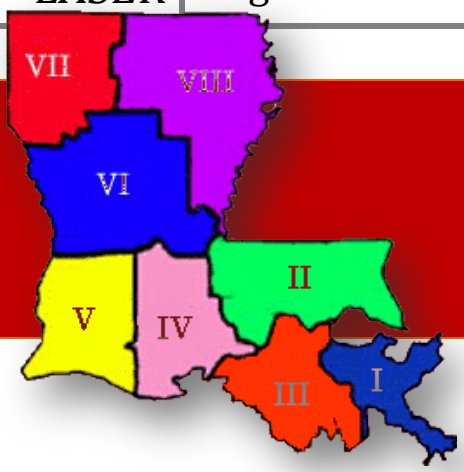
Louisiana Science Teachers Association Newsletter (www.lsta.info)

**LSTA NEWSLETTER**

# LASER






**LOUISIANA SCIENCE TEACHERS ASSOCIATION**

Louisiana science educators dedicated to the advancement of scientific literacy at all levels, and encouraging lifelong learning.


August 2023 | Louisiana Science Teachers Association

# LSTA Board and Regional Representatives

| | | |
|---|---|---|
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| **Tammy Brouillette**<br>Secretary<br>tammycbrouillette@gmail.com | **Nathan Cotten**<br>Treasurer<br>nathancotten@tpsdonline.org | **Chris Campbell**<br>Membership<br>ctc@latech.edu |
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| **Cecelia Gillam**<br>Region 1 Representative<br>cgillam@stcharles.k12.la.us | **Tricia Trinco**<br>Region 2 Representative<br>trish.trinco@gmail.com | **Wendy Delgado**<br>Region 3 Representative<br>wendy_delgado@houmachristianschool.com |
| **Kellie Boquet**<br>Region 4 Representative<br>khboquet@lpssonline.com | **Cammie Canik**<br>Region 5 Representative<br>cammie_canik@camsch.org | **Dr. Ladale Bernard**<br>Region 6 Representative<br>ladale.bernard@rpsb.us |
| **Rosie Cash-Loftis**<br>Region 7 Representative<br>rbcash@caddoschools.org | **Marci Bryant**<br>Region 8 Representative<br>marcibryant@opsb.net | **Stephen Knight**<br>LASER Editor<br>stephen_knight@saintmartinschools.org |
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**L O U I S I A N A  S C I E N C E  T E A C H E R S  A S S O C I A T I O N**

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# President's Message from Pierre LaCaze

Happy New Year! I would like to wish everyone the best of luck during the 2023-2024 school year. Regardless of your position, you are truly going to make a difference in the lives of your students. The impact we make as educators, has a profound affect on those we teach.

We will, along with Louisiana Association of Teachers of Mathematics, be hosting the 2023 Louisiana Science and Math Conference. This will be our first major conference since 2019. We will offer two days of meaningful professional development that will positively impact your classroom. The conference will take place November 2-3 at the Raising Cane's River Center in Baton Rouge. To register for the conference please visit https://lsta.info/conference-registration.

We welcome vendors and exhibitors to participate in our conference. We will feature both non-profit and for-profit exhibitors. The exhibits will be located in the galleria. This will ensure the best exposure possible. For information about exhibits, please visit our website at https://lsta.info/annual-conference.

We are very pleased to bring back our "Coffee Talk" series. Coffee talks take place once a month over Zoom. They feature a specific topic each month for teachers to learn about. It also gives teachers the opportunity to connect with like minded educators from across the state. Please keep an eye out for email announcements regarding coffee talks each month.

If you are looking to help improve science education, LSTA is looking for a few individuals to serve on the board. We are looking for nominations for regional representatives, as well as executive committee positions. If you, or someone you know, is interested in serving on the LSTA board please apply. Application details are located inside this edition of the LASER.

On a side note, with the advent of interactive boards many people are moving away from projectors. If you need help reducing your old projectors we would love to help. Due to the cost of renting projectors to provide professional development sessions to teachers, we welcome any donations of unwanted projectors.

We wish you and your students all the best this school year. Thank you for all you do.
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Sincerely,

Pierre LaCaze
President, LSTA


Cover page

## Complimentary LSTA Membership

LSTA understands how difficult these times are for science educators. We want you to know we are with you by doing our part to provide information about a variety of resources and opportunities to alleviate some of the strain you may be feeling. Please click the link below to fill out an online form to register for your complimentary membership to LSTA. Please share this offer with colleagues. LSTA Complimentary Membership Form

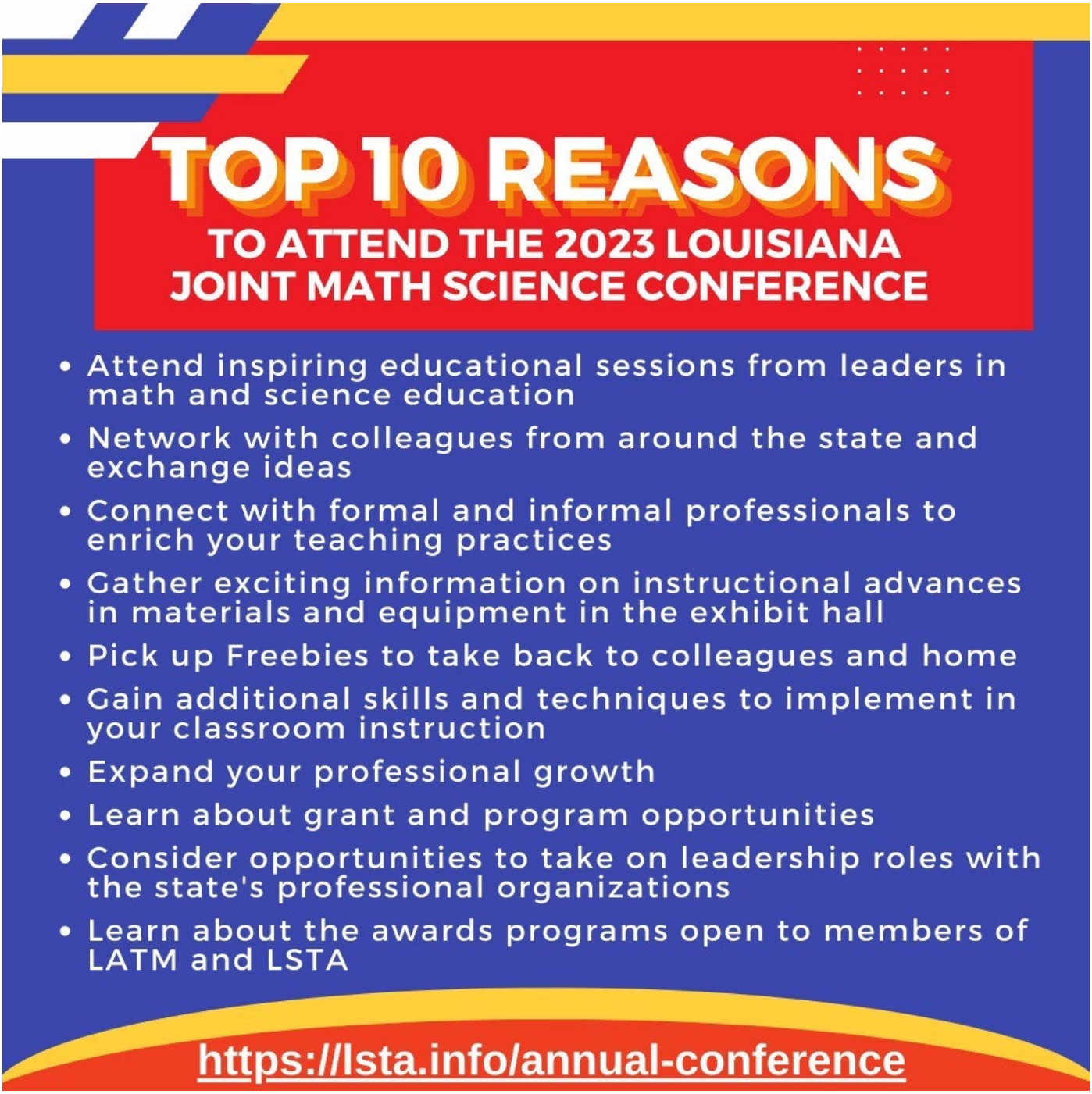
## LATM/LSTA Confrence


Click here for all the latest Confrence information

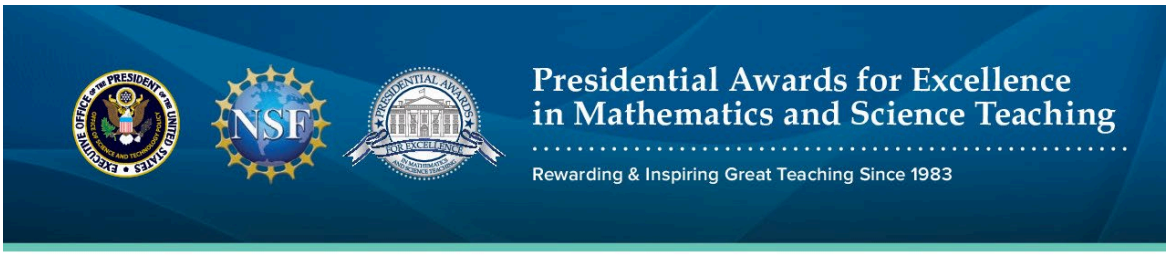
## LSTA Awards and Travel Grants

Calling all science educators! LSTA Awards and Travel Grant information are now on the LSTA website (www.lsta.info). The deadline for application submission is October 1, 2023.

## Top 10 Reasons to Attend the 2023 Joint Conference



## The 2023-2024 PAEMST Cycle is Open




### Call for Nominations

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the highest honors bestowed by the United States government specifically for K-12 science, technology, engineering, and/or mathematics teaching. Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of STEM education. Since 1983, more than 5,200 teachers have been recognized for their contributions to STEM education. Up to 110 teachers are recognized each year.

Presidential Awardees receive:

- A certificate signed by the President of the United States
- A trip to Washington, D.C. to attend a series of recognition events and professional development opportunities
- A $10,000 award from the National Science Foundation
- Access to a network of award-winning teachers from across the country

### Who Can Nominate?

Anyone—principals, teachers, parents, students, or members of the general public—may nominate exceptional science, technology, engineering, and/or mathematics teachers.

**NOMINATION DEADLINE: January 8, 2024**

### Who Can Apply?

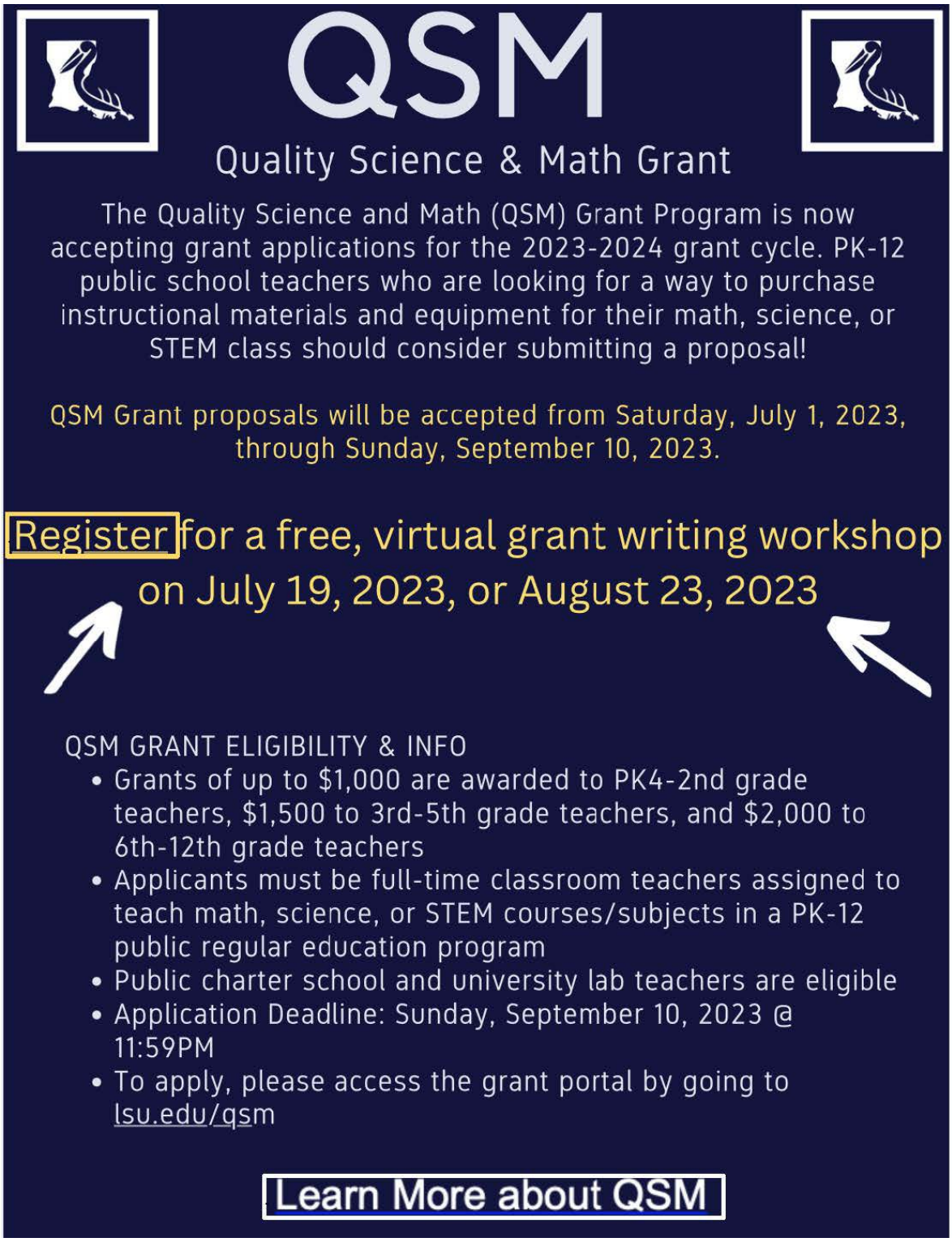
Elementary school science, technology, engineering, and/or mathematics teachers (K-6) can apply this year. Secondary school teachers (7-12) will be eligible to apply during a future cycle.

**APPLICATION DEADLINE: February 6, 2024**

**To nominate or apply, visit www.paemst.nsf.gov**

The National Science Foundation administers PAEMST on behalf of the White House Office of Science and Technology Policy.

## QSM Grant Program



## QSM Scorers Needed

The QSM Council is recruiting judges to review and score the 2023 grant applications. It is particularly helpful to have district math and science content specialists, curriculum coordinators and master teachers serve as QSM scorers. Scoring grant submissions can be a good way to prepare to write other applications.

Teachers must submit their applications by September 10th. A virtual QSM judge training will be offered Wednesday September 6th at 6 PM. Grant assignments will be received Friday, September 15th with a scoring deadline of October 1, 2023. All applications are blind scored so judges are not assigned applications from their district or regions. To sign up as a QSM scorer with the LSU Cain Canter and QSM Program educators will find the application at: QSM Judge Registration FY24.

QSM Judge Registration FY24

# Regional News

**✦ Region I ✦**

## SAVE THE DATES!

TULANE CENTER FOR K-12 STEM EDUCATION

### Girls in STEM at Tulane (GiST)

Saturday, November 4, 2023

Saturday, March 16, 2024

### Boys at Tulane in STEM (BATS)

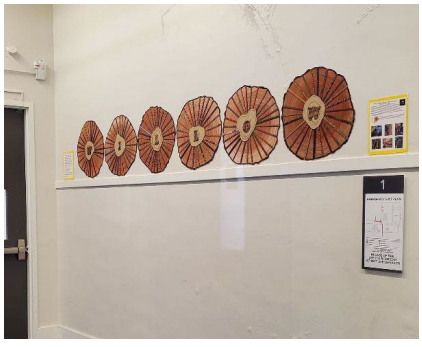
Saturday, September 16, 2023

Saturday, April 13, 2024

### Teachers Experience STEM at Tulane

Third through fifth-grade teachers get to experience three hands-on workshops, discuss how to implement the activities and aligned standards into their classrooms, and receive both aligned curricula ideas AND supplies to bring the activities back to their school!

**$100 STIPEND also provided for attending!**



Ms. Christine Bagneris and Ms. Jodi Sanchez completed a culminating project for a tree core lesson at the Willow Middle School after LSU scientists visited the class. Every Team 7 student participated in this meaningful scientific and creative experience. First, all students experienced collecting tree core samples from our campus trees with the assistance of LSU Climate Scientists, Jill Trepanier and Clay Tucker in their science class with Ms. Sanchez. Students learned the many reasons scientists take tree core samples. Scientists use these samples to understand how environmental factors such as flooding, drought, storms, extreme temperature change, lack of nutrients, diseases, salt or freshwater intrusion affect an area from the past to the present day. Dendrochronologists study the patterns of light and dark rings to determine what kind of year occurred. Light rings are the first part of the growing season and the dark rings

indicate the slowing down or end of the growing season. In collaboration with our art teacher, Ms. Bagneris, students created replicas of tree core samples to illustrate patterns of shape, space, and color. Each sample became a piece of the larger radial design mural display in the corridor of the Nashville side entrance of our Marsalis campus.


The Greater New Orleans STEM Initiative (GNO STEM) has had a busy summer! GNO STEM hosted 5 unique STEM Summer Camps: GNO STEM Engineering, Circuitry & Robotics Camp; GNO STEM Jr STEM Camp; GNO STEM NASA Space Camp; GNO STEM Robotics Camp; and GNO STEM STEAM Camp. Students were engaged in STEM activities while beating the summer heat!

Students programming robots during Robotics Camp

GNO STEM also hosted 4 unique teacher PD sessions: Geographic Information System (GIS) Technology Training; LIGO – Light, Color, Sound and Waves; STEM & Grant Writing for Middle School Teachers; and a Code.org PD for K-5 Teachers. Participating teachers are excited to bring their newly acquired skills and the technology to their classrooms.

Teachers programming littleBits in GNO STEM teacher PD session

Teachers working with light and shadows at GNO STEM's LIGO PD

On Saturday, August 29, GNO STEM partnered with Shell and Xavier University for the annual NOLA Back 2 School Fest where free backpacks and school supplies were given away to thousands of New Orleans K-6 students.

NOLA B2S Fest backpack giveaway

## Bob Thompson Excellence in Energy Education Award

Right after Thanksgiving 2012, NEED received word that Bob Thompson, one of our former teachers and staff members died suddenly. For the NEED family, this loss reminded us of the great times we had with Bob and his wife Debbie and all the fun we had as a team at teacher workshops, NEED Energy Conferences for Educators and our BP Solar Schools, BP A+ for Energy Program workshops and many others. Bob was a

key part of our H2 Educate and Wind for Schools programming early on and delivered workshops for us in Illinois and all across the country for several years. When I think of Bob, I think of all the gee whiz moments that happen in science. I also think of Bob's childlike wonder about science, and specifically about energy. We're an organization of Energy Nerds. Big ones. We think of energy as a unifying theme in science. We think of energy as cool. Bob loved energy and loved teaching about energy. He also loved taking care of people. I can attest that I never picked up my own luggage, never had to carry my own laptop bag or open a door when Bob was around. He was a gentleman, a great teacher, and an explorer. As an ultralight pilot he would fly near wind turbines installed in Illinois. As a huge fan of aerospace, he would stand with me in the Avis parking lot at Los Angeles International Airport and stare into the heavens at the jet planes coming in to land. Then there was the time he shoved my ice cream cone in my face. That was funny. It was also cooling since we were in La Quinta, California

It was all science. All the time. Bob explored. Bob taught exploration. Bob energized workshops of teachers and classrooms of kids.

He was special. Special to all of us at NEED and to the teachers and students he worked with over time. Because of this, NEED has established the Bob Thompson Excellence in Energy Award that will be given each year to a teacher who exemplifies Bob's childlike wonder of science and energy. The award includes a $1,000 cash grant to the teacher to use as they so choose in the classroom and an all-expenses paid trip to the NEED Energy Conference for Educators hosted each July.

**– Mary Spruill,** *Executive Director*

## **Congratulations to our 2023 Award Winners**

**Cecelia Gillam**
**Hahnville High School**
**Boutte, LA**

This year your Region I Rep will be on the feature panel at NSTA. If you are going to Kansas, please stop by to listen to this panel!

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## ✦ Region II ✦

The STEM and Robotics Center in Covington offers after-school programs that engage students in authentic STEM problem-solving with applications in robotics, engineering, and mathematics. For more information on our classes, visit www.STEMandRoboticsCenter.com.

Our 2023-2024 classes include:

- Grades PK - 1: FIRST LEGO League Discover
- Grades 1-3: STEM Lab with a focus on engineering
- Grades 1-4: FIRST LEGO League Explore Robotics
- Grades 4-6: MOEMS Elementary Mathematical Olympiad
- Grades 4-8: FIRST LEGO League Challenge Robotics
- Grades 4-8: National WW2 Museum Robotics Challenge

**Northshore STEM Coalition** will host their 5th Annual Back to School STEM Festival at Southeastern on August 26. You can register here: https://mailchi.mp/4955fc6e5623/holiday-stem-fest-15627887?e=[UNIQID]

2023 International Envirothon Report

The amazing Louisiana Environthon team from Baton Rouge Magnet High School came in 11th place during the International event this summer. This was the first time Louisiana has sent a team in many years to the international competition, and these students did absolutely amazing! Not only did they perform well, but they engaged with other teams from all over the country, Canada and China and learned how to tackle the climate change issues facing the world today. It's more than a competition, it is also an immersive learning experience and we are so glad they could be a part. LSTA congratulates this team for the work they put in to prepare and their efforts during the competition. We bet they will be ready for 2024!!!

Please submit news for Region 2 to **Tricia Trinco** at trish.trinco@gmail.com.

## ✦ Region III ✦

Engineering and Algebra II students from Terrebonne Parish high schools recently visited the Applied Science Department at Nicholls State University. Students were exposed to the world of geomatics and the potential careers a degree in this field could lead to.

The South Louisiana Wetland Discovery Center had a "Swamp Camp "this summer in Terrebonne Parish. The campers took many field trips around south Louisiana to learn about Louisiana swamps.

Please submit news for Region 3 to **Wendy Delgado** at wendy_delgado@houmachristianschool.com.

## ✦ Region IV ✦

**STEM Olympics Camp**-Held June 5-9, 2023. Middle school students competed in various STEM related activities. Activities challenged students as they engaged in scientific experiments for accuracy, technology for gathering data, engineering design for better solutions, and mathematical thinking to tackle problems. Some activities included Mousetrap Race Car Design Challenge, Density Lab and Tower Prediction Competition, Biodiversity and Probability Tournament, and Robot Computational Thinking. Awards were given to winners for each event as well as an overall team winner. The Region 4 STEM Network Center partnered with UL Lafayette's College of Education to give students this fun-filled experience.

**The Environmental Deep Dive Camp 2**- Held June 12-16, 2023. A week-long camp experience connecting middle school students to topics like underwater robotics, climate change, and coastal ecology. The Region 4 STEM Network Center partnered with Robnation, Entergy, and Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) to give the students this engaging experience.

**Renewable Energy Camp**- Held June 20-23, 2023. A four day camp experience, for current middle school students, that showcased the science and technology around wind turbines and solar power. The energy-based content combined with practical standards and classroom activities connected kids to the world of renewable energy. The Region 4 STEM Center partnered with KidWind to give students this handson experience.

**Region 4 STEM Network Center in partnership with the Lafayette Parish Federal Program Department-** Held three camps over the course of two weeks, June 5-9 and June 12-15, 2023. Students completed NASA based activities, STEM related competitions, and learned team building and problem solving through a range of lifetime sports.

**NASA Astro Camp-** Held July 10-14, 2023. A week-long camp, for elementary, middle, and high school students to join in and contribute to student-centered, standards based STEAM activities that utilize NASA resources. This camp provided a connection for all youth to NASA science missions, challenges, and resources in Astrophysics, Heliophysics, Earth Science, and Planetary Science. The Region 4 STEM Center partnered with Central Creativity to give students this "out of this world" experience.

Click here for the latest information from the Region 4 STEM Center

Please submit news for Region 4 to **Kellie Boquet** at khboquet@lpssonline.com.

## ✦ Region V ✦

A lot of exciting activities have been taking place in the Science/STEM world in Region 5.

St. Margaret Catholic School in Lake Charles has a new robotics team, the Vikings. They were able to participate in the Region 5 Stem Robotics Camp.

Region 5 Science and Engineering Fair will be held on February 8, 2023, at the MSU Recreation Center. Check out www.lasciencefair.org for more information, or reach out the director, Judy Reeves at jrkat60@gmail.com.

Region 5 STEM Center is hosting a viewing party on Tuesday, August 8 at 12 pm for an event of the International Space Station educational in-flight event with the LaSTEM's NASA Astro Camp in Louisiana with NASA flight Engineers Frank Rubio and Woody Hoburg. Questions asked by the NASA Astro Camp students to the astronauts will be featured.

Region 5 was able to serve 1,051 students and teachers during the summer STEM camps.

Please submit news for Region 5 to **Cammie Canik** at cammie_canik@camsch.org.

## ✦Region VI ✦

Poland Junior High Robotics Program

This program/club consists of grade levels 6-8th. Any student is welcome to try out for the team, but only 15 are accepted. This year, our club was comprised of three teams of 5 members. Two of the 6th-grade teams competed at the local district level and finished in 3rd place. Both teams scored enough points at the SKILLS competition of the tournament to be invited to the state. Only 2 teams from Rapides Parish District competed at the Junior High level, one being Poland Jr. High.

Poland has one team of three sixth graders that were invited to participate in the VEX Robotics World Competition in Dallas, Texas. This competition truly is a competition between students from hundreds of different countries worldwide! Poland competed against teams from Canada, Japan, Ohio, and others. Although we did not make it as a finalist, the overall experience was a lesson of what our small schools need to do as engineers to compete at the world level.

Please submit news for Region 6 to **Dr. Ladale Bernard** at ladale.bernard@rpsb.us.

## ✦Region VII ✦

Sophie Chen, a Senior at Caddo Magnet High School, was selected for the summer science and engineering program at the Massachusetts Institute of Technology (MIT) Research Science Institute. Sophie was able to participate in a five-week research internship where she conducted individual projects with experienced scientists and researchers as mentors.

Please submit news for Region 7 to **Rosie Cash-Loftis** at rbcash@caddoschools.org

## ✦ Region VIII ✦

**Ouachita Parish School System** in **Region 8** brought in their Middle School Science Teachers to spend a week in July planning and diving into their curriculum for the upcoming school year. Thanks to Side by Side Strategies, as well as, **Missy Wooley** (Louisiana Tech University SciTEC) and **Cathi Cox-Boniol** (SCILS Region 8 LaSTEM Center) teachers took a more in-depth look at their in-class formal assessments as well as developing quality assessments to better prepare students as they master the Louisiana Science Standards. This summer the school system brought in teacher for their very first teacher STEM/ Robotics camp. This was led by some of their very own school leaders in the field. They were able to test out new tools and skills by participating in engineering activities, programming multiple robots, and even getting the chance to fly a drone.

**Cathi Cox- Boniol** leading middle school teachers

Teacher led STEM/Robotics Camp

**Missy Wooley** (Louisiana Tech University SciTEC) and **Cathi Cox-Boniol** (SCILS Region 8 LaSTEM Center) joined **Dr. Bill Deese** and **Dr. Kristie Ruddick** (both Louisiana Tech University Department of Chemistry) in presenting four days of its EPSCoR program "Middle Grades in the Mix." Cathi and Missy then hit the road delivering classroom kits of materials so teachers could replicate the Middle Grades in the Mix Mystery Powders lab investigation. They also delivered SeaPerch Kits across the Delta for schools and organizations planning to participate in next year's SeaPerch Challenge that will be hosted at Louisiana Tech. The kit delivery was followed by two training sessions for team coaches. Missy facilitated a STEM Day for the Boys and Girls Club from Claiborne Parish while Cathi attended the Girls in Aviation event at the Ruston Airport. Cathi hosted the 3rd Annual SCILS Mini Summit where partners from across along the I-20 corridor gathered to celebrate the successes achieved over the past year. Congratulations to **Dr. Jamie Newman** (Louisiana Tech University) and **Ryan Pierce** (Louisiana Delta Community College) for being the recipients of the inaugural SCILS TOSITA Awards for their commitment to innovation and transformation. Both were recognized during the Mini Summit along with Region 8 Girls in STEM who accomplished extraordinary success with the CS4U online courses. Cathi and Missy facilitated a STEM Day for the Jackson Parish 4-H Achievement Day as well as the 2nd Annual Engineer the World: Girls Design for Good event hosted in partnership with the Lincoln Parish Library and Lincoln Rotary. Cathi handed out free STEM Kits at the Louisiana Peach Festival that were designed by the SCILS team and included the book "James and the Giant Peach" before joining Missy and **Chris Campbell** (Louisiana Tech University UTeachTech) in kicking off summer camps that included Girls in STEM I and II, Camp Invention, All About Stuff I and II, Robotics and Programming I and II, and Environmental Extravaganza. In addition, the team hosted Pattern Energy and KidWind for its first camp and professional development in the region. Missy attended training in Denver for the new elementary OpenSciEd pilot in Louisiana and she and Cathi facilitated professional development for pilot districts in the northern part of Louisiana. After participating in STEM Day at the Capital, Cathi welcomed students from East and West Carroll parishes to the Tech campus for a STEM Day where they toured the Integrated Engineering and Science Building, visited the virtual anatomy lab, heard from the AEOP researchers on campus and enjoyed a demonstration show by Dr. Deese. Cathi also traveled to Union Parish to facilitate a morning focused on "I Am an Engineer . . ." for summer school students and patrons of the Union Parish Library as well as hosting a STEM Day in Franklin Parish for middle grades students. Cathi and Missy worked with teachers in Ouachita and Lafayette parishes as they continued their OpenSciEd facilitation before hosting the Louisiana Department of Education and the Dana Center for a foundational science training on the Tech campus. Congratulations also to Cathi for being named the recipient of the 2023 Region 2 Professional Practice Award as part of the Epsilon Pi Tau William E. Warner Awards Program which recognizes members for their achievements in their professional work.

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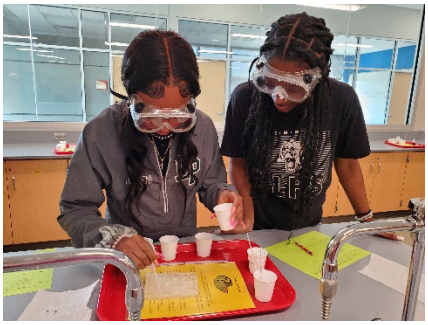
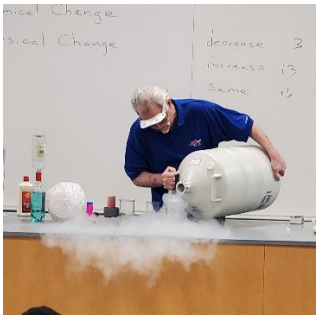




Middle Grades in the Mix



Engineer the World: Girls Design for Good

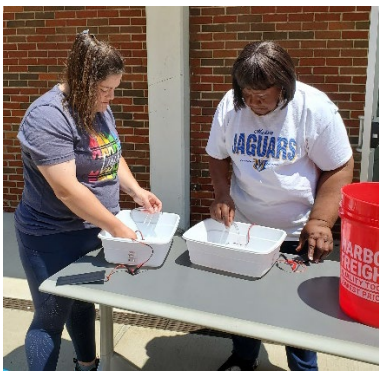


SCILS Mini Summit Awards

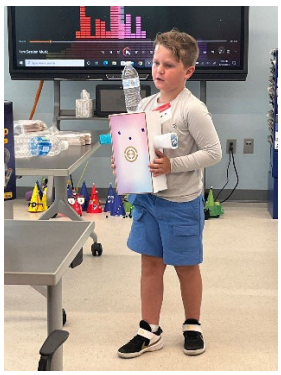



Girls in STEM Camp



KidWind Professional Development and Camp

Camp Invention

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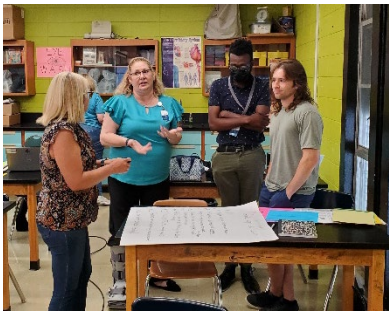
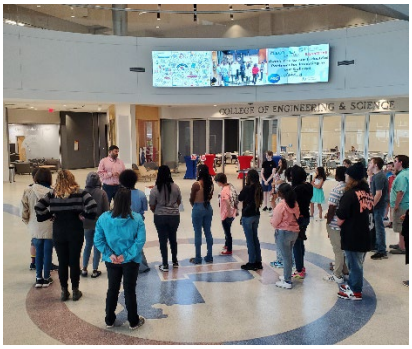



Teacher Professional Development



East and West Carroll STEM Day



Union Parish “I Am an Engineer . . .” Day

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Franklin Parish STEM Day


All About Stuff Camp

Please submit news for Region 8 to **Marci Bryant** at marcibryant@opsb.net.

# Professional Development Opportunities and Resources

## Louisiana Association of Science Leaders' Corner

Are you a district science supervisor, science content specialist, science master teacher, Teacher Leader or science coach? If so, consider becoming a member of LASL, the affiliate of the National Science Education Leadership Association (NSELA). We hope to see a number of science education leaders participate in the Joint LATM LSTA Conference in Baton Rouge November 2/3. Don't wait, make your hotel reservations now.

### Recording: Looking Ahead to the Next Decade of Science Standards

"A recent National Academies of Sciences, Engineering, and Medicine event shared insights from science education leaders from across the country on what the field has learned so far about equitable access to science education and implications for future work over the next ten years. In the event, two new white papers were discussed: History and Reflections on the Development of The Framework and Next Generation Science Standards, which discusses the development processes of *A Framework for K–12 Science Education* and the NGSS, along with trade-offs and decisions that informed the processes along the way; and An Overview and Analysis of Review, Revision, and Adoption of State Science Standards, which includes recommendations for future state standards revisions.
See the event recording here."
From an NASEM news letter

Some important studies from the NASEM
Science and Engineering in Preschool Through Elementary Grades
https://nap.nationalacademies.org/catalog/26215/science-and-engineering-in-preschool-through-elementary-grades-the-brilliance

Science and Engineering for Grades 6-12
https://nap.nationalacademies.org/catalog/25216/science-and-engineering-for-grades-6-12-investigation-and-design

## Sea Change Podcast

NASEM announced a new podcast from WWNO/WRKF that will dive deep into the environmental issues facing coastal communities on the Gulf Coast and beyond. The podcast will help document our changing coasts while sharing captivating stories from the people dealing with the most significant and complex problems of our time.

Hosted by Carlyle Calhoun, Halle Parker and Kezia Setyawan, the show is based out of New Orleans, Louisiana which — perhaps more than any other place — embodies the existential threat of climate change. But like the city known as the Big Easy — Sea Change will also showcase joy, and resiliency — and tell powerful stories of people making a difference.
https://mail.yahoo.com/d/folders/1/messages/373172?.intl=us&.partner=sbc&.lang=en-US#:~:text=making%20a%20difference.-,Listen%20now.,-Made%20possible%20with

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**Made possible with major support provided by the Gulf Research Program of the National Academy of Sciences, Engineering and Medicine.**

## New Research Report — Science Instructional Materials Selection and Modification: A Landscape Analysis

High-quality instructional materials are a key part of implementing science standards. However, it is rare for instructional materials to be implemented exactly as intended. Educators modify instructional materials for many reasons, including for class time and relevance to local phenomena. To learn more about the factors that affect instructional materials selection and modification, NextGenScience conducted a landscape analysis that included a national survey of educators. This report shares findings from the landscape analysis as well as recommendations for the field.

See the report here.

### Practice Brief: Think Globally, Act Locally

This new STEM Teaching Tool provides guidance on how the United Nations' 17 Sustainable Development Goals (SDGs) — global goals to make the world a better place for all — can be used to focus science instruction on meaningful local and global phenomena.

See STEM Teaching Tool Practice Brief 93 here.


## Wild Ones Lorrie Otto Seeds for Education Program

Grants ranging from $100 to $500 are available to support acquiring native plants and seeds for outdoor learning areas that engage youth in planning, planting, and caring for native plant gardens. Examples include pollinator gardens, rain gardens, tallgrass prairies, native plant monarch waystations, and sensory and natural playgrounds.
The 2024 Planting Season application window is July 14 through November 14, 2023. Lorrie Otto Seeds for Education Program - Wild Ones: Native Plants, Natural Landscapes

## Apply for the 2024 Monarch Butterfly Scholarship Grant

Natural Habitat Adventures has just released their **Monarch Buttery Scholarship Grant application**, inviting two educators to witness firsthand the enchanting migration of monarch butterflies. Apply online by September 3, 2023. Each grant recipient will be awarded one space on their January 14, 2024 Kingdom of the Monarchs adventure trip plus free roundtrip airfare to Mexico City, where the trip begins and ends.
https://www.nathab.com/teacher-travel-scholarship-grant/?utm_campaign=wild-classroom&utm_medium=email&utm_source=enews-wc&utm_content=230629-edu

## The AIAA ExGen Title 1 grant applications are open!

For the 2023 – 2024 Academic Year, AIAA will fund five $1,500 awards to educators or administrators at Title 1 schools. Awarded projects will receive funding to support the engaging and inclusive implementation of STEM and aerospace-related projects. The deadline to apply is Saturday, September 30th, 2023.
AIAA Exploration Generation Grant

## New Water Cycle Diagram for Educators and Students

The U.S. Geological Survey is thrilled to announce the recent release of a new water cycle diagram in English and Spanish. The new diagram is user-friendly, visually appealing, and scientifically accurate. It places necessary and accurate emphasis on human presence on the landscape and human influence on the water cycle.

**Water Cycle Educational Resources from the U.S. Geological Survey:**

1. **Explore** the diagram in more detail on our zoomable website in English or Spanish.
2. **Download** the diagram as a 26x36-inch pdf (English | Spanish), 8.5x11-inch pdf (English | Spanish), or fill-in-the-blank worksheet (English | Spanish).
3. **Compare** the relative sizes global pools and fluxes of water with our interactive data visualization.
4. **Learn** more about the water cycle (and other water topics) on the USGS Water Science School website.

Educators played an important role in the development of the new diagram. More than 100 educators spoke to us and provided us helpful feedback. Thank you! This was made possible because educators like you were willing to participate in user-centered design. We want to help educators incorporate this new diagram into their instruction. We're designing webinars and other events with you in mind. Sign-up and we will email you about upcoming opportunities.

Finally, wondering why we created a new diagram? Learn why by watching the recording of our release party or reading our blog post.

## Kenner Planetarium

Kenner Planetarium MegaDome Cinema

Louis J. Roussel, Jr. Laser Planetarium

# Join Us For An Experience That's OUT OF THIS WORLD!

**SEPTEMBER 2023**


**The Little Star That Could**

Join Little Star, an average yellow star in search for planets of his own to protect and warm. Along the way, meet other stars, learn what makes each star special, and discover that stars combine to form star clusters and galaxies.

**Running time: 35 minutes**

**The Accidental Astronauts**

Follow the adventures of Sy and Annie and their dog Armstrong as they embark on an unexpected journey into space! Explore the Earth, Sun and Moon system with a wise-cracking starship computer and gain a new appreciation of our home planet. "The Accidental Astronauts" is a space adventure for all ages.

**Running time: 32 minutes**



**Flying Monsters**

Set out to uncover the truth about the dinosaur cousin, the pterosaur, with a wingspan of approximately 40 feet and equal to that of a modern-day jet plane.

**Running time: 40 minutes**

**Hubble Vision**

View the wonders of the universe in this visually stunning planetarium show! Hubble Vision brings into focus the vastness of outer space by detailing the discoveries made by the Hubble Space Telescope. See glorious images of planets, nebulae, star clusters, galaxies, and more.

**Running time: 35 minutes**


## LASER TRIBUTE

Some great artists like John Lennon, James Brown, and Elvis Presley come into our lives only to depart far too soon, leaving behind a musical legacy. Laser Tribute pays homage to great artists whose music has touched and inspired us all. May their legacies live on, one song at a time.

**Running time: 45 minutes**

**Admission:**

**E-mail hglorioso@kenner.la.us or call 504-468-7231 for information and group rates.**

| | |
|---|---|
| **Adults** | **$6.00 per show** |
| **Children/Seniors** | **$5.00 per show** |

**Multi-show packages available**

*Children 2-12 years
*Seniors 60 and over

**SHOW SCHEDULE SUBJECT TO CHANGE!**

**Schedule:**

***Appointment Only:*** ***Tues-Fri*** ***Schools/Camps/Groups***
***Call 504-468-7231 for reservations.***

***General Public:*** ***Saturdays Only***
***Box Office opens at 10:45 am***

| | |
|---|---|
| **The Little Star That Could:** | **11:00 am** |
| **The Accidental Astronauts:** | **12:00 pm** |
| **Flying Monsters:** | **1:00 pm** |
| **Hubble Vision:** | **2:00 pm** |
| **Laser Tribute:** | **3:00 pm** |

Kenner Planetarium 2020 Fourth Street Kenner, Louisiana 70062
www.kenner.la.us 504-468-7231

## Teacher PD Opportunity

# 2024 KNOWLES TEACHING FELLOWSHIP APPLICATION PROCESS

**To be eligible for a 2024 Knowles Teaching Fellowship, individuals must:**

1. have the capacity and determination to **commit to teaching as their primary career**;
2. have **earned a degree in a major related** to the mathematics or science discipline they intend to teach **between 2014 and September 1, 2024**;
3. **have earned or will earn a valid state teaching credential**/certificate/license that enables them to **teach mathematics or science in grades 9–12 in the United States no earlier than January 1, 2019 and no later than September 1, 2024**; and
4. be **entering their first, second or third** year as teacher-of-record** during the **2024–2025 academic year.**

Contact us via email at apply@knowlesteachers.org if you have any questions.

APPLY NOW

Knowles TEACHER INITIATIVE

www.knowlesteachers.org

## Discover EIF

Discover EiE® Lessons Powered by Pear Deck™
As part of a new collaboration, EiE with Pear Deck has transformed 10 climate change lessons into engaging, interactive, slide-show style lessons that support educators in introducing the critical topic of climate change to students in grades 3-8. Each presentation includes standards-aligned lesson plans, formative assessments, real-world examples and videos, enhanced with the interactive features of Pear Deck. Get Started for Free Today!

## Climate Emergency: Feedback Loops Documentary Series

Climate Emergency: Feedback Loops Documentary Series
Teach climate change with the following free resources: Climate Emergency: Feedback Loops, a series of five short films narrated by Richard Gere, featuring twelve renown climate scientists, and endorsed by the Dalai Lama and Greta Thunberg. The resources also include an accompanying science standards-based curriculum for grades 6 -12 and discussion guides suitable for university level and community groups. The materials are freely available for use by teachers and students at www.feedbackloopsclimate.com. Ranging in length from 8 – 14 minutes, the films are ideal for classroom use. The broadcast version, Earth Emergency, aired on PBS and is now appearing on television globally. It was presented at the 2021 United Nations Climate Change Conference (COP26), showcased to the U.K. House of Commons, and featured in a series of webinars by the Smithsonian National Museum of Natural History.

## Toshiba America Grants For Grades K – 5

Do you teach in an elementary school classroom?
Do you have an innovative idea for improving Science, technology, engineering and math learning in your classroom?
Is your idea project based learning with measurable outcomes?
What do you need to make learning math and science fun for your students?
K-5 grade teachers are invited to apply on-line for a Toshiba America Foundation grant of not more than $1,000 to help bring an innovative project into their own classroom.
With a Toshiba America Foundation grant, elementary teachers can bring their best new teaching ideas to life.
To begin the application process, please click here and you will be redirected to short questionnaire.
Grant applications are due on OCTOBER 1st each year.

## Explorer Classroom Returns for 2023

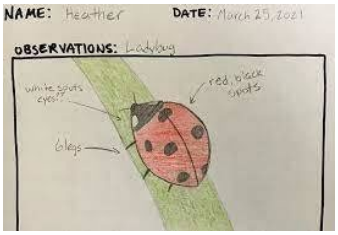
Ignite an Explorer Mindset in your students with a **live interactive session** that connects young people with real National Geographic Explorers.
Our live interactive YouTube show will connect your students with scientists and storytellers to hear behind-the-scenes stories about their work and ask questions in real time. Upcoming topics include geography, biology, oceans, history, and more. All sessions are free and include an instructional guide to help your class get the most out of the experience.
We provide the following schedule for grades K-8:

- **Every Monday, 11 AM ET** – Ages 4-8 | Grade K-2 | 30 minutes
- **Every Thursday, 10 AM & 2 PM ET** – Ages 9-14 | Grade 3-8 | 45 minutes

Explore upcoming sessions and register today. We are excited to see you there!

## Digital Field Book Activity from the Smithsonian

https://naturalhistory.si.edu/education/teaching-resources/life-science/field-book-activity-making-and-recording-observations?utm_medium=email&utm_source=GovDelivery
This activity from the Smithsonian's National Museum of Natural History helps K–8 students practice the skill of recording observations. The activity includes a digital field book template to use or copy, as well as additional information about the evolution of the use of field books in science and tips for maximizing students' observation skills in the field. For example, teachers can jump start students' thinking with the activity's provided Guiding Questions to Encourage Observations and Discussion.




## Children & Nature Network Vitamin N Challenge

The Vitamin N Challenge was inspired by Richard Louv's book on Vitamin N that includes 500 practical ideas to leading a nature-rich life. Join the challenge to help youth on summer break spend time outdoors.

NASA Citizen Science Projects: Calling learners of all ages to engage with NASA science!
Want to work on some real NASA science? NASA's citizen science projects are collaborations between scientists and interested members of the public. Through these collaborations, volunteers (known as citizen scientists) have helped make thousands of important scientific discoveries. There are more than 25 ongoing projects that need your help! NASA citizen science projects are open to everyone around the world, not limited to U.S. citizens or residents. Find a project!
https://science.nasa.gov/citizenscience?fbclid=IwAR0nLySqaKaZHha78lbE6Z8PnOAaCxArQIKVNxnYykRUO5Hy9f2AIWwZ_7Y

## Summer 2023 Teacher Professional Development Experience

This summer LA Sea Grant and several teachers attended the National Marine Educators Association (NMEA) annual conference in Bellingham, WA. The Louisiana teachers presented during the conference and attended the chapter meeting for the Southern Association of Marine Educators. The NMEA Conference will be on the gulf coast in 2025. Pictured from left to right:

Dani DiIullo, Louisiana Sea Grant
Chantal Correll, St. Amant High School, Ascension Parish Schools
Ann Smart, Cabrini High School
Mindy Kernahan, Elementary Gifted Program, Ascension Parish Schools
Robin Cobb, Broadmoor High School, East Baton Rouge Parish Schools
Jodi Sanchez, Willow Charter, Jefferson Parish Schools
Nikita LaCour, Scotlandville Pre-Engineering Magnet, East Baton Rouge Parish Schools
Ali McMillan, West Feliciana Middle School, West Feliciana Parish Schools
Madalyn Wynn, Lakeside Jr/Sr High, Webster Parish Schools
Jennifer Cook, LSG
Kara Erickson, GW Carver Primary, Ascension Parish Schools


## EcoRise Opportunities, Events, and Resources

All Louisiana K-12 teachers have access to our leading-edge Sustainable Intelligence Program, which includes sustainability and design curriculum, as well as grant funds (**up to $700 per project**) for green student projects, and year-round training and support.

## Green Guardians Environmental Literacy Curriculum

https://www.greenguardians.com/?utm_medium=email&utm_source=GovDelivery

Green Guardians, a California-based educational technology company, has developed an environmental literacy curriculum for grades K–5. The curriculum consists of a series of multimedia lessons and games exploring topics such as pollution, climate change, sustainability, energy, watersheds, waste management, and environmental justice. The lessons use a story base to engage students in learning about their environment, and through inquiry and problem-solving, devise solutions to the problems they study

## Lessons on Climate Change, Evolution and Nature of Science

The National Center for Science Education is celebrating its 40th anniversary of providing classroom resources created and tested by teachers from around the United States. View this comprehensive teacher tested set of lessons on Climate Change, Evolution and Nature of Science.

## Save the date! Louisiana Envirothon

2023 was a great year! One of our largest groups to engage in learning at the Louisiana Envirothon and at the NCF Envirothon!
> Our 20th year is upon us and we are ready!
> Form your tems now; applications will be accepted soon!
> Follow us on Facebook and Instagram!


## NSTA Updates

LSTA was well represented during the recent National Congress on Science Education (NCSE). President Pierre LaCaze, Vice-President Bianca Deliberto, Secretary Tammy Brouillette, Region 2 Rep Cecelia Gillam and Jean May-Brett participated in the three days of issue discussion and development of resolutions. No other state matched this level of participation. LSTA representing Louisiana Science Teachers and their interests were part of the conversation for all the issue topics. Following the NCSE Nathan Cotten, LSTA Treasurer and Jean May-Brett took part in the CAGS discussion groups about inter-organizational interactions at the invitation of NSTA Executive Director and CEO Erika Shugart.

LSTA congratulates Tyler Dufrene who began his three-year term as NSTA District VII Director on June 1. Tyler is completing a year as an Einstein Fellow and is a teacher at Hahnville High School. He has been quite active in LSTA for several years and is a teaching partner with Region 1 Representative Cecelia Gillam.

Look for news soon about a possible fall 2024 NSTA conference in New Orleans.

NSTA Awards and Grants
The National Science Teachers Association has many awards with a variety of categories. Many include incentives to support educators attending the National Conference or the National Congress in the summer. For more information go to: http://www.nsta.org/about/awards.aspx
Several classroom grants are also available at: http://www.nsta.org/publications/calendar/

NSTA & Shell

Consider Applying for or Nominating a Collea the Shell Awards

The Shell Science Teaching Award recognize teacher who has had a positive impact throug exemplary classroom science teaching. And s diverse educators who pursue professional development will receive the Shell Urban Scie Educators Development Award, which also s increase the science educator talent pool of r educators.

NSTA Safety Blog

Going Back to School Science and STEM Labs, Safely

Part I of a two-part safety blog post by NSTA Chief Safety Blogger Ken Roy instructs teachers about preparing their science and STEM instructional spaces for a safer new school year by assessing safety and addressing Standard Operating Procedures.https://www.nsta.org/blog/gearing-instructional-spaces-safety-wise-new-school-year-part-i?utm_medium=email&utm_source=rasa_io&utm_campaign=newsletter

# SHELL Science Education Leadership Pathways

## *Friday, October 27 • 9:20 - 10:20 AM*

Speakers: Cecelia Gillam, M.Ed., Roy Basa, Ph.D., and Adrine Williams, Ed.D.
Moderator: Alicia Conerly, Ed.D., NSTA President-Elect

# About the Session

Dr. Conerly will lead a discussion with other past Shell awardees about strategies and pathways for science educators to develop their leadership skills and advance in their careers while advocating for and promoting opportunities for students.

### Alicia Conerly, Ed.D., NSTA President-Elect

Dr. Alicia Conerly has taught elementary, middle school, and high school from 2008 to 2016, and served as science curriculum specialist and instructional coach from 2016 to 2018 for the Hazlehurst City School District in Hazlehurst, Mississippi. Conerly recently served as principal of Monticello Elementary School in Monticello, Mississippi. She joined the school's staff in 2018 as assistant principal and is the school's first African American administrator. Now Conerlyalso serves in the capacity of Instructional Specialist for Mississippi's Marion County School District. Conerly is a past recipient of the 2015 Shell Urban Science Educator Award, a 2016 Shell Science Lab Challenge Grand-Prize Award, and many other recognitions.

### *Cecelia Gillam, M.Ed.*

Cecelia Gillam is currently pursuing a Doctorate in Educational Leadership from Southeastern Louisiana University and has been a science teacher in St. Charles Parish Public Schools in Louisiana for seventeen years. Recently, she has become an advocate for the National Equity Project by being selected as a board member for the Black Teacher Project. Gillam is a 2021 Shell Science Lab Challenge Grand-Prize Awardee and a 2023 Shell Urban Science Educator Development Award Winner.


## *Roy Basa, Ph.D.*

Dr. Roy Basa is a science and CTE teacher in the Zuni Public School District in New Mexico. Prior to moving to the United States, he was awarded Outstanding Teacher of the Philippines 2016 by SOT, Metrobank Foundations, Asia's Most Remarkable and Exceptional CTE and Science Educator 2022 by Asia – Pacific Luminare Awards. Basa is a 2023 Shell Urban Science Educator Development Awardee.

## *Adrine Williams, Ed.D.*

Dr. Adrine Williams is a Program Coordinator at Jackson State University, where she develops and manages professional development for teachers. Previously she worked as a curriculum lead for the Jackson Public School District, where she provided guidance and supported instructional practices for her colleagues. Williams is both a Robert E. Yager Foundation Excellence in Teaching awardee and a Shell Urban Science Educator award winner.

# National Conference on Science Education • Kansas City 23

## Junior Science and Humanities Symposium

# Junior Science and Humanities Symposium

JSHS
JUNIOR SCIENCE AND HUMANITIES SYMPOSIUM

### WHAT IS JSHS?

**Junior Science and Humanities Symposium (JSHS) is a Department of Defense sponsored STEM program (U.S. Office of the Secretary of Defense and the U.S. Departments of the Army, Navy, and Air Force). Promotes original research and experimentation in the sciences, technology, engineering, and mathematics (STEM) at the high school level through competition at regional and national levels in eight core STEM areas.**

Biomedical Sciences
Chemistry
Engineering & Technology
Environmental Sciences
Life & Behavioral Sciences
Mathematics & Computer Sciences
Medicine & Health
Physical Sciences

**Connects talented students, their teachers, and research professionals aiming to develop trained individuals for STEM-based careers and research.**

### WHO IS ELIGIBLE?

- U.S. Citizens and Lawful Permanent Residents
- Students in 9th–12th grade

*"JSHS has been one of my most enjoyable experiences in my high school STEM career. It has taught me the value of scientific research and the value of diversity in STEM and the importance of scientific research for shaping the future."*

—JSHS Student 2020

### WHY SHOULD I PARTICIPATE?

- Develop and conduct original STEM research.
- Meet like-minded peers from other schools/regions.
- Receive free mentorship from professionals and experts in your chosen STEM field.
- Participate in a regional symposium and present to your peers and STEM personnel from the Department of Defense, federal research laboratories, and academia.
- Regional top five winners are sponsored to attend and compete at the National JSHS competition.
- Win scholarships for college and get publicly recognized for your work!
- Connections for future research opportunities
  - other Army, Navy, and Air Force STEM programs,
  - universities, and
  - other STEM professionals.
- Access to Department of Defense, university, and STEM industry laboratory tours, speakers, and other activities to provide insight into STEM careers and professional development.

### I AM INTERESTED! NOW WHAT?

- Find your region at http://www.jshs.org/regional-competitions/find-your-region/
- Go to www.jshs.org to learn more
- For additional inquiries contact admin@jshs.org

**IN COLLABORATION WITH OUR ESTEEMED ACADEMIC PARTNERS.**

@GO_JSHS | JUNIOR SCIENCE AND HUMANITIES SYMPOSIUM - JSHS
JSHS.ORG | 1-703-312-9206 | ADMIN@JSHS.ORG

## Science Teacher Leader Advisor Applications

**Coming soon: Science Teacher Leader Advisor Application Re-opening**

The Louisiana Department of Education's science content team is seeking high school science teachers to join our 2022-2023 Teacher Leader Advisor cohort. Teachers of all high school science courses are needed to develop resources for use by Louisiana educators. Additional information and an updated application will appear on the Department's Teacher Leader Teacher Leader Newsletter. page by August 23rd and will close on September 16th. Sign up to receive the newsletter by completing this form.

Please contact STEM@la.gov with questions.

## Learning Blade®

**Learning Blade®**, a STEM, Computer Science, and CTE resource is available **FREE** statewide in Louisiana through a joint venture of the Louisiana Board of Regents, LaSTEM, the Boeing Company, the Louisiana Dept. of Education and the Foundation for East Baton Rouge School System.

Learning Blade's over 400 online interactive lessons include **over 100 science-related** lessons that are aligned to state science academic standards for grades 5-9. Students are exposed to hundreds of unique STEM/CS/CTE-related careers and technologies while reviewing academics. See Mission Outlines.

Learning Blade also recently added the **New Introduction to Coding** course which includes over 20 hours of coursework aimed at 7th-8th graders but can also be used for other grade levels.

Sign up for your free Louisiana Learning Blade account today by filling out the form at www.LearningBlade.com/LA.*

Email us at info@learningblade.com to set up training or to learn more.

*Note: Learning Blade is free to all Parishes/Districts upon the signing at the Parish/District level of the Student Data Sharing Agreement.

## Audubon Zoo

This school year is rapidly approaching and Audubon Nature Institute's School Programs team would love to give your students a ***wild*** start to the year with our 45-minute programs featuring live animals from the Zoo. Click here to request your virtual school program, FREE for Title One Schools, today!

Audubon's virtual programs are highly interactive and connect your students to nature and science over Zoom. Our lessons are aligned with Louisiana state science standards for grades K through 12th and are offered Monday through Friday from 9:00am – 3:00pm. We have availability starting August 29th. Reservations will be made on a first-come and first-served basis, so don't delay in securing this fun and unique opportunity to enrich your curriculum!

Audubon's virtual school programs are free for all Louisiana Title 1 schools*, while Title 1 Targeted Assistance Programs receive a 10% discount from the $100 per program rate. (*Limit one free program per classroom per school year.)

Audubon's Virtual School Program themes include:

- **K-2nd Creature Coverings**: Explore the world of animal coverings, coats, skins, and more!
- **3rd-5th Oh, the Things They Eat**: Learn about the different roles animals play in a food chain!
- **6th-8th Bayou Diversity**: Discover the rich ecosystem of Louisiana and learn about the interdependence of native plants, animals, and humans!

Louisiana Science Teachers Association Newsletter (www.lsta.info)

- **9th-12th Mississippi River Story**: Learn how the Mississippi River shapes the land and the impacts it has on our ecosystem and daily lives.
- **9th- 12th impacting Wetlands**: Learn how wetland ecosystems impact coastal communities and discover local conservation groups and their efforts.

You can find more information at https://audubonnatureinstitute.org/virtual-education or feel free to reach out directly to this email (schoolprograms@audubonstitute.org).

## Arctic Ocean Curriculum Unit

The Arctic Research Consortium of the U.S. (ARCUS) announces a new resource, a curriculum unit focused on the Arctic Ocean.

The Arctic Ocean Curriculum Unit was created by ARCUS with funding from the North Pacific Research Board. The unit updates lessons originally created by PolarTREC alumni teachers to create a unit that uses recent data, aligns with Next Generation Science Standards (NGSS), polar, and ocean literacy principles, and encourages cultural relevancy. The format used lends itself to the changes in education - providing student-facing slide decks that allow them to move through the lessons with more independence.

The unit traces the movement of energy throughout the Arctic Ocean environment. There is a total of 18 lessons broken into two main components. The entire unit can be downloaded through the resources section of the PolarTREC website (https://www.polartrec.com/resources).

For more information and to download the unit, go to: Arctic Ocean Curriculum Unit webpage: https://www.polartrec.com/resources/lesson/the-arctic-ocean-curriculum-unit?amp%3Bqid=6854120

For questions, contact: Janet Warburton, warburton@arcus.org

## Unique Learning Opportunities Await You at Cane River Creole NHP

Cane River Creole National Historical Park is proud to partner with teachers and educators to provide curriculum-based, hands-on Science, Arts, Environmental Science, and History education experiences in the park, virtually, and in your classrooms. We are excited to connect both educators and learners with the unique resources of the Cane River area. Bring your class to visit Cane River Creole National Historical Park to explore a range of subjects including science, history, and the arts on one of our curriculum-based field trips. For schools nearby, Rangers will bring the park to your classroom though our In-Classroom Visit Programs. These programs include a wide range of topics such as Environmental Science and Reading, all building on curriculum standards. For schools further away, educators can schedule a program from anywhere in the world via a Distance Learning Program. Enhance your student's in the classroom learning with our lesson plans and other learning materials available to you online at www.nps.gov/cari/learn/education.

The park is pleased to offer a range of professional development. Join us for one of our single day Education workshops and return to your classroom with new tools and materials. For a more in-depth experience – become a Teacher-Ranger-Teacher (TRT). TRT is a program that offer teachers a unique opportunity to enhance their teaching resources with National Park Service-based Science, Technology, Engineering and Mathematics (STEM) education, use primary sources, and experience place-based learning. All while earning graduate credit through partnership with the University of Colorado Denver

National Park Service staff are available to help educators infuse their learning with National Park Service and STEM resources. To reach the park's education team visit us at www.nps.gov/cari/learn/education, email cari_interp@nps.gov,

or call 318-352-0383 x316 and leave a voicemail. The Park Rangers at Cane River Creole NHP cannot wait to connect you with these tools and resources!

## LASM Announces Return of Free First Sundays


## Youth Wetlands Program Online Learning Platform

Youth Wetlands Program online learning platform was now available. Teachers can sign up for free to gain access to lesson, activities, and other distance-learning resources. I'm including a link to the press release that went out from LSU AgCenter about the site. (https://www.lsuagcenter.com/profiles/jmorgan/articles/page1611327199513)

## NEEF Watershed Sleuth Challenge

The Watershed Sleuth Challenge

With NEEF's Watershed Sleuth Challenge, students will learn more about their local watershed—what it is, why it's important, and what they can do to help protect it—as they earn badges at each level of this three-part course

## New and Updated Resources for OpenSciEd Middle School Pilot

To assist teachers, schools, and systems with piloting OpenSciEd for middle school, the Department has updated existing resources and released new pacing documents.
These resources include
- Grade 6 and Grade 7 pilot guides updated with pacing guidance for the first three units in each grade;
- Grade 7 and Grade 8 pilot guides updated with links to newly released public units;
- OpenSciEd Distance Learning guidance updated to include Grade 8 Natural Selection; and
- OpenSciEd Purchasing and Professional Development updated kit purchasing information for revised units.

Additionally, ten units are now available in the National Instructional Materials Access Center (NiMAC) Inventory with more coming soon.
Please contact STEM@la.govwith questions.

## STEM Resources from the US Department of Education

The US Department of Education has recently shared two resources that may be useful supporting STEM learning.

- Data.gov is a database with over 335,221 real-world datasets from a variety of sources updated weekly and connected to free resources to help show how data shapes our lives.
- STEM Rising from the US Department of Energy features a monthly newsletter, social media connections, virtual learning resources, college workshops, and online career resources.

Please contact STEM@la.gov with questions.

## New Self-Paced Science Professional Learning Modules Available Now

To assist teachers, schools, and systems with implementation of high-quality science curricula, the Department has released three self-paced learning modules. These resources are designed to fit flexibly in a variety of professional learning formats. Modules may be accessed individually for an "at your own pace" style of PD or delivered by Content Leaders or other science leaders to drive professional learning and facilitate collaborative conversations. Learning modules are focused on the topics below and are available now.

- Science Instructional Model and Planning Guide
- Productive Science Talk and Planning for Discussion
- Leveraging Student Resources in Science

Each module includes a brief description, video, slide deck, and associated handouts.

Please contact STEM@la.gov with questions.

## Interact with PC's New Education Videos!

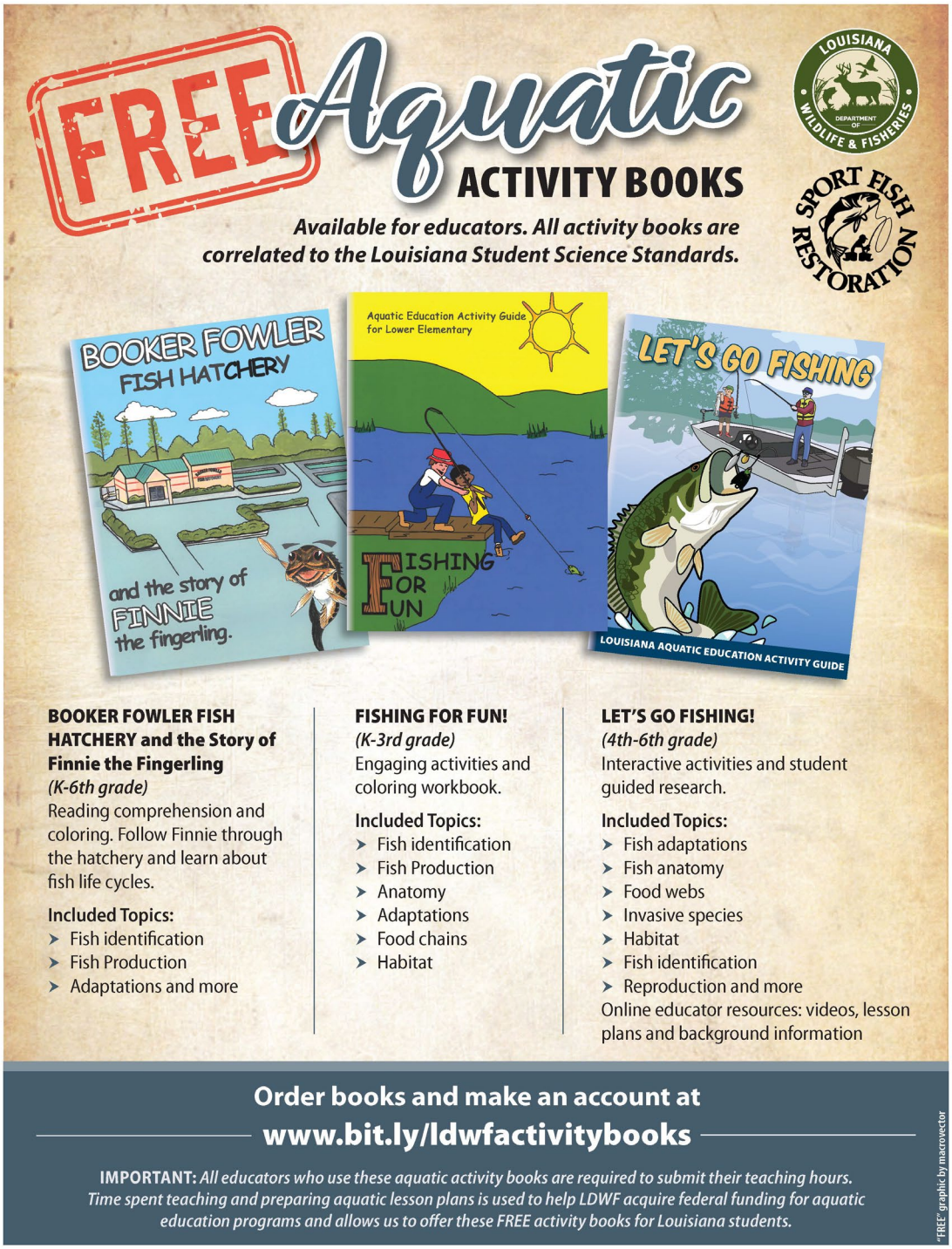
Join Pontchartrain Conservancy's Education Department in a series of videos that encourage participants to learn more about their local environment. These videos are interactive, with places for viewers to pause and answer questions, make predictions, or design and test their own experiments. Students and anyone interested are invited to participate in fun interactive ways, from writing down answers to building models!

There are currently four videos in the series that cover an array of environmental topics. The Coastal Land Loss Video Survey explains what the primary causes of land loss are and what can be done about it. The Ecosystems of the Pontchartrain Basin Survey covers what an ecosystem is and the animals and plants that live in ecosystems near the Pontchartrain Basin. The Hydrological Modifications Video Survey explains what hydrological modifications are and their main functions. The MLODS Video Survey teaches the Multiple Line of Defense strategy and its impacts on coastal communities. https://scienceforourcoast.org/pc-programs/education/interactive-videos/

## NASA EXPRESS


NASA EXPRESS features updates from NASA and STEM associates about workshops, internships, and fellowships; applications for grants or collaborations; promotions for student and educator opportunities; online professional development; and other announcements.

## Louisiana Department of Wildlife and Fisheries



## *Chemistry Shorts*™ Releases New Video and Lesson Plan on Directed Evolution Technology

**The materials are available free of charge via chemistryshorts.org**

***Like demolition derby cars continually upgrading to face greater and greater challenges, enzymes can undergo modifications in the test tube that make them better and better at solving problems in our everyday lives. But can we evolve them fast enough to clear some of our biggest obstacles?***

Our world faces climate, economic, and sustainability challenges that we don't yet have the tools to fix. "**Driving Reactions**," a nine-minute short film from *Chemistry Shorts*, explores how directed evolution and the chemical sciences are creating some of these new tools.

"Driving Reactions" explores the power of harnessing nature's own innovations to solve problems. Featured scientists **Professor Hal Alper** of the University of Texas at Austin and Nobel Laureate **Professor Frances Arnold** of the California Institute of Technology use directed evolution to design enzymes that work as molecular machines, helping create a more sustainable world using the power of chemistry. These new enzymes open the door of scientific progress, creating solutions for recycling waste, creating sustainable fuels, and more efficiently producing materials we use in our everyday lives. "Driving Reactions" focuses on Dr. Alper's innovative work to design an enzyme that can efficiently degrade PET, or polyethylene terephthalate, one of the most common plastics found in water bottles and other everyday objects, into infinitely recyclable and reusable products.

***"We have the ability to use the power of chemistry to find sustainable solutions for the future."*** - Hal Alper, "Driving Reactions"

"Driving Reactions" is aimed at high school and college students and can be used as a starting point for discussions around polymer chemistry, enzyme reactions, directed evolution, DNA, and plastic recycling.

The film is available for immediate viewing and use in teaching free of charge on the *Chemistry Shorts* YouTube channel. A full lesson plan to accompany the film is available on the *Chemistry Shorts* website.