



4th Quarter LASTEM Advisory Council Meeting
Louisiana Tech University
11/14/2024

Today's Agenda

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1) Roll Call and Welcome

- Dr. Jim Henderson, President, Louisiana Tech University
- Mr. Ronny Walker, Mayor, City of Ruston

2) Approval of 3rd Quarter Meeting Minutes

3) Cathi Cox-Boniol, Director, SCILS (Regional STEM Center 8)

4) Jamie Mixon, Computer Science and STEM Supervisor, LA Dept of Education

5) Dr. Bonnie Green, Expert, Directorate for STEM Education, National Science Foundation

6) LASTEM Updates (Board of Regents)

- Budget Overview
- 2024 Summit Report-Out
- STEM Learning Ecosystems (Chicago, IL)
- National Science Teachers Association (New Orleans, LA)
- Growing initiatives

7) Adjournment



Welcome From Host



Dr. Jim Henderson
President
Louisiana Tech University

Welcome From Host



Mr. Ronny Walker
Mayor
City of Ruston

Agenda Items

- **Roll Call**
- **Approval of 3rd Quarter Minutes**



Region 8 LaSTEM Center

The STEM Collective for Innovative Louisiana Stakeholders

SCILS is Housed in the Science and Technology Education
Center (SciTEC) Division within the College of Education and
Human Sciences at Louisiana Tech University



Jackson Parish
Union Parish
Ouachita Parish
Caldwell Parish
Morehouse Parish
Richland Parish
Franklin Parish
West Carroll Parish
East Carroll Parish
Madison Parish
Tensas Parish
Lincoln Parish

Focusing on Bringing STEM to the Region

STEM Kits:

Delivered over 600 STEM Kits throughout the rural delta for summer programming. Served Tensas, East Carroll, West Carroll, Madison, Morehouse, Franklin, Caldwell, and Union parishes

Summer Camps:

Facilitated or supported summer camps including Louisiana Tech Academic Center Youth STEAM Camp, KidWind Camp, Robotics Camps, Astro Camps, Nursing Boot Camp, Children's Museum Camp, ULM STEAM Camp

Teacher Professional Development:

Facilitated or supported teacher professional development that included Elementary OpenSciEd, Engineering is Elementary, Northeast Louisiana Teacher Symposium, LDOE Educational Technology, Google Computer Science, CS4U, SeaPerch and KidWind

Community Outreach:

Kid's Alley at the Louisiana Peach Festival, Community Connection Corner for Teacher Symposium, exhibitor at the Louisiana Association of Math Teachers conference, published monthly SCILS and Louisiana Girls Collaborative newsletters, recorded monthly SCILS podcasts and maintained active social media platforms

Focusing on Bringing STEM to the Region

CS4U (Computer Science for You):

Welcomed 9 different groups of middle grades students to explore computer science, coding, cybersecurity, and career success

Middle Grades in the Mix:

Worked with 8 different groups of middle grades students to dig into concepts in chemistry, engage in a chemistry lab and explore chemistry careers

Coursera Certifications:

1,178 enrollments with programs that include Louisiana GEAR UP Parents, Louisiana GEAR UP Students , Louisiana GEAR UP Teachers and Administrators, Privately Authored Resources, Hub Learning Community (OLD), ELRI Learning Community, Administration Workforce, ULS Learning Community, Radiance University , CTPP and more

Upcoming:

STEMINIST Fest, KidWind Challenge, Science Olympiad, RECIPE for Rural STEM Day, SeaPerch Competition, Drone Competition, SCILS Mini Summit



We Are Almost One Year Old . . . What Have We Done

- Created STEM Activities for Girls (ex: Girls Design for Good, STEMINIST Fest)
- Established a 16-Member Multi-State Champions Board
- Engaged LASTEM Regional Leadership
- Produced Monthly Newsletters for Statewide Distribution
- Established the STEM Her Way Initiative - Webinar Series and Youth Outreach Board
- Housed Newsletters and Webinars on the National Girls Collaborative Website
- Launched Career Connect in Partnership with the National Girls Collaborative and Discovery Education
- Presented to a Packed House at the 2024 LASTEM Summit with Special Guest NCGP Founder and CEO Karen Peterson



**Early Local STEM
Advocate**

Miss Louisiana's Teen

**NGCP National Youth
Advisory Board (YAB)**



Region 8 LaSTEM Center

Thank You from the
SCILS Team

4th Quarter LASTEM Council Meeting

LDOE Update

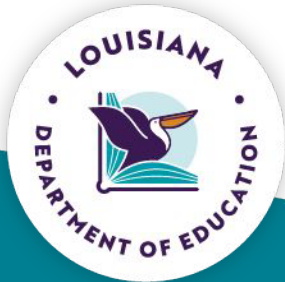


November 14, 2024

Louisiana K-12 Computer Science Education Plan

Comprehensive Action Plan

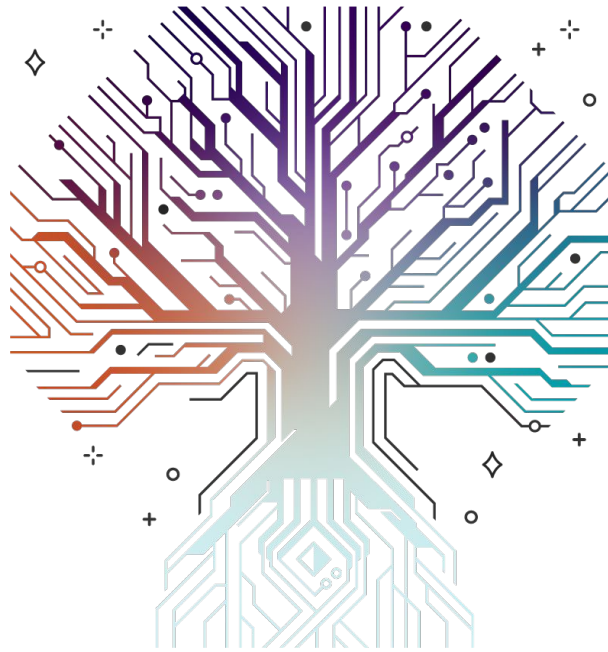
Key Action 1	State Actions and Supports	System Actions
Establish state content standards in computer science for grades kindergarten through twelve.	Establish the K-12 Computer Science Standards Writing Committee, composed of educators, experts, and business and industry leaders, to develop the Louisiana Student Standards for Computer Science. Through this set of comprehensive standards, our graduates will: • apply analytical and critical thinking skills to real-world situations; • demonstrate digital literacy and digital citizenship; and • utilize technology skills as employable citizens to meet present and future workforce needs.	Develop a system-level team to address the implementation of the Louisiana Student Standards for Computer Science in the 2025-2026 school year.



Vision for K-12 Computer Science



Digital Literacy



Progression of Computer
Science Concepts &
Experiences

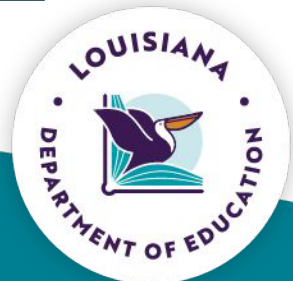


Career
Opportunities

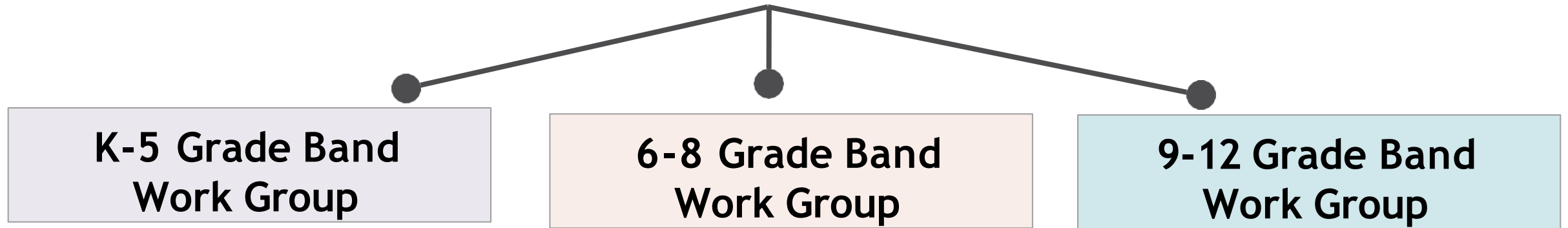


Louisiana's Computer Science Framework

Core Concepts	Core Practices
1. Computing Systems	1. Fostering responsible cyber citizenship
2. Networks and the Internet	2. Collaborating around computing
3. Data and Analysis	3. Recognizing and defining computational problems
4. Algorithms and Programming	4. Developing and using abstractions
5. Impacts of Computing	5. Creating computational artifacts
	6. Testing and refining computational artifacts
	7. Communicating about computing



Computer Science Content Standards Writing Steering Committee



Sample Standard

Concept 1 : Computing Systems (Chapter 3)	
Subconcept: Hardware and Software (\$301)	
By the end of grade 5	A.1. Identify and select the appropriate hardware to complete computing tasks.
By the end of grade 8	B. 1. Analyze the functions and interactions of core components within a computer system.
By the end of grade twelve	C. 1. Analyze the levels of interactions between application software and system software as well as the hardware layers.



By the end of grade 5

1A. Identify and select the appropriate hardware to complete computing tasks.

Complexity Statements

K	Identify hardware using appropriate terminology.
1	Describe the ways people use hardware to perform computing tasks.
2	Explain and use the proper hardware to complete a given task.
3	Compare and contrast the functions and uses of various hardware.
4	Analyze the capabilities and limitations of hardware for a particular use in a given scenario.
5	Explain how selected hardware pieces function.



Instructional and Implementation Supports

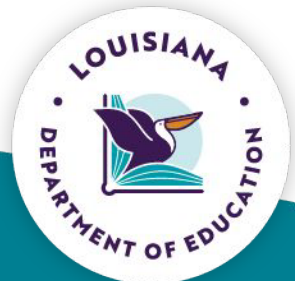
Guided by the K-12 Computer Science Education Plan, the Department will offer additional supports and guidance to ensure successful computer science education implementation including:

- implementation frameworks
- standards overview webinars
- computer science training for educators
- Computer Science Technical Assistance Grants for systems
- additional pathways leading to computer science certification



Louisiana Content Standards for Computer Science Implementation Timeline

2024-2025	2025-2026	2026-2027	2027-2028
Standards overview and implementation webinars			
	Louisiana Content Standards for Computer Science (LSSCS) Implementation		



Welcome to National Science Foundation



U.S. National
Science
Foundation

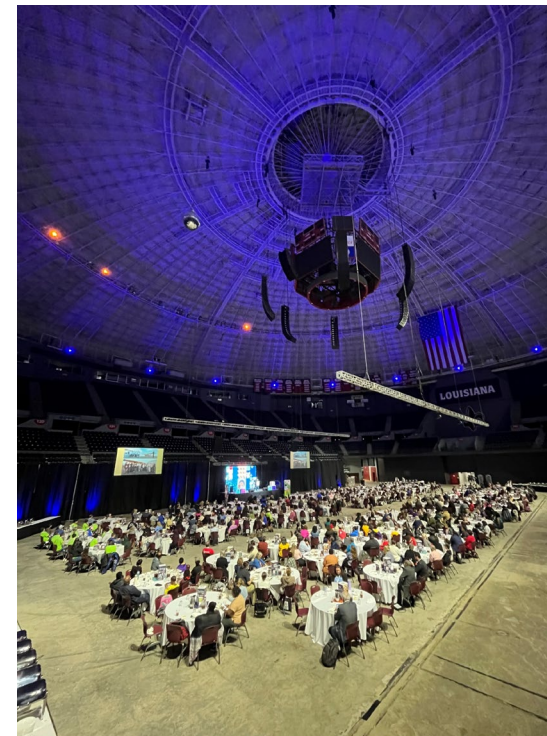
**Dr. Bonnie Green, Expert
Directorate for STEM Education**

LASTEM Budget Update

- **FY2025 Budget Updates**
 - Where are we at in the process?
 - Carrie Robison, Deputy Commissioner

2024 LASTEM Summit

- **Record-breaking attendance in Lafayette (~800)**
- **40+ breakout sessions across four distinct tracks:**
 - Preparing Students for Future Work,
 - Teacher Professional Development and Support,
 - Access in Education, and Innovations in Education
 - Workforce Development
- **Engagement from all nine Regional STEM Centers showcasing regional initiatives and resources**
- **Significant industry participation with 40+ exhibitors and sponsors**
 - Special thanks to: CITGO, REC Foundation, and Central Creativity for their sponsorship
- **Ongoing conversations with Captain Barrington Irving to bring the Flying Classroom to LA**
 - In cooperation with LDOE



STEM Learning Ecosystems, Communities of Practice (SLECOP)

National STEM Ecosystems Conference (Chicago, IL - October 28-31, 2024)

- **Louisiana delegation included representatives from:**
 - Bayou STEM, Bossier Parish
 - Louisiana Department of Education
 - Board of Regents
- **Featured Presentation: "Exploring STEM Through Literacy"**
 - Innovative approach connecting children's literature to STEM careers
 - Secured \$10,000 STEMx grant for program expansion in 2025
- **Generated significant interest from conference attendees**
 - Growing National Recognition of LASTEM Model
 - States actively studying Louisiana's Regional STEM Center approach:
 - Colorado
 - Indiana
 - New Mexico (Recent panel participation highlighting our success)

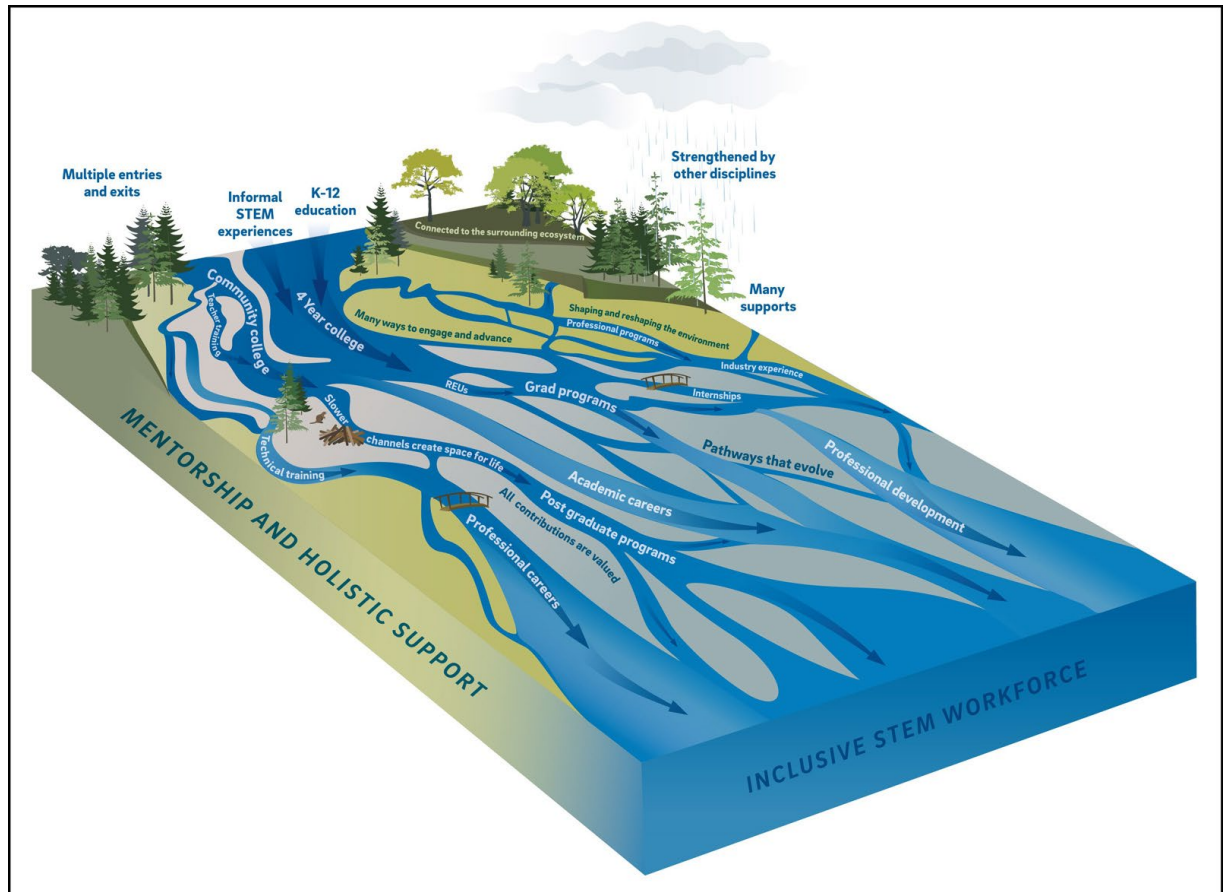


STEM LEAD

- Selected to participate in prestigious national fellowship program
- Collaborating with Donata Haley at the Louisiana Department of Education to align initiatives
- Created opportunity to document and showcase programs across all Regional STEM Centers “Braided River Model”
- Developing comprehensive online platform to highlight LASTEM initiatives, resources, and contacts
- Presenting at the STEM Learning Ecosystems conference in Washington, DC in Fall 2025

Reimagining STEM Workforce Development as a Braided River

A contemporary approach to today’s science careers looks less like a structured pipeline and more like a collection of paths that change and adapt to the needs of the individual.



National Science Teacher Association

Key Participation:

- Multiple Regional STEM Center Directors and staff in attendance
- Partnership support for Louisiana Science Teachers Association (LSTA)
- Complimentary exhibition space provided to showcase RSCs

Featured Presentations:

- **"It's Never Too Early: Exploring STEM, Literacy, and Career Connections in Early Childhood"**
 - Hands-on integration of STEM concepts with children's literature
 - Focus on developing early STEM career pathways
- **"Connecting Education to Brand: The Power of Direct Industry Partnerships"**
 - Showcase of LASTEM's K-20 career exploration integration
 - Strategies for building effective industry-education partnerships
 - Resources for corporate outreach and classroom implementation
- **"The Definition of STEM and Why it Matters: Connecting Education and Workforce"**
 - Introduction to Louisiana's newly adopted statewide STEM definition
 - Overview of LASTEM Regional STEM Centers



FUEL Workshops (11/4-11/5)

LASTEM partnered with Lacy McManus for NSF ENGINES grant initiative

Purpose:

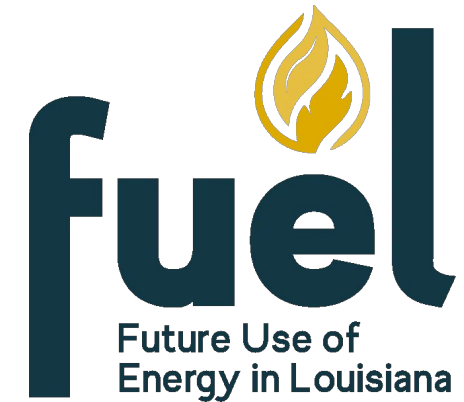
- Supporting NSF ENGINES grant objectives
- Documenting existing workforce development initiatives
- Identifying opportunities for expansion and collaboration
- Creating comprehensive asset map of education-workforce partnerships

Five virtual sessions organized by regions

- Asset mapping exercise to identify existing education-workforce connections
- Focus on energy sector opportunities across Louisiana

Participation Options:

- Virtual focus group attendance
- QR code survey access for additional input



2025 Opportunities

Competition & Events

- State VEX Championship at LSU
- Community-based robotics teams
- Seaperch program (enhanced by new DODSTEM funding)
- Innovation Convention (Possible partnership with The Henry Ford Museum)

Professional Development

- Ignite/Energize Teacher Training (LSU/SELU)
- YES/EiE Training (LSU/LA TECH partnership)
- Teaching STEM through Literacy
- RECIPE for rural STEM



2025 Opportunities

Outreach & Access

- Expanded Summer Camp Programming
 - Spanish Language STEM Resources (LDOE Migrant Workers partnership)
 - NASA TEAMS II Grant (rural and underrepresented communities focus)
- Region 7's Bars without Barriers Initiative
- NASA Museum in a Box Program
 - Separate TEAMS II submission

New Initiatives for 2025

- National STEM Honor Society (NSF grant partnership with DC)
- National STEM Teacher Corps (NSF grant partnership with Texas)
- Chief Science Officers Program (student voice in LASTEM)
- CS4ALL grant led by LSU (Region 2)



VIII. Adjournment