

TESTA News...

**December
2016**

**SPECIAL
POINTS OF
INTEREST:**

- **CAST
Wrap-Up!**
-

CAST is over for another year and the winter holidays are upon us. By now everyone should be winding down from the Fall Semester and readying themselves for a well-deserved break!

Of course, now is also the time to start making plans for the rest of the school year! In this issue of the Tailings, you will find news about CAST and learn more about the many opportunities that are on the calendar to participate in over the next couple of months. We hope to see you at some of these great happenings.

CAST 2016 - San Antonio, Texas

Once again, CAST 2016 was a great success! We had lots of attendees stop by the booth and renew their membership (if you did not renew, please do as soon as possible) and also check out the offerings going on at CAST. TESTA featured a great Strand of workshops and short courses, the Charles Swift Memorial Rock Raffle, the Annual TESTA Dinner held at Tomatillos Mexican Cantina, and the Saturday morning Share-a-Thon.



TESTA Dinner - Gregg Eckhardt, with the San Antonio Water Authority was our guest speaker at the Annual TESTA Dinner on Friday night of CAST. He gave a very interesting talk about the Edwards Aquifer and the San Antonio water system. We learned lots of interesting and unique facts and history of the role of water and water delivery has

had on the region and the City of San Antonio. One of the more interesting facts was that the previous day San Antonio had begun to use desalinated water from the largest desalination plant in the United States. We all gave a toast to the new water source for Texas! The dinner was great, the margaritas were cool, and many attendees won door prizes as well.



TESTA Strand - Five three-hour short courses and 5 one-hour workshops were presented during CAST as part of the TESTA Strand during CAST this year.

TESTA would like to extend a great big "Thank You" to Membership Chair, Lale Bilir for presenting "Going Loco for Topo", Donna Deerfield and TESTA Treasurer Lisa Stone for presenting "Get Up and Move", and Andy Shaner and Sudeshna Lahiry for presenting two short courses for LPI, Moon Phase Mania and Cracking Up - Plate Tectonics short courses. For the workshops, Karen Yancey and Laura Stafford presented "Water, Water, Where Did You Go?" as well as "Shake, Rattle, and Roll! A Sweet Lesson in Weathering", Dr. Lisa Brown and Dr. Casey Creggan presented "Survivor Earth", and Linda Ruiz McCall and Heather Christensen presented multiple sessions of Lone Star Geology - Landscapes and Resources,

Participants at the TESTA Presents: It's Just a Rock or Is It? Short course. During this short course, we conducted lab investigations to examine the physical and chemical properties of minerals and ores and looked at different mining techniques and strategic value of the world's minerals. They also conducted lab investigations on igneous, sedimentary, and metamorphic rocks and the rock cycle.



If you would like to be a part of the TESTA Strand during CAST 2017 in Houston, please be sure to contact us as soon as possible. Proposals will be due in the spring!

Winners of TESTA shirts that were given as door prizes at some of the TEST short courses!



The Charles Swift Memorial Rock Raffle

The annual Rock Raffle was held on Friday afternoon in the food court of the exhibit hall. A great time was had as participants shopped the offerings and placed their tickets in the bags in hopes that they would have the winning draw! This is the only fund-raiser that TESTA

does each year and it is totally dependent upon donations from members and business supporters. TESTA would like to thank the Katy Rock Shop and Bitterroot Rocks and Fossils for their generous donations each year towards the raffle. If you have items that would be of interest for the raffle, please be sure to bring them to CAST next year in Houston.





“Where shall I put my tickets?”





TESTA would like to say Thank You to Ward's Science for their continuing support of TESTA with their donation of \$100.00 gift certificates to our Rock Raffle and Teacher of the Year!

TESTA Share-a-thon -

Saturday morning of CAST always brings the annual Share-a-Thon. This year over 100 attendees blasted through the room in their quest to “grab it, get-it, and go”. When the presenters arrived to begin to set up for the activity, we found that the room was already full of people waiting for the big event 45 minutes before it was to begin. After clearing the room, our presenters were able to quickly get their tables set up and ready to go.

Thanks to Lale Bilir, Lisa Stone, Donna Deerfield, Amanda Bonds, Lisa Brown, Kathryn Barclay, Tanya Mynar, Linda McCall, Scott Rodgers, Josalyn Conwell, Katherine Thurman and Laura Stafford for your help with making the Share-a-Thon a success!



Linda Ruiz McCall, Texas Bureau of Economic Geology, with items for the Share-a-thon attendees.



Setting up for the Share-a-Thon.



Katherine Thurman of Bryan, TX demonstrating her plate boundaries activity during the Share-a-Thon.

Dr. Lisa Brown and Amanda Grigory Bond collating the Share-a-Thon handouts for all of the participants.



TESTA Teacher of the Year!

Congratulations to Mary Poarch!

Mary being honored as the TESTA Teacher of the Year for CAST 2016. An outstanding science teacher since 1985 and the former Assistant Director of School Improvement for North East ISD where she was the Pre-K - 12 science program supervisor for 70 schools, Mary has greatly influence science education in Texas. Mary holds the Marris and Verna McLean Master Chair of Science at Saint Mary's Hall School in San Antonio.

Mary was presented with a beautiful plaque, a \$100.00 gift certificate from Ward's Science, and \$300 cash prize from TESTA to recognize here contributions to Earth Science education in Texas.



Stimulating inquiry via NASA's Global Precipitation Measurement (GPM) mission

By: Lisa O. Brown, Ed. D. And Casey Creghan, Ed. D

Sam Houston State University

Since 1958, NASA has taken the role to inspire the public's interest in STEM education through its unique missions. Students and teachers are encouraged to explore and experience unique opportunities relating to aeronautics and space. One of these opportunities is the Global Precipitation Measurement (GPM) mission. For full disclosure, the author of this article is part of the GPM Earth SySTEM [sic] Ambassadors cohort.

Climate change has emerged as one of the biggest social controversies for the 21st century. The inherent complexity of climate change offers up perplexity, confusion, doubt, and misconceptions. NASA's Global Precipitation Measurement (GPM) mission and its educational resources provide opportunities for students to explore the science NASA is doing and to become more scientifically informed citizens.

NASA and the Japanese Aerospace Exploration Agency (JAXA) launched the GPM mission on February 27, 2014. This mission is setting new standards for global precipitation measurements using a constellation of satellites. GPM provides near real-time data to advance scientific understanding of Earth's water cycle and, thus, Earth's energy cycle. It also provides data for societal applications such as extreme weather (floods, cyclone, landslides); soil moisture, agriculture, and world health. Because of improved measurements of precipitation data, land surface and climate models reveal new insights to the global community on the relationships within Earth's water cycle.

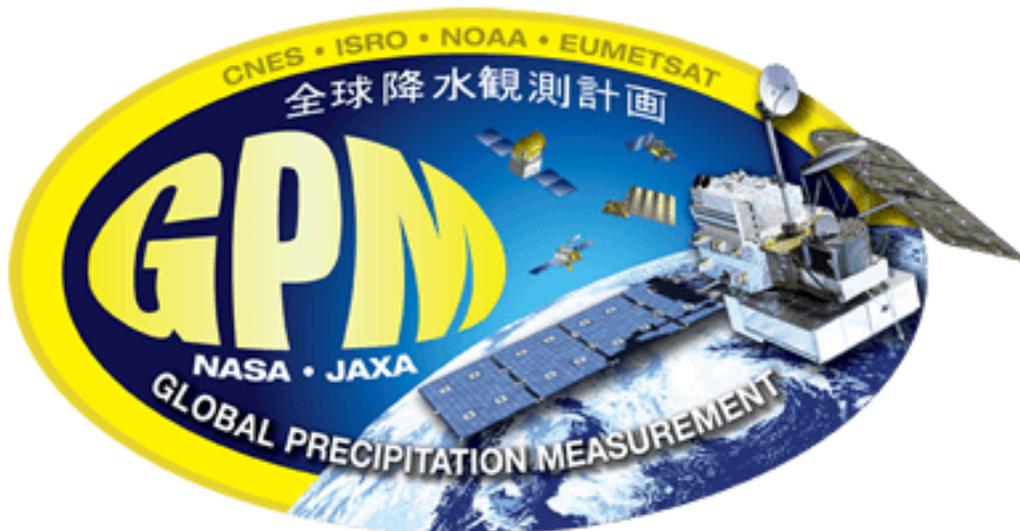
During August 2015, the GPM mission selected educators for a small cohort, through an application process, to learn about the GPM mission, other NASA Earth Science missions, and GLOBE protocols. These GPM Earth SySTEM [sic] Ambassadors share their best practices and ideas for integrating NASA resources and activities in their classroom. Monthly webinars are conducted where these ambassadors learn from the actual scientists and engineers on the NASA missions as well as discuss ways the information and the related NASA activities can be integrated into the curriculum. There are other requirements to complete; however, the authors finds the monthly webinars the most motivating since there are educators from all over the world – Brazil, Nigeria, United States, Thailand, Dominican Republic, Croatia, Kenya, and London. All of these teachers are using these resources to inspire students to become scientifically literate citizens especially when analyzing the subject of climate change. These outstanding educators have had to overcome language barriers, technical barriers, and funding barriers but these teachers ARE very resourceful! We could all learn from their tenacity for educating our students.

The GPM mission has an extensive library of resources. These resources can be divided into the Water Cycle, Weather and Climate, Technology, and Societal Applications. For each of the categories, educators can sort videos, images, interactive activities, articles, websites, and lesson plans for their particular audiences.

The videos are professionally made as only NASA can and provide teachers and students with accurate and appropriate information about the topics. There are numerous short videos to show in class, after school, or even during Science Nights. The list includes videos about weather and climate, floods, hurricanes, and a water cycle animation. There is a video about the number of rain gauges in the world called Worldwide Rain Gauge Animation (<http://pmm.nasa.gov/education/videos/worldwide-rain-gauges-animation>) and depicts the number of active rain gauges around the world. If you took all of these rain gauges, it would fit on 2 regular sized basketball courts. This animation alone helps students, teachers, and the public understand the magnitude and significance of GPM's data.

As part of the mission, NASA's Precipitation Education website <http://pmm.nasa.gov/education/> provides a plethora of resources to students and educators to learn about Earth's water cycle, climate, weather, technology and societal applications.

The lesson plan website has six pages of related resources to help educators bring these topics into their classrooms. Most of the lesson plans are hands-on, inquiry-based activities to teach a concept related to the GPM mission. Some of the lessons contain power point presentations and are ready for educators to use the next day. The website also has Student Capture Sheets for students to gather data and the answer keys where applicable. Most of the activities use easily obtainable materials, involve data analysis, and are highly engaging to students. NASA's resources are based on current educational research and best practices approaches to student learning.



The Texas General Land Office has been sending this message across the state for twenty-eight years, and Texans have responded.

Since the program began back in 1986, there have been more than 504,000 volunteers remove more than 9,300 tons of trash from Texas beaches.

Due to tide patterns in the Gulf of Mexico, trash dumped anywhere in the gulf is likely to end up on a Texas beach. Volunteers record information such as the source and type of debris collected on data cards. This data has been instrumental in the passage of international treaties and laws aimed at reducing the amount of offshore dumping.

Keeping Texas beaches clean and safe is an economic as well as environmental priority. Coastal tourism, a \$7 billion industry, and commercial fishing, a \$1.9 billion business, demand clean beaches and a healthy gulf to thrive.

The program strives to:

- raise public awareness;

- educate citizens about the source of debris; and
- generate public support for state, national and international action to clean up coastal waters.

The Texas Adopt-A-Beach program, an all-volunteer effort, is dedicated to preserving and protecting Texas beaches. The program's success is due to the generous efforts of dedicated volunteer county coordinators, coastal community leaders, sponsors and citizens. Strong support from the private sector helps carry our message to Texans all across the state.

Join us for our upcoming Winter Cleanup events.

February 10 – South Padre Island

February 11 – Coastal Bend

21st Annual Treasures of the Texas Coast Children's Art Contest

- [Art Contest Flyer](#)
- [Art Contest Flyer \(Spanish\)](#)
- [Art Contest FAQ](#)
- [Art Contest FAQ \(Spanish\)](#)

WHO: All Texas students (public, private, and home-schooled) in grades K-6 are invited to participate.

WHAT: 21st Annual *Treasures of the Texas Coast* Children's Art Contest. Artwork should be based on the theme "Treasures of the Texas Coast" and should depict why the Texas coast is important or special to the student.

Artwork must be original and must be a horizontal or vertical drawing or painting measuring approximately eight and a half (8 1/2") by eleven (11") inches. The size should not include a mat or border. Entries must not be framed, under glass, or have a protective covering that is attached to the art.

Acceptable art media are paint (acrylic, water color or oil paints), colored pencil, colored markers, ink, crayon, and chalk or pastel (fixed). Collages, computer printouts, photography, or photocopies are not eligible. Nothing may be glued, stapled or attached to the front of the artwork in any way. For display purposes, colorful entries are preferred. No use of company logos, product brands, or store names. Any entries with use of such items will be disqualified. Only one entry per student.

All entries must have a completed parental release form affixed to the back of the artwork. Use a clear glue stick or tape the form. Do not staple or paper clip the form as it damages the artwork.

Ten winners will be chosen in mid-April from each of four grade-level categories (K – 2nd, 3rd – 4th, 5th, and 6th) for a total of 40 winners. One grand prize winner will be chosen from among the 40 finalists. Winning artwork will appear together in a 2018 calendar, which will be distributed throughout the state. This year's grand prize winner will receive two round-trip coach-class tickets from United Airlines to any United destination in the 48 contiguous United States, Alaska, Canada, Mexico and the Caribbean, one 7-night Caribbean cruise from Royal Caribbean International departing out of Galveston, Miami, Tampa, Ft. Lauderdale, Port Canaveral or Puerto Rico, and a class party at Schlitterbahn Waterpark in New Braunfels. The grand prize winner's teacher will also receive two round-trip coach-class tickets from United Airlines, and one 7-night Caribbean cruise courtesy of Royal Caribbean International. All 40 winners will receive a ticket to the Texas State Aquarium in Corpus Christi, a ticket to the Houston Zoo, two all day passes to Schlitterbahn Waterpark in New Braunfels, prizes and a certificate of recognition from the Texas General Land Office and a calendar displaying the winning artwork.

WHEN: All submissions must be postmarked by Wednesday, March 1st, 2017 and mailed to the Texas General Land Office. Late submissions will not be accepted.

HOW: Review the contest guidelines and sign the entry/parental consent/student pledge form, and attach the form to the back of the entry. Mail all entries to the Texas General Land Office.

Texas General Land Office

Adopt-A-Beach Program: Children's Art Contest 2017

P.O. Box 1287

3Austin, Texas 78711-2873

For more information, please see our FAQs, or contact the Adopt-A-Beach program at 877-TXCOAST (892-6278) or at

beach@glo.texas.gov



**Texas Earth Science Teachers Association
Spring Conference - "Texas - Underground!"
February 17 - 19, 2017 Sonora, Texas**

**Conference: Caverns of Sonora -
Session Focus**

- **Underground Classroom** - Cavern Formation & Speleology, Preservation, Cave Biology, Texas Geology, and Fossils.
- **Geology** - Physical and Chemical Properties of Minerals (added chemistry focus) and Identification and Classification of rocks.
- **Hydrology** - Groundwater, Texas Aquifers, Water Testing, and Conservation.
- **Caverns of Sonora** - Tour of the spectacular caverns and photo opportunities.

Conference Fee - \$ 175.00

Conference fee includes two nights hotel - double occupancy, meals on Saturday and Sunday morning, and all conference activities except Optional Sunday Activities. Transportation is not included.

Registration:

Name: _____

School: _____

Address: _____

Phone: _____

Email: _____

Housing: Days Inn - Devil's River - Sonora, Texas (Friday & Saturday Night) - Double occupancy.

Meals - "Sonora County Steakhouse" - Saturday & Sunday Breakfast, Saturday Night Dinner. Saturday Lunch at the Caverns of Sonora. All other meals on your own.

Sunday Morning Activities:

TEXAS Rocks! - Geologic Puzzles, Steno's Laws, Relative Dating, Road Cuts and Fossil Collecting. (Texas Room & Road cuts between Sonora & Junction, Texas.

(Optional Sunday Activities - additional charge) -

Caverns of Sonora

* **Discovery Challenge** (Maximum of 6 participants) - Off trail caving and rappelling - 4 Hours.

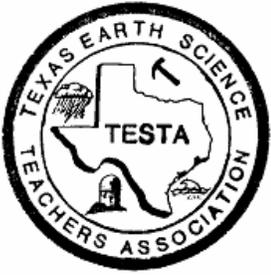
* **Single Rope Technique and Cave Safety** - Ascending and Climbing

* **Eaton Hall Wildlife Sanctuary** - self guided tour. (free)

Roommate Request:

Mail Registration with check or credit card information to:

TESTA - Kathryn Barclay
10535 Long River Dr.
Sugar Land, TX 77498
Kathrynbarclay65@aol.com
Text - 281-460-2026



Texas Earth Science Teachers Association

Fossil Hunt

Saturday - March 18, 2017 Brownwood, Texas

Explore the Pennsylvanian Period with Lexy Bieniek, TESTA President. We will study the formation of sedimentary rocks and use fossils to learn about the Pennsylvanian environment in Texas. Fossils can be collected for the classroom. Experts will also be available to identify those fossils.

For collecting - bring zip-lock bags, hand shovels, garden trowels, flat screw drivers, carrying bucket, notecards/book and sharpies. Folding hand carts/wagons are also useful.

For yourself - bring snacks, drinks, wet wipes, hats, sunglasses, sunscreen, cameras, appropriate clothing and shoes, and anything else you might need. Lunch will be at a local restaurant.

Field Trip Fee - \$15.00. Liability waiver must be signed before participation. We will be driving to various sites around Brown County and will be parking along roadsides. Hotel, transportation and snacks/meals on own.

Please register by Wednesday, March 15, 2017.
Lexy Bienek - 936-520-3907 or Kathryn Barclay - 281-460-2026.

Meeting location and time will be given upon registration.

Hope to see you there!



McDonald Observatory – The University of Texas at Austin

McDonald Observatory is pleased to announce that we are now accepting applications for our 2017 Summer Teacher Professional Development Workshops for K-12 educators. McDonald Observatory offers a unique setting for teacher workshops: The Observatory and Visitors Center in the Davis Mountains of West Texas.



Tours of the telescopes, discussions with the research astrophysicists in residence, and nighttime observing are all an integral part of every workshop experience. Not only will K-12 educators do inquiry-based activities aligned with state and national standards, they will receive at least 20 hours of Continuing Education Credit, and will practice their new

astronomy skills under the Observatory's dark skies, weather permitting. Teachers will partner with trained and nationally recognized astronomy educators. All workshops, as follows, are fully funded:

Apply online today! Deadline for applications is February 6, 2017.

VENGA! Explore Nearby Galaxies, June 15-17 grades - 8 - 12

Galaxies Galore - Cosmology & Galaxies, June 19-21 grades 8 - 12

The Solar System & Beyond, June 26-28 grades - K - 8

Worlds Beyond Our Solar System, July 9-11 grades - 6 - 12

Giant Magellan Telescope Workshop, July 12-14 grades - 6 - 12

Dear TX Educators in the DFW Area & Surrounding Areas:

If you are in the Dallas-Fort Worth area you might be interested in this free K-12 Astronomy Educator Event and Reception hosted by the American Astronomical Society as part of their semi-annual conference. This year it will be in Grapevine, TX at the Gaylord Texan Resort and Convention Center on Tuesday January 3, 2017. The event is free for any K-12 educators; conference registration is not required. However, if you are interested in attending they would appreciate you register for free at the website listed below. The reception takes place from 4:30 - 6:30pm on Jan. 3.

Shortened EventBrite Registration link: <http://bit.ly/2hbULuZ>

Full EventBrite Registration Website link:

<https://www.eventbrite.com/e/k12-astronomy-educator-reception-grapevine-registration-26977459307?aff=efbnreg>



The National Earth Science Teachers Association will be traveling to Iceland July 6, 2017 to July 14, 2017! The land of fire and ice, Iceland is an Earth scientist's dream, abundant with majestic waterfalls, active volcanoes, expansive lakes, winding rivers, massive glaciers, and vast mountainous and uninhabited terrain. CEU's or graduate credits are available for

this 9-day immersive experience sponsored by NESTA.

Go to the NESTA website for more information about this great travel opportunity.

Photo - NESTA member Gail Gant on the NESTA Iceland Trip - 2010.



Out In Space, Down To Earth: STEM Educator Conference

Saturday - Feb 25, 2017 8:00am - 4:00pm

Scobee Education Center, 1819 San Pedro Ave, San Antonio, TX 78212, USA [map](#) directions



Organized by Scobee Education Center, ESC 20 and OLLU CSME it is one of the best conferences in the San Antonio, Central and South Texas areas.

The 23rd annual Out in Space, Down to Earth 2017 STEM Educator Conference will be hosted at the Scobee Education Center at San Antonio College in San Antonio, Texas. This is an exciting venue housing a planetarium, observatory and the Challenger Learning Center. The Out in Space, Down to Earth conference targets STEM educators of all grade levels (pre-K to 12) in the greater San Antonio, Central and South Texas areas. The Out in Space,

Down to Earth - STEM Educator Conference offers workshops in STEM topics and best practices in science teaching.

Out in Space, Down to Earth Tentative Agenda

7:30 - 8:30 Vendor and Local Resource Table Set-up

8:00 - 8:50 Registration and Badge Pick Up for Pre-Registered Participants

9:00 - 3:30 Sessions

3:30 - 4:00 Survey Collection, Door Prizes and PD Certificates

Go to www.smore.com/k1qd3 for registration and for more information.

Registration is open for presenters, vendors, local resources and participants.

Interstate Mining Compact Commission National Minerals Education Awards Criteria and Nomination Form

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Mining Awareness Educator Award:

This award will be presented to a(n) individual school teacher or school from an IMCC member state that has achieved excellence in one or more of the following categories:

- provided educational outreach in an innovative manner that increases the level of understanding in the classroom and community about mining and its impacts.
- promoted environmental stewardship while enhancing the understanding of issues associated with mining and natural resource development.
- created unique educational materials or curriculum demonstrating the production and/or use of minerals and associated environmental protection.

These criteria may be met through classroom and/or out-of-classroom (i.e. field trips, mine tours, etc.) activities.

This award will consist of a plaque or a framed award certificate and a \$500 gift certificate or cash award for classroom resource materials.

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The deadline for submissions is February 1 of each year. Nomination forms can be obtained from Beth Botsis by calling: 703.709.8654 or emailing: bbotsis@imcc.isa.us.

The First Greater Houston Area STEM Conference

“New Horizons and Innovations in STEM”

March 4, 2017

Saturday: 8 a.m. – 4 p.m.

Call for Presentations – Submit now through January 31st

We welcome you to submit a proposal to present at the
Greater Houston Area STEM Conference.

Location: University of Houston-Clear Lake
Registration: \$30 (by Jan. 31), \$35 (after Jan. 31/on-site)

Concurrent Sessions, Exhibitors, Door Prizes and
Tours of State-of-the-Art Research Facilities

2017 Conference Information

stemconference@uhcl.edu <http://prtl.uhcl.edu/education/stem-conf>



Featured Keynote Speaker
Steve Wolf
“SCIENCE IN THE MOVIES”

Steve Wolf has been producing film, TV and live events for 25 years. He is the president of Stuntworks, and founder of Science in the Movies, an organization that teaches physics and chemistry through stunt demonstrations. “If you want people to learn and grow, you have to engineer experiences that promote that growth.” Steve Wolf’s “Science in the Movies” reveals the STEM concepts behind movie stunts and special effects. Wolf passionately engages students and teachers in STEM (Science, Technology, Engineering, and Math) concepts through his Science in the Movies show. As a former Hollywood stuntman, Steve uses the entertainment industry’s ability to capture and hold kid’s attention to help them master the science they’ll need to solve tomorrow’s challenges.



Working together to work wonders™



University of Houston  Clear Lake

Katy Rock Shop

Thank you to the Katy Rock Shop for your continuous support of the Texas Earth Science Teachers Association! Every year this business donates approximately \$500.00 worth of rocks, gems, and fossils to our annual Rock Raffle at CAST!



Please support the business that supports us!

535 Pin Oak Rd
Katy, TX 77494

Regular Hours
Tues-Sat: 10am-5pm
Sun-Mon: CLOSED

<http://www.katyrockshop.com/>

Renew your TESTA

membership today!

(membership runs CAST to

CAST) 😊



New members enjoying CAST!



TEXAS EARTH SCIENCE TEACHERS ASSOCIATION MEMBERSHIP APPLICATION

Please fill out as completely as possible.

Date _____

First Name _____ M.I. _____ Last Name _____

Address _____

City _____ State _____ Zip _____

ESC Region _____ School/Campus _____

District/Business _____

Home Phone _____ Business Phone _____

Fax _____

School/Business Email _____

Home Email _____

Job Description (all that apply)

- Student Teacher
- Teacher
- Department Head
- Supervisor/Consultant
- Principal/Administrator
- College/University Professor
- Science Specialist
- Student
- Business
- Museum
- Nontraditional
- Retired
- Other _____

Grades/ Subject (all that apply)

- Elementary Science
- Integrated Science (K-8)
- Anatomy & Physiology
- Biology
- Integrated Physics & Chemistry
- Physics
- Chemistry
- Geology/Meteorology/Oceanography
- Aquatic/Marine Science
- Environmental Science
- Advanced Placement; Intl. Baccalaureate
- Informal Science Education
- Teacher Education

Please make checks payable to **TESTA** in the amount of \$10.00.

Please mail to:
Kathryn Barclay
10535 Long River Dr.
Sugar Land, TX. 77498

Memberships run from CAST to CAST.

Would you be interested in serving on a committee? ____
Which one? _____

TESTA Leadership -

Elected Officers:

President - Alexia Bieniek

Vice - President - Kathryn Barclay - Fort Bend ISD

Secretary - Vacant

Treasurer - Lisa Stone - Fort Bend ISD

Appointed Positions:

Membership Chair - Lale Bilir - Fort Bend ISD

Rock Raffle Chair - Vernon Dye - Waco ISD

Webmaster - Christine Shupla - LPI

Board of Directors:

Gail Gant - St. Johns School - Houston, TX

Dr. Linda Knight - Retired - Dallas, TX

Contact Us!

www.texasearthscienceteachers@aol.com

The Texas Earth Science Teachers Association is a nonprofit 501(c)(3) educational organization, founded in 1984, whose mission is to facilitate and advance excellence in Earth and Space Science education. NESTA's purpose is the advancement, stimulation, extension, improvement, and coordination of Earth Science education at all educational levels. TESTA is an organization made up of and governed by classroom teachers, and extends its influence through association with other professional societies and organizations. We always welcome new members -

Join TESTA today!

**"If you teach science on Earth,
you are an Earth Science
Teacher!"**

