Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching

IN THE SERVICE OF SCIENCE AND MATHEMATICS TEACHERS

SEVENTEENTH ANNUAL MEETING

Renaissance Austin Hotel
June 28 - 30, 2011

TRC | Leveraging Partnerships to Maximize Teacher Quality

This agenda belongs to:

Name: _____

Collaborative: _____

Cell Phone Number: _____

Internet Connection
Please visit the Internet Cafe area (for TRC use only) located in the Atrium by the Ballroom (main floor).

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TRC is funded by a variety of state, federal, and corporate partners, and is supported by The University of Texas at Austin.

WELCOME

June 28, 2011

Dear Annual Meeting Attendees and Guests,

Welcome to the Seventeenth Annual Meeting of the Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching (TRC). For twenty years, thousands of TRC teacher leaders, educators, professors, administrators, policy makers, and corporate partners have come together, stayed together, and worked together to build capacity in our schools and support excellence in Science, Technology, Engineering, and Mathematics (STEM) education for all students.

This year's theme, *TRC: Leveraging Partnerships to Maximize Teacher Quality*, challenges us to renew our commitment to join forces with our education, state, and corporate partners to empower our teachers to prepare and inspire a highly educated and skilled workforce for an increasingly scientific and technological workplace.

Successful collaboration among all of us in the STEM education community will help our schools achieve rigor and relevance in science and mathematics teaching and learning. Transforming the culture of STEM education is an imperative for our state and the nation to meet the challenges of a rapidly changing 21st Century.

The TRC team has worked diligently to develop an informative and stimulating program of STEM presentations, demonstrations, exhibits, and panel discussions that embody the foundation and substance of high quality science and mathematics teaching and learning, and their connection to professional development and workforce preparation.

To our major partner, the Texas Education Agency, our corporate partners, and all of our P-16 partners, I express my sincere gratitude and appreciation for helping us mark another milestone of achievements in the service of STEM education and workforce development.

Thank you for taking the time to join us for another exciting professional experience!

Sincerely,

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

EVENING PROGRAM

SHOWCASE AND RECEPTION
Tuesday, June 28, 2011
5:00 - 6:45 p.m. - Rio Grande A

DINNER
7:00 p.m. - Grand Ballroom

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

WELCOME
Marilyn C. Kameen, Ph.D.
Senior Associate Dean
College of Education
The University of Texas at Austin

GREETINGS AND REMARKS
Marsha L. Farney, Ph.D.
Member, District 10
State Board of Education

INTRODUCTION OF KEYNOTE SPEAKER
Marco A. Uribe, M.D.
Obstetrics and Gynecology
Austin, Texas

KEYNOTE SPEAKER
Chancellor Francisco G. Cigarroa
The University of Texas System

TRC 2011 DISTINGUISHED SERVICE AWARD

KEYNOTE SPEAKER

Chancellor Francisco G. Cigarroa
The University of Texas System

Francisco G. Cigarroa, M.D., was appointed the 10th chancellor of The University of Texas System by the UT System Board of Regents on January 9, 2009. He began his service as the UT System's chief administrative officer on February 2, 2009. As chancellor, Dr. Cigarroa oversees one of the largest public systems of higher education in the nation, with nine universities and six health institutions, an annual operating budget of $11.9 billion (FY 2010), including $2.5 billion in sponsored programs funded by federal, state, local and private sources, and more than 202,000 students and 84,000 employees. Dr. Cigarroa also serves as vice chairman for policy on the Board of Directors of The University of Texas Investment Management Co. (UTIMCO).

A nationally renowned pediatric and transplant surgeon, Dr. Cigarroa served as president of the UT Health Science Center at San Antonio from 2000 until his appointment as chancellor.

A native of Laredo, Dr. Cigarroa earned a bachelor's degree from Yale and received his medical degree from The University of Texas Southwestern Medical Center at Dallas. During his 12 years of postgraduate training, Dr. Cigarroa was chief resident at Harvard's teaching hospital, Massachusetts General in Boston, and completed a fellowship at Johns Hopkins Hospital in Baltimore.

In 1995, he joined the faculty of the UT Health Science Center at San Antonio and, in October, 2000, was appointed its third president. Immediately prior to his appointment as president, he served as director of pediatric surgery. In 2003, President George W. Bush appointed him to serve as a member of the President's Committee on the National Medal of Science.

A member of the prestigious Institute of Medicine of The National Academies, Dr. Cigarroa is a Fellow of the American College of Surgery and a Diplomate of the American Board of Surgery and has received a certificate in pediatric surgery from the American Board of Surgery. He is a member of the Yale University Council and was most recently elected in June 2010 to serve as an Alumni Fellow to The Yale Corporation, the university's governing board.

He and his wife, Graciela, an attorney, have two grown daughters, Maria Cristina and Barbara Carisa.

GREETINGS AND REMARKS

Marilyn C. Kameen, Ph.D.
Senior Associate Dean
College of Education
The University of Texas at Austin

Dr. Marsha L. Farney
Member, District 10
State Board of Education

Marco A. Uribe, M.D.
Obstetrics and Gynecology
Austin Area OBGYN

Science Educators and Neuroscientists: A Collaborative Agenda

Wednesday, June 29 • 8:00 - 9:15 a.m. • Grand Ballroom

Janet M. Dubinsky, Ph.D.
Professor of Neuroscience
University of Minnesota (UMN)

Dr. Dubinsky's presentation will explore the relationship between neuroscience and education. Why is neuroscience relevant to education? How does education alter brains? How can neuroscience be used to increase the motivation of teachers and students?

Creating An Impact School

Wednesday, June 29 • 3:30 - 4:45 p.m. • Grand Ballroom

Jim Knight, Ph.D.
Research Associate
University of Kansas

This workshop describes high-leverage activities that educational leaders can employ to design professional learning which has an unmistakable impact on teaching. The content draws from ideas described in Jim Knight's *Unmistakable Impact*, based on more than 18 years of research. Topics include: focusing professional learning on easy-to-understand professional learning targets; designing workshops, professional learning communities and other professional learning that support implementation of school improvement targets; and employing principals, coaches, and central office staff to accelerate professional learning.

State of Mathematics & Science Education

Thursday, June 30 • 8:00 - 9:15 a.m. • Grand Ballroom

Everly Broadway, Ed.D.
Director of Mathematics
Texas Education Agency

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

The past year has witnessed many exciting changes in mathematics and science education. Rigorous curriculum standards in mathematics are currently being developed. Teachers implemented new science curriculum standards. The new STAAR assessment program will measure student progress. Come hear about how you can join forces with TEA to help students prosper in a global community.

TEACHING AND MENTORING EXCELLENCE AWARDS

Excellence Awards Sponsored by TRC State, Foundation, and Corporate Partners

Winners receive a recognition plaque and a $750 award

AT&T Foundation

Science Mentoring Excellence Award
Mathematics Teaching Excellence Award

Science Mentoring Excellence Award
Science Mentoring Excellence Award

El Paso Corporation

Science Teaching Excellence Award
Science Teaching Excellence Award

The Cynthia and George Mitchell Foundation

Science Teaching Excellence Award

THE UNIVERSITY OF TEXAS AT AUSTIN

WHAT STARTS HERE CHANGES THE WORLD

UT Center for Science and Mathematics Education

Mathematics Mentoring Excellence Award

TUESDAY, JUNE 28 - SESSION 1

TIME		PRESENTATIONS / ACTIVITIES		ROOM
10:00 a.m. - 4:00 p.m.		REGISTRATION		**Rio Grande Foyer** *Lower Level*
10:00 a.m. - 4:30 p.m.		SET-UP Showcase Exhibits		**Rio Grande A** *Lower Level*
12:00 - 2:00 p.m.		OPENING LUNCHEON and PROGRAM Teaching and Mentoring Excellence Awards		**Rio Grande B** *Lower Level*
2:30 - 3:30 p.m.	**SESSION 1**		**Level**	
	A	**Successes and Challenges: Project Directors Panel** Fletcher/Junk	Leadership	**Wedgwood** *Main Floor*
	B	**Welcome to "Our" Science Class** Paramoure	Elementary *Science*	**Bosque** *Main Floor*
	C	**Bowling Balls, Nerf Guns, and Atoms: Active Learning in Action in the High School Physical Science Classroom** Nichol/Suskavcevic/Blake/Rea	High School *Science*	**Concho** *Main Floor*
	D	**Move It!** Lindley/Lehmann	Middle School *Science*	**Frio** *Main Floor*
	E	**Pump It Up With Pi** Brogdon/Booker	Middle School *Math*	**Guadalupe** *Main Floor*
	F	**Metric Measurement is Downright EZ When it's Left Up to Me!** Golson/Sanders	Elementary *Math/Science*	**Nueces** *Main Floor*
	G	**Social Networking with Twitter** Solis	All *Math/Science*	**Brazos** *Main Floor*
	H	**Bringing Lessons Alive: Utilizing Lifescribe Smart Pens in the Classroom** Phillips/Robinson/Young/Womack/Lain	All *Math/Science*	**San Antonio** *Lower Level*
	I	**Texas Rivers and Today's Landscape** Brownlee	Field Trip Participants	**San Marcos** *Lower Level*
	J	**SECO Activities: Wind for Watts** James/Elms	All *Math/Science*	**Sabine** *Lower Level*
	K	**Biomes of Texas Field Experiences** Patrick/Baskin/Patrick/Cusik-Fernandes	All *Math/Science*	**Pecos** *Lower Level*
	L	**Making STEM Career Classroom Connections** Sognier	Leadership *Science*	**San Saba** *Lower Level*
	M	**Engaging Students in Math** Sweet	Elementary *Math*	**Trinity** *Lower Level*
	N	**Monarch Butterfly Life Cycle - Make a Habitat!** Malek/Sander	Elementary *Science*	**Glass Oaks** *Access via Main Floor**
5:00 - 7:00 p.m.		SHOWCASE and RECEPTION		**Rio Grande A** *Lower Level*

** **Glass Oaks** is the building located to the west of the main hotel. You access it by walking outside of the doors on the Atrium level (behind AustinBytes), down the stairs and enter through the doors on the left.*

NOTES

SESSION 1 - PRESENTATION DESCRIPTIONS

A. Successes and Challenges: Project Directors Panel

Carol Fletcher, Debbie Junk, *TRC*

This session is designed for Project Directors and Instructional Team Leaders. New Project Directors will find this session especially helpful. The session will feature a panel of experienced Math and Science Project Directors sharing their successes and challenges in directing a Collaborative. Topics addressed will be program design, recruitment of teachers, roles of content experts, and working with administrators.

B. Welcome to "Our" Science Class

Stef Paramoure, *John Cooper School*

Thomas Sergiovanni in his research *Building Community in Schools* states, "we become connected for reason of commitment rather than compliance." Learn strategies on creating a classroom culture of community in which topics are explored and mistakes are "learning opportunities for the brain." Proactive classroom management steps to connect students and minimize negative behavior will be shared and discussed to empower you to make your classroom a community of learning and respect.

C. Bowling Balls, Nerf Guns, and Atoms: Active Learning in Action in the High School Physical Science Classroom

Carolyn Nichol, Milijana Suskavcevic, *Rice University;* **Thomas Blake**, *Cypress-Fairbanks ISD;* **Randy Rea**, *Katy ISD*

Using highly interactive teaching/learning techniques, the presentation will introduce important physics and chemistry concepts to high school teacher audiences. Atomic structure, Coulomb's law, ionization energies of elements, and the photoelectric effect will be among several TEKS-aligned concepts presented. The participants will learn ways to gain insight in their students' reasoning about the science phenomena using instant formative feedback on conceptual "clicker type" questions.

D. Move It!

Jana Lindley, Beth Lehmann, *San Angelo ISD*

Come find out how popular music and movement can be used in science to engage students and to promote learning. Topics will include: moon phases, tides, matter and energy, heat transfer, and plate tectonics.

E. Pump It Up With Pi

Sherri Brogdon, Sheri Booker, *Burkburnett ISD*

Pi Week is a celebration of Pi Day (3/14) where the entire school is engaged in pi-related fun activities. All core and non-core classes integrate pi with their curriculum. The week ends with a Pi Pep-Rally and student recognition from the various competitions throughout the week. We will bring cross-curricular ideas ready for your school to implement next year.

F. Metric Measurement is Downright EZ When it's Left Up to Me!

Angela Golson, *Kermit ISD;* **Lacey Sanders**, *Monahans-Wickett-Pyote ISD*

This workshop will help you with moving up and down the metric chart when you're not quite sure of decimals. We will be taking measurements with Canadian Night Crawlers, gummy worms, and rubber worms looking at the advantages and limitations of the worm model, finding the mass of the worms, and using journals to record our data.

G. Social Networking with Twitter

John Solis, *TRC*

Tweets, tweeps, back channeling, followers, microblogging, hashtags... do any of these terms sound familiar? Twitter is a free Web-based social networking service that allows users to share small bits and pieces of information and links to Web resources to other users efficiently. This session will highlight and discuss common Twitter terminology; presenter and participants will post Twitter messages in real time and discuss potential classroom uses of Twitter. Participants should have a free Twitter account prior to this hands-on session.

H. Bringing Lessons Alive: Utilizing Lifescribe Smart Pens in the Classroom

Karen Phillips, Lacy Robinson, *ESC Region 8;* **Kevin Young,** *Roxton ISD;* **Laurie Womack**, *Redwater ISD;* **Michel Lain**, *Pittsburg ISD*

This session will introduce participants to the use of some of the newest digital and audio capture technology for the classroom. Participants will have the opportunity to experience the use of the technology by working in learning stations, which will be facilitated by Region 8 science teacher mentors. The Region 8 STMs will also share their practical experience of the use of the technology in the classroom.

I. Texas Rivers and Today's Landscape

Diane Brownlee, *Stoneham Oil and Gas Co.*

Water, particularly in rivers and streams, is the greatest agent of erosion and deposition on Earth. This talk will show and discuss Texas examples of the effects of fluvial (river) erosion on the landscape, and enable you to "see" the erosion and deposition happening. Field trip briefing will also be discussed.

J. SECO Activities: Wind for Watts

Jett James, Sandra Elms, *Ector County ISD*

Participants will have a hands-on experience of building an actual wind turbine system that is affordable and can be implemented in classroom instruction. Challenge your students in the areas of engineering and design to create innovative thinkers for future energy needs. Demonstrations and models include energy transformation, solar power and alternative energy labs. One participant will win a wind turbine system!

K. Biomes of Texas Field Experiences

Dan Patrick, *Wichita Falls ISD;* **Randy Baskin, Leslie Patrick, Leslie Cusik-Fernandes**, *ESC Region 9*

This workshop will show how our Science Collaborative participated in two field trips over spring break during the 2010 and 2011 school years. Each trip was focused on a separate biome of Texas and took a look at the flora and fauna of each general area while exploring Texas State Parks of the areas. Technology was used to measure water and air temperatures, turbidity, atmospheric pressure, UVB intensity, latitude/longitude, and altitude above sea level.

L. Making STEM Career Classroom Connections

Marguerite Sognier, *University of Texas Medical Branch*

Want to inspire and inform your students about STEM careers? Having difficulties getting scientists, engineers, and other STEM professionals to come to your classroom? Learn about our online Profession Session Series which will help you make those essential career connections possible.

M. Engaging Students in Math

Michael Sweet, *Pharr-San Juan-Alamo ISD*

Teachers will participate in hands-on activities in mathematics such as Foldables®, games, bagables, the use of technology, etc. Teachers will make samples to take back to utilize in their classroom. These tried and true activities are a must!

N. Monarch Butterfly Life Cycle - Make a Habitat!

Claire Malek, *Navasota ISD;* **Theresa Sander**, *Magnolia ISD*

Learn how to investigate the life cycle of the monarch butterfly! We will make and take a butterfly habitat from recycled materials. We will include technology and learn how to use the Flip Camera and SmartScope to motivate students to become budding biologists.

WEDNESDAY, JUNE 29 - MORNING SESSION 2

TIME		PRESENTATIONS / ACTIVITIES		ROOM
6:30 - 7:45 a.m.		BREAKFAST		**Grand Ballroom** *Main Floor*
8:00 - 9:15 a.m.		**GENERAL SESSION**		
		Science Educators and Neuroscientists: A Collaborative Agenda Janet Dubinsky - *Details on Page 4*		**Grand Ballroom** *Main Floor*
9:30 - 10:30 a.m.		**SESSION 2**	**Level**	
	A	**Morphing of the 5E Instructional Model** Barufaldi	Leadership	**Wedgwood** *Main Floor*
	B	**What's a Watershed? How Am I Responsible for Water Quality?** Slayton	Middle School *Science*	**Bosque** *Main Floor*
	C	**Do the Lengths of Your Legs Really Matter?** Monaghan/Hahn/Lane	Middle School *Math*	**Concho** *Main Floor*
	D	**Digging Into Earth Science** Fitzgerald/Bizzell	Elementary *Science*	**Frio** *Main Floor*
	E	**Creating a Presence for Science, A School Wide Systemic Change in Science Instruction at the Elementary Level** Osae	Elementary *Science*	**Guadalupe** *Main Floor*
	F	**Fusion of Art and Science: An IMLS Leadership Grant Program for Schools** Youker/Lewis	Elem./Middle School *Science*	**Nueces** *Main Floor*
	G	**Making It Happen in Elementary Math** Garcia/Urbina	Elementary *Math*	**Brazos** *Main Floor*
	H	**Teach the TEKS with the New Mars Rover** Presley	All *Science*	**San Antonio** *Lower Level*
	I	**Living It Up with Life Science Activities in Genetics** Dobrovolny/McMillan/Swindell/Steele/Morton	Middle/High School *Science*	**San Marcos** *Lower Level*
	J	**SECO Activity: Focus on Wind** Flusche and team	All *Math/Science*	**Sabine** *Lower Level*
	K	**Informals: A Hidden Treasure of Resources** Cigarroa/Chappa	All *Math/Science*	**Pecos** *Lower Level*
	L	**Now We Are Cooking!** Cubillos-Dominguez/Negrete	Elementary *Science*	**San Saba** *Lower Level*
	M	**Luis and Clark's TOP FIVE in the Exploration of High School Mathematics** Clark/Luis	Middle/High School *Math*	**Trinity** *Lower Level*
10:30 - 10:45 a.m.		BREAK		

NOTES

SESSION 2 - PRESENTATION DESCRIPTIONS

A. Morphing of the 5E Instructional Model

James Barufaldi, *College of Education, UT Austin*

The 5E Instructional Model is well received among educators in Texas. This session is designed for teachers, administrators, professional development providers, and others involved in writing and developing curriculum in science and mathematics education. The presentation will provide a historical perspective of the model, its "journey" to Texas, and results from research findings demonstrating its effectiveness in enhancing the teaching and learning of science and mathematics.

B. What's a Watershed? How Am I Responsible for Water Quality?

Victoria Slayton, *Georgetown ISD*

The seventh grade standard requires students to model how human activity affects the water in a watershed. First, students will model what a watershed is. Second, the Enviroscape model will be used to illustrate to students how their actions can impact the watershed, and even the water that they use for drinking, cooking, and cleaning. Other topics that will be addressed include where our water comes from, the water cycle, and aquifers. Journaling activities will be included.

C. Do the Lengths of Your Legs Really Matter?

Johnette Monaghan, *McKinney ISD;* **Nichole Hahn**, *Royse City ISD;* **Shannon Lane**, *Ferris ISD*

Need a new way to teach triangle attributes? Come have fun with angle legs, integrated technology applications with the TI-Nspire and Navigator system, and other activities geared to teach your students all about triangles.

D. Digging Into Earth Science

Natalie Fitzgerald, Jennifer Bizzell, *Ector County ISD*

Do your students struggle with fifth grade Earth Science concepts? Participants will create a foldable, using visual and kinesthetic interactions. The foldable will include: fossil formation, landforms, natural resources, rapid and slow changes to the Earth's surface, making of sedimentary rocks, weathering, erosion, deposition, and the making of soil. After this session, you will have an Earth Science foldable sample to take back to your classroom to create with your students.

E. Creating a Presence for Science, A School Wide Systemic Change in Science Instruction at the Elementary Level

Martin Osae, *Dallas ISD*

Participants will learn how to bring about a systemic change in science instruction at their elementary campuses by setting in place advocates for science on each grade level. Campus science coaches or science lead teachers work with each grade level science advocate to ensure that a presence for science is created at that campus. Participants will take a look at a threefold approach to teaching science to young children (Developmentally Appropriate Practices (DAP), The 5E Instructional Model, Questioning).

F. Fusion of Art and Science: An IMLS Leadership Grant Program for Schools

Christy Youker, *Upper Colorado River Authority*; **Lillian Lewis**, *San Angelo Museum of Fine Arts*

An art museum, an environmental agency, and a school district bring together Art and Science in a 3-tiered program. Come learn how and why it's working and share ideas on working collaboratively on interdisciplinary programs.

G. Making It Happen in Elementary Math

Mary Garcia, *San Benito CISD;* **Olivia Urbina**, *Brownsville ISD*

Learn about an all-in-one free tool created by teachers for teachers focusing on hands-on activities for your students, making teaching much easier; all the activities are in one place, organized by TEKS/TAKS objectives, by grade level, and centralized in one wiki. This tool offers free resources at the click of a mouse.

H. Teach the TEKS with the New Mars Rover

Lucinda Presley, *ICEE Success*

Celebrate the launch of the next Mars rover, Curiosity, set for November 2011, by engaging your students in TEKS-based design of their own robotic exploration tool. You can use such TEKS as forces/motion, circuits, magnetism, energy, landforms, and Earth changes as you give your tool required robotic attributes. Developed in partnership with the Imagine Mars project at NASA's Jet Propulsion Lab, this workshop will give you an information-rich CD and connections to Curiosity.

I. Living It Up with Life Science Activities in Genetics

Marianne Dobrovolny, **Tobi McMillan**, *ESC Region 17;* **Kara Swindell**, **Nicole Steele**, *Lubbock ISD;* **Jeanna Morton**, *Idalou ISD*

During this session, participants will explore a number of genetics concepts using engaging hands-on activities. Because genetics tends to be more abstract than other life science topics, students have a difficult time grasping the content. This session will equip teachers with fun ways to conceptualize these complex topics using manipulatives that appeal to a variety of different learning styles. Participants will have access to all materials electronically in order to easily implement these activities in the classroom.

J. SECO Activity: Focus on Wind

Sara Flusche and team, *North Central Texas College*

Join us for a hands-on approach to teaching wind energy. Participants will walk away with a model and a great experience. Limited seating for 30 participants.

K. Informals: A Hidden Treasure of Resources

Melissa Cigarroa, Lisa Chappa, *Texas A&M International University*

Discover the "hidden" resources that your community offers through your informal learning sites. Find out how connections to nature are doable in the classroom and what support exists from local informals and from Texas Parks and Wildlife. Get your kids motivated to learn about science by tapping in to their natural curiosity, and practice with a snail investigation.

L. Now We Are Cooking!

Jeanette Cubillos-Dominguez, Marisa Negrete, *El Paso ISD*

This session will provide resources and strategies for using food and other everyday materials to teach science. Some of the food fun includes: separating iron in cereal, using pudding cups to teach mixtures and solutions, and exploring edible earth science and symmetry with clay. This is all tied together with a handy booklet of TAKS review questions.

M. Luis and Clark's TOP FIVE in the Exploration of High School Mathematics

Darla Clark, Christy Luis, *East Central ISD*

After two years of collaborating and exploring the unchartered world of mathematical journaling and mathematical differentiation in the high school environment, we have developed techniques that have been successful and observed other changes in the high school "natives" with the implementation of these shifts in our instruction. In this session, we will have you make samples of the strategies that have been the most successful with our students.

WEDNESDAY, JUNE 29 - MORNING SESSION 3

TIME	PRESENTATIONS / ACTIVITIES			ROOM
10:45 - 11:45 a.m.	**SESSION 3 - SPEAKER SERIES**		**Level**	
	A	**The Oil Business: How I Got to See the World and Paid in the Bargain** Brownlee	All	**Wedgwood** *Main Floor*
	B	**Birds: Why They Deserve Your Attention** English	All	**Bosque** *Main Floor*
	C	**Geometry in Construction** Burke/Moore	Middle/High School *Math/Science*	**Concho** *Main Floor*
	D	**OnTRACK for College Readiness: Math** Cosenza	High School *Math*	**Frio** *Main Floor*
	E	**OnTRACK for College Readiness: Science** Brown/Lee	High School *Science*	**Guadalupe** *Main Floor*
	F	**Partnering for Success: The TXESS Revolution** Ellins	Middle/High School *Science*	**Nueces** *Main Floor*
	G	**Learning the APR!** Sherron	Leadership	**Brazos** *Main Floor*
	H	**Teachers TryScience** Dochen	All *Science*	**San Antonio** *Lower Level*
	I	**Engineering New Biotechnology at NASA** Sognier	All	**San Marcos** *Lower Level*
	J	**Why Hydraulic Fracturing?** Olson	All	**Sabine** *Lower Level*
	K	**Student Asteroid Discoveries** Miller/Rothrock/Anderson	All	**Pecos** *Lower Level*
	L	**Using Math to Fight Infectious Diseases** Meyers	All	**San Saba** *Lower Level*
	M	**Hot Science - Cool Talks Outreach Series** Brueggerhoff	All	**Trinity** *Lower Level*
	N	**The Big Bang: A Complete History of the Universe** Kopp	All	**Rio Grande B** *Lower Level*
12:00 - 1:45 p.m.	LUNCH			**Grand Ballroom** *Main Floor*
12:45 - 5:00 p.m.	**TRC/SHELL Geology Field Trip** (Separate registration required) *Meet in the Lobby at 12:45 p.m.*			**Lobby** *Main Floor*

NOTES

SESSION 3 - PRESENTATION DESCRIPTIONS

A. The Oil Business: How I Got to See the World and Paid in the Bargain

Keith Brownlee, *Stoneham Oil and Gas Company*
This is a geoscientist's look at the petroleum business with an overview of the many careers it offers to travel the world. Positions in engineering, research, applied science and operations support offer unique and interesting high tech job possibilities available in many locations. We will take the time to visit some of my interesting stops along the way.

B. Birds: Why They Deserve Your Attention

Peter English, *Center for Inquiry in Math and Science, UT Austin*
Birds are among the most incredible organisms on Earth, and this talk will explain the fascinating adaptations and underlying physiology that make birds so unique. The talk will range from physiological and structural adaptations to intense multi-species bird flocking behavior that underpins the biodiversity of the tropics. Delivered with an easy style and an enthusiastic approach, you will leave the talk with a new appreciation of the world around you.

C. Geometry in Construction

Scott Burke, Tom Moore, *Loveland High School, Colorado*
Contextual Learning at Loveland High School (Loveland, CO), beginning with the Geometry in Construction program, has proven to be wildly successful and is influencing practice on a national level. Join us to learn how this revolutionary model improves math instruction through "real world" Career and Technical Education (CTE) situations. Outcomes including student engagement, enthusiasm, and data from state standardized testing will be shared as proof.

D. OnTRACK for College Readiness: Math

Gary Cosenza, *Institute for Public School Initiatives, College of Education, UT Austin,*
Participants will learn how to access, explore, and experience free student ready lessons from OnTRACK for College Readiness that support student success on STAAR and other assessments. As part of TEA's Project Share, OnTRACK provides more than 200 engaging and interactive online lessons for Algebra 1, Algebra 2 and Geometry.

E. OnTRACK for College Readiness: Science

Bonnie Brown, Martha Lee, *Institute for Public School Initiatives, College of Education, UT Austin*
As part of TEA's Project Share, OnTRACK provides dozens of STAAR-aligned lessons on biology, chemistry, and physics which include interactive learning, assessments with meaningful feedback, and additional resources. OnTRACK materials enable participants to effectively use interactive media in a non-linear learning environment with students struggling with science.

F. Partnering for Success: The TXESS Revolution

Kathy Ellins, *UTIG, UT Austin*
The TXESS Revolution has served 168 teachers who have reached over 21,000 students. One partnership essential to success of the project is our collaboration with the Texas Regional Collaboratives. Through the TRC's model, 107 TXESS Revolution teachers had reached 4,905 other teachers by April 2011. The success of TXESS Revolution model for the delivery of rigorous Earth science professional development is due to the strong formal and informal partnerships that are the centerpiece of the project.

G. Learning the APR!

Todd Sherron, *TRC*
Come learn the Online Annual Performance Reporting System for the MSP Program. This will be a hands-on session for new and seasoned project directors. Bring your laptop and username/password to login to your APR at http://apr.ed-msp.net/aprs.

H. Teachers TryScience

Sandy Dochen, *IBM Corporation*
Teachers TryScience is an online resource for teachers developed by IBM, the New York Hall of Science, and teachengineering.org; it is designed to help middle school teachers improve their instruction of hands-on lessons, with a focus on engineering and environmental science.

I. Engineering New Biotechnology at NASA

Marguerite Sognier, *NASA-Johnson Space Center*
The Biomedical Engineering for Exploration Space Technology Lab (BEST) at NASA Johnson Space Center is unique as it is the only biomedical/cell biology laboratory integrated into an engineering environment. The focus of our team is to invent new biomedical technology to be used in future manned space exploration and also on Earth. Learn how we integrate science, math, and engineering to create new, innovative, out of this world technologies! Includes a hands-on activity.

J. Why Hydraulic Fracturing?

Jon Olson, *Cockrell School of Engineering, UT Austin*
Hydraulic fracturing is an essential technology in the petroleum industry for extracting natural gas from shale. Recent industry activity and its news coverage have brought up questions about the environmental impact of this technology. This talk will review the technology and address related issues including water contamination, water usage and earthquake hazards.

K. Student Asteroid Discoveries

Patrick Miller, *Hardin-Simmons University;* **Denise Rothrock**, *Madisonville ISD;* **Ginger Anderson,** *May ISD*
Centered at Hardin-Simmons University (Abilene, TX) is the International Astronomical Search Collaboration ("Isaac"). In this program, 300 schools from more than 40 countries participate. Students make original discoveries of Main Belt asteroids located between the orbits of Mars and Jupiter. Learn how you can join this free program and have your students make important observations of threatening near Earth objects and discoveries of Main Belt asteroids.

L. Using Math to Fight Infectious Diseases

Lauren Meyers, *College of Natural Sciences, UT Austin*
As public health officials face the challenge of controlling the spread of infectious diseases around the globe, they are increasingly using math and computational methods to help understand and design effective intervention strategies. In this presentation, I will describe how simple mathematical concepts have helped the fight against diseases such as flu, SARS, and HIV.

M. Hot Science - Cool Talks Outreach Series

Stephen Brueggerhoff, *Environmental Science Institute, UT Austin*
Bring cutting edge science to your school by hosting a Hot Science Cool Talks satellite viewing party. UT Austin's Environmental Science Institute outreach series produces professional science lectures hosted at UT and broadcast through the Internet. Each event supports professional development with resource materials for teachers to use for curriculum development and in-class instruction.

N. The Big Bang: A Complete History of the Universe

Sacha Kopp, *College of Natural Sciences, UT Austin*
Here are two amazing facts which humankind can say with a straight face: the Universe is 14 billion years old and much of its history is recorded in a fossil record in little tiny objects called atoms. I will review some of the large-scale history of the Universe and how we have reconstructed that history, and the terrestrial experiments conducted on Earth to recreate the early moments of the Universe, which lie beyond the reach of astronomical telescopes.

TIME	PRESENTATIONS / ACTIVITIES			ROOM
2:15 - 3:15 p.m.	**SESSION 4**		**Level**	
	A	**Building Your Leadership Capacity Through the TRC** Jbeily	Leadership	**Wedgwood** *Main Floor*
	B	**Introducing Early Science Concepts Through Toys and Food** Hinojosa-Gonzalez	Elementary *Science*	**Bosque** *Main Floor*
	C	**Contextual Learning - A Model for Science** Burke/Moore	High School *Science*	**Concho** *Main Floor*
	D	**Show Me the Money - Find Funding Through DonorsChoose.org** Cable	All *Math/Science*	**Frio** *Main Floor*
	E	**Intervention Strategies for Addition and Subtraction: Grades K-2** Kulhanek	Elementary *Math*	**Guadalupe** *Main Floor*
	F	**Battling the Beasts** Nicholson/Crnokrak/Hendrix/Suhrer/Chapa	All *Math/Science*	**Nueces** *Main Floor*
	G	**Teaching Science and Math Through the Lens of the NAE's Grand Challenges of the 21st Century** Webb/Gautier	All *Math/Science*	**Brazos** *Main Floor*
	H	**Water Power Flight Plan** Becker/Archer	All *Science*	**San Antonio** *Lower Level*
	I	**Developing a Just-In-Time (JIT) Approach to Professional Development** Crow/Odell/Brown/Alexander	Leadership	**San Marcos** *Lower Level*
	J	**SECO Activity: Let's Make a Water Wheel** Flusche and team	All *Math/Science*	**Sabine** *Lower Level*
	K	**Developing Mathematical Ideas: Building a System of Tens** Bracewell/Brown/Boren/Lee/Bellinfantie	Elem./Middle School *Math*	**Pecos** *Lower Level*
	L	**Bringing Science, Technology, and Literacy Together for Student Success** Simpson	Middle School *Science*	**San Saba** *Lower Level*
	M	**A Line in the Sand - Connecting Texas History and Geometry** Telese/Aguilar	Elem./Middle School *Math*	**Trinity** *Lower Level*
3:15 - 3:30 p.m.	BREAK			
3:30 - 4:45 p.m.	**GENERAL SESSIONS**			
	Creating An Impact School Jim Knight, Ph.D. - *Details on Page 4*			**Grand Ballroom** *Main Floor*
5:00 - 7:00 p.m.	**Vendor Fair with Reception** *Details below*			**Rio Grande B** *Lower Level*

VENDOR FAIR

The TRC Vendor Fair is an opportunity for those attending the Annual Meeting to view high quality science and mathematics instructional materials as displayed by a variety of commercial and educational companies* and non-profit organizations. Attendees are encouraged to visit informally with company representatives to learn about the latest in books, equipment and technology for the classroom. Light refreshments will be served.

**The Texas Regional Collaboratives does not endorse any particular vendor or any particular product sold, used, or displayed at this event.*

LIST OF VENDORS *(subject to change)*

- Abrams Learning Trends
- CPO Science
- Delta Education
- EAI Education
- Green Ribbon Schools
- PASCO Scientific
- Region XIII ESC
- Rice University
- Sargent Welch-Science Kit-Wards
- SmartSchool Systems
- UT Institute for Public School Initiatives
- Vernier Software & Technology

SESSION 4 - PRESENTATION DESCRIPTIONS

A. Building Your Leadership Capacity Through the TRC
Kamil A. Jbeily, *TRC*
Building leadership capacity to support systemic reform in science and mathematics teaching and learning is one of the functions of the TRC. This session is designed for TRC project directors, instructional team members, and teacher leaders who are interested in playing a leadership role in designing and providing high quality support systems of teacher professional development. Come learn important and proven attributes needed to lead, support, and sustain successful Regional Collaboratives in the service of Texas science and mathematics teachers.

B. Introducing Early Science Concepts Through Toys and Food
Argelia Hinojosa-Gonzalez, *Mission ISD*
Introduce science concepts and vocabulary during early childhood to motivate children by engaging them in science by relating it to their lives. Guide students as they explore science concepts that will later help them be successful in the science classroom by presenting science in a way that will make the child's early science experiences be unforgettable and fun.

C. Contextual Learning - A Model for Science
Scott Burke, Tom Moore, *Loveland High School, Colorado*
How can rigorous science education benefit from partnering with Career and Technical Education (CTE) classes? Through the use of this revolutionary educational model, there has been a proven success record improving practice on a national level with quality STEM education. Join us to learn how this approach advances instruction through "real world" Career and Technical Education (CTE) situations. Outcomes including student engagement, enthusiasm, and data from state standardized testing will be shared as proof.

D. Show Me the Money - Find Funding Through DonorsChoose.org
Mike Cable, *Anson ISD*
For most of us, funding is often limited, or nonexistent. While I can't promise the same success for everyone, I've had 17 *DonorsChoose* projects fully-funded in the 2010-2011 school year and received more than $10,000 in supplies for my classroom. Let me shed some light, and present a few tips and tricks, so you can take advantage of this wonderful opportunity, too.

E. Intervention Strategies for Addition and Subtraction: Grades K-2
Stefani Kulhanek, *ESC Region 4*
Are your kindergarten, first, or second grade students struggling with the concepts of addition and subtraction? Join us as we explore hands-on instructional strategies designed to help struggling students develop conceptual understandings of addition and subtraction. Explore how to use instructional tools to make connections between the concrete representations and the abstract numerical representations.

F. Battling the Beasts
Brandi Nicholson, *Rice University;* **Whitney Crnokrak**, **Maria Hendrix**, *Cypress-Fairbanks ISD;* **Amy Suhrer**, **Sayda Chapa**, *Katy ISD*
Don't let the "beasts" of education tear apart your quality of teaching! With obstacles such as budget cuts, higher class sizes, and increased expectations, it's time to conquer these challenges with convenient ideas and partnerships. This is where quality teachers can arm themselves to battle the "beasts."

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G. Teaching Science and Math Through the Lens of the National Academy of Engineering's Grand Challenges of the 21st Century
Joules Webb, *ESC Region 20;* **Carol Gautier**, *ESC Region 13*
Join us as we share developed lessons including "Sustainable Strong Structures," "Clean, Green Energy: Bioprocessing Alternative Fuels," and "Green Roof Design." We will also share how to use the project based learning (PBL) content organizer provided to modify the lessons by shifting the teaching and learning focus to different standards within the same Grand Challenge context. Lesson plans provided.

H. Water Power Flight Plan
Donald Becker, Julie Archer, *Pasadena ISD*
Teachers will learn how to assist students of all levels in successfully designing, constructing and launching a model rocket. Through this process they will investigate and describe Newton's law of inertia, law of force and acceleration and the law of action-reaction. Students will apply this knowledge to past rocket designs and make predictions regarding possible future rocket designs used in space exploration.

I. Developing a Just-In-Time (JIT) Approach to Professional Development
Eli Crow, Michael Odell, Fredericka Brown, *UT Tyler;* **Rhonda Alexander**, *Tyler ISD*
UT Tyler has developed a Just-In-Time approach to professional development. Come learn about our model for integrating handheld technology into the curriculum in a way that ensures transfer into the classroom. The PD model, results data and sample activities will be discussed.

J. SECO Activity: Let's Make a Water Wheel
Sara Flusche and team, *North Central Texas College*
Join us for hands-on activities on hydroelectricity. Dive into hydro dams and hydro curriculum in this session. Walk away with tools for immediate implementation. Limited seating.

K. Developing Mathematical Ideas: Building a System of Tens
Kristi Bracewell, *Anderson Shiro ISD;* **Susan Brown**, *Bremond ISD;* **Kathleen Boren**, *Leggett ISD;* **Monica Lee**, *Iola ISD;* **Sherene Bellinfantie**, *Centerville ISD*
Developing Mathematical Ideas (DMI) is a professional development curriculum designed to help teachers think through the major ideas of K-8 mathematics and examine how children develop those ideas. At the heart of the materials are sets of classroom episodes (cases) illustrating student thinking as described by their teachers. In this session, teachers will share their experiences and leaders will outline how to provide a successful DMI institute for your Collaborative.

L. Bringing Science, Technology, and Literacy Together for Student Success
John Simpson, *Round Rock ISD*
The growing focus on science and technology has seen a growth in technology that can enhance science and engage students in hands-on activities. This presentation looks at how to integrate real technology in real science. The workshop will demonstrate examples of the strategies used that incorporate Sparks from PASCO and Sally Ride Science literacy materials and labs. The focus will be upon plate tectonics and how students can relate it to everyday happenings.

M. A Line in the Sand - Connecting Texas History and Geometry
James Telese, *UT Brownsville;* **Mario Aguilar**, *Brownsville ISD*
This presentation will focus on connecting Texas History and Geometry through the use of the Geogebra software. The presentation will introduce Geogebra and its ability to import graphics to be used for finding symmetry, measuring in order to find perimeter and area, as well as several other geometric concepts suitable for elementary and middle school classrooms.

THURSDAY, JUNE 30 - MORNING SESSION 5

TIME		PRESENTATIONS / ACTIVITIES		ROOM
6:30 - 7:45 a.m.		BREAKFAST		**Grand Ballroom** *Main Floor*
8:00 - 9:15 a.m.		**GENERAL SESSION**		
		State of Mathematics and Science Education Everly Broadway and Kenn Heydrick - *Details on Page 4*		**Grand Ballroom** *Main Floor*
9:30 - 10:30 a.m.		**SESSION 5**	**Level**	
	A	**Instructional Coaching: An Overview** Knight	Leadership	**Wedgwood** *Main Floor*
	B	**Earth, Wind, and Fire** Garay-Escobedo/Green/Zuniga	Elementary *Science*	**Bosque** *Main Floor*
	C	**The X Factor** Faircloth	Middle/High School *Math*	**Concho** *Main Floor*
	D	**Students as Scientists: Steps Toward a Successful Student Research Program** Sears/Plas	Middle/High School *Science*	**Frio** *Main Floor*
	E	**Examining Mathematical Structures** Robles/Hernandez	All *Math*	**Guadalupe** *Main Floor*
	F	**How Big is a Million?** Urquhart	All *Math/Science*	**Nueces** *Main Floor*
	G	**Supporting New Teachers from Certification to Teaching** Meyer/Allison	All *Math*	**Brazos** *Main Floor*
	H	**New DataCenter for 2011-2012** Perry	Leadership	**San Antonio** *Lower Level*
	I	**Using Short Stories to Enhance Scientific Vocabulary** Garcia	All *Science*	**San Marcos** *Lower Level*
	J	**SECO Activities: Solar Energy** Flusche and team	All *Math/Science*	**Sabine** *Lower Level*
	K	**Aligning the TEKS and Student Engagement in Geometry** Johnson/Oyervides/Huff/Hernandez	Elementary *Math*	**Pecos** *Lower Level*
	L	**Will it Happen to You? Disorders/Diseases of the Body Systems** Flores/Coats	Middle/High School *Math/Science*	**San Saba** *Lower Level*
	M	**Incorporating Free Web-based Programs in the Classroom** Rodriguez	All *Math/Science*	**Trinity** *Lower Level*
	N	**The Liquid Rainbow Density Column** Merriott/Rhea/Luke	Elementary *Science*	**Glass Oaks** *Access via Main Floor*
10:30 - 10:45 a.m.		BREAK		

NOTES

SESSION 5 - PRESENTATION DESCRIPTIONS

A. Instructional Coaching: An Overview

Jim Knight, *The University of Kansas*

For the past nine years, researchers and practitioners at The University of Kansas Center for Research on Learning have been developing and evaluating a model for providing onsite professional learning. The result of this study is the identification of several activities that instructional coaches employ to facilitate teachers' learning new teaching practices. This presentation will provide an overview of the components of coaching—(a) enroll, (b) identify, (c) model, (d) observe, (e) explore, (f) support, and (g) reflect—and introduce the partnership principles that represent the theoretical framework for this approach to coaching.

B. Earth, Wind, and Fire

Sylvia Garay-Escobedo, **Vernon Green**, **Maricela Zuniga**, *Dallas ISD*

Want to know how to share the understanding of properties of soil with your students? How does wind make paper fly? Why is a flame upside down? Join us and discover and observe how these questions can be answered by using eatable and simple household ingredients/materials.

C. The X Factor

Kym Faircloth, *ESC Region 20*

Is Algebra really all about finding x? Did we even know it was lost? Many students are not sure why we keep looking for something that is right in front of them on their paper. So, let's look at ways to still foster their algebraic thinking and gain a formative understanding of the student.

D. Students as Scientists: Steps Toward a Successful Student Research Program

Tim Sears, Dan Plas, *Weslaco ISD*

Presenters will share several years experience in developing a successful program that engages students in original scientific research. The program structure has helped numerous students win awards at regional, state, and international competitions, and has taken advantage of frequently overlooked innovative state course options, local partnerships, and diverse funding sources. A weekend and after-school program can provide materials, laboratory space, and quality mentorship to middle and high school students pursuing original independent research.

E. Examining Mathematical Structures

Allie Robles, *El Paso ISD;* **Veronica Hernandez**, *ESC Region 19*

Why do students of all ages struggle so much with word problems? Examine foundational mathematical structures that will provide educators with a deeper understanding of the misconceptions our students often experience. Participate in rich hands-on activities, case studies and discussion as you consider the vertical dynamics of problem solving. (Leave with ideas that can be applied to any grade level K-12.)

F. How Big is a Million?

Mary Urquhart, *The University of Texas at Dallas*

Understanding large and extremely small numbers is difficult for adults, and more so for children. Yet from scale in the solar system to Avogadro's number, in science these numbers are common. Here I present a resource to assist in developing number sense with regard to powers of ten, along with an example mathematics activity for fourth grade that highlights place value, and science examples appropriate for upper elementary and above.

G. Supporting New Teachers from Certification to Teaching

Janice Meyer, *The Texas A&M University System;* **Cheryl Allison**, *Redwater ISD*

In this session, participants will learn about the TRC's Mid-Career STEM teacher recruitment program and Beginning Teacher Induction and Mentoring program at The Texas A&M University System. Learn how this partnership is leveraging funds to support new teachers from certification to their first year of teaching.

H. New DataCenter for 2011-2012

George Perry, *TRC*

The TRC DataCenter for 2011-2012 has gone through some important changes. This session will acquaint you with these changes and prepare you for using the DataCenter to its full potential. Project Directors and their data entry specialists are urged to attend.

I. Using Short Stories to Enhance Scientific Vocabulary

Marianne Garcia, *Lockhart ISD*

Everyone loves being told a story. Ever want to create an activity that would make vocabulary fun and easy to learn? This workshop will give you the tools to create short stories using your scientific vocabulary terms. Only prerequisite is an openness to new ideas and the ability to think outside the box.

J. SECO Activities: Solar Energy

Sara Flusche and team, *North Central Texas College*

It's hot out there! Join us for a hands-on approach to learning about our Sun. This SECO based lesson will include solar ovens and energy webs. Limited seating.

K. Aligning the TEKS and Student Engagement in Geometry

Detra Johnson, **Jesus Oyervides**, **Cathleen Huff**, **Mary Hernandez**, *Navasota ISD*

In this presentation, teachers will identify approaches on how students can improve their geometric understanding and learning capacity through exercises that facilitate higher order thinking skills, graphic organizers, and hands-on activities which support and build the understanding of elementary geometry TEKS. Teachers will address and foster geometric thinking while aligning the relationships between geometry, algebra, and problem solving in order to meet multiple student expectations. This presentation will identify specific instructional strategies that explore comprehensive language construction that engages students in extensive geometry vocabulary development.

L. Will it Happen to You? Disorders/Diseases of the Body Systems

Tammy Flores, Lisa Coats, *Saint George Episcopal Day School*

Participants will learn to integrate technology, science, and math to create student infomercials. These infomercials will use research, data, graphs, and charts, as well as math concepts involving percentages, ratios, and proportions. This is a project based-lesson plan allowing for multiple subject partnerships. Examples of student work and grading rubric will be included.

M. Incorporating Free Web-based Programs in the Classroom

Efren Rodriguez, *South Texas ISD*

Technology use in the classroom has gotten easier than ever. Become familiar with how technology can easily be incorporated into the classroom through the use of the many free Web-based programs, Web 2.0 products, such as Flash animations, Google Apps, and others are available to teachers and students. Teachers will also experience the use of Google Docs to generate templates and forms for students' electronic lab reports and students' feedback. Finally, the participants will see how easy it is to integrate Flash animations that are readily available on the Internet to their science lessons.

N. The Liquid Rainbow Density Column

Kathy Merriott, Julie Rhea, Geraldine Luke, *Dallas ISD*

In this investigation, students will find the densities of various liquids by dividing mass by volume. They will use this information to create a "liquid rainbow" density column in a graduated cylinder. Participants will then use their density column to estimate the densities of four different types of balls.

THURSDAY, JUNE 30 - MORNING SESSION 6

TIME		PRESENTATIONS / ACTIVITIES		ROOM
10:45 - 11:45 a.m.	**SESSION 6**		**Level**	
	A	**Partnership Communication** Knight	All *Math/Science*	**Wedgwood** *Main Floor*
	B	**Island Paradise** Lana	Middle/High School *Science*	**Bosque** *Main Floor*
	C	**Unlocking the Secrets Behind What We Eat With Hands-on Science** Anselmi/Dobrovolny/McMillan	Middle/High School *Science*	**Concho** *Main Floor*
	D	**Endeavor 2011 Mathematical Reasoning** Jackson/Robles	Middle/High School *Math*	**Frio** *Main Floor*
	E	**Mastering Misconceptions** Tevebaugh/Grubbs	All *Science*	**Guadalupe** *Main Floor*
	F	**TAKS is Over - We Are Done, Not!** Kaspar/Beisch	All *Math/Science*	**Nueces** *Main Floor*
	G	**Preparing Texas Students for College and Career Success** Seeley	All *Math/Science*	**Brazos** *Main Floor*
	H	**The Perfect Trio: Literature, TEKS, and Foldables®** Bynum/Alexander/Utsman/Casmir	Elementary *Math/Science*	**San Antonio** *Lower Level*
	I	**Talkin' Trash** Herrera	Elementary *Science*	**San Marcos** *Lower Level*
	J	**SECO Activities: Biomass** Flusche and team	All *Math/Science*	**Sabine** *Lower Level*
	K	**Connecting Students to Their Campus by Creating a Field Guide** Vore	Elem./Middle School *Science*	**Pecos** *Lower Level*
	L	**Problem Based Learning - Successful Classroom Applications of STEM** Clem	Middle/High School *Math/Science*	**San Saba** *Lower Level*
	M	**Food Chain - The Journey from Start to Finish** Row/Nachlinger	Elementary *Science*	**Trinity** *Lower Level*
	N	**Extreme Science - Chocolate Rocks** Estrada/Holcomb	Elem./Middle School *Science*	**Glass Oaks** *Access via Main Floor*
12:00 - 2:30 p.m.	LUNCH • Nita Beth Camp Legacy Awards • Door Prizes!			**Grand Ballroom** *Main Floor*

NOTES

SESSION 6 - PRESENTATION DESCRIPTIONS

A. Partnership Communication
Jim Knight, *The University of Kansas*
Relationship Building stands at the heart of the coaching relationship, indeed at the heart of most relationships of any sort. In this presentation, participants will learn several communication strategies that can quickly be employed to strengthen relationships with people in our professional and personal lives. Participants will also learn about the partnership principles that are at the heart of many healthy relationships.

B. Island Paradise
Trisha Lana, *Denton ISD*
Come experience this case study of the ecological collapse of Easter Island that could begin a study of Earth and its carrying capacity. The story of the collapse is done as a jigsaw so a group of students only get a portion of the story and then break up into other groups who have other parts of the story. All the gathered information is then shared among participants. This TXESS Revolution activity could be used as an introduction to population and sustainability.

C. Unlocking the Secrets Behind What We Eat With Hands-on Science
Kayla Anselmi, *Lubbock-Cooper ISD;* **Marianne Dobrovolny, Tobi McMillan**, *ESC Region 17*
Join us for an engaging session of hands-on, life science activities that were developed in response to reading The Omnivore's Dilemma: The Secrets Behind What You Eat. This New York Times Bestseller is full of fascinating (and sometimes disturbing) information about the food we eat and the impact our choices are having on the modern American food chain. Participants will leave this workshop with relevant, creative ways to teach concepts like the flow of matter and energy and engage students in applying scientific information to decisions in their everyday lives.

D. Endeavor 2011 Mathematical Reasoning
Susana Jackson, Allie Robles, *El Paso ISD*
Be prepared to engage in a hands-on experience! Ideas from the UTEP TSTEM Center unit, Atlantis 2008 Proportional Reasoning will be shared. Participants will gain knowledge of proportional reasoning through a sample of the units (missions). Get ready to BLAST OFF!

E. Mastering Misconceptions
Nancy Tevebaugh, Judy Grubbs, *ESC Region 7*
Are you teaching, but your students aren't learning? Perhaps they suffer from common misconceptions. Join us as we explore research-based strategies that uncover and challenge existing conceptions and help guide them into more scientific ways of thinking.

F. TAKS is Over - We Are Done, Not!
Ferran Kaspar, *Wichita Falls, ISD;* **Melanie Beisch**, *Winthorst ISD*
Tired of showing videos and playing games until the year ends after the TAKS test have been given? We've got the answer. Build cardboard boats to engage students until the end of the year. Masking tape, cardboard, latex caulk and latex paint is all you will need. Teachers will leave with a fully implementable curriculum.

G. Preparing Texas Students for College and Career Success
Cathy Seeley, *Charles A. Dana Center, UT Austin*
What does it take to graduate from high school really prepared for success? We will look at issues related to college and career readiness in general and, in the second part of the presentation, discuss a new 12th grade option approved by the Texas State Board of Education. Advanced Quantitative Reasoning (AQR) is the kind of course policy makers had in mind when they raised the bar for graduation - rigorous, relevant, yet accessible to all students. This is a new alternative to pre-calculus (or an elective after pre-calculus), with material presented in applied contexts, addressing statistics, finance, trigonometry, discrete math, algebra, and geometry.

H. The Perfect Trio: Literature, TEKS, and Foldables®
Debbie Bynum, Martha Alexander, Diane Utsman, Sandra Casmir, *Region 18*
Get more bang for your instructional buck by combining the use of children's literature and Foldables® to address various TEKS in math and science, as well as providing a little practice with reading skills. Find many curricular connections within one book and use a variety of Independent and Dependent Foldables® to make those connections come alive.

I. Talkin' Trash
Blanche Herrera, *El Paso ISD*
A whole mess of activities designed to get your student to make informed choices in the use and conservation of natural resources. We'll even throw out a heap of lessons to help students make informed decisions on environmentally appropriate disposal and recycling of materials at home and in the school.

J. SECO Activities: Biomass
Sara Flusche and team, *Texas North Central College*
Trash or Treasure? Join us for a hands-on approach to learning about biomass. Limited seating.

K. Connecting Students to Their Campus by Creating a Field Guide
Rebecca Vore, *Austin Discovery School*
Participants learn how to create a school field guide while giving their students a personal connection to the schoolyard. This project can incorporate both the plants and animals on the school campus. This cross-curricular activity includes science, social studies, literacy, and research skills.

L. Problem Based Learning - Successful Classroom Applications of STEM
Valerie Clem, *Galveston ISD*
Come see how we use problem-based learning to enhance student learning and achievement in environmental math and science. Example projects and successful strategies will be presented so you can learn how to implement this effective teaching strategy in your classroom. Handouts!! Door prizes!!

M. Food Chain - The Journey from Start to Finish
Brenda Row, Sharon Nachlinger, *Coahoma ISD*
Join us for a fun and exciting way to present the food chain to your elementary students, from start to finish. Session will incorporate games and music, and then conclude with a different slide presentation for scavengers and decomposition. These lessons have been used with GT students as well as those with special needs. Lesson plans will be provided. Door prizes that can be incorporated into the lessons will be given throughout the session.

N. Extreme Science - Chocolate Rocks
Sabrina Estrada, Danny Holcomb, *Denton ISD*
CHOCOLATE ROCKS... a fun and exciting lesson about the rock cycle with chocolate. You will have students demonstrate in a lab setting how to take their "rock" through weathering and erosion, sedimentary, metamorphic, then igneous rock as if in the rock cycle. You will learn how to have students observe, document, and write a conclusion for the lab. Although the Rock Cycle may not be exciting to students, they will all have fun while learning the life of a rock.

Regional Mathematics and Science Collaboratives

R	M	S	REGIONAL COLLABORATIVES
1	♦	♦	Region 1 Collaborative/*Edinburg*
		♦	UT Pan American Regional Collaborative/*Edinburg*
	♦	♦	UT Brownsville Regional Collaborative/*Brownsville*
		♦	TAMU International Regional Collaborative/*Laredo*
2	♦		Region 2 Collaborative/*Corpus Christi*
		♦	Texas State Aquarium-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 Regional Collaborative/*Houston*
		♦	UH-Downtown Regional Collaborative/*Houston*
		♦	Aldine ISD Regional Collaborative/*Houston*
5	♦	♦	Region 5 Collaborative/*Beaumont*
6	♦		Region 6 Collaborative/*Huntsville*
		♦	TAMU-College Station Regional Collaborative/*College Station*
7	♦	♦	Region 7 Collaborative/*Kilgore*
	♦	♦	UT Tyler Regional Collaborative/*Tyler*
8	♦	♦	Region 8 Collaborative/*Mount Pleasant*
		♦	TAMU-Texarkana Regional Collaborative/*Texarkana*
9	♦	♦	Region 9 Collaborative/*Wichita Falls*
10	♦	♦	Region 10 Collaborative/*Richardson*
		♦	Southern Methodist University Regional Collaborative/Dallas
		♦	UT Dallas Regional Collaborative/*Dallas*
11	♦	♦	Region 11 Collaborative/*Fort Worth*
	♦	♦	North Central Texas College Regional Collaborative/*Gainesville*
		♦	University of North Texas Regional Collaborative/*Denton*
12	♦	♦	Region 12 Collaborative/*Waco*
13	♦	♦	Region 13 Collaborative/*Austin*
		♦	Capital City Regional Collaborative/*Austin*
		♦	ACC Regional Collaborative/*Austin*
		♦	UT MD Anderson Regional Collaborative/*Smithville*
		♦	UT Austin-College of Nat. Sci. 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	♦	♦	Region 20 Collaborative/*San Antonio*
	♦	♦	OLLU Regional Collaborative/*San Antonio*
	26	40	

R: Region **M**: Mathematics **S**: Science

BTIM (Beginning Teacher Induction and Mentoring)

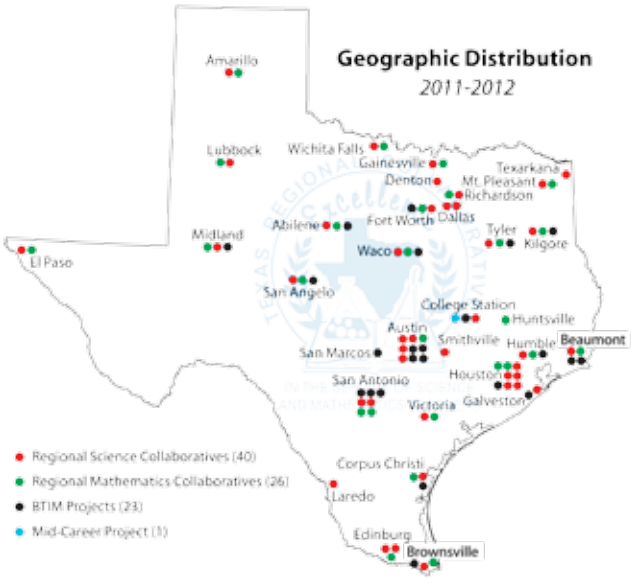
R	M	C	S	INSTITUTIONS
1		♦		UT Brownsville/*Brownsville*
2		♦		Texas State Aquarium-ESC 2/*Corpus Christi*
4			♦	Galveston County/*Galveston*
			♦	Humble ISD/*Humble*
			♦	University of Houston-Downtown/*Houston*
5	♦		♦	Region 5 ESC/*Beaumont*
6		♦		Texas A&M University System/*College Station*
7		♦		Region 7 ESC/*Kilgore*
		♦		UT Tyler/*Tyler*
11		♦		Region 11 ESC/*Fort Worth*
12		♦		Region 12 ESC/*Waco*
13		♦		Austin Community College/*Austin*
		♦		Region 13 ESC/*Austin*
			♦	Texas State University/*San Marcos*
		♦		UT Austin - UTeach/*Austin*
		♦		UT Austin - UTeach Institute Expansion/*Texas*
14		♦		Region 14 ESC/*Abilene*
15			♦	Region 15 ESC/*San Angelo*
18			♦	Region 18 ESC/*Midland*
20		♦		Region 20 ESC/*San Antonio*
	♦		♦	OLLU/*San Antonio*
		23		

R: Region **M**: Mathematics **S**: Science
C: Combined Science/Math

Mid-Career

R	INSTITUTION
6	Texas A&M University System/*College Station*

R: Region



STATE AND FEDERAL PARTNERS

Texas Education Agency

The University of Texas at Austin

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

Fluor

IBM

LOUISIANA REGIONAL COLLABORATIVES PARTNERS

Louisiana State University, *Baton Rouge*
Southern University, *Baton Rouge*
Louisiana Tech University, *Ruston*
Grambling State University, *Grambling*

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 56 institutions of higher education collaborating with the Texas Education Agency, Education Service Centers, school districts, and business partners, has an 19-year track record of designing and implementing exemplary professional development using research-based instructional models, materials, and best practices.

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.

Achievements

Served over two million students across Texas through improved instruction and performance of participating teachers; developed the leadership capacity of approximately 17,000 Science Teacher 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, approximately 1,000 Mathematics Teacher Mentors (MTMs) have received sustained and high intensity professional development sponsored by the Texas Education Agency, and supported several thousand additional math teachers with mentoring and outreach. Science and mathematics teachers in almost all of the State's 254 counties have been the beneficiaries of this extensive statewide network.

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.

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, through a historic $1.0 Million gift from Shell, 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 30,000 teachers of science and 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.

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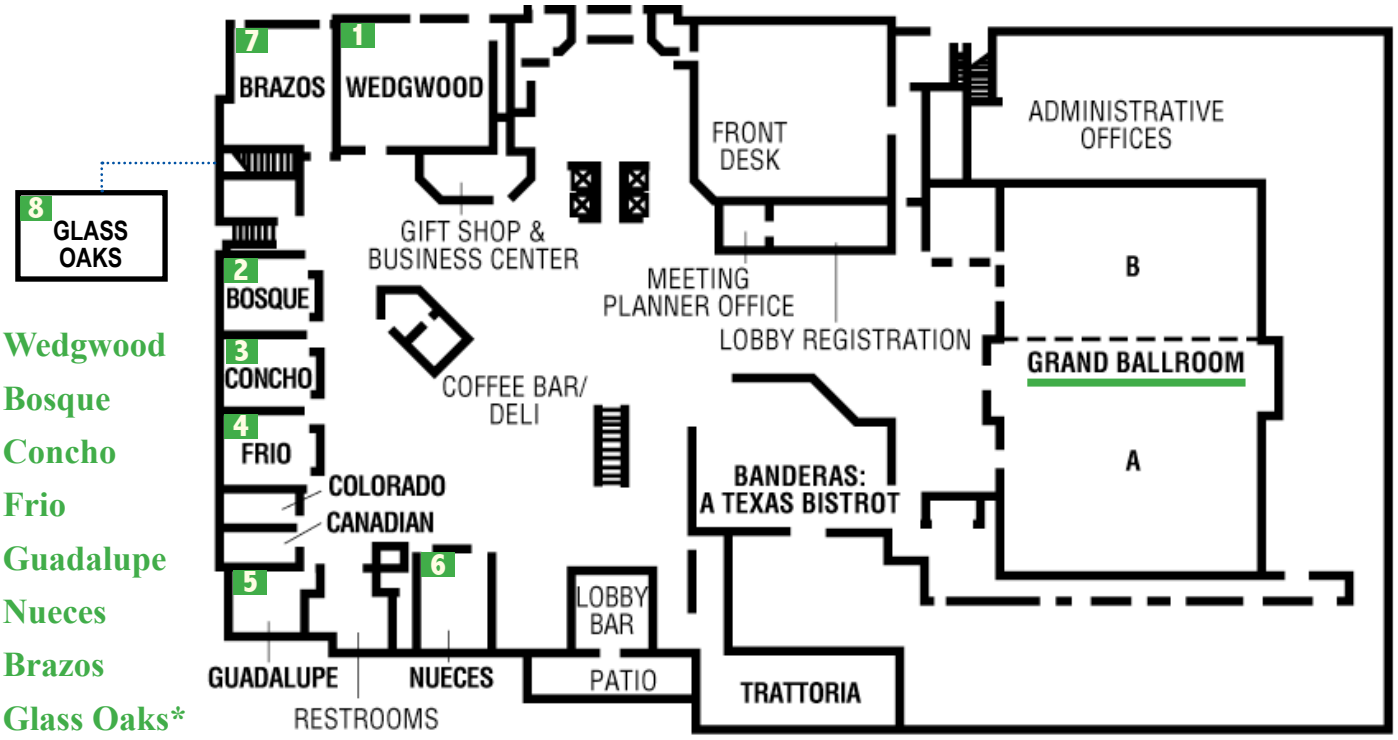
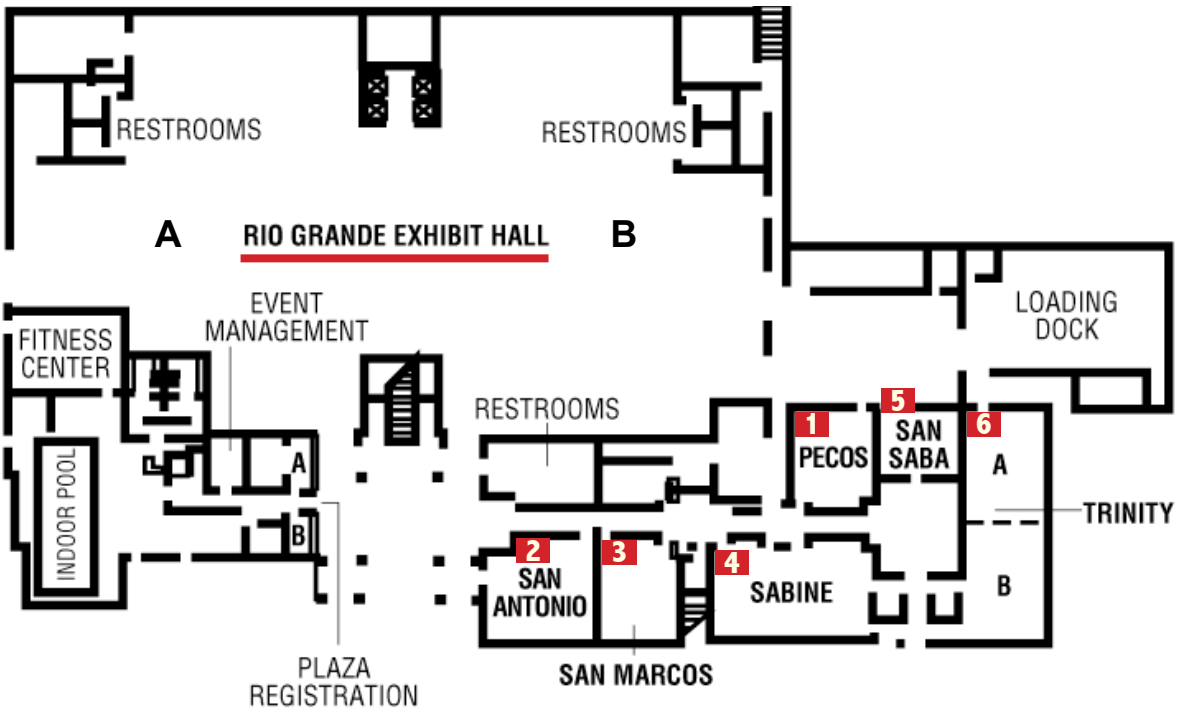


1. Wedgwood
2. Bosque
3. Concho
4. Frio
5. Guadalupe
6. Nueces
7. Brazos
8. Glass Oaks*

** **Glass Oaks** is the building located to the right of the main hotel. You access it by walking outside of the doors on the Atrium level (behind AustinBytes), down the stairs and enter through the doors on the left.*

LOWER LEVEL



1. Pecos
2. San Antonio
3. San Marcos
4. Sabine
5. San Saba
6. Trinity

WEDNESDAY EVENING OPTIONAL ACTIVITIES

ARBORETUM AREA

Within walking distance

SHOPPING

Banana Republic
Barnes and Noble
Bath and Body Works
Chico's
Express
The Gap
Just Add Water
Nine West
Pottery Barn
Restoration Hardware
Sunglass Hut

RESTAURANTS

Amy's Ice Cream
Eddie V's Edgewater Grille
Macaroni Grill
Manuels
The Cheesecake Factory
Wiki Wiki Teriyaki
Z' Tejas

RECREATION & ENTERTAINMENT

The Alamo Drafthouse - Village
2700 W. Anderson Ln. – Movies and meals.
Eat and drink while you watch.
www.drafthouse.com

Dave and Busters
9333 Research Blvd. – Dining and giant arcade.
www.daveandbusters.com

Main Event
13301 N. Highway 183 – Family fun center.
www.maineventusa.net

Broken Spoke
3201 South Lamar – Country music and dancing.
www.brokenspokeaustin.tx.com

Lone Star River Boat
208 Barton Springs Rd. – River cruise with dinner.
www.lonestarriverboat.com

Bats Under Congress Bridge
100 Congress Avenue – Bat viewing at dusk.
www.austintexas.org

Highland Lanes Bowling Alley
8909 Burnet Road
www.highlandlanes.com

TRANSPORTATION TO TOWN

Yellow Cab Austin
Fare estimate from Renaissance to 6th Street District
is about $30 one way.

512-452-9999

SHOPPING MALLS

The Domain - 11410 Century Oaks Terrace (1 mile)
Highland Mall - 6001 Airport Blvd. (7 miles)
Lakeline Mall - 11200 Lakeline Mall Dr. (8 miles)
Barton Creek Mall - 901 S. Capital of Texas Hwy. (10 miles)

TRC STAFF RESTAURANT RECOMMENDATIONS

Chuy's – 11680 Research Blvd.
El Caribe – 5610 North Lamar Blvd. #A
Salvation Pizza - 624 West 34th Street
La Cocina de Consuelo – 4516 Burnet Road Austin
Titaya's Thai Cuisine – 5501 North Lamar Blvd. #C101
Texas French Bread – 2900 Rio Grande St.
Cover 3 – 2700 W. Anderson Ln., Suite 202
Curra's Grill – 614 East Oltorf St.
Freddie's Place – 1703 South First St.
Hey Cupcake – 5530 Burnet Rd.
Hoover's Cooking– 13376 Research Blvd.
Hula Hut – 3825 Lake Austin Blvd.
Iron Cactus – 10001 Stonelake Blvd.
Juan in a Million – 2300 East Cesar Chavez St.
Lick It, Bite It, or Both Bakery – 11101 Burnet Rd. # A140
Maiko Sushi Lounge – 311 West 6th St.
P.F. Chang's China Bistro – 10114 Jollyville Rd.
Rudy's Country Store & BBQ – 11570 Research Blvd.
Satay Restaurant – 3202 West Anderson Lane, Suite 205
Shady Grove – 1624 Barton Springs Rd.
The County Line BBQ – 5204 FM 2222
The Upper Crust Bakery & Café – 4508 Burnet Rd.
Threadgill's – 6416 North Lamar
Torchy's Tacos – 4211 Spicewood Springs Rd.
Trudy's North Star – 8820 Burnet Rd.
Trulucks – 10225 Research Blvd., Suite 4000

SCHEDULE AT-A-GLANCE

TUESDAY June 28	A	B	C	D	E	F
	Wedgwood *Main Floor*	**Bosque** *Main Floor*	**Concho** *Main Floor*	**Frio** *Main Floor*	**Guadalupe** *Main Floor*	**Nueces** *Main Floor*
10:00 - 4:00 p.m.	**Registration** -- Rio Grande Foyer, *Lower Level*					
10:00 - 4:30 p.m.	**Gallery Showcase Set-up** -- Rio Grande A , *Lower Level*					
12:00 - 2:00 p.m.	**Opening Luncheon and Program** -- Rio Grande B, *Lower Level*					
2:30 - 3:30 p.m. **SESSION 1**	Successes and Challenges: Project Directors Panel **L**	Welcome to "Our" Science Class **S**	Bowling Balls, Nerf Guns, and Atoms: Active Learning... **S**	Move It! **S**	Pump It Up With Pi **M**	Metric Measurement is Downright EZ When it's... **M/S**
5:00 - 7:00 p.m.	**Showcase and Reception** -- Rio Grande A, *Lower Level*					
7:00 p.m.	**Dinner and Program** -- Grand Ballroom, *Main Floor*					

WEDNESDAY June 29	A	B	C	D	E	F
	Wedgwood *Main Floor*	**Bosque** *Main Floor*	**Concho** *Main Floor*	**Frio** *Main Floor*	**Guadalupe** *Main Floor*	**Nueces** *Main Floor*
6:30 - 7:45 a.m.	**Breakfast** -- Grand Ballroom - *Main Floor*					
8:00 - 9:15 a.m.	**General Session** -- Grand Ballroom, *Main Floor* *Science Educators and Neuroscientists: A Collaborative Agenda* -- Janet Dubinsky					
9:30 - 10:30 a.m. **SESSION 2**	Morphing of the 5E Instructional Model **L**	What's a Watershed? How Am I Responsible for Water... **S**	Do the Lengths of Your Legs Really Matter? **M**	Digging Into Earth Science **S**	Creating a Presence for Science, A School Wide... **S**	Fusion of Art and Science: An IMLS Leadership Grant Program... **S**
10:30 - 10:45 a.m.	*Break*					
10:45 - 11:45 a.m. **SESSION 3 Speaker Series**	The Oil Business: How I Got to See the World and Paid in the Bargain	Birds: Why They Deserve Your Attention	Geometry in Construction **M/S**	OnTRACK for College Readiness: Math **M**	OnTRACK for College Readiness: Science **S**	Partnering for Success: The TXESS Revolution **S**
12:00 - 1:45 p.m.	**Lunch** --- Grand Ballroom					
12:45 - 5:00 p.m.	**TRC/SHELL Geology Field Trip** -- *Meet in the Lobby at 12:45 p.m*					
2:15 - 3:15 p.m. **SESSION 4**	Building Your Leadership Capacity Through the TRC **L**	Introducing Early Science Concepts Through Toys and Food **S**	Contextual Learning - A Model for Science **S**	Show Me the Money - Find Funding Through ... **M/S**	Intervention Strategies for Addition and Subtraction... **M**	Battling the Beasts **M/S**
3:15 - 3:30 p.m.	*Break*					
3:30 - 4:45 p.m.	**General Session** -- Grand Ballroom, *Main Floor* *Creating An Impact School* -- Jim Knight					
5:00 - 7:00 p.m.	**Vendor Fair** - *Light Refreshments will be provided* -- Rio Grande B, *Lower Level*					

THURSDAY June 30	A	B	C	D	E	F
	Wedgwood *Main Floor*	**Bosque** *Main Floor*	**Concho** *Main Floor*	**Frio** *Main Floor*	**Guadalupe** *Main Floor*	**Nueces** *Main Floor*
6:30 - 7:45 a.m.	**Breakfast** -- Grand Ballroom, *Main Floor*					
8:00 - 9:15 a.m.	**General Session** -- Grand Ballroom, *Main Floor* *State of Mathematics & Science Education* -- Everly Broadway and Kenn Heydrick					
9:30 - 10:30 a.m. **SESSION 5**	Instructional Coaching: An Overview **L**	Earth, Wind, and Fire **S**	The X Factor **M**	Students as Scientists: Steps Toward a Successful... **M**	Examining Mathematical Structures **M**	How Big is a Million? **M/S**
10:30 - 10:45 a.m.	*Break*					
10:45 - 11:45 a.m. **SESSION 6**	Partnership Communication **M/S**	Island Paradise **S**	Unlocking the Secrets Behind What We Eat With Hands-on... **S**	Endeavor 2011 Mathematical Reasoning **M**	Mastering Misconceptions **S**	TAKS is Over - We Are Done, Not! **M/S**
12:00 - 2:00 p.m.	**Lunch** -- Grand Ballroom, *Main Floor*					

LEGEND | **S** Science | **M** Mathematics | **L** Leadership

Texas Regional Collaboratives - Seventeenth Annual Meeting

G	H	I	J	K	L	M	N
Brazos *Main Floor*	**San Antonio** *Lower Level*	**San Marcos** *Lower Level*	**Sabine** *Lower Level*	**Pecos** *Lower Level*	**San Saba** *Lower Level*	**Trinity** *Lower Level*	**Glass Oaks** *Via Main Level*
Social Networking with Twitter **M/S**	Bringing Lessons Alive: Utilizing Lifescribe...**M/S**	Texas Rivers and Today's Landscape **Field Trip Part.**	SECO Activities: Wind for Watts **M/S**	Biomes of Texas Field Experiences **S**	Making STEM Career Classroom Connections **L**	Engaging Students in Math **M**	Monarch Butterfly Life Cycle - Make a Habitat! **S**

G	H	I	J	K	L	M	N
Brazos *Main Floor*	**San Antonio** *Lower Level*	**San Marcos** *Lower Level*	**Sabine** *Lower Level*	**Pecos** *Lower Level*	**San Saba** *Lower Level*	**Trinity** *Lower Level*	**Rio Grande B** *Lower Level*
Making It Happen in Elementary Math **M**	Teach the TEKS with the New Mars Rover **S**	Living It Up with Life Science Activities... **S**	SECO Activity: Focus on Wind **M/S**	Informals: A Hidden Treasure of Resources **M/S**	Now We Are Cooking! **S**	Luis and Clark's TOP FIVE in the Exploration of HS Math **M**	
Learning the APR! **L**	Teachers TryScience **S**	Engineering New Biotechnology at NASA	Why Hydraulic Fracturing?	Student Asteroid Discoveries	Using Math to Fight Infectious Diseases	Hot Science - Cool Talks Outreach Series	The Big Bang: A Complete History of the Universe
Teaching Science and Math Through the Lens... **M/S**	Water Power Flight Plan **S**	Developing a Just-In-Time (JIT) Approach to... **L**	SECO Activity: Let's Make a Water Wheel **M/S**	Developing Mathematical Ideas: Building a System... **S**	Bringing Science, Technology and Literacy... **S**	A Line in the Sand - Connecting Texas... **M**	

G	H	I	J	K	L	M	N
Brazos *Main Floor*	**San Antonio** *Lower Level*	**San Marcos** *Lower Level*	**Sabine** *Lower Level*	**Pecos** *Lower Level*	**San Saba** *Lower Level*	**Trinity** *Lower Level*	**Glass Oaks** *Via Main Level*
Supporting New Teachers from Certification to Teaching **M**	New DataCenter for 2011-2012 **L**	Using Short Stories to Enhance Scientific... **S**	SECO Activities: Solar Energy **M/S**	Aligning the TEKS and Student Engagement...**M**	Will it Happen to You? Disorders/ Diseases... **M/S**	Incorporating Free Web-based Programs in the Classroom **M/S**	The Liquid Rainbow Density Column **S**
Preparing Texas Students for College and Career... **M/S**	The Perfect Trio: Literature, TEKS, and... **M/S**	Talkin' Trash **S**	SECO Activities: Biomass **M/S**	Connecting Students to Their Campus by... **S**	Problem Based Learning - Successful Classroom..**M/S**	Food Chain - The Journey from Start to Finish **S**	Extreme Science - Chocolate Rocks **S**

	Elementary		Middle School		High School
	Elem./Middle School		Middle/High School		All Grade Levels

Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching

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