



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

Welcome From Host



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.

Agenda Items



Special Message from State Senator Sharon Hewitt

Agenda Items

I. Roll Call

II. Approval of 2nd and 3rd 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!



1990

2000

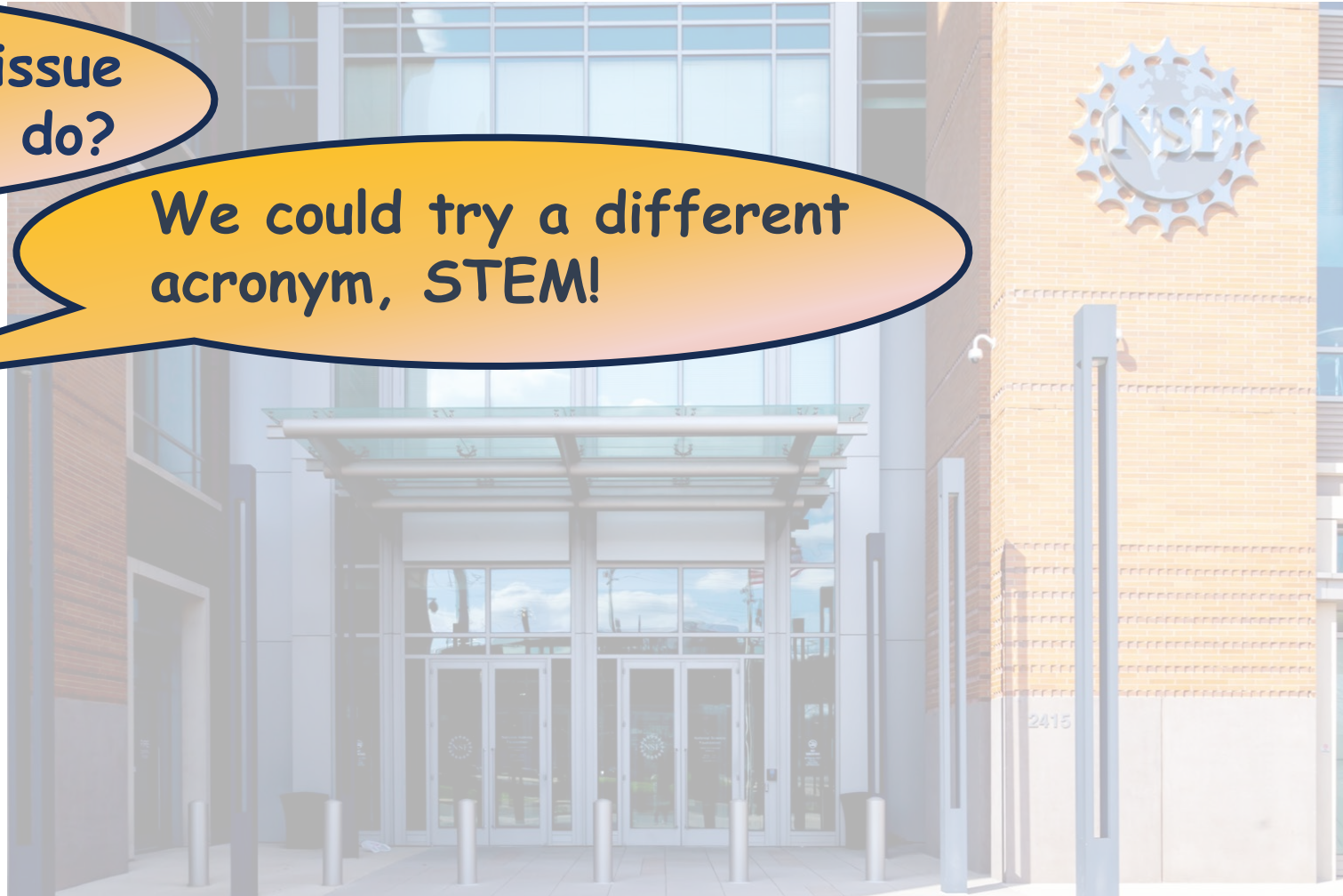
2010

Today

Changing Definition of STEM Over the Years

We are having a messaging issue with SMET, what should we do?

We could try a different acronym, STEM!



1990

2000

2010

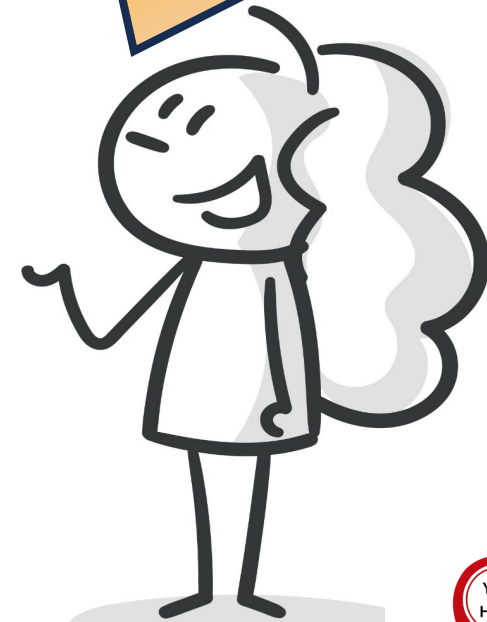
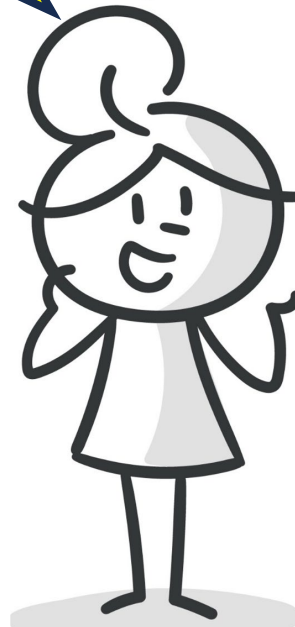
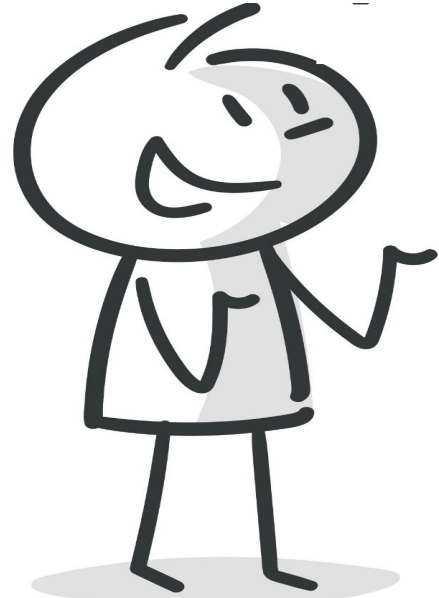
Today

Changing Definition of STEM Over the Years

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

Let's not forget about the vocational programs

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



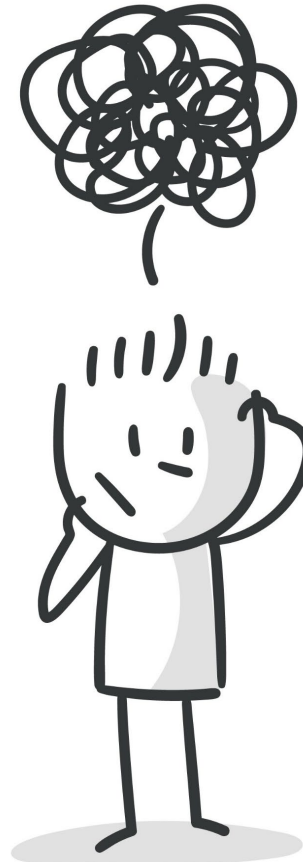
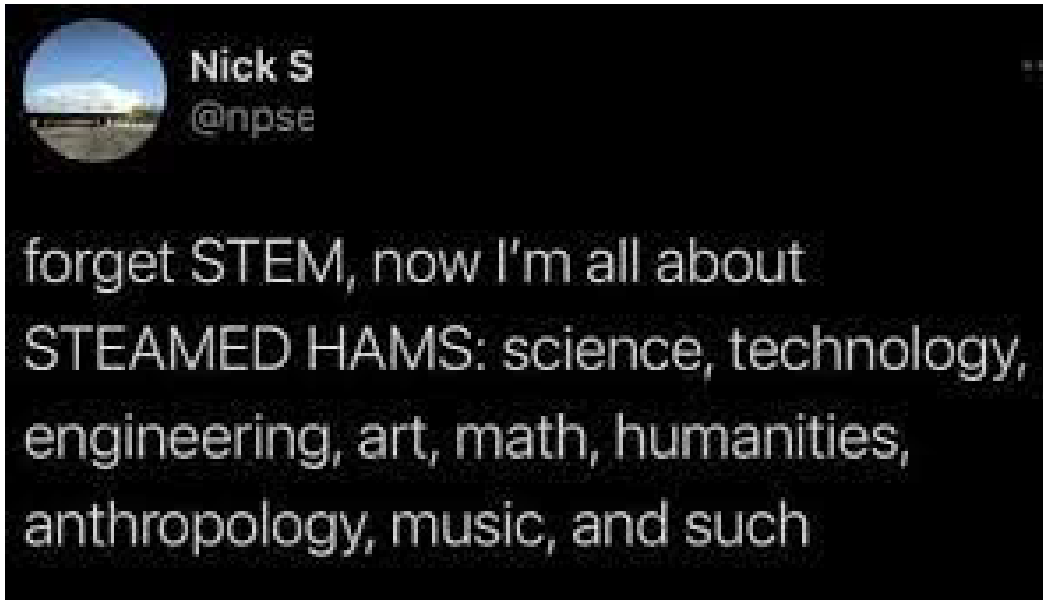
1990

2000

2010

Today

Changing Definition of STEM Over the Years



1990

2000

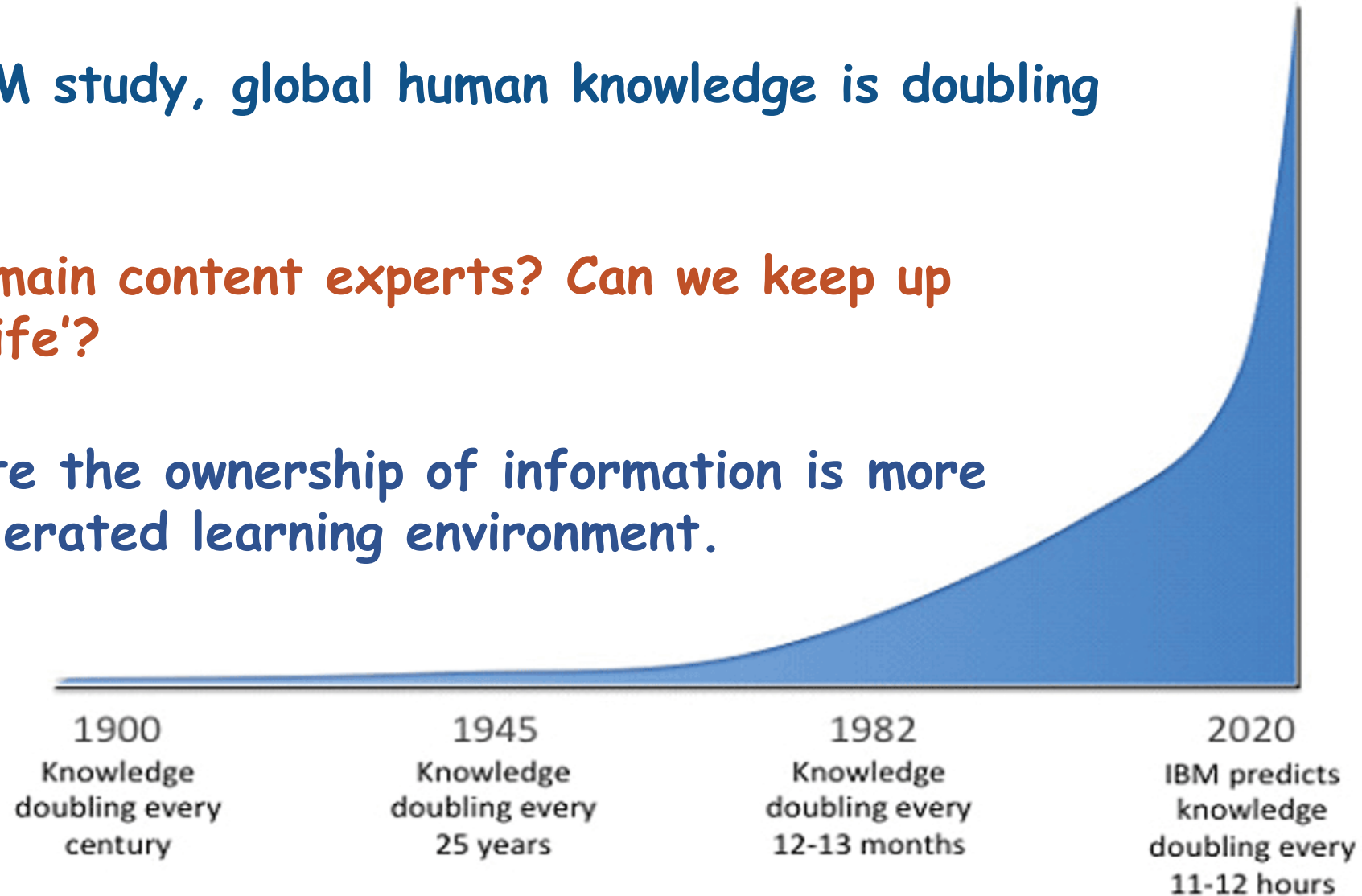
2010

Today



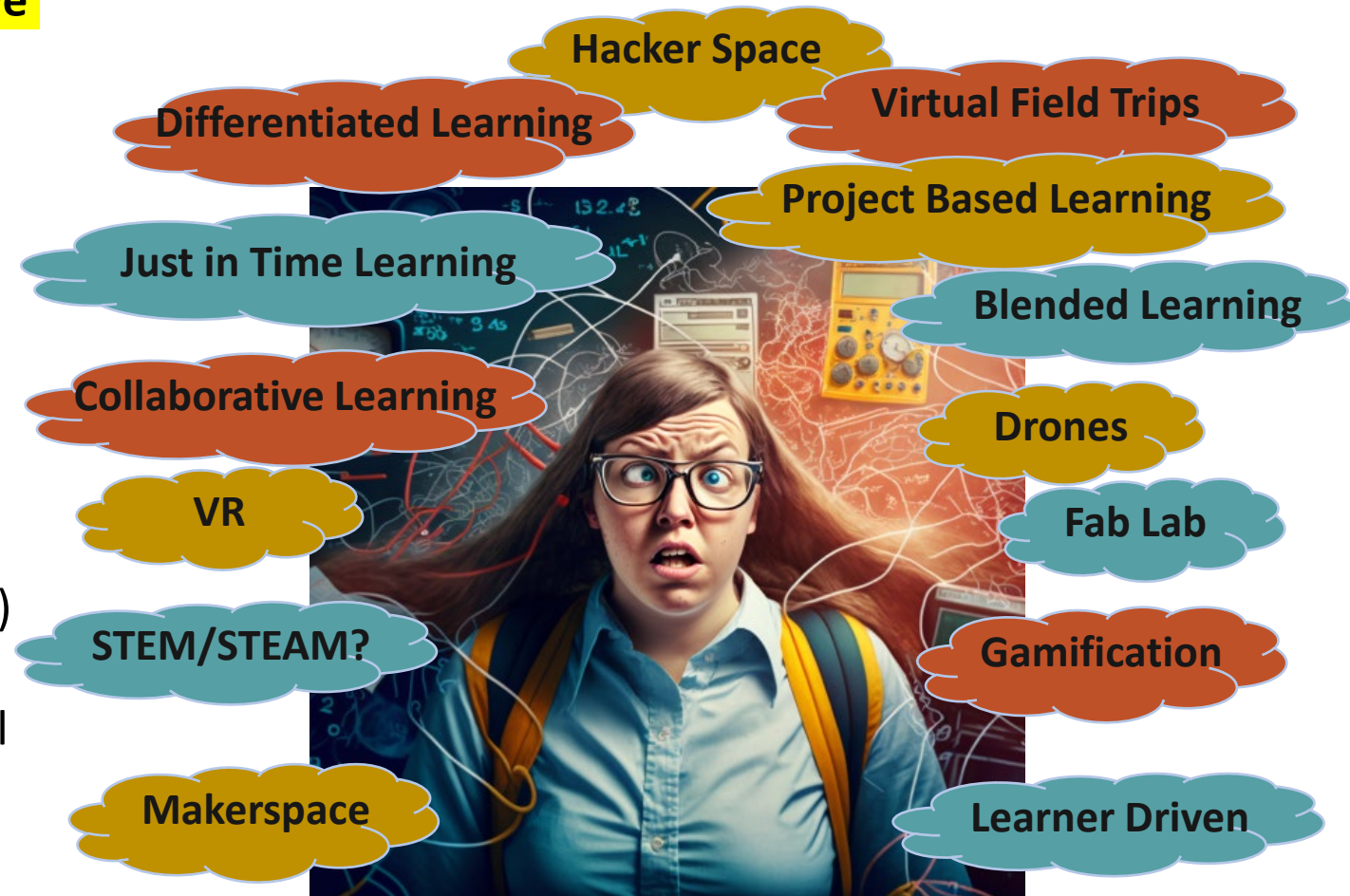
Education is Constantly Evolving

- 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.



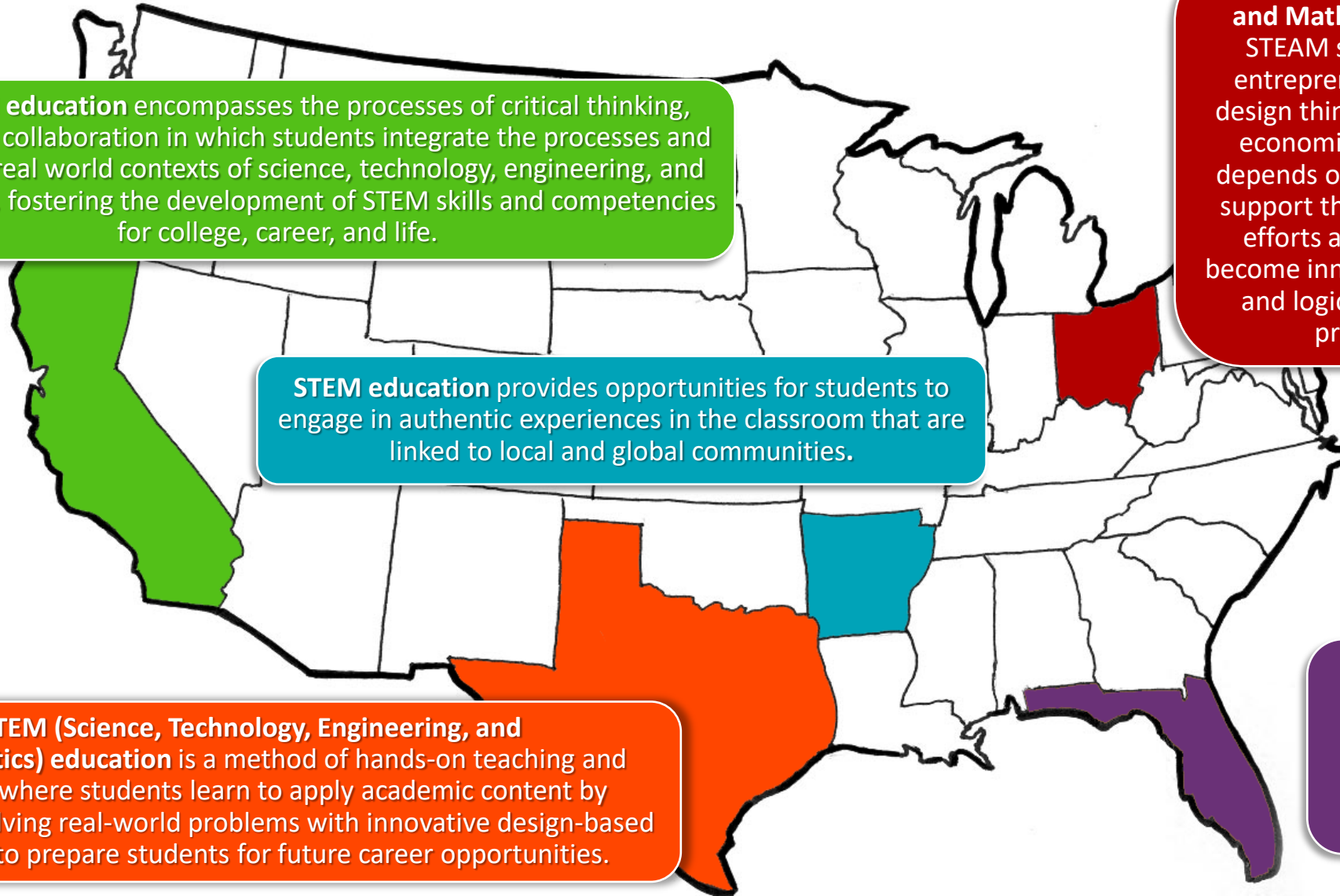
Where Do You Begin?

- 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.



(AI Generated Image)

The Definition of STEM Across America



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

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.

Louisiana Definition of STEM

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

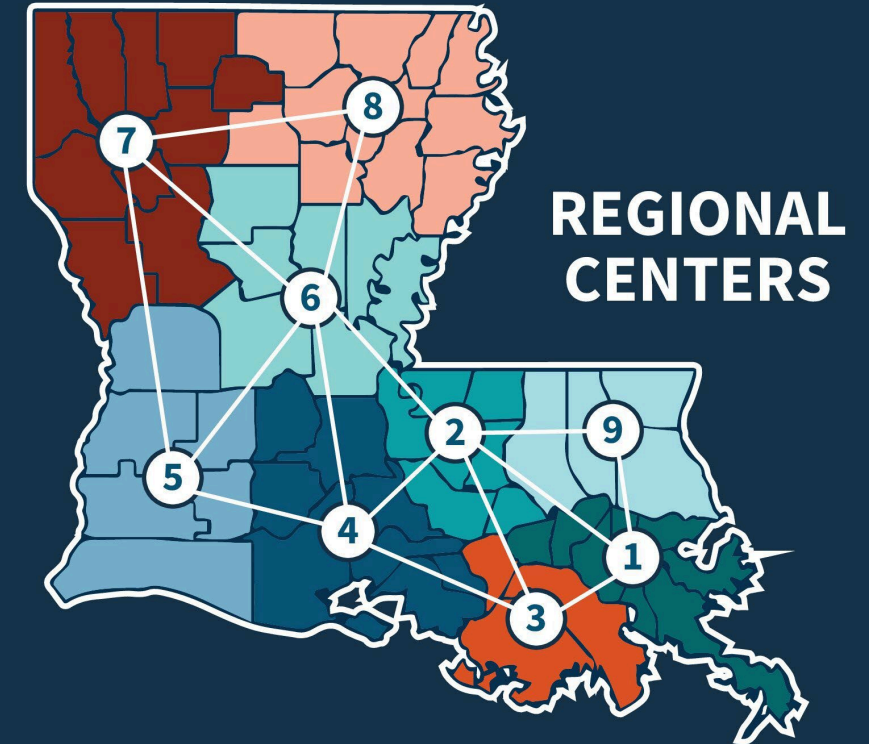
October 17, 2023

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 REGIONAL DIRECTORS

Region 1	Daphne Barnes	Greater New Orleans, Inc., New Orleans
Region 2	Summer Dann	Louisiana State University and A&M College, Baton Rouge
Region 3	Christie Landry	Fletcher Technical Community College, Houma
Region 4	Angela Boxie	University of Louisiana at Lafayette, Lafayette
Region 5	Mark Arseneault	Calcasieu Parish School Board, Lake Charles
Region 6	Jennifer DePriest	Northwestern State University, Natchitoches/Alexandria
Region 7	Dr. Heather Kleiner	Sci-Port Discovery Center, Shreveport
Region 8	Cathi Cox-Boniol	Louisiana Tech University, Ruston
Region 9	Wendy Conarro	Southeastern Louisiana University, Hammond and Northshore Technical Community College, Lacombe

LASTEM Summit Metrics

746
Registrants

650
Attendees



60 Exhibitors

2 Mobile STEM
Labs



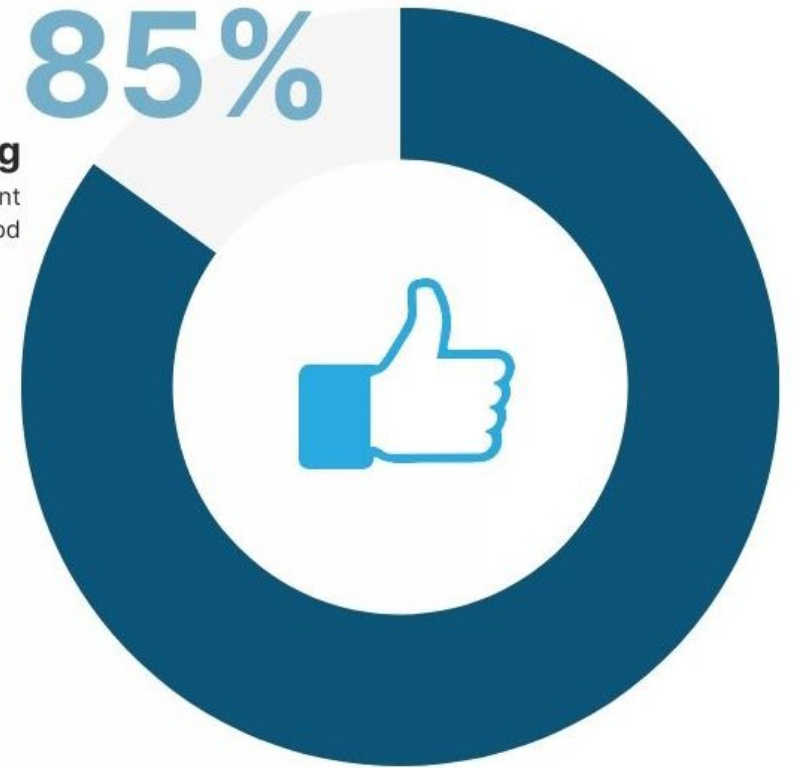
45
Breakout
Sessions/Panels



Overall Event Rating

Attendees rated the overall event
as Excellent or Good

85%



Attendee Highlights



Comments from Attendees



THE OPPORTUNITY TO COLLABORATE
WITH OPTIMISTIC SCIENCE EDUCATORS
WAS EXHILARATING!



LASTEM Summit Sponsors

STEM ADVOCATES



STEM SUPPORTERS

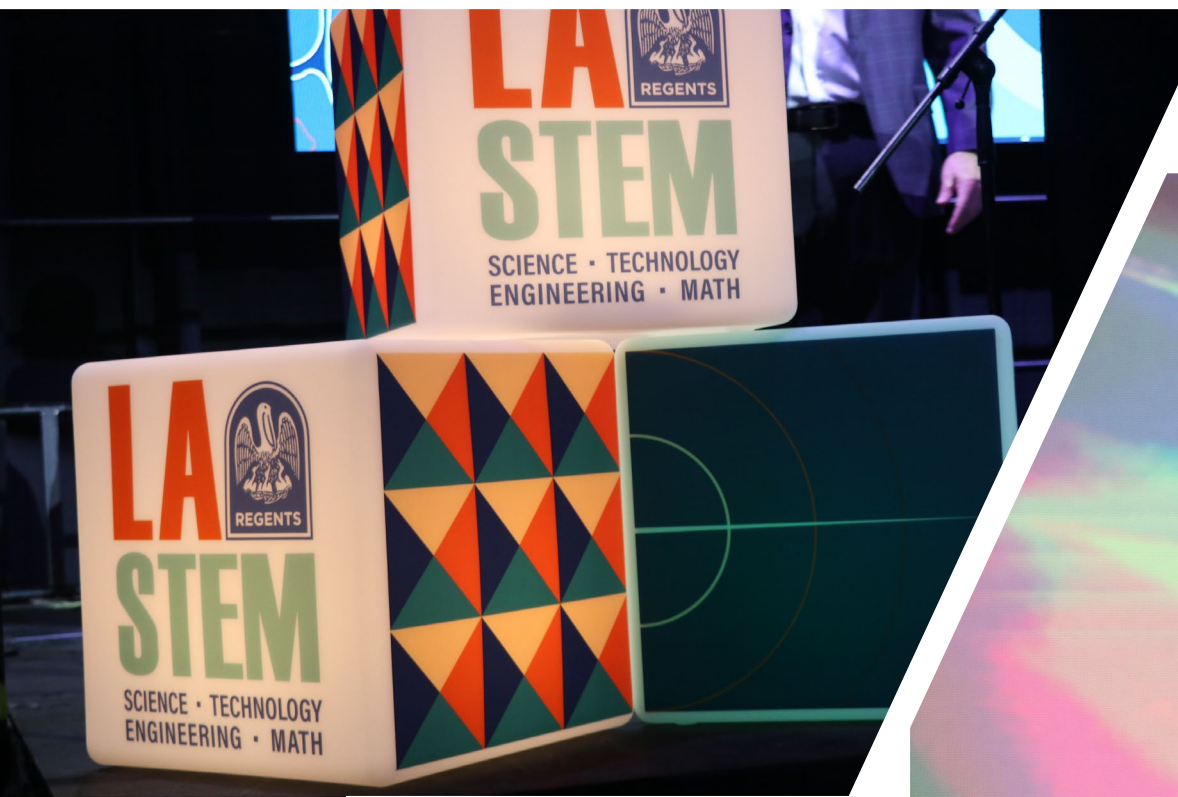


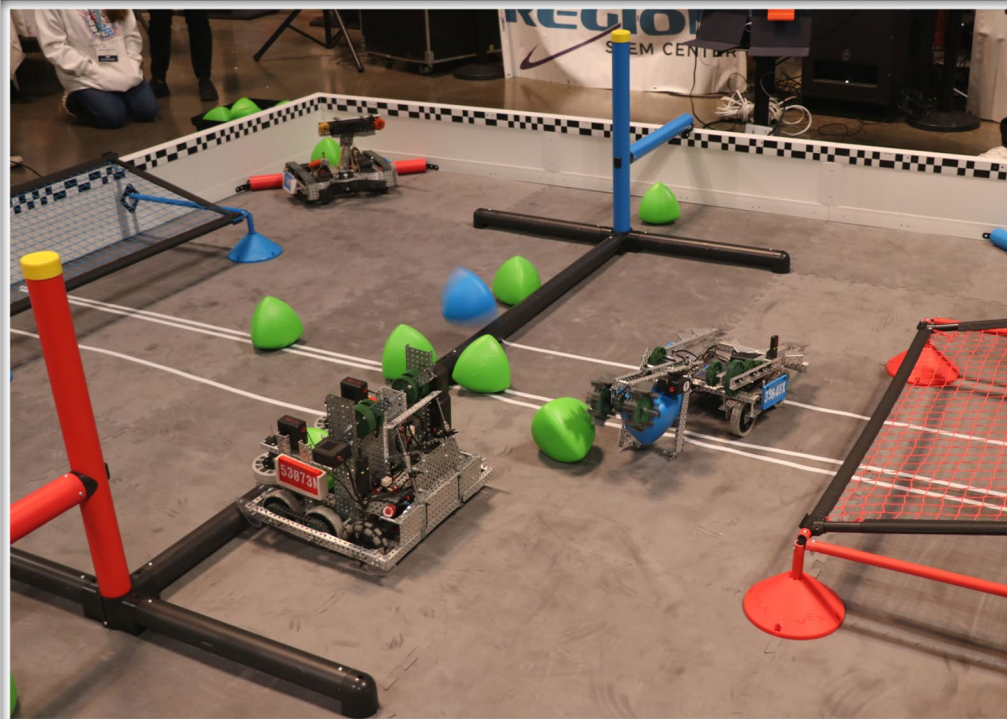
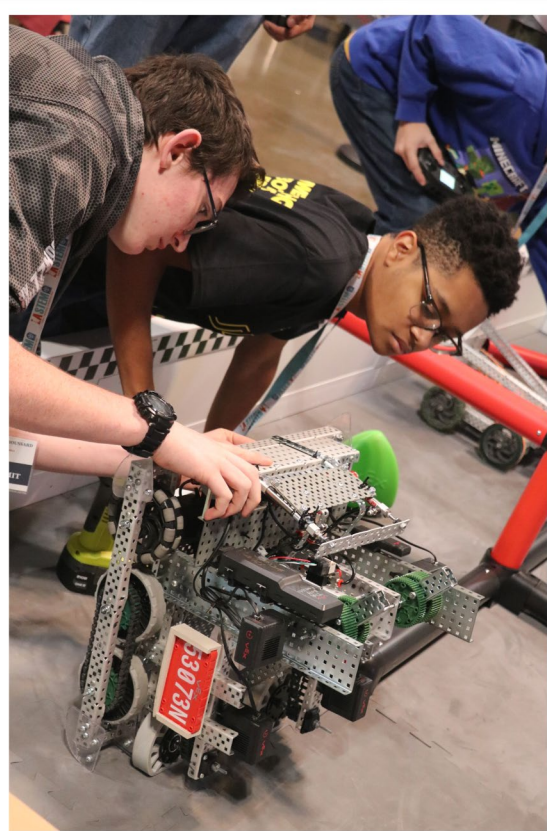
2017-2022 sponsorships: ~\$25,000

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

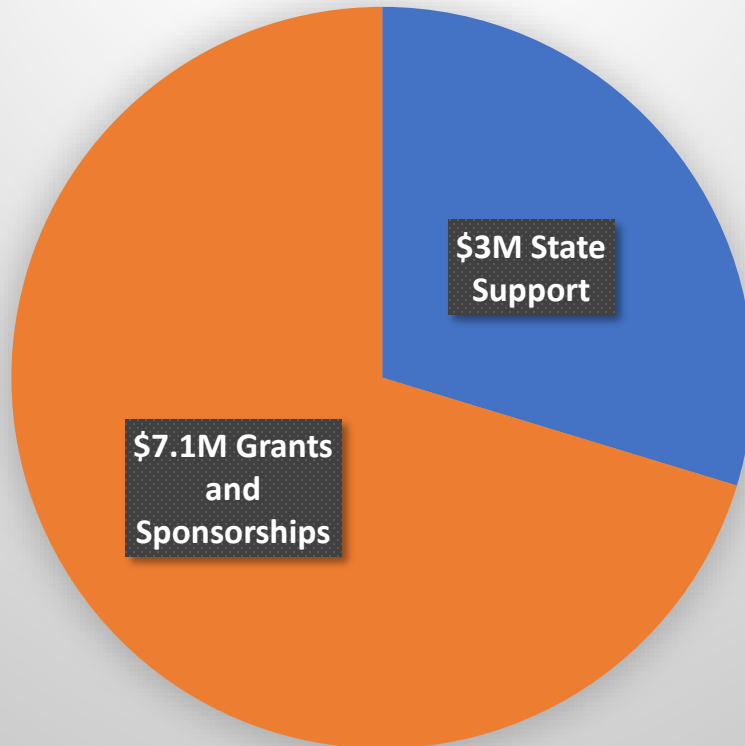
Steering Committee held first meeting on 12/5

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

Funding



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



robonation



seaperchTM



96

UNIQUE
SeaPerch
programs



1,056

SeaPerch Kits
utilized



4,679

STUDENTS
impacted



147

Teachers
Trained

Agenda Items

III. LDOE Update

LASTEM Advisory Council Ignite, Energize, and Inspire!

Computer Science and STEM Opportunities



December 7, 2023

LDOE and LASTEM Collaborations

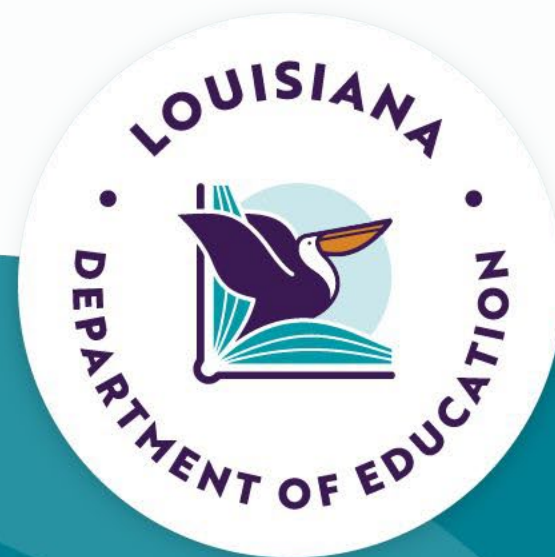


The Key Features of Quality STEM are:

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 **progressional** 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.

The Ignite Project
Registration



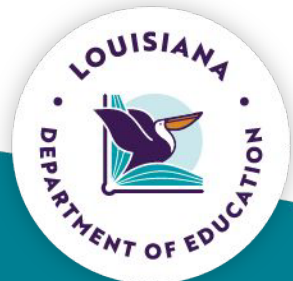
Energize!



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.

[Northshore Regional STEM Center](#)



Computer Science Everywhere!

Computer Science Education Week



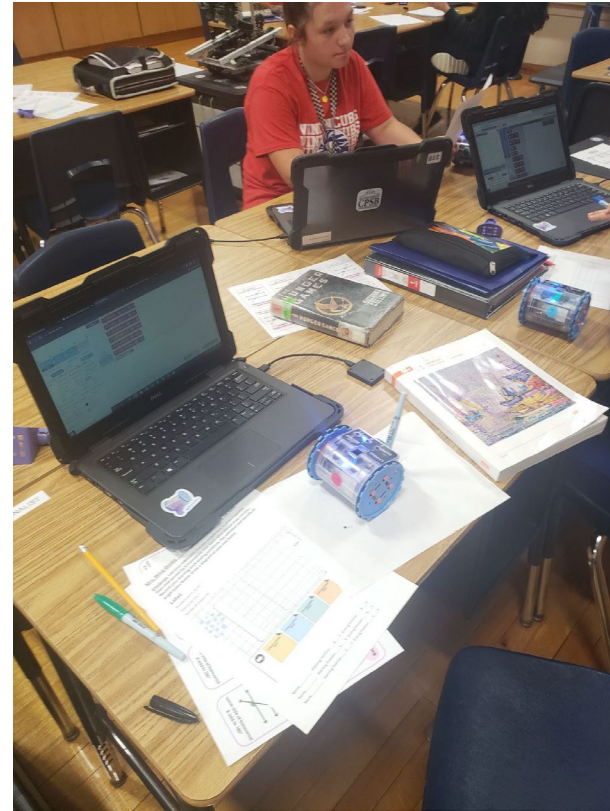
Day	Focus Topic
Monday	Cybersecurity and Cybersafety
Tuesday	Exploring Computer Science Careers
Wednesday	Computer Coding
Thursday	Responsible Social Media Awareness and Usage
Friday	Showcase STEM and CS in Your School

[Resources](#)



Inspire: Robotics

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



Coding with Robotics and Math



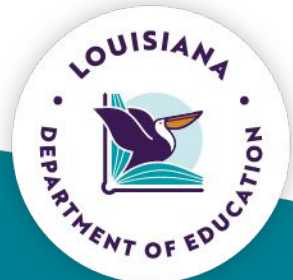
Inspire: STEM Leadership Cohort

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



Agenda Items

III. Region 3 Update



Housed at
Fletcher Technical
Community College

BayouSTEM Update

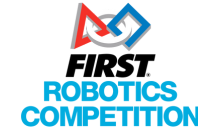
LaSTEM Q4 Advisory Council
Meeting-2023



Visit Our Website
bayoustem.com



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.

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.

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

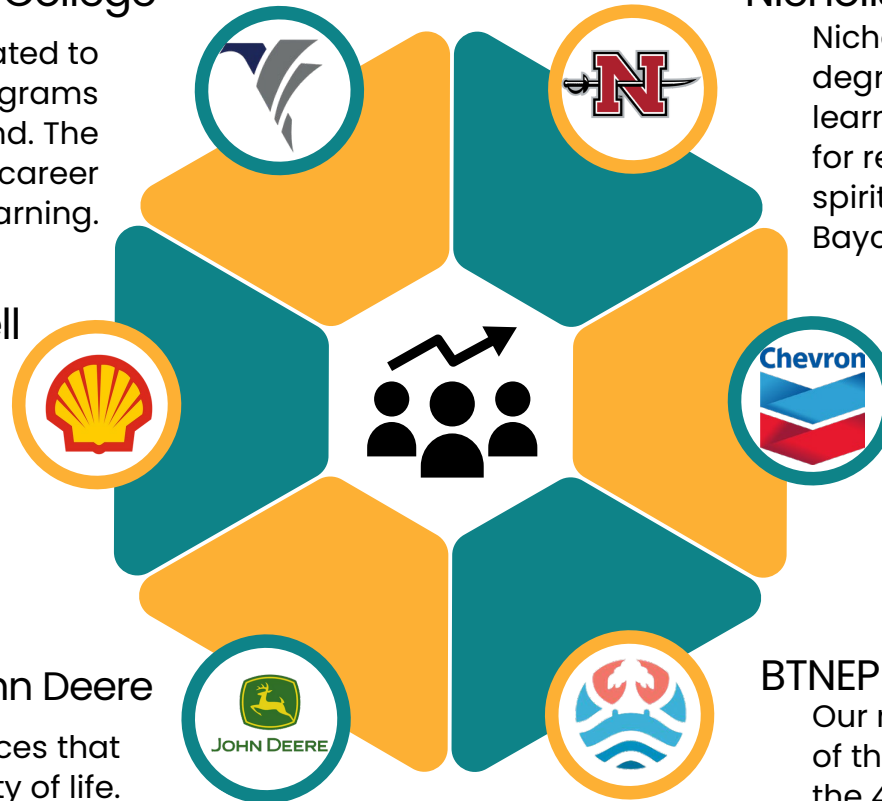
Our purpose is to develop the affordable, reliable, ever-cleaner energy that enables human progress. We work to provide the energy that enables human progress around the world.

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.



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



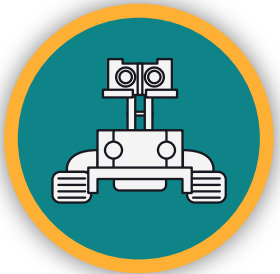
Rural STEM Initiative: Informal Outreach Programming

- Chemistry Road Show
- STEM After-School



Rural STEM Initiative: Summer Programming

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



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 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

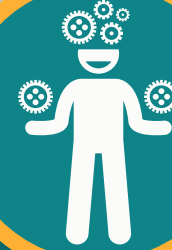


Rural STEM Initiative: Summer Programming and Camp Development



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
 - 2nd-9th grade
- Sound and STEM Camp
 - K-2nd grade
- Ways of Water Camp
 - K-High School

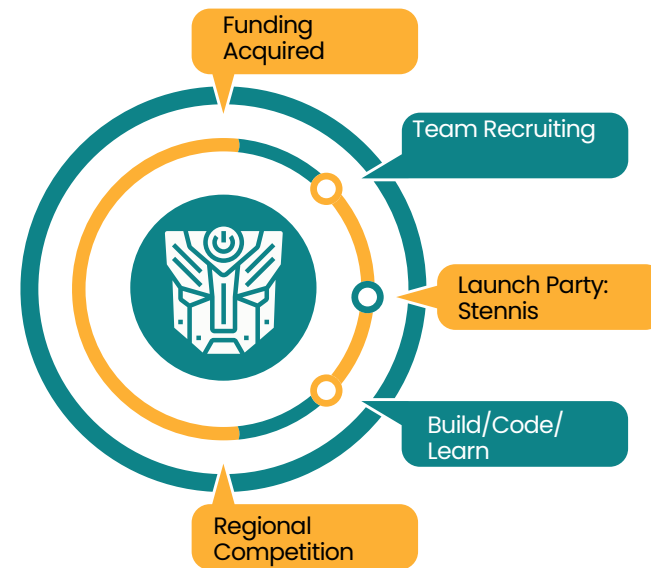


Summer
Camps

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

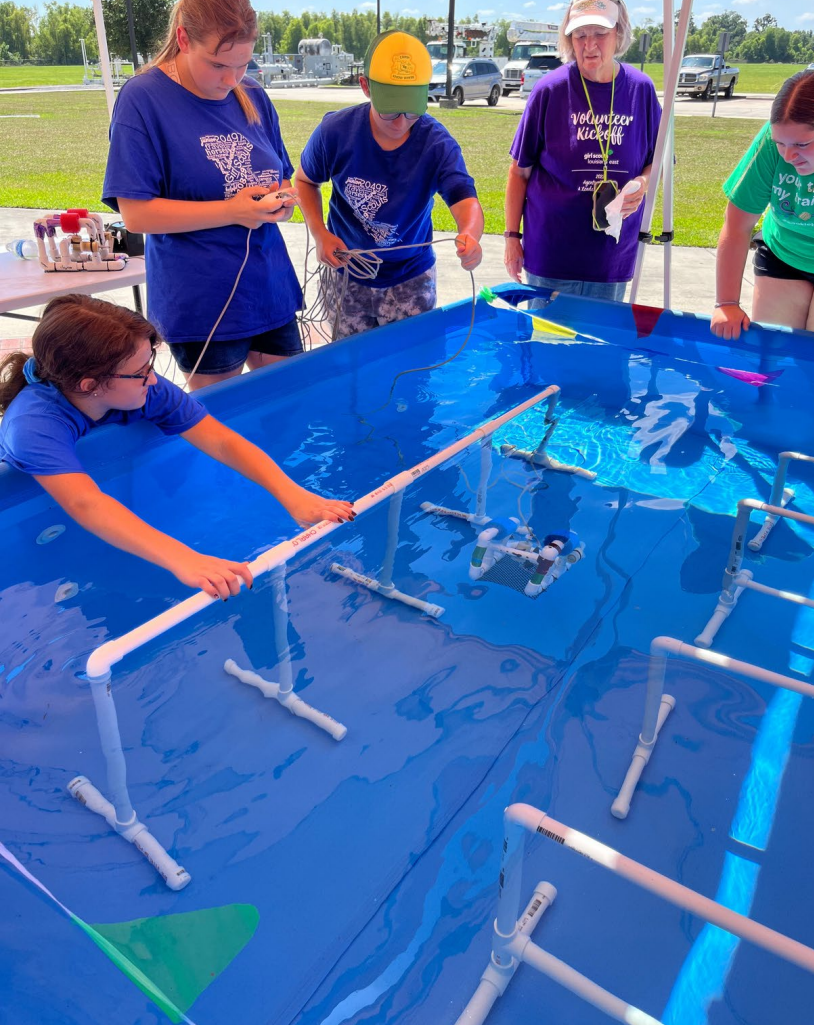
- 6th-12th grade
- AI and ML basics with NASA-inspired application
- Teacher PD
- 15-20 hrs of class time to project

SEA-PERCH ROVs

- 4th-12th grade
- Production and piloting
- Teacher PD
- GSLE leader PD

Robotics Programming





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



2024 LASTEM Council Dates and Adjournment

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