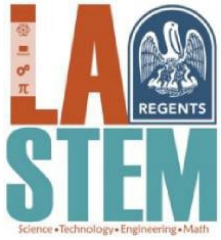**2nd Quarter LaSTEM Advisory Council Meeting**

LSU Center for River Studies

4/28/22

2nd Quarter LaSTEM Advisory Council Meeting
April 28, 2022 | 10:00 a.m. – 11:30 a.m.

- **10:00-10:15 a.m.- Welcome and Roll Call**
  - Dr. Clint Willson, Director of the Center for River Studies

- **10:15-10:20 a.m.- Approval of Quarter 1 LaSTEM Council Minutes**

- **10:20-10:35 a.m.- CWPPRA/LaSTEM Caminada Headlands**
  - Jacqueline Richard, Interim Dean of STEM, Fletcher

- **10:35-10:45 a.m.- Microsoft TEALS Program**
  - Lucia Berliner, Associate Regional Manager Lead, Southeast

- **10:45-10:55 a.m.- Vote on Fund Reappropriation**
  - Region 1: $7,500 Request
  - Region 3: $8,000 Request
  - Region 4: $74,500 Request

- **10:55-11:15 a.m.- Introduction of New Directors**
  - Summer Dann, Region 2
  - Angela Boxie, Region 4
  - Dr. Heather Kleiner, Interim, Region 7

- **11:15-11:30 a.m.- Subcommittee Formation**
  - External Funding Opportunities
  - Metrics/Pathways

- **11:30 a.m.- Adjournment**
  - Lunch and Tour of the River Model Following Meeting

Welcome from Dr. Clint Willson, Director of LSU's Center for River Studies

- Roll Call

- Approval of Quarter 1 Advisory Council Meeting Minutes - January 20, 2022

Caminada Headlands Virtual Field Trip

- Jacqueline Richard, Interim Dean of STEM
Fletcher Technical Community College

Microsoft

Microsoft Philanthropies
TEALS Program

A volunteer-powered program increasing access to computer science in Louisiana

Volunteer, Kayla Fortson, helps students at Saint Katherine Drexel Prep in New Orleans, LA.

Lucia Berliner

Assoc. Regional Manager Lead, Southeast
& Louisiana Regional Manager

Microsoft Philanthropies TEALS Program

- 10 + years as educator in formal and informal settings

- Ed.M with focus in technology

- Joined TEALS in summer 2018

- Previously supported TEALS partner schools in NY, NJ, PA, FL

- Moved back to Louisiana in fall of 2020 to launch TEALS!

Why TEALS? There is a gap in access to computer science education

67% of all new jobs in STEM are in computing

Computing jobs are the #1 source of new wages in the US, with over 400,000 current openings!

BUT

Only **51%** of US high schools teach CS and students who stand most to gain from CS are even less likely to have access

Louisiana: **29%**

Only **46%** of CS teachers hold a credential in computer science and only **30%** have a related degree

Sources: Code.org

Together, tech professionals and classroom teachers are opening the door to tech careers for Louisiana students with the TEALS Program.

Over the past decade, Technology Education and Literacy in Schools (TEALS) volunteers have made it possible for high schools to build equitable, inclusive computer science programs.

- TEALS is a **community** of volunteers and teachers working to increase access to CS

- TEALS focuses on engaging students excluded from learning CS because of **race, gender, socioeconomic status and geography**

- TEALS **helps classroom educators** learn to teach computer science by pairing them with industry volunteers and **proven curricula**

Volunteer, Luis Lafer-Sousa, helps students at McDonogh 35 in New Orleans, LA.

Expanding the TEALS Program

Since 2009, the TEALS Program has brought CS to over **93,000 students** across 31 states, DC, and BC, Canada.

We are excited to have expanded to **8 new regions** to **significantly increase our reach among Black and African American students**.

1,000 AP exam in LA (2019)

- 12.6% B/AA; 10% Latinx; .4% Native A.

- 35% female   (code.org)

Legend:
- 2021-2022 TEALS schools
- New TEALS region
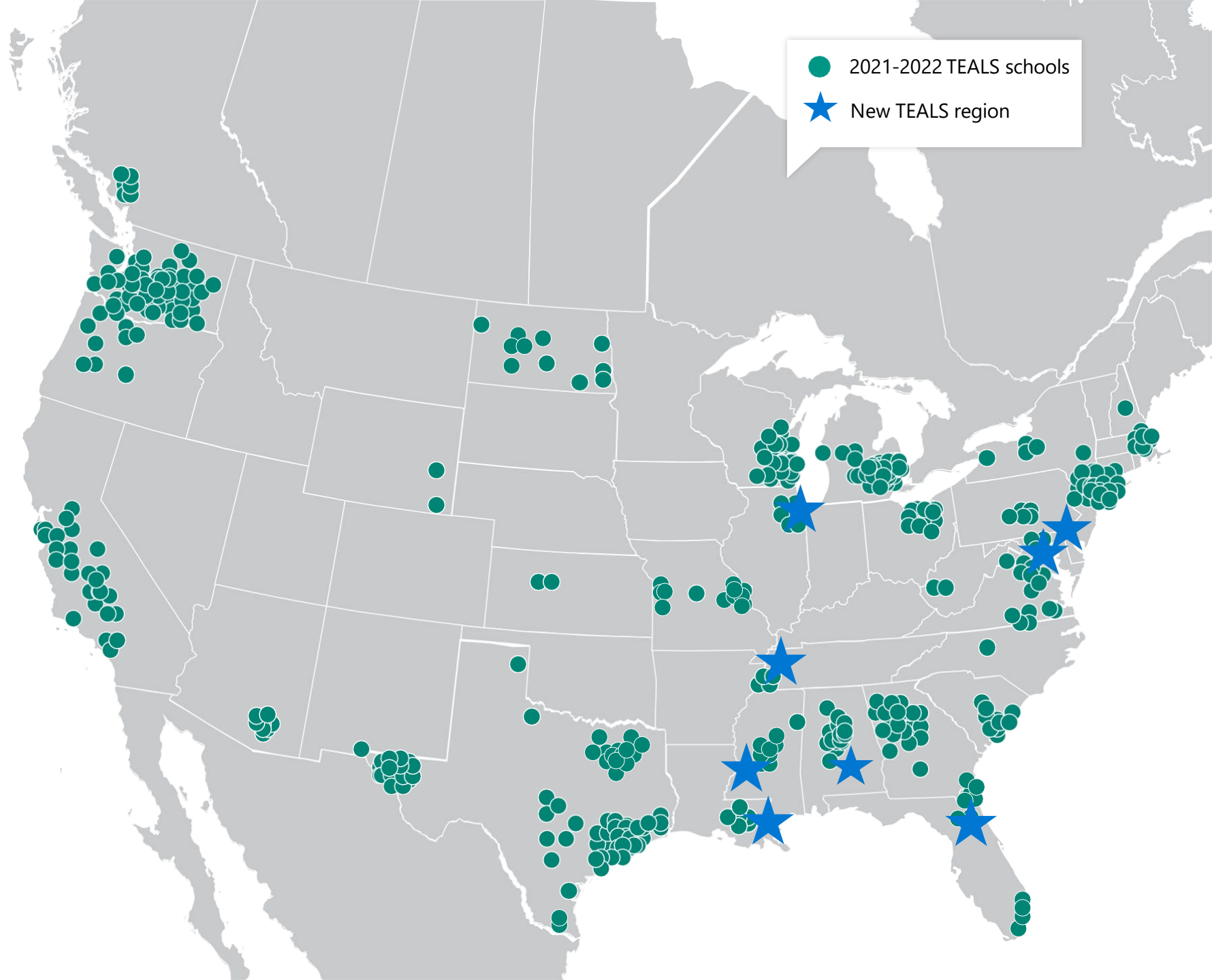
Our first year in Louisiana (2021-22)

Schools
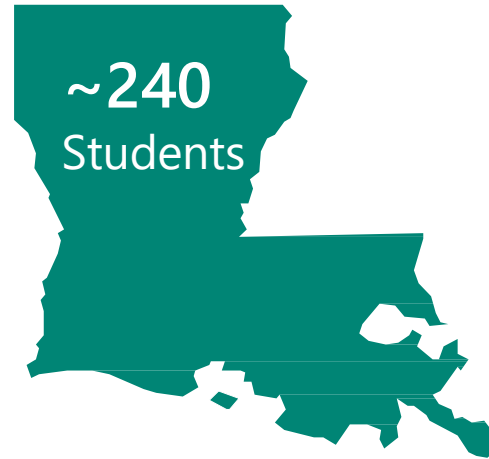
6
Partner schools

7
Partner teachers

*all schools chose to implement least one AP course

Students

~240
Students

Volunteers

20
Organizations are represented

25
Tech volunteers in schools

Partners
- Helen Cox HS (Jefferson)
- Living School (Orleans)
- McDonogh 35 Senior HS (Orleans)
- St. Katharine Drexel Prep (Orleans)
- Sarah T Reed (Orleans)
- Tara HS (East Baton Rouge)

Who does TEALS support teachers that are new to CS?

	Co-Teach model	Lab support model	Graduation
Who's doing the teaching?	Teacher: 10 → 80% Volunteer: 90 → 20%	Teacher: 80 → 99% Volunteer: 20 → 1%	Teacher: 100%
Teacher's role	• Classroom and teaching team **management** • **Learning** computer science • Completing all CS assignments • Leading lessons **at their capacity**	• **Leading** 80%+ of lessons • Continue refining CS understanding • **Leveraging volunteers' industry experience**	• Teaching computer science independently of TEALS
Volunteer team engagement in the classroom	**4-5 days** a week	**2-5 days** a week	Schools teach CS on their own

TEALS Volunteers

Volunteers from **700+ companies** across many industries are represented

Trained in instruction, team planning, and working with students

Volunteer recruitment and retention are a **joint effort between schools, the local tech ecosystem, and TEALS**

Companies can utilize the TEALS program to support their **community engagement goals**

Laura Manuel volunteering at St. Katherine Drexel Prep in New Orleans, LA.

What a volunteer's week looks like

Preparation

1-2 hours every week for team syncs, lesson preparation and student feedback

Instruction

1-2 days per week in the class, supporting both the teacher and students

Reaching CS classes through remote instruction

Volunteers can support teachers and students through a virtual classroom

- **Flexibly** fits into schedules and avoids commute time
- **Training** on best practices for remote instruction
- **Utilizes breakout rooms** to connect with small groups or individuals
- **Makes** an impact for schools and students that otherwise would not have access to volunteers

The TEALS program has been teaching remotely since 2012.

The TEALS program sets up teaching teams for success

Training · Teamwork · Feedback · Community · Support
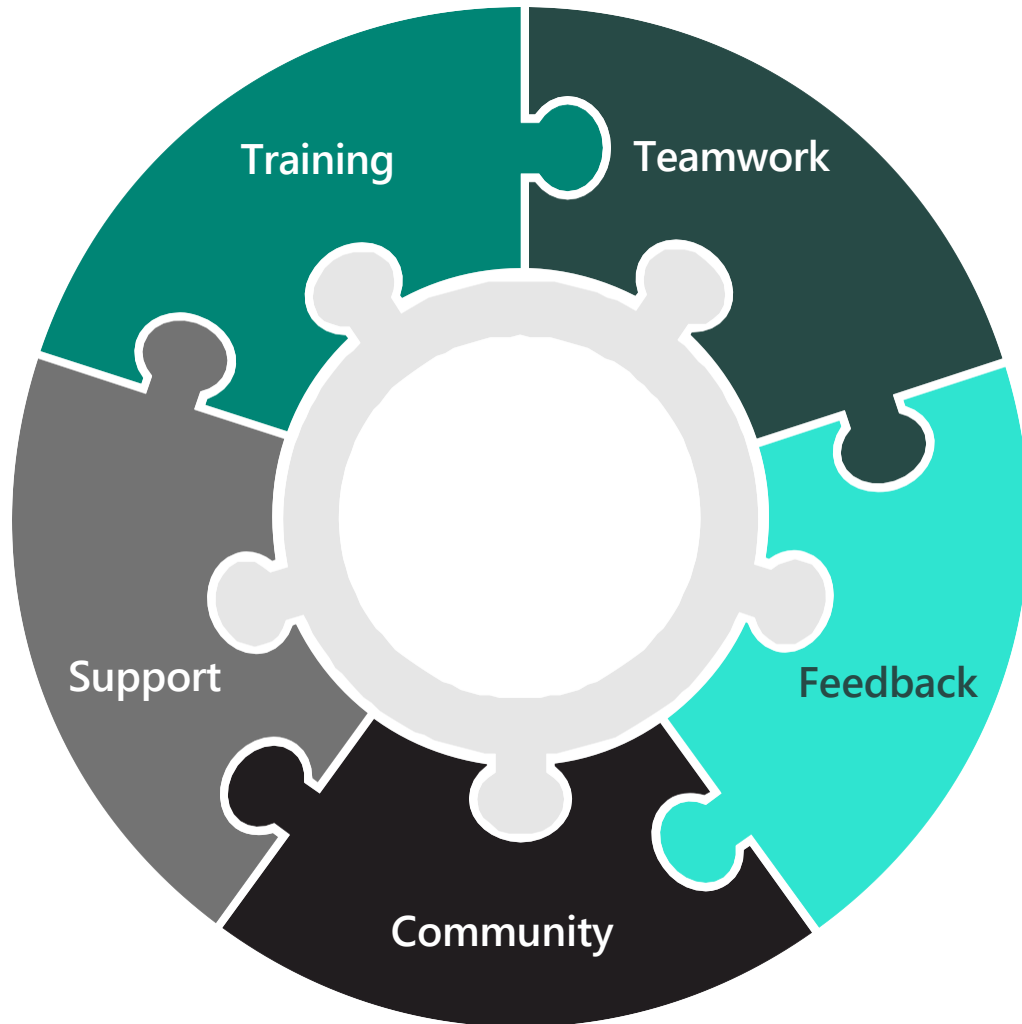
Volunteers are trained over the summer on CS teaching best practices

Teaching teams meet throughout the summer to build cohesion and plan for the year

Class observations and feedback provided throughout the year by RMs and school partnership coordinators

Multiple opportunities to share and learn best practices from the TEALS community

Dedicated TEALS Regional Manager available as needed to answer questions or provide support

teacher + volunteer = secret sauce

Volunteers help close the CS education gap

After taking a TEALS CS class **students say...**

91% volunteers helped them learn CS

48% see themselves having a career in CS

58% see themselves continuing to study CS

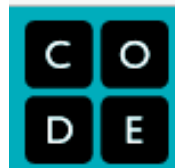**78%** CS allows them to be creative

90%
of volunteers found the TEALS experience rewarding

Classroom teacher, Kirk Thomas, and volunter,r, Luis Lafer-Sousa, with students at McDonogh 35 in New Orleans, LA.

TEALS supported courses

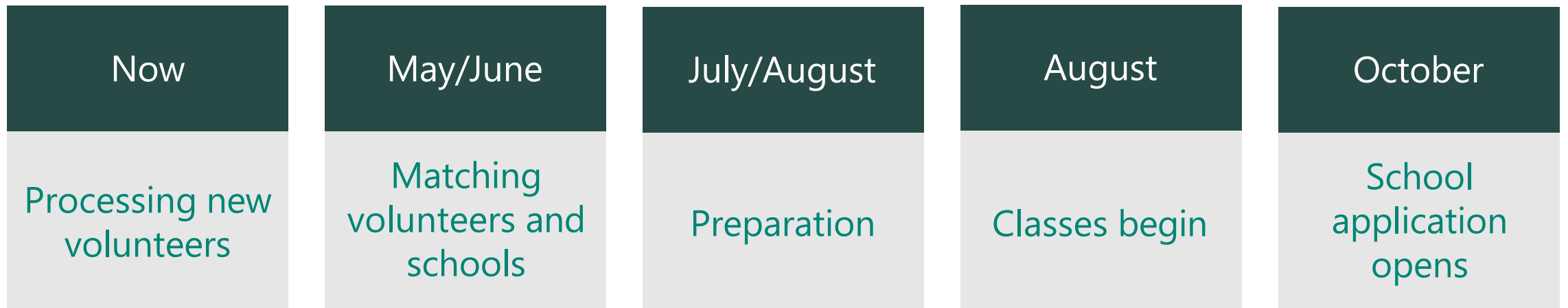|	Introductory courses		Advanced courses	
	Introduction to Computer Science	**AP Computer Science Principles**	**AP Computer Science A**	**Computer Science Topics**
Description	A semester or full-year course that explores a variety of basic computational thinking and programming concepts through a project-based learning environment.	A full-year course covering the fundamentals of computing, including creativity, programming, and global impact.	A full-year course focused on object-oriented programming and problem solving in Java. Equivalent to a first-semester, college level course in computer science.	A full-year course that focuses on specific applications of computer science fundamentals and can be taught after taking one CS course such as Intro to CS, CS Principles, or CSA.
Where can I learn more?	aka.ms/TEALSintro	aka.ms/APCSPrinciples	aka.ms/APCSA	aka.ms/CStopics

High school partnership requirements

Potential school costs	• Costs incurred by volunteers (e.g., background check) • Curricular resources (if using a partner curriculum provider that charges a cost) • Remote teaching equipment (as applicable)
Class meeting time	• First period of the day
Diversity, Equity, and Inclusion	• Commit to diversity, equity and inclusion actions
TEALS volunteer recruitment	• Engage with the local community and your school's/district's network to share this volunteer opportunity
Data sharing	• TEALS classroom enrollment numbers • Student and teacher course experience survey • AP scores (if applicable)
Recruit classroom teacher	• 2+ years teaching experience • Attends required curriculum training and TEALS training • Commits to becoming a CS champion in the school • Teacher is Team Lead
Identify school staff partners	• School administration contact • District contact (as applicable) • IT liaison (as applicable)

TEALS Timeline

Now	May/June	July/August	August	October
Processing new volunteers	Matching volunteers and schools	Preparation	Classes begin	School application opens

Call to action

Schools

Teachers
Administrators
District contacts

Tech volunteers

Individuals
Companies
Interest groups

Resources

Opportunities for students
Opportunities for teachers

Microsoft.com/TEALS | Lucia@tealsk12.org

Thank you!

Microsoft.com/TEALS

Lucia@tealsk12.org

Vote on Surplus Funds Reappropriation

- **Approximately $100k remains in the LaSTEM Administration budget for FY21-22.**

- **Vote to reappropriate to three of the Regional STEM Centers for work that can be completed by the close of the CEA.**

- **Region 1 (GNO, Inc.) – $7,500 for:**
  - **HBCU Connect ($1,500 for student stipends)**
  - **Wise Women ($1,000 for supplies)**
  - **Sponsorship Support ($5,000 for summer education enrichment consumables)**

- **Region 3 (Fletcher) – $8,000 for:**
  - **Girls Design for Good Event ($3,000 for food and consumables)**
  - **Construct 1,500 Rube Goldberg Energy Transfer Experiments ($5,000 for supplies)**

- **Region 4 (ULL) – $74,500 for:**
  - **Support for 900+ Waitlisted Students for Summer Camps and Teacher Professional Development**

RECOMMENDATION

LaSTEM staff recommends approval of additional funding of $90,000, allocated from remaining FY 2021-22 LaSTEM administrative dollars, to the three (3) regional centers listed below for expenditure as discussed:

- Region 1 (GNO, Inc.): $7,500

- Region 3 (Fletcher): $8,000

- Region 4 (ULL): $74,500

Introduction of New Regional Directors

- **Region 2 (LSU, Capital Area STEM): Summer Dann**

- **Region 4 (ULL): Angela Boxie**

- **Region 7 (SciPort Discovery Center): Dr. Heather Kleiner**

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REGION 4 STEM
NETWORK CENTER (R4SNC)

- Angela Boxie, Director, angela.boxie@Louisiana.edu
  - 20th year in education; 16 years middle school math; 3 ½ years middle school assistant principal
  - LDOE Elementary Math Specialist Credential
  - 2017 National Milken Educator Award, LATM Teacher of the Year Runner-Up, Two-Time Edgar Martin Middle Teacher of the Year
  - Contributing Author to *"Strengthening Mathematical Reasoning Among Middle School Mathematics Students with Hidden or Unmet Potential"*
  - Started as Director Feb. 2022

R4SNC: Purpose & Goals

- Purpose
  - The R4SNC aims to provide broader access to STEM educational opportunities and promote STEM workforce development within the region.

- Primary Goals
  - **Provide Access** to STEM
  - **Remove Barriers** to STEM Access
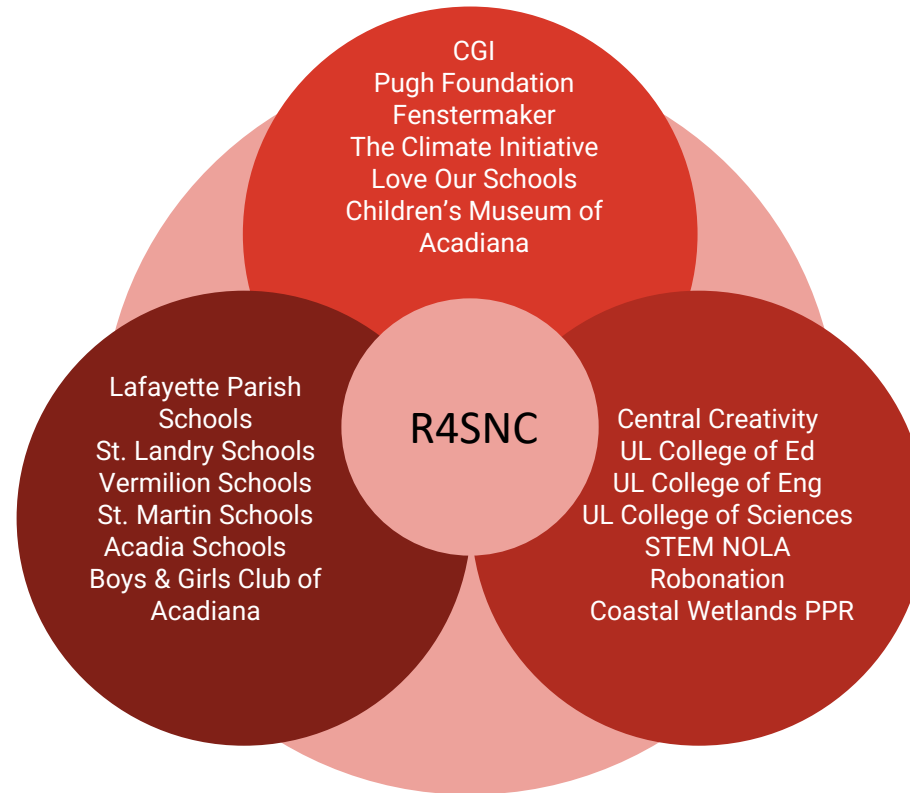 - **Build** STEM **Networks**

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R4SNC: Providing Access

- STEMulating Summer Initiative 2.0

Event	Date	Target Audience
Acadiana STEM Fest	May 18	500+ Students K-8
STEM In Motion	June 6-10	150 Middle School Students (70+Waitlist)
NASA Astro Pilot Camp (offline)	June 6-10	25 Middle School Students
Shell Venture Pilot Camp (offline)	June 13-17	25 Middle School Students
Shell Venture Camp (live)	June 27-July 1	300 Middle School Students
Environmental Deep Dive Camp	June 20-24	60 Middle School Students
NASA Astro Camp (live)	July 11-15	500+ Elementary Students (800+Waitlist)

R4SNC: Removing Barriers (Proposed)

- Increase the number of middle school teachers earning Algebra certification through teacher professional development so that access to Algebra is no longer a barrier for hundreds of middle school students.

- Engage STEM majors in purposeful STEM outreach activities throughout the academic year to reduce the intangible effects of having underqualified STEM teachers in numerous classrooms.

- Address inequities in STEM education, using solution-driven meetings among STEM and STEM education faculty and stakeholders across the state ("strategic doing").

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R4SNC: Build STEM Networks

CGI
Pugh Foundation
Fenstermaker
The Climate Initiative
Love Our Schools
Children's Museum of Acadiana

Lafayette Parish Schools
St. Landry Schools
Vermilion Schools
St. Martin Schools
Acadia Schools
Boys & Girls Club of Acadiana

R4SNC

Central Creativity
UL College of Ed
UL College of Eng
UL College of Sciences
STEM NOLA
Robonation
Coastal Wetlands PPR

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Thank you for attending today's presentation.

Welcome Interim Director Dr. Heather Kleiner

Subcommittee Formation

1) **External Funding Opportunities (3 Directors / 3 LaSTEM Council Members)**
   - Act 392 lays out pathways for obtaining external funding
   - When written, Regional STEM Centers did not exist
   - What strategies/mechanisms should Regional STEM Centers use when seeking statewide funding opportunities?

2) **Metrics/STEM Pathways (3 Directors / 3 LaSTEM Council Members)**
   - Following up on the November 2021 Directors' Retreat
   - What metrics should be collected from all Regional STEM Centers?
   - What is important for regional/statewide/national efforts?
   - What role should the STEM Pathways play in metric collection?

- Goal is to have a report out from subcommittees at Q3 meeting in August.

- If interested in serving on either subcommittee, please reach out to Clint Coleman.

Subcommittee Formation Timeline

- April 2022
  - Announce subcommittee formation at Q2 LaSTEM Advisory Council meeting
  - Request volunteers for subcommittees

- May 2022
  - Present objectives of subcommittee and annual LaSTEM goals to Leadership Meeting 5/17
  - Kickoff subcommittee meetings, present objectives to subcommittees

- June/July 2022
  - Subcommittees meet to develop recommendations for the LaSTEM Advisory Council

- August 2022
  - Subcommittees present recommendations to LaSTEM Advisory Council at Q3 meeting 8/18

Adjournment

- Enjoy lunch and the tour that follows!