4th Quarter LASTEM Advisory Council Meeting
LUMCON’s ‘Blue Works’ building, Houma
12/7/2023
Today’s Agenda

I. Welcome and Roll Call
   • Brian Roberts, Executive Director, LUMCON
   • Introduction of New Council Members

II. Approval of 2nd and 3rd Quarter Meeting Minutes

III. STEM Definition Review & Approval

IV. LASTEM Summit Review

V. LDOE/STEM Center Collaborations
   • Jamie Mixon, Computer Science and STEM Supervisor
   • John Underwood, STEM Specialist

VI. Region 3 Update
   • Christie Landry, BayouSTEM Director

VII. 2024 Meeting Dates
   • 1st Quarter: February 22, 2024
   • 2nd Quarter: May 2, 2024
   • 3rd Quarter: August 15, 2024
   • 4th Quarter: November 14, 2024

VIII. Adjournment

Lunch Provided by BayouSTEM, Region 3

- Blue Works ribbon-cutting at Noon, followed by facility tours.

- Nicholls Farm activities
Dr. Brian Roberts
Executive Director and Chief Scientist
LUMCON
Welcome New Members!

Robin Cosenza, representing the LA School Boards Association

Robin Cosenza has worked with the Louisiana School Boards Association on numerous special projects for the past 8 years. She officially joined the LSBA team in August 2020 as the Member Services and Projects Manager.

For more than 20 years, Robin has worked in the project management and public relations/communications arenas. She has an extensive background in the development and implementation of public awareness and political campaigns as well as brand expansion that stems from years of working with both corporate and small businesses in the Central Louisiana area and beyond. Robin holds a Bachelor of Science degree in Business Administration from Louisiana College in Pineville. She is a member of the Central Chapter of the Public Relations Association Louisiana (PRAL), having served on the board for 10 years.
Welcome New Members!

Taya Loupe, representing the LA Association of Principals

Mrs. Taya Loupe holds a Bachelor of Arts degree in Education from Purdue University and a Master’s degree in education from Louisiana State University. Mrs. Loupe has served as an educator in West Baton Rouge Parish for 25 years. Her career spans across the entire K-12 spectrum. She began her administrative career as an assistant principal at the high school level. She then moved to be an assistant principal at the elementary level where she then served as the building level principal for three and a half years. She is currently in her sixth year serving as Principal of Brusly Middle School in Brusly, Louisiana, which serves grades 6-8. Prior to that she served in various roles such as teacher, coach, assistant principal, and elementary principal.

Mrs. Loupe was a semi-finalist for Louisiana State Principal of the Year in 2022 and is firmly committed to the belief that all students can learn. All children need is a caring, connected adult who can help turn a student’s life around. She focuses on building school culture, staff leadership, and creating an environment that staff and students embrace. Mrs. Loupe strives each day to have positive interactions with students on campus, but she also ensures the right decisions are made to create a positive and high-quality learning environment for all students and faculty.
Welcome New Members!

Jamie Mixon, representing the LA Department of Education

Jamie Mixon, currently serves as the new Computer Science and STEM Supervisor at the Louisiana Department of Education where she leads work related to K-12 STEM strategy and the coordination of the STEM Teacher Leader Advisors.

Prior to joining the Department, she served in various roles within her local school system including teacher, interventionist, lead teacher, and assistant principal. As a former math and science teacher who has a passion to see learners grow and succeed, Mrs. Mixon collaborates with partners across our state to broaden and expand STEM opportunities for Louisiana students.
Welcome Back!

Susana (Susie) Schowen, representing the LA Community and Technical College System (LCTCS)

Ms. Susana (Susie) Schowen joined the Louisiana Community and Technical College System as the Vice President of Education in 2022.

Before LCTCS, she spent ten years with LED FastStart, a division of Louisiana Economic Development. She focuses on building coalitions of industry partners, economic developers, and educators to align our programs with the needs of employers and the economy, increasing the prosperity of our people and our communities.

Prior to joining LED, Susie held leadership roles with several private companies in the technical training and educational services sector. Susie has degrees in chemistry from Wellesley College and Columbia University.
Special Message from State Senator Sharon Hewitt
I. Roll Call

II. Approval of 2\textsuperscript{nd} and 3\textsuperscript{rd} quarter meeting minutes
III. STEM Definition Review & Approval
Changing Definition of STEM Over the Years

How are we going to prepare our future workforce for 21st Century Careers?

Let’s prioritize Science, Mathematics, Engineering, and Technology programs and call it SMET!
We are having a messaging issue with SMET, what should we do?

We could try a different acronym, STEM!
Changing Definition of STEM Over the Years

1990

We can't forget about Allied Health and Medicine! STEMM!

We need to reach more learners! Programs need to account for DEIA as well.

Let's not forget about the vocational programs.

Today
Changing Definition of STEM Over the Years

Nick S @npse

forget STEM, now I’m all about STEAMED HAMS: science, technology, engineering, art, math, humanities, anthropology, music, and such
According to 2020 IBM study, global human knowledge is doubling every 11-12 hours.

How can educators remain content experts? Can we keep up with 'knowledge half-life'?

The ability to facilitate the ownership of information is more important in this accelerated learning environment.
A 21st Century classroom will include interactive learning, higher level thinking skills, and student engagement.

Interactive learning does not always mean technology alone.

Learning must be an interaction between the educator, the information, and the audience.

Buzz words are simply tools (chalkboard, pencil)

Connecting information and outcomes is critical to growing our future workforce.
STEM education is a method of hands-on teaching and learning where students learn to apply academic content by creatively solving real-world problems with innovative design-based thinking to prepare students for future career opportunities.

STEM education provides opportunities for students to engage in authentic experiences in the classroom that are linked to local and global communities.

K–12 STEM education encompasses the processes of critical thinking, analysis, and collaboration in which students integrate the processes and concepts in real-world contexts of science, technology, engineering, and mathematics, fostering the development of STEM skills and competencies for college, career, and life.

STEM (Science, Technology, Engineering, and Mathematics) education is a method of hands-on teaching and learning where students learn to apply academic content by creatively solving real-world problems with innovative design-based thinking to prepare students for future career opportunities.

STEM – Science, Technology, Engineering, and Mathematics. The goal of STEM and STEAM schools is to foster intellectual, entrepreneurial and technical talent and design thinking. This is vital to Ohio’s future economic growth and prosperity, which depends on an aligned education system to support the state’s economic development efforts and that helps all Ohio students become innovators and inventors, self-reliant and logical thinkers and technologically proficient problem solvers.

STEM education in Florida is focused on generating new ideas, concepts and theories that address real-world challenges and spur scientific breakthroughs.

The Definition of STEM Across America
STEM education, as defined by the Louisiana STEM Advisory Council (LASTEM), is an integrated approach to learning about scientific, technological, engineering, and mathematical concepts and processes as well as their application in careers and in life.

**STEM education cultivates critical thinking, analysis, and collaboration skills applicable in real-world contexts.**

It emphasizes dynamic, hands-on, experiential learning across the STEM spectrum, enabling students to creatively solve real-world problems through innovative design thinking.

Skills developed through STEM prepare learners for success by providing authentic experiences relevant to 21st-century life and work.

**STEM, STEAM, STEMM, STREAM, SMET, STEMIE, STEEM, or any other combination is now encapsulated under this definition.**
III. STEM Definition Review & Approval

Approve or Disapprove Vote
IV. LASTEM Summit Review
STEM TODAY, SUCCESS TOMORROW

2023 LASTEM SUMMIT
October 17, 2023
CAJUNDOME and Convention Center, Lafayette
What is LASTEM and the Annual Summit?

- **LASTEM**: A statewide initiative that connects education and workforce opportunities through STEM learning into communities (K – Gray)

- **Goals of the Summit**: Bringing together Regional Centers, education, workforce, and community partners to promote awareness of STEM opportunities connected directly to Louisiana jobs

- **Previous Summits Held**:
  - 2018 – Pennington
  - 2019 – Raising Cane’s River Center
  - 2020 – Virtual due to Covid
  - 2021 – Postponed due to Covid
  - 2022 – Raising Cane’s River Center
  - 2023 – Lafayette Cajundome
LASTEM Summit Metrics

- 746 Registrants
- 650 Attendees
- 60 Exhibitors
- 2 Mobile STEM Labs
- 45 Breakout Sessions/panels

Overall Event Rating: 85%
Attendees rated the overall event as Excellent or Good
Comments from Attendees

- I loved hearing from the students.
- This was great! Mark Perna was a fantastic speaker and the breakouts were so inspiring!
- Important and timely information shared.
- Yes!!
- The opportunity to collaborate with optimistic science educators was exhilarating!
LASTEM Summit Sponsors

### STEM ADVOCATES

- Boeing
- BASF
- Learning Blade

### STEM SUPPORTERS

- Meraux Foundation
- ExxonMobil
- REC Foundation
- Central Creativity

2017-2022 sponsorships: ~$25,000
2023 total sponsorships: $22,000
2024 goal: $50,000

2024 LASTEM Summit sponsorship packets will be sent out to councilmembers soon
Mark Your Calendars!

2024 LASTEM Summit
Cajundome & Convention Center, Lafayette
October 8, 2024

Steering Committee held first meeting on 12/5

Extra special thanks to the RSI team and other volunteers at the Board of Regents for their efforts bringing the LASTEM Summit together
Celebration! Funding and Grants

Examples

- $3.4M Collaboration with LDOE/SELU/LSU
- $1M Federal Appropriation with BoR/SCILS
- $765k Navy/Robonation DODSTEM
- $100k Boeing (GNOrocs)
- $170k Chevron (GNOrocs/BayouSTEM)
- $65k Shell (BayouSTEM)
- $25k Centerpoint Energy (SciPort)
- $12.5K Verizon (SciPort)
- ~$175k Americorps (Northshore STEM)
- $60k NASA Space Act Grants (Capital Area STEM/BoR)
Celebration! Funding and Grants

- 96 UNIQUE SeaPerch programs
- 1,056 SeaPerch Kits utilized
- 4,679 STUDENTS impacted
- 147 Teachers Trained

www.seaperch.org
III. LDOE Update
LDOE and LASTEM Collaborations
The **Key Features of Quality STEM** are:

1. All Students have **access** to quality STEM learning experiences.
2. STEM instruction is a **continuous spectrum** of experiences across multiple disciplines from K-12.
3. **Student-centered** investigation and design drive learning outcomes for students.
4. **Career-connected** STEM experiences expose students to future opportunities, partnerships with industry, and possibilities in STEM extending beyond the classroom.
5. **Disciplinary practices** in science, technology, engineering, and mathematics are leveraged appropriately, driving engineering design and innovative technology integration.
Ignite, Energize and Inspire!
Vision for K-12 Computer Science

Louisiana’s vision for K-12 Computer Science Education is to increase digital literacy skills in all students through actively engaging with progression(al computer science experiences that prepare students for success in society and with future career opportunities.
Ignite!

The goals of Ignite are to offer:

- 40 hours of in person and virtual training to all public and public charter schools,
- training and authorization to use Code.org’s K-5 resources,
- introductory training in block-based coding,
- introductory training in robotics, and
- to establish a community of practice.
Energize!

The goals of Ignite are to offer:

- 40 hours of in person and virtual training to all 6-12 public and public charter schools,
- training and preparation to pass the Computer Science (5652) Praxis content area exam,
- study tools to provide individualized learner guidance,
- pedagogical and classroom lessons to practice teaching concepts, and
- to establish a community of practice.
## Computer Science Education Week

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<tr>
<th>Day</th>
<th>Focus Topic</th>
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<tr>
<td>Monday</td>
<td>Cybersecurity and Cybersafety</td>
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<td>Tuesday</td>
<td>Exploring Computer Science Careers</td>
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<td>Wednesday</td>
<td>Computer Coding</td>
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<td>Thursday</td>
<td>Responsible Social Media Awareness and Usage</td>
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<td>Friday</td>
<td>Showcase STEM and CS in Your School</td>
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Inspire: Robotics

Teachers were trained in the summer of 2023 and are now facilitating coding, math, and robotics lessons in grades 6-8.
Inspire: STEM Leadership Cohort

Teacher Leader Advisors will:

- Learn how to identify and apply quality STEM resources with students,
- Increase pedagogical knowledge and practices for STEM, and
- Design STEM implementation plans for schools.

Region 4 STEM Network Center (R4SNC)
Questions?

Please reach out to us with any questions.

STEM@la.gov

jamie.mixon@la.gov

john.underwood@la.gov
III. Region 3 Update
BayouSTEM Update
LaSTEM Q4 Advisory Council Meeting-2023
Regional Partners Who Make What We Do Possible:

**Fletcher Technical Community College**
Fletcher Technical Community College is dedicated to offering high-quality technical and academic programs to the community of South Louisiana and beyond. The College prepares individuals for employment, career and academic advancement, and lifelong learning.

**Shell**
Shell's purpose is to power progress together by providing more and cleaner energy solutions. We believe that rising standards of living for a growing global population are likely to continue to drive demand for energy, including oil and gas, for years to come.

**Chevron**
Our purpose is to develop the affordable, reliable, ever-cleaner energy that enables human progress. We work to provide the energy that enables human progress around the world.

**John Deere**
To provide innovative products and services that help our customers improve their quality of life.

**BTNEP**
Our mission is the preservation and restoration of the Barataria-Terrebonne estuarine system, the 4.2 million-acre region between the Atchafalaya and Mississippi Rivers.

**Nicholls State University**
Nicholls State University delivers accredited degree programs and comprehensive learning experiences to prepare students for regional and global professions within a spirited campus environment immersed in Bayou Region culture.
BayouSTEM Goals
FY 2023-2024

Goal 1:
Create a succession plan to measure matriculation from LaSTEM/BayouSTEM programming into STEM training programs at regional training/educational programs.

Goal 2:
Develop engagement activities and opportunities in STEM associated with Coastal Louisiana.

Goal 3:
Identify and Implement opportunities to grow workforce-related relationships with local, state, and national partners.
## Goal 1: Succession Plan—Awareness of BayouSTEM/LaSTEM

### Rural STEM Initiative: Informal Outreach Programming
- Chemistry Road Show
- STEM After-School

### Rural STEM Initiative: Robotics Training Program
- Robotics Day Camps
- FIRST Lego League Regional Qualifier
- FIRST Robotics Competition Community Team
- Teacher/Coach/Mentor Professional Development

### Rural STEM Initiative: Summer Programming
- Summer Camp Programming
- Rural STEM Ambassador
- Professional Development for Teachers and Librarians

### Rural STEM Initiative: Summer Camp Development
- Summer Camp Development that is relevant to SE Louisiana
- Integrated learning: connect STEM activities to literature
STEM After-School

Booked monthly dates at regional public libraries to host a STEM activity for K-8th graders.

All regional libraries participated.
Attendance by both kids, and parents at each library site.

Branch out to reach more students.
End of day/transportation an issue across the region. Work with community centers, rec districts, fire stations to increase availability.

Develop a volunteer base.
Training for STEM activity implementation for librarians, teachers, parents, etc. to encourage increased participation and availability of events.

198 K-8th Participants
132 Parent/Adult Participants
25% Repeat Participants
Rural STEM Initiative: Summer Programming and Camp Development

Tried and True Camps
- Energy Venture Camp
  - Enrollment increased by 300% (5th-12th grade)
  - Coding, drones, biodiversity, logistics, etc.
  - 2023 Gulf Energy Information Excellence Award–Best Outreach Program
- NASA AstroCamp
  - Over 200 campers from K-12th grade
- Girls In STEM Camp
  - Over 50 girls from 3rd-6th grade

New Summer Camps
- Engineering Camp
  - Middle-High School
- Biology Camp
  - High School (fieldtrips)
- Science Fair Camp
  - Middle-High School
- Surviving the Wild: Hatchet
  - 2st-9th grade
- Sound and STEM Camp
  - K-2nd grade
- Ways of Water Camp
  - K-High School
Summer Camps
Rural STEM Initiative: Robotics Training Program

FIRST Robotics Competition (FRC) Community-Based Team
- Funding sources: Rookie Grants from John Deere Inspire and FIRST (also NASA)
- Team Recruiting Event: DEC 09
- Launch Party: JAN 06 2 Stennis Space Center
- Robot Build: JAN–APR 2024
- Regional Competition: APR 4–6; Kenner, LA

Robotics Day Camps
- K–8th Grade
- Led builds for new coders
- Challenge builds for experienced coders
- Students and parents invited

ML-BOTS
- 6th–12th grade
- AI and ML basics with NASA-inspired application
- Teacher PD
- 15–20 hrs of class time to project

SEA-PERCH ROVs
- 4th–12th grade
- Production and piloting
- Teacher PD
- GSLE leader PD
COASTAL 101

Introduction to careers and skills needed to successfully compete in the Coastal Restoration job market.

- Industry-Based Certifications/Credentials Earned:
  - OSHA-30
  - Green Infrastructure Inspection
  - FCC 107*
  - Forklift Driver*

- Practical Skills/Knowledge:
  - Introduction to Coastal Restoration Agencies and Funding Sources
  - Data Collection and Interpretation—CRMS
  - Water Quality Monitoring
  - Air-boat Safety and Piloting*
  - Job Application Training (resume, interview, etc)

Scholarships provided by RESTORE ACT FUNDS awarded to TPCG
VII. 2024 Dates
- 1st Quarter: February 22, 2024 (Claiborne Building)
- 2nd Quarter: May 2, 2024
- 3rd Quarter: August 15, 2024
- 4th Quarter: November 14, 2024

VIII. Adjournment