.

6. Fossils: They're More Than Just Rocks and Dirt

Trisha Lana, Teacher, Denton ISD and Cathey Wiley, Teacher, Weatherford Christian School

Activities addressed in this session will help the teacher bring excitement

FRIDAY PRESENTATIONS DESCRIPTION



Galveston County Regional Collaborative Exhibit



Region 11 Collaborative Exhibit



“Critical TEKS-Based Labs and Review Activities for TAKS Success” Workshop

SESSION VII

1. The Archaic Indians of the Lower Pecos: Teaching the TEKS through Prehistoric Science

Scott Walters, Elementary Teacher, Gustine ISD

Explore the world of Archaic Indians of the Lower Pecos, prehistoric scientists whose discoveries provide educators with high-interest opportunities to teach the TEKS across the curriculum. Experience the 5-E activities using artifact replicas to discover how they met their needs utilizing the plants, animals, earth materials, and landforms in their environment. Learn about numerous resources available to assist educators in preparing lessons in all core subjects.

2. Building Writing/Math Skills through Science Instruction

Nicole Betts, Karen Goffney, and Beatriz Rivas, Elementary Teachers, Houston ISD

This session will focus on an integrated approach to improving science comprehension and retention skills for students at the 1st and 4th grade level. Session participants will be shown research based strategies for integrating math, science, and writing into their school curriculum.

3. The Water Cycle

Staci Price, Intermediate School Teacher, Clear Creek ISD

Evaporation, Condensation...Having problems getting your students to understand the water cycle and its importance? Learn some hands-on techniques that will make the water cycle more tangible, some catchy songs to help students remember all those “ations,” and some fun books that will not only help students visualize the water cycle, but will also help you to make those cross curricular connections.

4. What's in Your Genes?

Marsha Tharp and Debbie Lisoski, Elementary Teachers, San Angelo ISD

Participants will receive lessons focusing on TEKS objectives addressing traits and genes. Activities will begin at the high school level and spiral down through middle school and elementary objectives that provide the foundation for science success. Presenters will have stations that participants may visit to explore activities at different grade levels.

5. Let's Get Physical

Robyn Fender, Elementary Teacher, Lytle ISD and Nancy Haass and Judi Jopling, Intermediate School Teachers, Devine ISD

This session includes lessons and activities to teach physical properties of matter including magnetism, physical states, conductor, insulators, mixtures and solutions. Participants will experience 8 to 10 stations with various hands-on activities.

6. Enhancing Mentor Capacity

Margarita Parra, Elementary Teacher, Amarillo ISD, Dan Porter, Professor, Amarillo College, Lori Petty, Elementary Teacher, Amarillo ISD, and Cayla Cielenski, Curriculum Specialist, Amarillo ISD

How do you reach out to teachers on your own campus and beyond? We have many years experience in solving this problem and would like to share our insights with you. Presenters are classroom teachers, curriculum specialists, and college professors from our Region 16 Collaborative.

MCKINNEY ROUGHS FIELD TRIP

Organized by Marsha Willis

Characteristics of four Texas regions -- Post Oak Savannah, Blackland Prairie, East Texas Piney Woods, and Central Texas Plateau -- converge to create an unusual blend of natural resources at McKinney Roughs Nature Park. Located just 13 miles east of Austin-Bergstrom International Airport, McKinney Roughs 1,100 acres include rolling box canyons, wildflower meadows, lazy river bends and a diverse biological population.

Wildlife exhibits

An exhibit hall features live creatures native to the area, including snakes, turtles, salamanders, toads and frogs. A 1,300-gallon aquarium is filled with species of fish found in the Colorado River. Interactive exhibits allow visitors to get close to some of the area's indigenous species.



The participants had a choice of eight different hikes and activities focused on geology, birding, nature photography and even a trip to the Challenge Course.



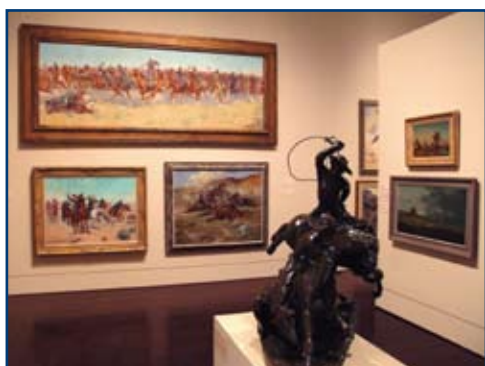
THE BLANTON MUSEUM OF ART FIELD TRIP

Organized by Lucinda Presley and David Lamp

The Blanton's permanent collection is composed of over 17,000 works of art from Europe, the United States, and Latin America.

Current Exhibition

European Paintings from the Permanent Collection; Prints and Drawings from the Permanent Collection America/ Americas; New, Now, Next: Selections from the Contemporary Collections; Paul Chan: Present Tense; Workspace Exhibition Series



Participants spent half of their time on a tour of the new Blanton Art Museum, the largest university art museum in the country.



They also participated in one of two workshops designed to promote TEKS-based science learning and higher level thinking skills through the use of inquiry and art.



TWELFTH ANNUAL MEETING AWARDS*

DISTINGUISHED TEACHING AWARDS



AT&T Foundation



Olga Vidal

TAMIU Regional Collaborative/
Laredo



El Paso Corporation



Trudy Field

Region 1 Collaborative/Edinburg



Shell Oil Company



Angela Ruggeri

UH-Clear Lake Regional
Collaborative/Houston

The Cynthia and George Mitchell Foundation



Judith Davis

Galveston County Regional
Collaborative/Galveston



Toyota USA Foundation



Wanda Pagonis

OLLU Regional Collaborative/
San Antonio

DISTINGUISHED MENTORING AWARDS



AT&T Foundation



Sarah Joy Anderson

Region 17 Collaborative/Lubbock

Center for Science and Mathematics Education



Hilda Borrego

UT-Pan American Regional
Collaborative/Edinburg



Shell Oil Company



Toni Holland

NCTC Regional Collaborative/
Gainesville



Toyota USA Foundation



Margarita Parra

Region 16 Collaborative/Amarillo

* Winners received a recognition plaque and a \$750 check.

PARTNERS & PROJECT CONTRIBUTORS

State and Federal Partners

Texas Education Agency
U.S. Department of Education
National Science Foundation
Texas Higher Education Coordinating Board

Statewide Corporate and Foundation Partners

Shell Oil Company
AT&T Foundation
Toyota USA Foundation
El Paso Corporation
The Cynthia and George Mitchell Foundation

Project Contributors

Abilene Education Foundation
Advanced Micro Devices
The Bob Bullock Texas State History Museum
Central West Texas Charitable Foundation/Jack Ramsey
Community Foundation of Abilene/Bob and Maggy Morford
Delta Education
Dian Graves Owen Foundation
Eleanor and Robert Hoppe Endowment DA Fund
Fourier Systems
J.E. Connally/Virginia H. Boyd
Morehead-Welborn LLP
Robert Gooch
Rockwell Fund
Sam E. and Ann Barshop
Sargent-Welch
Scott Taliaferro, Jr.
Sydney E. Niblo
Walter F. Johnson
WARDS
William Wright Jr.
Zachry Group, Inc.

PARTICIPANT FEEDBACK

Congratulations on another very successful annual meeting! It was an informative and enjoyable occasion for everyone. Please convey my appreciation to your staff.

I was quite overwhelmed and grateful to receive a Distinguished Mentoring Award! Lisa Bellows and Sara Flusche have been such an inspiration and encouragement to me as I have participated in the training programs of the NCTC Collaborative. Having such a resource contributes significantly and directly to student success. I truly believe that this program is the most effective program available to assist Texas teachers with meeting the needs of our students. Thank you for all that you do to make this happen!

Toni Holland, *Science Teacher, Gainesville ISD*
North Central Texas College Regional Collaborative

Dr. Jbeily,

First, let me say what a wonderful and enlightening time I had at the recent conference in Austin. It was because of the Collaborative I was successful in receiving my MS in Broadfield Science with an emphasis in Physics. You had mentioned to me the possibility of the doctoral program at UT and I was interested in learning more. I knew you were so busy at the conference and I hated to bother you, but I am truly interested in pursuing science education. I have been a student of Dr. Doughty's and his guidance for me has been wonderful. I would love the opportunity to speak to someone there about the program and any related grants or scholarships that would help me on this venture. Thanks again for setting such high standards for science teachers.

Kelley Ferguson, *Science Teacher, Paris ISD*
Region 8 Collaborative/Mount Pleasant



Drs. Jbeily and Barufaldi with a group of TRC Project Directors

Dr. Jbeily,

I would like to take the opportunity to thank you for allowing me to attend my first Texas Regional Collaborative -Annual Meeting. It was an outstanding event and I obtained many great ideas from the workshops; I plan to implement them next school year. Once again, thank you!

Luz Zoch, *Science Teacher, San Antonio ISD*
OLLU Regional Collaborative/San Antonio

Mary,

I just wanted to take a moment to tell you how impressed I was with the conference and to thank you for your part in it. The Collaborative is a wonderful organization and it has helped me tremendously in my teaching. I would also like to tell you that if you ever need my help in any way that I am a willing participant. I feel like everything I do can only make me a better teacher. Again, thank you for the wonderful experience I had in Austin.

Debra Ervin, *Science Teacher, Sherman ISD*
UT-Dallas Regional Collaborative/Dallas

ABOUT TEXAS REGIONAL COLLABORATIVES



Who We Are

Texas Regional Collaboratives for Excellence in Science Teaching is an award-winning network of P-16 partnerships that provide sustained, high-intensity professional development to P-12 teachers of science. This infrastructure of 37 institutions of higher education collaborating with education service centers, school districts and business partners has a 15-year record of designing and implementing exemplary professional development using research-based methods, materials and best practices.

Achievements

We have improved the knowledge and skills and developed the leadership capacity of over 12,000 Texas science teachers who in turn shared their experiences with other teachers through mentoring, peer coaching and technical assistance.

Over one million students across Texas have benefited through improved instruction and performance of participating teachers.

Our Mission

To provide Texas science teachers with support systems of sustained, high-intensity professional development and mentoring to assist them in the implementation of the Texas Essential Knowledge and Skills (TEKS). Our programs equip teachers with the knowledge and skills to engage their students in meaningful science learning experiences and prepare them for high achievement on the Texas Assessment of Knowledge and Skills (TAKS) and other measures.

Values

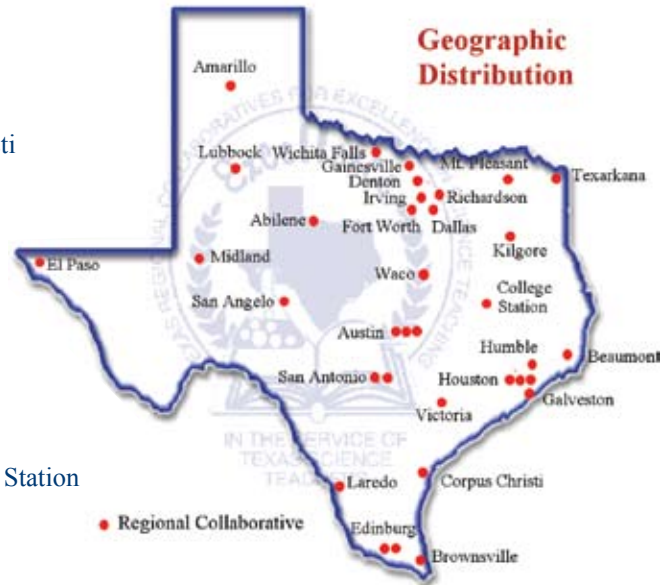
- We **serve** the teachers and students of Texas.
- We **treasure** our people.
- We **operate** with integrity.
- We **reward** our partners.
- We **contribute** to systemic reform and to the community.

35 REGIONAL COLLABORATIVES

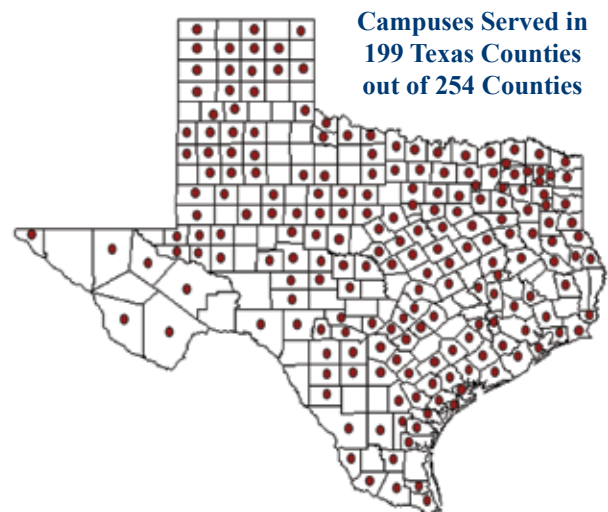
REGION	COLLABORATIVE NAME
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- | | |
|----|---|
| 1 | Region 1 Collaborative/Edinburg
UT-Pan American Regional Collaborative/Edinburg
UT-Brownsville Regional Collaborative/Brownsville
TAMU Regional Collaborative/Laredo |
| 2 | TAMU-CC/ESC 2 Regional Collaborative/Corpus Christi |
| 3 | Region 3 Collaborative/Victoria |
| 4 | Region 4 Collaborative/Houston
Rice University Regional Collaborative/Houston
Galveston County Regional Collaborative/Galveston
Lake Houston Regional Collaborative/Humble
UHCL/EIH Regional Collaborative/Houston |
| 5 | Region 5 Collaborative/Beaumont |
| 6 | TAMU-College Station Regional Collaborative/College Station |
| 7 | Region 7 Collaborative/Kilgore |
| 8 | Region 8 Collaborative/Mount Pleasant
TAMU-Texarkana Regional Collaborative/Texarkana |
| 9 | Region 9 Collaborative/Wichita Falls |
| 10 | Region 10 Collaborative/Richardson
UT-Dallas Regional Collaborative/Dallas
University of Dallas Regional Collaborative/Irving |
| 11 | North Central Texas College Regional Collaborative/Gainesville
University of North Texas Regional Collaborative/Denton
Region 11 Collaborative/Fort Worth |
| 12 | Region 12 Collaborative/Waco |
| 13 | Region 13 Collaborative/Austin
Capital City Regional Collaborative/Austin
ACC Regional Collaborative/Austin |
| 14 | Region 14 Collaborative/Abilene |
| 15 | Region 15 Collaborative/San Angelo |
| 16 | Region 16 Collaborative/Amarillo |
| 17 | Region 17 Collaborative/Lubbock |
| 18 | Region 18 Collaborative/Midland |
| 19 | Region 19 Collaborative/El Paso |
| 20 | OLLU Regional Collaborative/San Antonio
Region 20 Collaborative/San Antonio |

Regional Collaborative Sites



2001 - 2006 County Distribution



TRC INTERSTATE ACTIVITIES



Louisiana Regional Collaboratives for Excellence in Science Teaching



**The Louisiana Outreach Project
Two Regional Collaboratives Funded
Through the Shell-TRC Partnership:**

**LSU/Southern University
Regional Collaborative for
Excellence in Science Teaching**

**LA Tech/Grambling State University
Regional Collaborative for
Excellence in Science Teaching**



Preservice and alternative certification teachers as well as practitioners requiring middle school certification visit the Challenger Center and work together to experience hands-on science.

Leveraging Resources

Leveraging local, state and national resources is the cornerstone of the Southern University/Louisiana State University Collaborative. Partnerships among the Louisiana Department of Education through their Math Science Partnership Programs and the Louisiana Board of Regents have provided information for compliance with all state education mandates and assisted the SLC in offering services to the education community. In addition, the SLC has forged partnerships with many education organizations and agencies, including the JASON Foundation, National Alliance of State Science and Math Coalitions (NASSMC), National Science Teachers Association (NSTA), Louisiana Science Teachers Association (LSTA), Louisiana Association of Science Leaders (LASL), Louisiana Environmental Education Commission, Louisiana Art and Science Museum, the Center for BioModular Multi-Scale Systems, Baton Rouge Recreation and Park Commission and LIGO (Laser Interferometer Gravitational-Wave Observatory). Through these partnerships and many other connections, the SLC has been able to provide services that not only further science education across south Louisiana, but also provide extensive resources for K-16 teachers of science.



**We came, we conquered the
Poverty Point Reservoir!**



**SLC participants enjoy the flora and fauna of Lake
Martin and learn about the impact of the wetlands on
south Louisiana.**



**Middle School Teachers working on
JASON: Disappearing Wetlands
activities!**

SLC JASON Train-the-Trainer Leadership Institute
Sustainability is a key component of the South Louisiana Collaborative. Programs are embedded within an existing infrastructure to ensure successful completion and continuation of the SLC. Plans are currently underway to kick-off the South Louisiana JASON Train-the-Trainer Leadership Institute July 13-14. This institute is being led by a nationally recognized JASON Lead Trainer to provide leadership development to our first cohort of two-person teams, who will, in turn, provide professional development and mentoring to 160 of their peers over the course of the 2006-07 academic year.



**Learning about the wetlands at the
Louisiana Environmental
Education Symposium!**



**Making cooking stones at Poverty
Point to learn how Native Americans
lived and worked in the area.**



**SLC participants working in the
field with noted paleontologist
Gary Stringer from the University of
Monroe to locate and identify marine
fossils found in north Louisiana.**

TEXAS REGIONAL COLLABORATIVES TEAM



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