Fifteenth Annual Meeting

June 30 - July 2, 2009

Effective P-16 Partnerships: Transforming the Culture of STEM Education

Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching

TEXAS REGIONAL COLLABORATIVES Excellence

IN THE SERVICE OF SCIENCE AND MATHEMATICS TEACHERS

Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching

Background Information and History

In 1991, tremendous science education reform activities were underway across Texas and the nation. Changes necessitated that teachers provide science instruction in fields for which they were not prepared. Dr. Kamil A. Jbeily, then at the Texas Education Agency, initiated a series of regional meetings across the state to explore ways to create support systems of professional development for Texas science teachers. The meetings included representatives from education service centers, colleges and universities, school districts, business and industry, and institutions of informal education. The goal was to create regional partnerships built on collaboration and cost-sharing that provided science teachers with relevant, sustained, high-intensity professional development. These P-16 partnerships, with federal funding from the Dwight D. Eisenhower Science Professional Development Program, developed into the statewide network that is now the Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching.

On March 2, 1996, with the reorganization of the Texas Education Agency, the statewide administrative office of the Texas Regional Collaboratives (TRC) was moved, under a TEA-UT partnership agreement to the Science Education Center, now the Center for Science and Mathematics Education at The University of Texas at Austin. The program has enjoyed support from a wide range of partners including the U.S. Department of Education Eisenhower Grants Program, the Texas Education Agency, the National Science Foundation, and a number of corporate supporters including AT&T Foundation, Shell Oil Company, the Toyota USA Foundation, The Cynthia and George Mitchell Foundation, El Paso Corporation, and others. In addition, over fifty business and community partners support activities of the Collaboratives at the regional level.

In March 2006, as per a historic $1.0 Million gift from Shell Oil Company, two Louisiana Regional Collaboratives prototypes modeled after the TRC, commenced their activities in the service of Louisiana science teachers. In July 2006, the TRC launched a new initiative supported by Math and Science Partnership funding through the Texas Education Agency to provide high quality professional development to mathematics teachers across Texas. After a competitive process, grants were awarded to 20 Regional Collaboratives for Excellence in Mathematics Teaching.

To date, the Texas Regional Collaboratives have served over 16,000 science teachers and 16,500 mathematics teachers, who in turn have shared their knowledge with other teachers at the district, regional, and state levels. The long-range goal of the Regional Collaboratives is to continuously (1) enhance the quality of science and mathematics teaching in Texas through Professional Development Academies and inter-regional collaboration; (2) increase the number of qualified science and mathematics educators by building the leadership capacity of teachers to mentor and serve a larger number of teachers; and (3) improve accountability of the system by evaluating the impact of the professional development on teachers' knowledge and skills, their performance in the classroom, and on student achievement.

The Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching program has received commendations from the U.S. Department of Education, policy makers, state legislators, and business partners. The Program was inducted into the Texas Science Hall of Fame on January 17, 2000, and was recognized by the Governor, the Senate, and House of Representatives on January 16, 2001 for distinguished achievements and contributions to supporting education reform.

STEM Education Innovators Gather for Austin Conference

The Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching (TRC) Annual Meeting set an attendance record this year, with over 650 of the best Texas math and science teachers and professional development providers convening in Austin to be honored, share instructional strategies, and learn the latest developments in STEM education.

The theme of this year's conference was "Effective P-16 Partnerships: Transforming the Culture of STEM Education," emphasizing the TRC's commitment to support some of America's most valuable resources – highly skilled science, math, and technology teachers. This was the first year that members of the Mathematics Collaboratives were in attendance.

"According to the U.S. Department of Labor, of the 20 fastest growing occupations projected for 2014, 15 of them require significant science or mathematics preparation," said Dr. Kamil A. Jbeily, TRC Founder and Executive Director. "That's only five years away. When discussing education policy, President Barack Obama has stressed that we must give science, math, engineering, and technology education top priority and he has been joined by corporate America and institutions of higher education in setting that as an urgent goal."

"The work of the Texas Regional Collaboratives reflects national priorities in that we're offering intense, sustained professional development for science and math teachers in almost every county in Texas. This professional development is based on the most current scientific research and is strategically designed to strengthen teachers' science content knowledge and pedagogy so that they can inspire and educate a future workforce of innovators and leaders. Our system of engaging multiple stakeholders to make this happen has consistently met with success over the 18 years that the TRC has been in existence. I want to express my sincere appreciation and gratitude to the leadership and administration of the Texas Education Agency and to our corporate and foundation partners for investing in us to support this exemplary and sustained collaboration in support of excellence in STEM education."

***Dr. Kamil A. Jbeily**, founder and executive director of the Texas Regional Collaboratives, stated, 'The work of the Texas Regional Collaboratives reflects national priorities in STEM Education.'*

During the Texas Regional Collaboratives' annual three-day conference, TRC partners shared outstanding teaching strategies and lessons with colleagues, and gathered excellent resources to share with others in their school districts.

During the three-day conference, teachers, professors, district project directors, regional education service center staff, corporate supporters, policy makers and representatives of the Louisiana Collaboratives were able to network and share ideas, strategies and resources. Attendees could choose from over 80 presentations and activities offered by TRC members who wanted to share creative ways of teaching topics such as how to use Google Earth in class, podcast authoring, GeoGebra instructional software, astronomy and algebra activities for English-Language Learners. The presentations during the morning and afternoon sessions included proven teaching tools and strategies for elementary and secondary teachers.

Participants had access to an extensive vendor fair at which 23 companies and organizations showcased the latest in instructional materials, resources, tools, equipment and a wealth of information for Pre-K to Grade 12 science and mathematics classroom teachers.

The conference also was the setting for the unveiling of the TRC Online Learning Community (TOLC), a new resource that enables TRC members to publish professional journals, participate in online discussions, join STEM special interest groups and share professional development resources, photos and videos.

EFFECTIVE P-16 PARTNERSHIPS

"The TRC will continue to provide guidance to STEM educators across the state as they leverage new Web 2.0 and social networking tools in sharing effective practice, professional development resources, and peer mentoring. For example, the online community will use Twitter to establish dedicated pages for reporting live observations on weather, environmental issues, and member discovered professional development resources," said Dr. Keith Mitchell, TRC's Coordinator for Technology Initiatives.

***Dr. Jesús Chávez** is presented with the TRC Distinguished Service Award during the RRISD School Board Meeting by President Diane Cox.*

As is tradition, the conference included a celebratory evening showcase of exhibits designed by representatives from the 36 Science Collaboratives and 24 Mathematics Collaboratives. The showcase was followed by a dinner program and announcement of the winners of the AT&T Foundation, El Paso Corporation, Center for Science and Mathematics Education, Shell, Toyota USA Foundation and Cynthia and George Mitchell Foundation teaching and mentoring excellence awards.

Dr. Jesús Chávez, Round Rock ISD Superintendent, was honored with the TRC's most prestigious award, receiving the 2009 Distinguished Service Award for longstanding and exceptional support of teachers' professional development, the improvement of science and math education and the goals of the TRC. "Our district has experienced success in student achievement since we began participating in the science Collaborative," said Dr. Chávez. "The training our teachers receive is rich in content, and the increase in our science scores at the elementary level is a direct reflection of the staff development the TRC provides. I am honored to be recognized by the TRC with the 2009 Distinguished Service Award." Under Dr. Chávez's leadership, TAKS achievement scores have risen and his school district has had a higher percentage of teachers participate in TRC than any other district in the state.

"All of the TRC partners – the teacher leaders, professors and administrators at institutions of higher education, business leaders, TRC project directors, community members, policy makers and our friends in higher education – have a strong commitment to our TRC value system to serve our educators and students, treasure our people, honor our teachers, reward our partners, and contribute to the community and to systemic reform. The synergistic networking and sharing at the Annual Meeting allow the best work and ideas to be leveraged and used in more schools and classrooms across the Collaboratives regions," said Dr. James P. Barufaldi, Ruben E. Hinojosa Regents Professor in Education and Director of the Center for Science and Mathematics Education at The University of Texas at Austin.

***Dr. James P. Barufaldi** Principal Investigator of the Texas Regional Collaboratives*

The TRC also was pleased to announce a very generous $100,000 gift from El Paso Corporation, which was presented to a standing ovation from the audience, by El Paso Corporation Vice President for Communication and Community Relations John Sousa.

***John Sousa**, Vice President for Communication and Community Relations at El Paso Corporation, presented a check for $100,000 to the Texas Regional Collaboratives.*

"When it comes to the communities where we live and work, we want to be the neighbor to have," said Sousa. "They're more than just the places where we do business. We love to see students inspired by science and engineering, and we feel it's important that all sectors help prepare an educated workforce. One of the top risks to the oil industry is a human talent deficit, and, unfortunately, the window of opportunity for knowledge transfer is very short. The impact of the TRC is huge – the Collaboratives have served more than one and a half million students around Texas and more than 16,000 teachers who went on to mentor and offer technical assistance to countless additional teachers. The TRC truly is transforming the culture of STEM education."

Speakers for the evening were indicative of the broad base of support the TRC receives, with Texas State Representative Drew Darby, Texas Education Agency Deputy Associate Commissioner Norma Torres-Martinez and John Sousa offering comments. The keynote speaker was Susan Dawson, President and Executive Director of Austin's E3 Alliance, which is a Central Texas non-profit organization devoted to improving education outcomes for all students through the strengthening of partnerships among schools, communities, and businesses.

TRANSFORMING THE CULTURE OF STEM EDUCATION

*E3 Alliance founder, president and executive director **Susan Dawson** was keynote speaker at the TRC conference dinner, praising the TRC's success in helping teachers prepare college- and career-ready students and strengthen STEM education.*

"We believe in using information to drive action and to create systemic change," said Dawson. "Incremental change isn't enough. How do we engage parents, the community and businesses to work together for change? How do we bring the latest research findings and put them into practice in the classroom and how do we build up the ties between universities and schools, strengthening that pipeline?"

"You have a more and more challenging student population coming to you as teachers – more than 60 percent of the students here in Texas are economically challenged and too few of them are graduating and going to college. Like the TRC, E3 Alliance is working to increase the number of college- and career-ready students. We believe that the fundamental culture of Texas needs to change so that everyone's accountable for student success, not just the teachers. Collaboration is difficult, but it's doable and all of you are proof of that."

*Texas State Representative **Drew Darby** addressed the over 600 math, science and technology teachers who gathered in Austin to share best practices in math and science instruction and celebrate some of the top teachers in the state.*

Since its inception, the Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching program has received more than $57 million in state, federal and corporate funding and enjoyed commendations from the U.S. Department of Education, policy makers, state legislators and business partners. Generous supporters include the Texas Education Agency, Shell, AT&T Foundation, El Paso Corporation, Toyota USA Foundation, The Cynthia and George Mitchell Foundation and the National Science Foundation.

The TRC was inducted into the Texas Science Hall of Fame and has been recognized by the Texas governor, Senate and House of Representatives for distinguished achievements and contributions in support of education reform.

"The Texas Regional Collaboratives program has opened up more doors for me than I ever would have imagined," said Roxanne Hammonds, a participating teacher from the San Antonio area. "I was Teacher of the Year at my campus and Outstanding Teacher of the Gifted for Region 20. I also was awarded the Mayoral/County Judge Outstanding Science Teaching award for San Antonio. If I had not been able to attend the quality workshops that TRC provides to my district free of charge, I wouldn't be half the teacher I am today. I can't thank you enough for the opportunity to be part of TRC. It has made all the difference in my effectiveness as a teacher."

The 60 P-16 partnerships that make up the TRC deliver services to teachers in around 80 percent of the 1042 independent school districts and charter schools in Texas. In 2005, a landmark $1 Million gift from Shell allowed the TRC to expand its highly successful collaborative concept to Louisiana. Two partnerships based on the Texas model formed there and now offer enhanced professional development training for Louisiana teachers. In 2009, a resolution by the Louisiana State Senate urged the Louisiana Regional Collaboratives for Excellence in Science and Mathematics Teaching to coordinate and partner with institutions of postsecondary education to expand the program statewide.

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

For additional Annual Meeting information, videos and photos, please visit the following website links:

TRC website:	*http://thetrc.org/trc/fifteenth.html*
Link to photos:	*http://thetrc.org/15AMGallery*
Link to press release:	*http://www.edb.utexas.edu/education/news/2009/trc_stem09/*

JUNE 30 SHOWCASE, RECEPTION AND DINNER

TRC SCIENCE PROJECT DIRECTORS

Thank you to our Corporate Partners who attended!

From **Shell**

Dr. Frazier Wilson, *Social Investment Manager*, and
Monte King, *Manager Workforce Development*

From **El Paso Corporation**

John Sousa, *Vice President of Communications and Community Relations*, and
Jesus Soto, *Operation Services*

From **AT&T**

James Lydon, *Executive Director of External Affairs (Texas),* and
Bob Digneo, *Executive Director*

FIFTEENTH ANNUAL MEETING HIGHLIGHTS

EVENING PROGRAM

SHOWCASE AND RECEPTION
6:00 - 7:00 p.m. - Grand Ballroom B

DINNER
7:00 p.m. - Grand Ballroom A

INTRODUCTION
Kamil A. Jbeily, Ph.D.
Executive Director, Texas Regional Collaboratives
The University of Texas at Austin

WELCOME
James P. Barufaldi, Ph.D.
Director, Center for Science and Mathematics Education
The University of Texas at Austin

GREETINGS AND REMARKS

Texas Legislature
The Honorable Drew Darby
Appropriations Committee
Texas House of Representatives

El Paso Corporation
John Sousa
Vice President, Communications and Community Relations

KEYNOTE SPEAKER
Susan Dawson
President and Executive Director
E3 Alliance

TRC 2009 Distinguished Service Award

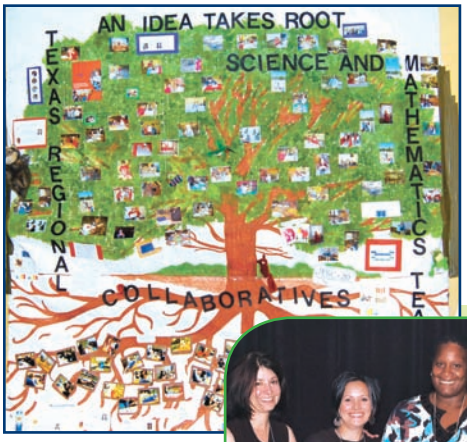
Louisiana Regional Collaboratives Project Directors attended as well!

Dr. Brenda Nixon, *Louisiana State University*,
Joseph Meyinsse, *Southern University and A&M College*,
David Mills, *Louisiana Tech University*

TRC MATHEMATICS PROJECT DIRECTORS

SCIENCE AND MATHEMATICS EXHIBITS AWARDS

Region 20 Combined Science/Math Collaboratives



SAN ANTONIO

Region 1 Mathematics Collaborative

EDINBURG

UHCL/EIH Regional Science Collaborative

HOUSTON

Region 19 Science Collaborative

EL PASO

Region 12 Combined Science/Math Collaboratives

WACO

Region 19 Mathematics Collaborative

EL PASO

2009 AWARD RECIPIENTS

Teaching Excellence Award

David Holbert

Wichita Falls High School - Wichita Falls ISD
Region 9 Science Collaborative/Wichita Falls

The Cynthia and George Mitchell Foundation
Teaching Excellence Award

Peter Barrera

Pleasanton High School - Pleasanton ISD
Region 20 Mathematics Collaborative/San Antonio

Toyota USA Foundation
Mentoring Excellence Award

Augustine Frkuska

Crestview Elementary - Judson ISD
OLLU Regional Science Collaborative/San Antonio

AT&T Foundation
Mentoring Excellence Award

Kelly Goodin

Northwest Elementary - Hereford ISD
Region 16 Science Collaborative/Amarillo

El Paso Corporation
Teaching Excellence Award

Bea Long

Seabrook Intermediate - Clear Creek ISD
UHCL/EIH Regional Science Collaborative/Houston

UT Center for Science and Mathematics Education
Mentoring Excellence Award

Shannon Lane

Ferris Junior High School - Ferris ISD
Region 10 Mathematics Collaborative/Richardson

TUESDAY, JUNE 30 - LUNCHEON

TUESDAY
OPENING LUNCHEON PROGRAM

INTRODUCTION

Kamil A. Jbeily, Ph.D.
Executive Director
Texas Regional Collaboratives

STATE OF SCIENCE AND MATHEMATICS EDUCATION IN TEXAS

Kenn Heydrick, Ed.D.
Director of Science
Texas Education Agency

Irene Pickhardt
Assistant Director of Science
Texas Education Agency

Erika Pierce
Associate Director of Mathematics
Texas Education Agency

Teaching and Mentoring Excellence Awards

(Please see recipients on Page 7)

Dr. Kenn Heydrick, Irene Pickhardt and Erika Pierce updated the luncheon attendees with the Texas Education Agency's latest information on Science & Career and Technical Education (CTE) TEKS Revisions Texas Math and Science Diagnostic System (TMSDS), College and Career Readiness, Texas Virtual School Network, Legislation, and PAEMST Finalists.

Irene Pickhardt, Dr. Kenn Heydrick, Erika Pierce

"The Texas Regional Collaboratives is a showcase of the State of Texas, and also nationally. I feel so blessed to be a part of this; I was part of the Collaboratives before coming to the Agency about a year ago, so I know all the hard work that you do. I thank you personally on behalf of the Agency."

Dr. Kenn Heydrick
Director of Science
Texas Education Agency

HANDS-ON CLOCKS!

A. Learning, Teaching and Assessing: An Integrated Approach
Lupita Carmona, *The University of Texas at Austin*
Model-eliciting activities are ideal settings for each student to elicit and document relevant and complex mathematical thinking, and for teachers to observe and interpret different ways in which their students are thinking about the mathematical content addressed. We will present how these modeling tasks can be implemented to foster formative assessment practices in the mathematics classroom, and how this implementation can help simultaneously improve student learning of relevant mathematical content and teachers' instructional practices.

B. Speaking the Language: Effective Multimedia Strategies for Communicating with Today's Learners
Roxanne Hammonds, *East Central ISD*
Want to be more technologically savvy? In this workshop, you will learn how to create a webpage, upload videos, and use photos to enhance your curriculum. Students are already using various media to communicate. Learn how to cater to student's technological needs.

Astronomy in the Middle and High School Classroom

Engineering Empowers Elementary Education

Manipulative Mania Aligned to the High School TAKS

C. Astronomy in the Middle and High School Classroom
Leslie Howell, *Grapevine-Colleyville ISD;* **Darrell Harvey** and **Denise Rothrock**, *Mansfield ISD*
In the summer of 2008, 17 Texas teachers participated in an Astronomy Institute at the University of California Berkeley. The purpose was to educate the teachers in the field of astronomy so that they could take this information back to their schools to enrich their districts' science curriculum. This presentation will include an overview of the concepts taught at the Institute and how this knowledge can be applied in the classroom.

D. Group Wheel of Fortune
Shaik Ahmed, *Waco ISD*
This is a way to review several concepts the students have just learned. Divide the class into three to four teams. Make up categories as needed, for example, fractions, decimals, percents, scientific notation…under each category have the questions. For more points, difficulty level increases. Questions answered in timed session. "Play and review"-a simple, inexpensive way to learn and have fun. There will be prizes!

E. Hands-On Clocks!
Sarah Bauer, *Floresville ISD;* **Ralph Gomez**, *Edgewood ISD;* **Kathy Pruitt** and **Linda Philips**, *Judson ISD*
Remember finger painting? Want to dip your hands in the paint? Then this session is for you! Come investigate time across the elementary TEKS as you create poster-sized clocks appropriate for addressing both five and one minute intervals. This activity can be completed individually, or as a cooperative learning team. It encourages development of planning and problem solving strategies. Observations of students engaged in this activity will be described and modifications will be discussed.

F. Engineering Empowers Elementary Education
Angie Watson, **Sharon Mills**, **and Lola Henning**, *ESC Region 16*
Want to make your school excited about learning? Engineering is the answer! The Boston Museum of Science "Engineering is Elementary" program integrates engineering with all elementary core subjects. In this session, participants will explore mechanical engineering through literacy and hands-on activities. The extensive "Engineering is Elementary" program introduces participants to characters around the world who use a multiple disciplinary approach to solving real world problems.

G. Manipulative Mania Aligned to the High School TAKS
Jennifer Jordan-Kaszuba, *ESC Region 13*
Spice up your Science TAKS Review with hands-on, minds-on manipulatives. Included are sorts, puzzles, and other interactive games designed to serve as formative assessments, review activities, and conversation starters. Masters provided.

H. Rock and Dirt Studies in Preschool Classrooms
Bob Williams, *Professor Emeritus, Southern Illinois University*
We will look at how rocks and soil can be used with young children.

I. Got Words? Increasing Student Understanding of Academic Vocabulary
Annette Venegas, *ESC Region 20*
Using a direct-teach model, graphic organizers and a variety of games, participants will learn a multitude of ways to differentiate vocabulary instruction. The key to better conceptual science understanding and reading comprehension is understanding academic vocabulary.

WEDNESDAY, JULY 1

Secondary Math Success

Clickers in the Classroom

Turning the Tide of War:
Using Tidal Knowledge to Plan
Amphibious Landings

A. They're Not Dumb, They're Different. Analyzing Who's in Your Classroom and What Strategies Will Help Them Learn.
Sheila Tobias, *University of Virginia*
Sheila Tobias' books *They're Not Dumb, They're Different* and *Breaking the Science Barrier* are the basis for her belief that students have different cognitive styles when it comes to learning science, but that they must be drawn out of their "cognitive comfort zone" if they are to succeed. How to manage *both* a multitude of learning styles in a single classroom and the desired goal of rendering students capable of learning from any instructor....is the purpose of this workshop.

B. Clickers in the Classroom
Stacy Stoll, *Killeen ISD*
The use of "clickers" in the classroom is becoming a more frequent occurrence, but most educators are at a loss as to how to implement them. I started using clickers while teaching at the college level, and now at the secondary school level, too, I see an increase in participation, understanding, and grades when I use them for quick assessments of lectures, grading class work, and assessing prior knowledge.

C. Sequencing Using Manipulatives
Adalberto De La Fuente, *Tyler ISD*
Help middle school students understand sequences using manipulatives as cubes and relate its formula.

D. A STEM Enterprise in Action: Energize Your Middle School Curriculum
Sandra Geisbush, Northeast ISD; **Julianne Webb**, *Transformation 2013 T-STEM Center*
Join these two dynamic facilitators as they guide you through essential steps leading to curriculum that is rigorous, relevant, and that builds positive and productive relationships among students and teachers alike. Participants will explore how to develop new units and recreate existing units that reinforce *21st Century Learning Skills* while developing essential *Habits of the Mind*. Begin by asking yourself, *Could King Kong Really Live?*

E. Secondary Math Successes
Kay Olds and **Janna Smith**, *ESC Region 5*
Hear from secondary math teachers how the Collaborative has affected the "look" of their classroom. No longer is the time of only pencil and paper calculations. We will share success stories of using hands-on activities at the middle/high school levels, as well as share how we are taking the real world into our classrooms by visiting local refineries and other local places of interest.

F. Instructional Coaching
Shelly Bolen-Abbott, *ESC Region 4*
Explore strategies for creating a collaborative approach to instructional coaching. Discover how data collection and the coaching cycle are utilized to improve teacher practices and instructional strategies in order to increase student achievement.

G. Turning the Tide of War: Using Tidal Knowledge to Plan Amphibious Landings
Jim Manley, *Garland ISD* and **Janice Park**, *New Diana ISD*
The outcome of two major modern wars was greatly affected by an understanding of how to use tides to make victory possible. In WWII, an invasion opened a third front against Hitler. During the Korean War, an invasion drove back the North Koreans. This presenter discusses factors that affect tides with possibilities for cross curriculum connections to history. Come away with a new understanding to tides plus activities you can use in your classroom.

Nachos and Numbers

Sequencing Using Manipulatives

TAME Trailblazer Tours Texas

H. Concept Mapping in the Mathematics School Curriculum
Jamie Curts, *University of Texas-Pan American*
This presentation will illustrate how concept mapping in mathematics can be used as a meta-cognitive tool to improve planning, learning, and assessment in mathematics education for all grade levels, including pre-service teacher education.

I. Mentoring: A Mathematics Focused Journey
Jennifer Aguilar, *Socorro ISD*; **Veronica Hernandez**, *ESC Region 19*
A group discussion of what it takes to be a Mentor and the use of Learning to Lead Mathematics Professional Development to ensure mathematics is the focus of professional development. Examples will be given.

J. Energize your Energy Unit
Tammy Oldani and **Melody Witte**, *Clear Creek ISD*
Are you out of energy and ideas when it comes to teaching energy? Come and see a smorgasbord of energy ideas and activities that come from various sources that will light up our unit and put some zing into your teaching.

K. Get Ready, Set, and Go, First Year High School Teacher
Teri Sciara, *Hooks ISD*
This workshop will give the attendees tools that are needed for surviving the first year of teaching in high school. Ideas and materials will be given, along with a hands-on example of using differentiation with the 5-E model. This presentation is composed mainly of biology content, but can be modified to fit other areas of teaching. This workshop will also include sharing a behavior management plan and time saving ideas.

L. Making Math Fun!
Michael Sweet and **Peggy Trevino**, *Pharr-San Juan-Alamo ISD*
Presenters will share their experience and expertise in implementing meaningful and engaging literacy strategies acquired through the Region 1 Math Collaborative. Participants will view student work, media, and pod casts that demonstrate how these strategies have been implemented in their 5th grade classroom.

M. Nachos and Numbers
Kelley Childs, *Lovelady ISD;* **Gwyn Foy**, *Anderson-Shiro CISD;* **Karen Trevino**, *Normangee ISD;* **Krissa Bass**, *Livingston ISD;* **Jennifer Glick**, *Willis ISD;* **Emily DeJoya**, *Trinity ISD*
Are you tired of the "typical" family math night, with a lack of real involvement often resulting in poor attendance? This session includes a host of engaging activities designed to address the mathematics curriculum. Find out how to serve a fun family meal complete with lively mariachi music enhanced by south-of-the-border décor. Rewards and incentives for optimum student participation and parent involvement will be shared. You will leave prepared to host an unforgettable event!

N. TAME Trailblazer Tours Texas
Michael Nevels, *TAME (Texas Alliance for Minorities in Engineering)*
The TAME TRAILBLAZER is a 40-foot exhibit trailer that houses a variety of engineering and science exhibits and travels across the state. The TRAILBLAZER is a valuable tool in raising students' enthusiasm for science and math, and reinforcing basic skills. Take-away material is provided and can be accessed on the TAME website.

WEDNESDAY, JULY 1

Math Anxiety:
An Update

A Study of the Atom Using
Faraday's Laws and Spectroscopy

Where in the World?
Grade 8 Earth and Space Science

A. Math Anxiety: An Update
Sheila Tobias, *University of Virginia*
Thirty years ago, Sheila Tobias broke ground in the field of mathematics education by establishing the significance of avoidance and anxiety in students' (girls' but also boys') attitude toward math. Her books, *Overcoming Math Anxiety* and *Succeed with Math: Every Student's Guide to Overcoming Math Anxiety*, are much valued by K-12 teachers and adult learners alike. She will review the interventions that have proven effective, conduct a typical math-anxiety reduction exercise with participants, and show parts of a film of a Math Anxiety Clinic. Copies of *Succeed with Math* will be available to participants in this workshop.

B. Significant Figures Made Easy: The Basics
Virginia Williams, *Clarksville ISD*
Teaching significant figures is never easy. A fun interactive activity can help even middle school students grasp the basic rules. It can be taken up a notch or two with each grade level to reinforce the basics. So, when they get to classes like chemistry, it isn't a new concept that causes undue frustration.

C. P-16 STEM Alignment: Assessing and Embedding the College & Career Readiness Standards (CCRS) and Texas Essential Knowledge and Skills (TEKS) in the High School Curriculum
Kristian Fischer Trampus, *University of Texas at Tyler*
This workshop investigates the alignment of high school STEM standards with the Texas Higher Education Board's College & Career Readiness Standards and will facilitate teachers' implementation of the CCRS in their STEM curriculum. Hands-on activities encouraging the integration of the CCRS into the high school classroom, as well as the exploration of a wealth of resources, will be included.

D. A Study of the Atom Using Faraday's Laws and Spectroscopy
Jim Roberts, *University of North Texas*
We will "count atoms" by using Faraday's discovery that current flow in a copper sulfate solution can be used to determine how many electrons are transferred in a solution. From this count we determine the value of Avogadro's number. A simple spectroscope will be constructed to analyze the spectral output of an atom and from this observation model the structure of an atom. These activities will demonstrate how visible data can be used to provide a basis for accurate models.

E. Down to Earth Science
Pat Rutland, *Stockdale ISD*
A variety of hands-on activities will be demonstrated to put the fun back into teaching earth science. Join us for "How Fast Can it Freeze?," "Tic Tac Weathering," 'Soil Soaks Up Water," and many more.

F. Where in the World? Grade 8 Earth & Space Science
Cynthia Holcomb, *ESC Region 15*
Participants will experience activities and strategies to address the Grade 8 Earth and Space Science TEKS. Each participant will receive master copies of the activities and a make-and-take sample project portfolio.

G. Podcasting to Engage Digital Natives
Stef Paramoure, *Comal ISD*
Classrooms are filled with digital natives. Learn how to use podcasts as a way to ignite students' interest in science. This session will provide a brief overview of the basics and then move into the use of podcasts as a way to engage students, support the use of science journals, and provide formative assessment opportunities. Participants will experience appealing high quality examples and brainstorm ways to incorporate this motivating technology in the science classroom.

The Super Science Show

We Are Journaling...
Now What?

Significant Figures Made Easy:
The Basics

H. Planning Units for Deep Understanding
Brenda Paloski, *Pasadena ISD*
Utilizing the framework of Earth Science by Design, participants will explore ways to focus student learning on the big ideas in science disciplines to build lessons toward deep understanding of one overarching idea and will have the opportunity to frame a unit they can use. Designing authentic assessments and rubrics will also be examined.

I. We Are Journaling… Now What?
Carey Quick, *Salado ISD* and **Angie King**, *Robinson ISD*
New exciting scientific ideas that make your journals pop by using higher level thinking skills, cutouts, games, etc. Homework!!! Bring a favorite journal activity to share with the class.

J. Packing Cans
Stefanie Everitt and **Paula Peckham**, *Burleson ISD*
This is a real-world geometry problem that has been used in both middle and high school. Students must decide how to package a set of cans in a box using the least amount of materials. Activity utilizes circumference, surface area, volume of cylinder and rectangular prism, and percent of change. Presenters will discuss how the problem was adapted to fit the needs of all the students.

K. The Super Science Show!
Orlando Montalvo, *Sharyland ISD*
If you are curious about how to merge technology with science curriculum, then this session is for you. The "Super Science Show" is an IPod video (vodcast) designed, filmed, edited, and produced by eighth graders to help teach science to fifth grade students in preparation for their TAKS Science exam. Come and see how simple it really is to integrate video production equipment and software with science instruction to make a meaningful product for your students.

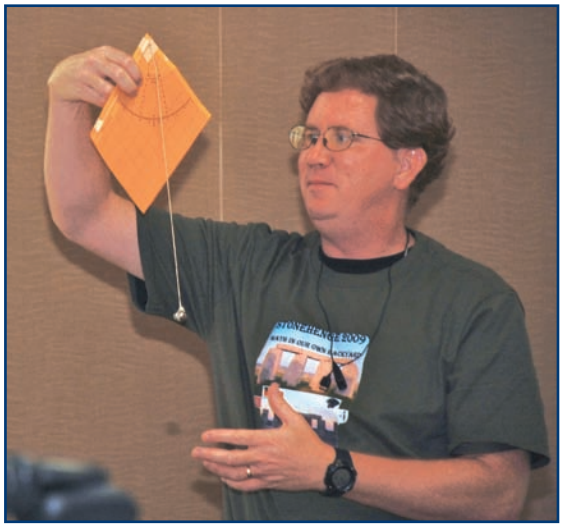
L. Learning to Count! A Window Into Young Children's Thinking About Number
Brian Mowry, *Austin ISD*
Learn how young learners develop counting strategies, the basis for understanding how numbers work. This session includes video clips of three typically developing preschoolers, all of whom possess a range of skills and use various strategies while counting and quantifying a collection of discrete objects. The presenter will explain the relationship between these informal counting strategies and preschoolers' levels of cognitive development and provide instructional strategies for differentiation.

M. Blast Off to Space Camp
Wanda Kollaus and **Beth Henry**, *Seguin ISD*
Blast off to Space Camp for a day of fun and learning covering elementary TAKS Objectives 1 and 4. Experience multiple hands-on activities utilizing inexpensive, readily available items in rotating centers that incorporate math and language arts skills. These learning experiences can be used individually in your classroom, for after school enrichment or remediation, or as a Family Space Night.

N. TAME Trailblazer Tours Texas
Michael Nevels, *TAME (Texas Alliance for Minorities in Engineering)*
The TAME TRAILBLAZER is a 40-foot exhibit trailer that houses a variety of engineering and science exhibits and travels across the state. The TRAILBLAZER is a valuable tool in raising students' enthusiasm for science and math, and reinforcing basic skills. Take-away material is provided and can be accessed on the TAME website.

WEDNESDAY, JULY 1

Science of Sound



Stonehenge:
Math in Our Own Backyard

Playful Math

A. Empower STEM Students-Nullify Stereotype Threat
Stef Paramoure, *Comal ISD* and **Matthew McGlone**, *The University of Texas at Austin*
Come learn about the negative effects of stereotype threat on student achievement. This session will build on the information presented by Dr. Matt McGlone at last year's Annual Meeting. Participants will learn about the podcast series created to showcase Dr. McGlone's presentation and research as well as way to share this critical information with students, parents, and administrations. A 5-E lesson plan will be provided for teachers to adapt to their classroom needs.

B. Light and Shadows
Sue Ann DeCuir, *Pflugerville ISD* and **Liz Janish**, *Round Rock ISD*
This session explores the use of multiple models to build depth in understanding the concept of light and shadows, with a focus on physical and earth science. Investigation stations will include multiple 2-D and 3-D models. Instruction/handouts will be provided to assist in preparation of these investigations, including websites, resources, and support for modifications.

C. Science of Sound
Julie Thomas, *Oklahoma State University*
In this hands-on session, participants will engage in hands-on inquiry activities that are designed to build content knowledge. Join in this opportunity to increase your understanding of the science of sound, and to gather some new teaching ideas. Session handouts will include ready-to-use lessons for grades 3-5.

D. Integrated Science by Inquiry
Sacha Kopp, and **Cynthia LaBrake**, *The University of Texas at Austin*
We present a 4-semester inquiry-based natural sciences curriculum for pre-service elementary teachers. The curriculum spans biology, geology, physics, chemistry, and astronomy and is based around the foundational concept of the movement of energy and matter through systems.

E. Stonehenge: Math in Our Own Backyard
Amanda Urias, *Fort Stockton ISD* and **Tabitha Rosales**, *Midland ISD*
Region 18 Math Collaborative teachers met at UT Permian Basin's Stonehenge for a day of exploration and planning, with subsequent development of TEKS-aligned student lessons connecting mathematics to other disciplines. The project culminates in bringing students to the site to engage in some real-world mathematics.

F. Playful Math
Denise Petter, *East Central ISD* and **Emma Cassas-Valadez**, *Pleasanton ISD*
Experience easy to make and use games that engage 4th and 5th grade students in developing their number sense, computing and problem solving skills. Multiplication and division are the focus of the games, but addition and subtraction computational skills are also involved, as well as problem solving (strategic thinking) and applying number sense. Some games can be adjusted to fit the needs of individual students, while others capture students' creativity as they design their own games that practice mental math using literature facts, social studies, or science facts.

Light and Shadows

Hickory Dickory Dock

Blast Off to Space Camp

G. TRC Legacy Lecture Series - Honoring Dr. Lowell Bethel Galileo, the Telescope, and Astronomy Today: Celebrating the International Year of Astronomy
Mary Kay Hemenway, *The University of Texas at Austin*
In 1609, Galileo first observed the sky with a telescope and changed not only his life, but the scientific and cultural world of his era. We'll examine Galileo's achievements with the telescope, his struggles with the Church, and the resolution of his conflict. The talk will conclude with an overview of some of the most exciting astronomical science of the current era, including research being performed by astronomers at McDonald Observatory.

H. Journaling in Math
Angela Pearson, *Copperas Cove ISD*
We will explore how to create journal entries that enhance learning through hands-on manipulation. We will look at how to set a journal up so that it becomes a useful reference tool for students.

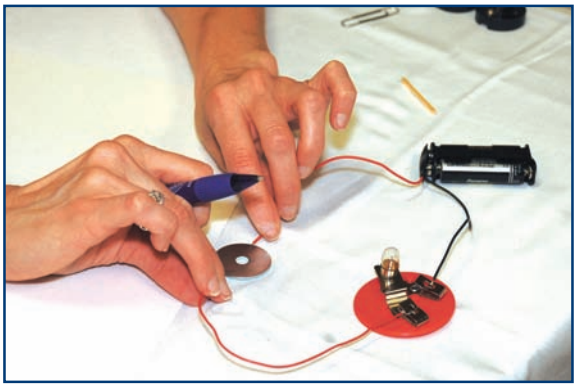
I. Interactive TAKS Strategies
Amy Rutherford, *ESC Region 15*
Participants will receive and create graphic organizers, foldables and manipulative activities to help students review TAKS science content.

J. Science Clubs
Brenda Lee Johnson and **Bonnie Anderson**, *Judson ISD*
Participants will learn how to start a club that offers students opportunities to enhance their knowledge of science through field trips, club meetings, and hands-on activities. They will also learn techniques for finding funds available for this program. This program not only benefits the individual student, but promotes entire family involvement.

K. Hickory Dickory Dock
Debbie Yarger, *Fort Worth ISD*
Hickory Dickory Dock, how many times does the mouse run up the clock before it strikes 1? In this session, the participants will discover the use of literature, and force and motion to show the use of a pendulum. This session is for early childhood teachers.

L. Online Instructional Module: Teachers Mathematical Knowledge
John Lamb, **Cindy Sherman**, and **Nathan Smith**, *University of Texas at Tyler*
The UT Tyler Collaborative developed and implemented an online module to improve K-12 Mathematics Teacher Mentor content knowledge in mathematics. This online module utilized videos of actual college professors presenting lessons addressing the college algebra topic of linear functions. Interactive Internet applets were also included in this module allowing MTMs to build a more conceptual understanding of the mathematics. Pre-and post-test were administered to the UT Tyler Collaborative MTMs and results will be presented.

M. The Science-Art Connection
Tracy Mansfield, *Aldine ISD*
How can science teachers use art as a tool to engage students while at the same time assist children in deeply learning the Science TEKS? We will answer that question for you in this interactive session. We will share our emerging classroom research with you to back up our assertions that art supports science learning. Also, we will share our strategically aligned Science-Art Connection lessons along with samples of student work with rubrics. You will receive a free copy of our CD: The Science-Art Connection.



Studying Electricity:
The "Workhorse" of Today

Sands of the Southwest

Astronomy in the Classroom

A. What Would You Like to Know About Math Coaching?
Robyn Silbey, *Montgomery County Public Schools, Maryland*
Every district and school is unique, but all districts and schools benefit from the math coach. Bring your questions, concerns, and ideas about math coaching to this highly interactive session.

B. Seeing Science: Digital Media in the Classroom
Lisa Baxter, *Hughes Springs ISD*
Find both visual and interactive ways to engage student interest in the classroom. Participants will receive information about a variety of web sites, PowerPoint games, and programs designed to increase student excitement about learning science.

C. Studying Electricity: The "Workhorse" of Today
Jim Roberts, *University of North Texas*
In this workshop we will conduct several hands-on activities with electricity to see how this source of energy can be harnessed to operate today's machines: washing machines, fans, electric starters, and even the cell phone. Each participant will see how the discovery of Oersted in 1820 led to the production of the Internet in use today. If time permits, a simple Direct Current (DC) motor and electroscope will be constructed by each participant.

D. Discrepant Events are a Quandary
Mike McClure, *Blanco ISD*
Discrepant Events in the classroom as a bell ringer, or as the Engage in the 5-E, or as a misconception probe can be powerful or at least the stimulus of creative juices in our students. I will present, in station fashion, some familiar ones and possibly some unfamiliar ones. Please feel free to come prepared to share discrepant events that you have history with as well.

E. Sands of the Southwest
Bea Long, *Clear Creek ISD*
Walk away with an actual lesson that works and teaches students about land and sea breezes. The lesson also incorporates specific heat. Different sands that were collected over a grant-funded trip are used to show students how chemical composition of sand affects the rates, which they heat up, and cool off.

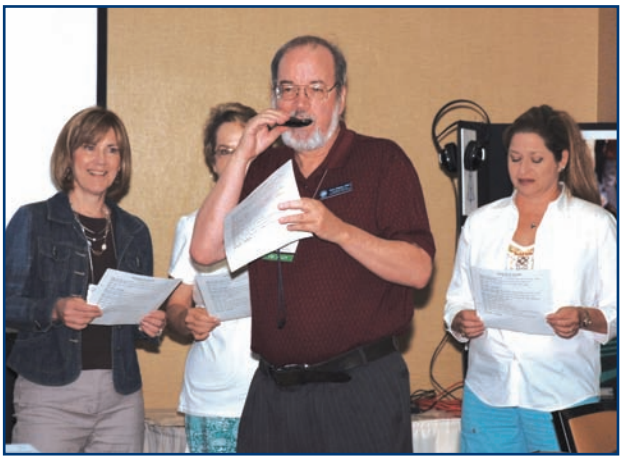
F. Astronomy in the Classroom
Kelly Goodin, *Hereford ISD*
Observe hands-on activities that show you how scientists can tell the temperature of the sun and other stars. We will use spectrum glasses, hand boilers, solar beads, and have photos from classrooms where the students were involved.

G. Algebraic Thinking and English Language Learners
Jose Graciano, *Tyler ISD*
Participate in these interactive activities of ELLs and algebraic thinking. Students are presented with logical reasoning and math challenges.

H. GeoGebra
Gary Browning, *ESC Region 9;* **Glenda Moore**, *Vernon ISD;* **Deanna Messer** and **Christine Knabe**, *Nocona ISD*
GeoGebra is free, intuitive, dynamic, instructional software which helps teachers visually model concepts from 8th grade through calculus. Teachers can easily develop "dynamic worksheets," website of pre-developed GeoGebra files that can be previewed at: http://www2.esc9.net/math/geogebra/

SESSION 5 - PRESENTATIONS AND WORKSHOPS

Gotta Sing, Gotta Get Movin'!



Podcast Authoring 101

"Let's Face It"

I. Promoting Integrative STEM Literacy
Julianne Webb, *Transformation 2013 T-STEM Center*
Integrative STEM (ISTEM) literacy is promoted through the use of project-based learning (PBL) in STEM education. PBL units serve to engage students in projects that require an inquiry-based approach to learning and applying the content. When the "T" and "E" in STEM are used to provide the context for "S" and "M" in STEM, the result is likened to the adage 'the whole is greater that the sum of its parts.' Join us as we explore the world of PBL and its potential impact on student ISTEM literacy. Many K-12 ISTEM resources are provided.

J. HEADS UP – Improve Your Students' Achievement Test Scores in Science
Nancy Murray and **Nathalie Sessions**, *The University of Texas Health Science Center at Houston*
For many years, U.S. students have been falling behind in science and math scores – a problem of such great concern to the U.S. government that the National Institutes of Health is funding partnerships between health scientists and educators. **H**ealth **E**ducation **A**nd **D**iscovering **S**cience while **U**nlocking **P**otential, an 8-year project funded by NIH, has been proven to raise Stanford Achievement Test scores in science and interest in science in a rigorous research study.

K. Environmental Health Science Summer Institute Overview
Robin Fuchs-Young and **Heather Reddick**, *University of Texas MD Anderson Cancer Center*
The Environmental Health Sciences (EHS) Summer Institute (SI) is a four-day professional development conference that introduces Texas K-12 educators to new curricular materials that explore the critical interrelationships between human health and the environment. SI is centered on increasing the scientific expertise and comfort level of teachers by integrating current EHS concepts across all subjects. Summer Institute consists of sessions focusing on gene/environment interactions, toxicology, carcinogenesis, organ systems, air and water quality and many more.

L. Gotta Sing, Gotta Get Movin'!
Kelly McDaniels, *Waco ISD*
Come join us for some fun! We will sing songs related to mathematical concepts! We will also do a little movin' and shakin'! We will discuss various instructional strategies to motivate the diverse learner. See if you can come up with some songs of your own! Don't hesitate to bring ideas!

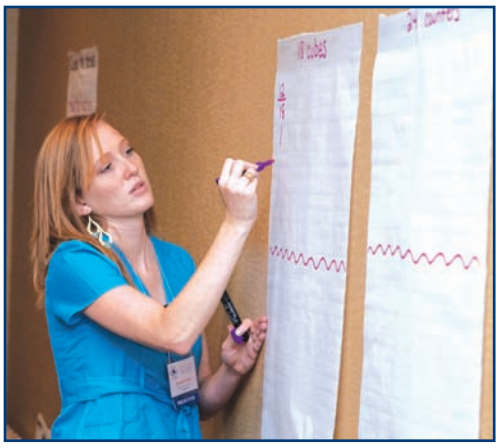
M. Podcast Authoring 101
Keith Mitchell, *TRC, The University of Texas at Austin*
Learn the basics of authoring and publishing your own podcast in iTunes. Keith Mitchell, TRC Coordinator for Technology Initiatives will explain podcasting concepts and demonstrate the basic steps for authoring content. Also learn about the TRC podcasting statewide initiative and how you can participate.

N. "Let's Face It"
Janna Long, **Lucinda Haugen**, *Springtown ISD*
Participants will engage in estimating and measuring by exploring their own facial features. The recorded data will then be used to construct a fun and interesting mask! The activity utilizes measuring, hypothesizing, charting and graphing skills. Middle school and high school extensions provided. Handouts and freebies included.

THURSDAY, JULY 2

Imagine Mars

Commando Cable -
There's a Cockroach in the Classroom



Fraction Fun is the
EQUIVALENCE to Success

A. What Would You Like to Know About Content Coaching?
Robyn Silbey, *Montgomery County Public Schools, Maryland*
Every district and school is unique, but all districts and schools benefit from the content specific coach. Bring your questions, concerns, and ideas about coaching to this highly interactive session.

B. Imagine Mars
Lucinda Presley, *Discovery Science Place*
Learn how the NASA/Jet Propulsion Lab's "Imagine Mars" initiative can be used to excite students about science TEKS-based learning and 21st Century workforce skills. Based on successful programming with elementary and middle schools, this project uses inquiry, the arts, and creative problem solving to engage students in Earth, physical, and life science. In this process, students use their science learning to design communities, inventions, or vehicles that humans could use on Mars.

C. Designing the Future
Shirley Willingham, *Aldine ISD*
Learn the rationale behind design technology in the elementary classroom and how to use it to give students opportunities to build and test ideas for practical problem solving with everyday materials. Receive a CD with proven lessons from an award-winning, elementary magnet school for engineering.

D. Opening Pandora's Box: Elementary School Science
Linda Brown, *TRC, The University of Texas at Austin*
Come learn about the results of a statewide survey of 297 Texas school districts and 499 elementary campuses of 5th grade teachers who attended a Regional Collaborative program. Collaborative teachers and their respective administrators participated in this study. Surveyed teachers attended TRC Science Professional Development Academies (PDA) between 2003 and 2008. Two electronic surveys were developed and compared with the 5th Grade Science TAKS scores. Learn how data can be used to influence elementary science education.

E. Commando Cable - There's a Cockroach in the Classroom
Mike Cable, *Anson ISD*
Learn how Madagascar hissing cockroaches can present unique learning opportunities in the elementary and middle school classroom.

F. Fraction Fun is the EQUIVALENCE to Success!
Elizabeth Farrell, *Floresville ISD* and **Amanda Wilder**, *Northeast ISD*
Looking for a different perspective on teaching equivalent fractions? This session gives ideas, which promote conceptual understanding of equivalence, not dependence on a rule. Participants will explore hands-on activities for grades 3-5. Come ready to discover lessons that promote student success in mastering the TEKS and the TAKS. You will receive a CD with lessons and games to use in your classroom.

G. Lesson Study: Teacher-led Professional Development
Trena Wilkerson and **Rachelle Meyer**, *Baylor University*
Participants will learn about Lesson Study as a form of teacher-led professional development that engages teachers in examining aspects of both teaching and learning in mathematics. Presenters will share the process and examples from actual middle school mathematics classrooms. Impact on teacher and student learning will be considered. Time will be provided for audience discussion related to how to implement Lesson Study in your own school, along with benefits and challenges.

Out of the Classroom and Beyond!

"Who Ate Our Corn?" We Want to Know!

Building Mathematics

H. Using Google Earth to Determine Seafloor Spreading
Belinda Jacobs, *Pflugerville ISD*
Teachers will learn to use the computer application Google Earth and ocean core data to analyze spreading along the Mid-Atlantic Ridge. Participants will need to bring their own laptops and peripherals. Prior download of Google Earth is helpful, but not required.

I. A Few of My Favorite Things
Sherri Carson, *Pittsburg ISD*
Raindrops on roses and whiskers on kittens, bright copper kettles and warm woolen mittens, these are a few of my favorite things. Come share your favorite things in the classroom. I'll bring plenty to discuss. Some are freebies, some will cost a little, a few will cost a chunk of money, but well worth it. Learn about websites, cool toys, and songs. I'll have a list to hand out. Bring your favorite things too.

J. "Who Ate Our Corn?" We Want to Know!
Craig Wilson, *TAMU & USDA/HSINP;* **Janette Trejo**, *Weslaco ISD*
Handle the Corn Earworm (Helicoverpa zea) and learn how to have students rear it; conduct growth/control experiments; collect and interpret data; present their research findings e.g. video of Weslaco ISD students and research work. Corn growth, ethanol production and environmental controls like predation by bats are all covered. Inexpensive digital microscope used to show how technology can be incorporated to engage students. FREE class sets of worms.

K. Outdoors to Indoors
Sandra Elms, *Ector County ISD*
Participate in hands-on activities that bring the outdoors inside and engage learners to become better observers and make a connection to the outdoors. Emphasis will be on building journaling and observation skills that are aligned with the TEKS. Fun and inexpensive projects will promote a love for nature, the outdoors, and where you live.

L. Out of the Classroom and Beyond!
Christy Youker, *Upper Colorado River Authority* and **Debbie Junk,** *TRC, The University of Texas at Austin*
Excellence in education ideally means that the community is directly involved. How do we do that? Who are possible partners? Can this be done across discipline? Learn from a model of how this has been done in Austin (designed by teachers!) and in a small town in West Texas. You are NOT alone.

M. Building Mathematics
Julianne Webb, *Transformation 2013 T-STEM Center*
Are you looking to foster algebraic reasoning among your middle school mathematics and Algebra I students? Building Math includes standards-based activities integrating STEM content through investigations using the engineering design process to solve problems. Through the hands-on, project-based learning units, students simulate an Amazon Mission, climbing Everest, and surviving after being stranded. Three lucky participants will take home a set of the reproducible teacher books.

Teacher Accountability vs. Teacher Autonomy: Must We Choose?

Sheila Tobias
Author, Consultant on Science and Mathematics Education

For three decades, Sheila Tobias has been an advocate for students who avoid, or are anxious about mathematics and science. With her newest book, *Science Teaching as a Profession. Why It Isn't. How It Could Be*., she tackles the latest in a wave of onslaughts against the people who matter most in the nation's schools: the classroom teacher. She defends them against all efforts to take away their status, their autonomy, and their very professionalism.

Sheila Tobias and Dr. Mary Hobbs

The Unveiling of the TRC Online Learning Community (TOLC)

Keith Mitchell, Ph.D.
Coordinator for Technology Initiatives, Texas Regional Collaboratives

Learn about the new TRC Online Learning Community (TOLC) and how you can be an active participant. Every member of the TOLC can publish a professional journal, join in STEM related special interest groups, share professional development photos and videos, and take part in topic-based discussions. Everyone attending the Annual Meeting will receive an invitation to join the community. This session is your opportunity to learn how to navigate the online network and be ready to take part in a statewide conversation on STEM education topics.

Dr. Keith Mitchell

The Content Coach: Raise Teacher Quality and Student Achievement

Robyn Silbey
Mathematics Coach and Author, Montgomery County Public Schools, Maryland

The goal of the content coach is to raise teacher quality and improve student achievement. In this interactive session, participants experience specific examples of reflective professional development around content, student learning styles, data analysis, and planning. The presenter reveals the secret for making demonstration lessons spark dramatic and positive schoolwide change. The materials include things needed to implement the structures and programs that empowered our diverse schools' math scores to steadily rise.

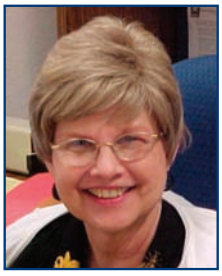
Dr. Debbie Junk and Robyn Silbey

2009 NITA BETH CAMP LEGACY AWARD

The Nita Beth Camp Legacy Award is presented to Dr. John McBride

"This is so special. Nita Beth was a dear friend of mine and I knew her for years, and I thought so much of her. This came as a real shock, and with great gratitude."

Dr. John McBride
Project Director, UT-Pan American
Regional Science Collaborative



Nita Beth Camp
(1940 - 2007)

The Story of Nita Beth Camp

In 1985, doctors told Nita Beth Camp her life was over. Facing such a grim outlook, it would have been easy for the longtime science teacher to give in to the breast cancer that had invaded her body. But Nita Beth had other plans.

"A lot of people think cancer is a death sentence, but I think it's a life sentence because you live every day to the fullest," Camp said from her office at the Region 7 Education Service Center in Kilgore.

"My doctor said I am a medical anomaly. I should not be alive. All of the studies say I should not have lived this long," Camp said. "God has a plan for me, and I'm supposed to be here. I take my chemo and come on to work every day," she said. "If you've got something else to think about, like coming to your job, that puts your illness at the back of your mind."

These quotes embody the attitude and optimism that characterized Nita Beth Camp, founder and former Project Director of the Region 7 Collaborative for Excellence in Science Teaching in Kilgore, Texas. For over 21 years after her diagnosis with cancer and with her passing, Nita Beth Camp continues to be an inspiration for thousands of Texas educators and teachers.

With great respect and admiration to her memory, the Texas Regional Collaboratives dedicates the Nita Beth Camp Legacy Award.

THE TRC LEGACY LECTURE SERIES

1937 - 2009

Honoring the Life and Memory of

Dr. Lowell J. Bethel

Distinguished Science Educator
and Special Friend of the
Texas Regional Collaboratives

Galileo, the Telescope, and Astronomy Today:
Celebrating the International Year of Astronomy

Presented by
Mary Kay Hemenway, Ph.D.
Research Associate, Department of Astronomy
College of Natural Sciences
The University of Texas at Austin

I recently became a Milken Family Foundation Educator and was surprised with a $25,000 monetary award. Many of the strategies used in my daily classroom lessons are aligned with the outdoor teaching techniques that are also shared through the TRC sessions that I have attended in the past. TRC instilled the confidence in science.

Zulema Williams
Science Teacher, Los Fresnos CISD

The increase in my content knowledge has increased 10 fold in my 4 years in the TRC. Another great aspect is the increase in pedagogy strategies and the networking with others who have a passion for science.

Stef Paramoure
Instructional Team Member, Comal ISD

The TRC has been very instrumental in shaping my content understanding in science and played a key role in my National Board Certification Process. It has also made me a strong advocate for science instruction for my district and the elementary campuses I serve as an Instructional Coach.

Martin Osae
Science Teacher Mentor, Dallas ISD

TRC has given me great ideas on things that I wanted to get started but never knew how to start. I will be moving a lot of things toward technology and these sessions gave me some good ideas.

Raul Aguilar
Mathematics Tecaher Mentor, River Road ISD

TRC has provided me with more ideas for my classroom and motivated me to try new things and apply for grants in technology to be able to do more in my classroom. It has also helped me connnect with co-workers to help them with what I have have learned.

Amy Thomasson
Mathematics Teacher Mentor, Manor ISD

Working with, and learning from other members in my Collaborative has helped me immensely in the classroom. The workshops I regularly attend through our Collaborative give me new ideas and manipulatives I use in my classroom.

Tracy Henry
Science Teacher Mentor, Gainsville ISD

PARTICIPANT FEEDBACK

I am a teacher in the Galveston ISD and the Collaborative completely supported me as I began teaching a science class for middle school high risk students (no budget, no lab). As a result of their efforts, tremendous improvement in the science education of these most underserved students was met.

Jessie Minter
Science Teacher Mentor, Galveston ISD

I learned new activities that I can now go back and share with my teachers. It was so nice to be treated like a true professional. This was the first time I have attended, and I hope to come back for many years to come.

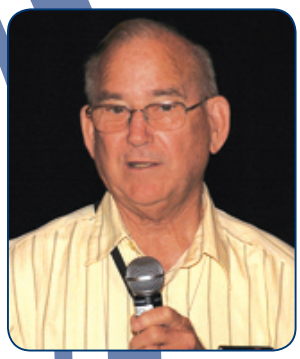
Karen Laughlin
Mathematics Teacher Mentor, Rockdale ISD

It has helped me to use what I consider "best practice" in the classroom. Allowing for the hands-on and group activities that promote a stronger foundation for learning and to help make learning fun for the students. It doesn't matter how much I know, but it matters how much my students know when they leave my classroom.

Stefanie Everitt
Mathematics Teacher Mentor, Burleson ISD

The TRC has helped me get my second Masters; it has made me not a good, but an outstanding teacher; it has helped me network with other great teachers; it has enriched my life with fabulous PDAs for years in all areas that I have taught. It has made me a mentor that has made starting teachers love teaching and stay in the teaching field. It has also made me want to help teachers that are starting out or teachers that may have idled in place for awhile.

Wanda Pagonis
Science Teacher Mentor, Lytle ISD



I believe it has given me a broader understanding of the science field and made me a more effective teacher. I was voted Teacher of the Year at my school because of the enthusiasm I bring to the science lab classroom and the impact I have on my campus. I know the TRC Science Collaborative has been a large part of my professional growth and success.

Sandra Elms
Science Teacher Mentor, Ector County ISD

36 REGIONAL SCIENCE COLLABORATIVES

REGION **SCIENCE COLLABORATIVE NAME**
Project Director / Phone Number / Email

1 **Region 1 Science Collaborative**/Edinburg
Elda Christian / 956-984-6230 / echristian@esc1.net
Julie Reynolds / 956-984-6247 / jreynolds@esc1.net
UT-Pan American Regional Science Collaborative/Edinburg
John McBride / 956-381-3401 / jwm1303@utpa.edu
UT-Brownsville Regional Science Collaborative/Brownsville
Rey Ramirez, Jr. / 956-882-7255 / reynaldo.ramirez@utb.edu
Eli Pena / 956-882-7262 / Eli.E.Pena@utb.edu
TAMU International Regional Science Collaborative/Laredo
Elizabeth Greninger / 956-326-2687 / egreninger@tamiu.edu

2 **TAMU-CC/ESC 2 Regional Science Collaborative**/Corpus Christi
Sheryl Roehl / 361-571-4153 / sheryl.roehl@tamucc.edu
Linda Simpson / 361-561-8570 / lsimpson@esc2.net
Margaret Bolick / 361-825-2674 / Margaret.Bolick@tamucc.edu

3 **Region 3 Science Collaborative**/Victoria
Susan Stehling / 361-573-0731 x291 / sstehling@esc3.net

4 **Region 4 Science Collaborative**/Houston
Edrice Bell / 713-744-8186 / ebell@esc4.net
Mary Ingle / 713-744-8186 / mingle@esc4.net
Rice University Regional Science Collaborative/Houston
Wallace Dominey / 713-348-5461 / wdominey@rice.edu
Galveston County Regional Science Collaborative/Galveston
Marguerite Sognier / 832-216-0001 / masognie@utmb.edu
Michele Marquette / 409-772-6972 / mlmarque@utmb.edu
Lake Houston Regional Science Collaborative/Humble
Kimberlea De La Cruz / 281-641-4465 / Kimberlea.delacruz@humble.k12.tx.us
Paul Edwards / 281-641-8346 / paul.edwards@humble.k12.tx.us
UHCL/EIH Regional Science Collaborative/Houston
Brenda Weiser / 281-283-3960 / weiser@uhcl.edu
Aldine ISD Science Collaborative/Houston
Linda Scott / 281-985-6416 / lscott2@aldine.k12.tx.us

5 **Region 5 Science Collaborative**/Beaumont
Becky Collier / 409-923-5421 / bcollier@esc5.net
Roxanne Minix-Wilkins / 409-923-5445 / rminix-wilkins@esc5.net

6 **TAMU-College Station Regional Science Collaborative**/College Station
Carolyn Schroeder / 979-458-4450 / cschroeder@science.tamu.edu

7 **Region 7 Science Collaborative**/Kilgore
Donna Wise / 903-988-6700 / dwise@esc7.net
UT-Tyler Regional Science Collaborative/Tyler
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8 **Region 8 Science Collaborative**/Mount Pleasant
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9 **Region 9 Science Collaborative**/Wichita Falls
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10 **Region 10 Science Collaborative**/Richardson
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UT-Dallas Regional Science Collaborative/Dallas
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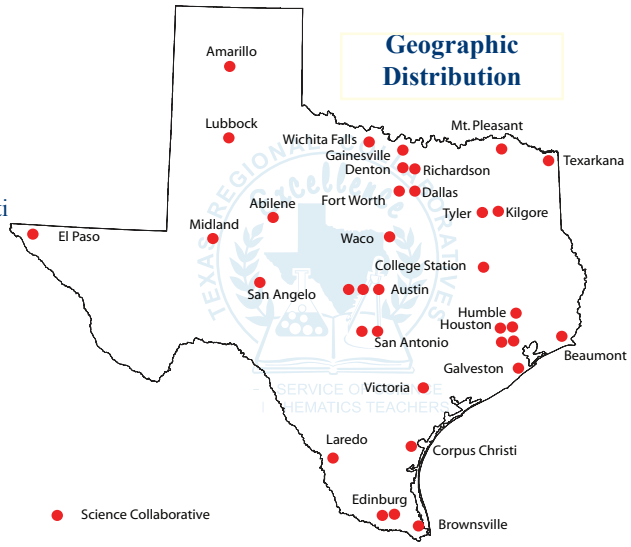
2008-2009 Regional Science Collaboratives Sites (36)



REGION **SCIENCE COLLABORATIVE NAME** *(continued)*
Project Director / Phone Number / Email

11 **Region 11 Science Collaborative**/Fort Worth
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12 **Region 12 Science Collaborative**/Waco
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14 **Region 14 Science Collaborative**/Abilene
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15 **Region 15 Science Collaborative**/San Angelo
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16 **Region 16 Science Collaborative**/Amarillo
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17 **Region 17 Science Collaborative**/Lubbock
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18 **Region 18 Science Collaborative**/Midland
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19 **Region 19 Science Collaborative**/El Paso
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20 **Region 20 Collaborative**/San Antonio
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2007-2008

COLLABORATIVES	37
DISTRICTS	784
CAMPUSES	2,324
TEACHERS	7,894
STUDENTS	497,322

One Year Data: August 1, 2007 - July 31, 2008
Student numbers based on a student/teacher ratio of 63:1

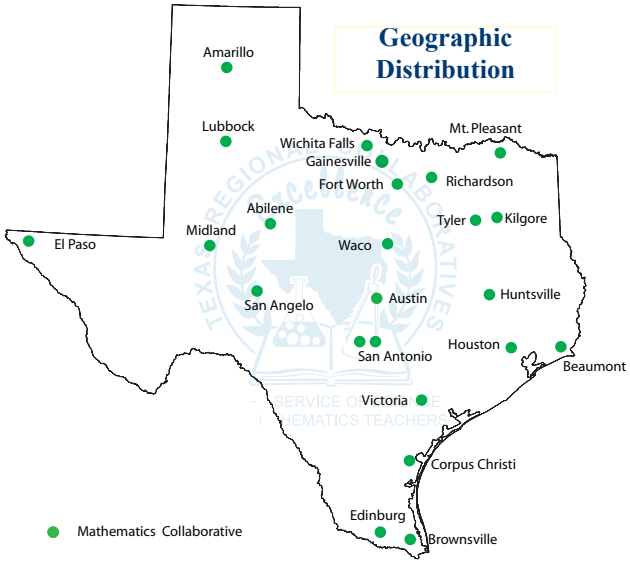
** LOUISIANA SCIENCE REGIONAL COLLABORATIVES

Two Louisiana Regional Collaboratives:
LSU/Southern University Regional Collaborative, and
Louisiana Tech University/Grambling State University Regional Collaborative
are supported by the Shell-TRC Partnership.

24 REGIONAL MATHEMATICS COLLABORATIVES

REGION	MATHEMATICS COLLABORATIVE NAME *Project Director / Phone Number / Email*
1	**Region 1 Mathematics Collaborative**/Edinburg *Gerbie Rodriguez / 956-984-6114 / grodriguez@esc1.net* **UT-Brownsville Regional Mathematics Collaborative**/Brownsville *James Telese / 956-882-7669 / james.telese@utb.edu*
2	**Region 2 Mathematics Collaborative**/Corpus Christi *Gaye Glenn / 361-561-8569 / gaye.glenn@esc2.us*
3	**Region 3 Mathematics Collaborative**/Victoria *Cindy Marshall / 361-573-0731 / cmarshall@esc3.net*
4	**Region 4 Mathematics Collaborative**/Houston *Sharon Benson / 713-744-6815 / sbenson@esc4.net* *Shelley Bolen-Abbott / 713-744-6521 / sbolenabbott@esc4.net*
5	**Region 5 Mathematics Collaborative**/Beaumont *Kay Olds / 409-923-5412 / kolds@esc5.net*
6	**Region 6 Mathematics Collaborative**/Huntsville *Susan Bohan / 936-435-8211 / sbohan@esc6.net*
7	**Region 7 Mathematics Collaborative**/Kilgore *Liz Scott / 903-988-6768 / lscott@esc7.net* *Jane Silvey / 903-988-6796 / jsilvey@esc7.net* **UT-Tyler Regional Mathematics Collaborative**/Tyler *John Lamb / 903-566-7390 / jlamb@uttyler.edu*
8	**Region 8 Mathematics Collaborative**/Mount Pleasant *Shane Wright / 903-575-2733 / swright@reg8.net*
9	**Region 9 Mathematics Collaborative**/Wichita Falls *Leslie Patrick / 940-322-6928 / leslie.patrcik@esc9.net*
10	**Region 10 Mathematics Collaborative**/Richardson *Debbie Dethrage / 972-348-1368 / debbie.dethrage@region10.org*
11	**Region 11 Mathematics Collaborative**/Ft. Worth *Patty Copeland / 817-740-7528 / pcopeland@esc11.net* **NCTC Regional Mathematics Collaborative**/Gainesville *Sara Flusche / 940-668-4252 / sflusche@nctc.edu* *Lisa Bellows / 940-668-4252 / lbellows@nctc.edu*
12	**Region 12 Mathematics Collaborative**/Waco *Jenny Dixon / 254-297-1272 / jdixon@esc12.net* *Charla Rudd / 254-297-1126 / crudd@esc12.net* *Kristin Arterbury / 254-297-1115 / crudd@esc12.net*
13	**Region 13 Mathematics Collaborative**/Austin *Carol Gautier / 512-919-5148 / Carol.Gautier@esc13.txed.net*
14	**Region 14 Mathematics Collaborative**/Abilene *Kathy Hale / 325-675-8679 / khale@esc14.net* *Kayla Swanzy / 325-675-8679 / kswanzy@esc14.net*
15	**Region 15 Mathematics Collaborative**/San Angelo *Susan Kerbow / 325-658-6571 x150 / susan.kerbow@netxv.net* *Marifrances Mackey / 325-658-6571 x307 / marifrances.mackey@netxv.net*
16	**Region 16 Mathematics Collaborative**/Amarillo *Angie Watson / 806-677-5135 / angie.watson@esc16.net*
17	**Region 17 Mathematics Collaborative**/Lubbock *Karen Marshall / 806-281-5806 / kmarshall@esc17.net*
18	**Region 18 Mathematics Collaborative**/Midland *Jim Collett / 432-567-3220 / jcollett@esc18.net* *Warren Koepp / 432-567-3233 / wkoepp@esc18.net*
19	**Region 19 Mathematics Collaborative**/El Paso *Veronica Hernandez / 915-780-6512 / vhernandez@esc19.net*
20	**Region 20 Mathematics Collaborative**/San Antonio *Rachel Morales / 210-370-5496 / rachel.morales@esc20.net* *Tori Austin / 210-370-5200 / tori.austin@esc20.net* **OLLU Regional Mathematics Collaborative**/San Antonio *Karen Harrower / 210-434-6711 / harrk@lake.ollusa.edu*

2008-2009 Regional Mathematics Collaboratives Sites (24)



2007-2008

COLLABORATIVES	22
DISTRICTS	818
CAMPUSES	2,153
TEACHERS	8,033
STUDENTS	433,782

One Year Data: August 1, 2007 - July 31, 2008

Student numbers based on a student/teacher ratio of 54:1

STATE AND FEDERAL PARTNERS

Texas Education Agency

U.S. Department of Education

National Science Foundation

STATEWIDE CORPORATE AND FOUNDATION PARTNERS

AT&T Foundation

El Paso Corporation

The Cynthia and George Mitchell Foundation

Toyota USA Foundation

PROJECT CONTRIBUTORS

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Community Foundation of Abilene/Bob and Maggy Morford • Dian Graves Owen Foundation
Eleanor and Robert Hoppe Endowment DA Fund • J.E. Connally/Virginia H. Boyd
Morehead-Welborn LLP • Robert Gooch • Rockwell Fund
Sam E. and Ann Barshop • Scott Taliaferro, Jr. • Sydney E. Niblo
Walter F. Johnson • William Wright Jr. • Zachry Group, Inc.

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Southern University *(Baton Rouge)*
Louisiana Tech University *(Ruston)*
Grambling State University *(Grambling)*

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Who We Are

The Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching (TRC) is an award-winning statewide network of sixty P-16 partnerships that provide sustained and high intensity professional development to P-12 teachers of science and mathematics across the state. This infrastructure of over 46 institutions of higher education collaborating with the Texas Education Agency, education service centers, school districts, and business partners, has a 18-year track record of designing and implementing exemplary professional development using research-based instructional models, materials, and best practices.

Achievements

Served over 1.5 million students across Texas through improved instruction and performance of participating teachers; developed the leadership capacity of approximately 16,000 Science Teachers Mentors (STMs) through sustained and high intensity professional development. These STMs are in turn sharing their experiences with thousands of teachers through mentoring, peer coaching, technical assistance, and workshops at the campus, district, and regional levels. In addition, over 16,500 mathematics teachers have received training in mathematics professional development modules sponsored by the Texas Education Agency. Science and mathematics teachers in almost all of the State's 254 counties have been the beneficiaries of this extensive statewide network.

Our Mission

To provide Texas science and mathematics teachers with support systems of scientifically researched, sustained, and high intensity professional development and mentoring to assist them in the successful implementation of the Texas Essential Knowledge and Skills (TEKS). TRC programs equip teachers with the knowledge and skills to engage students in meaningful science and mathematics learning experiences. Activities are designed to improve students' scientific, mathematical and technological literacy, and inspire them to pursue science and engineering related careers.

Values

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

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