



Society of American Military Engineers

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January 20, 2026

12:00 p.m.

Cityplex Auditorium



K-12 STEM

College of Engineering,
Architecture and Technology

OSU CEAT K-12 STEM

Develop and cultivate a sustainable educational ecosystem that trains a world-class STEM workforce, addressing the long-term need for STEM educational pathways for the K-12 and collegiate population of students and teachers to meet those needs.

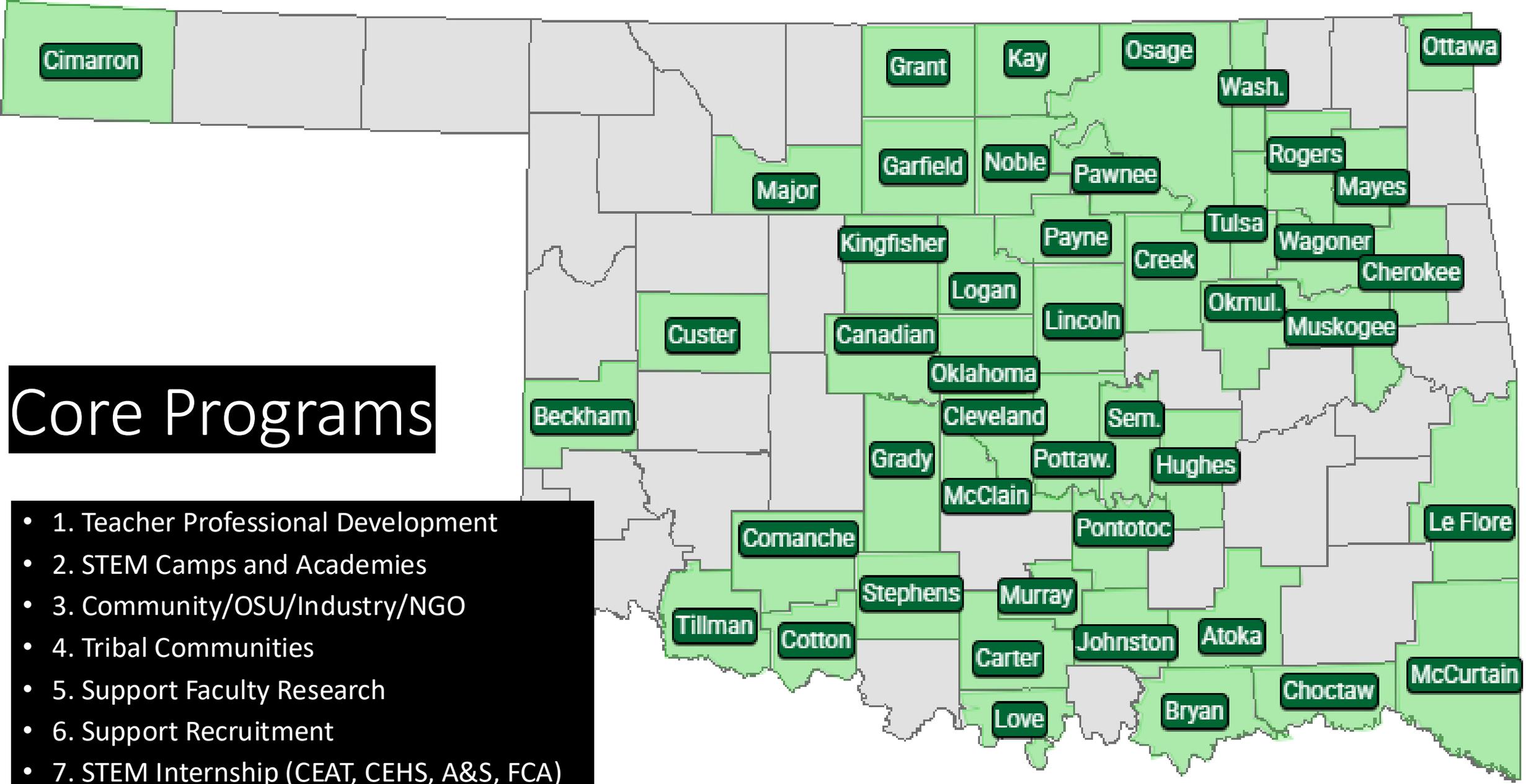
Welcome & Introductions

“We bring the STEM boots to Oklahoma”



Core Programs

- 1. Teacher Professional Development
- 2. STEM Camps and Academies
- 3. Community/OSU/Industry/NGO
- 4. Tribal Communities
- 5. Support Faculty Research
- 6. Support Recruitment
- 7. STEM Internship (CEAT, CEHS, A&S, FCA)



OSU CEAT K-12 Program Reach



Impact

2024 Summer

66

Student Camps Conducted

25,503

Student Contact Hours

2,130

Students Reached

10

Teacher Camps Conducted

341

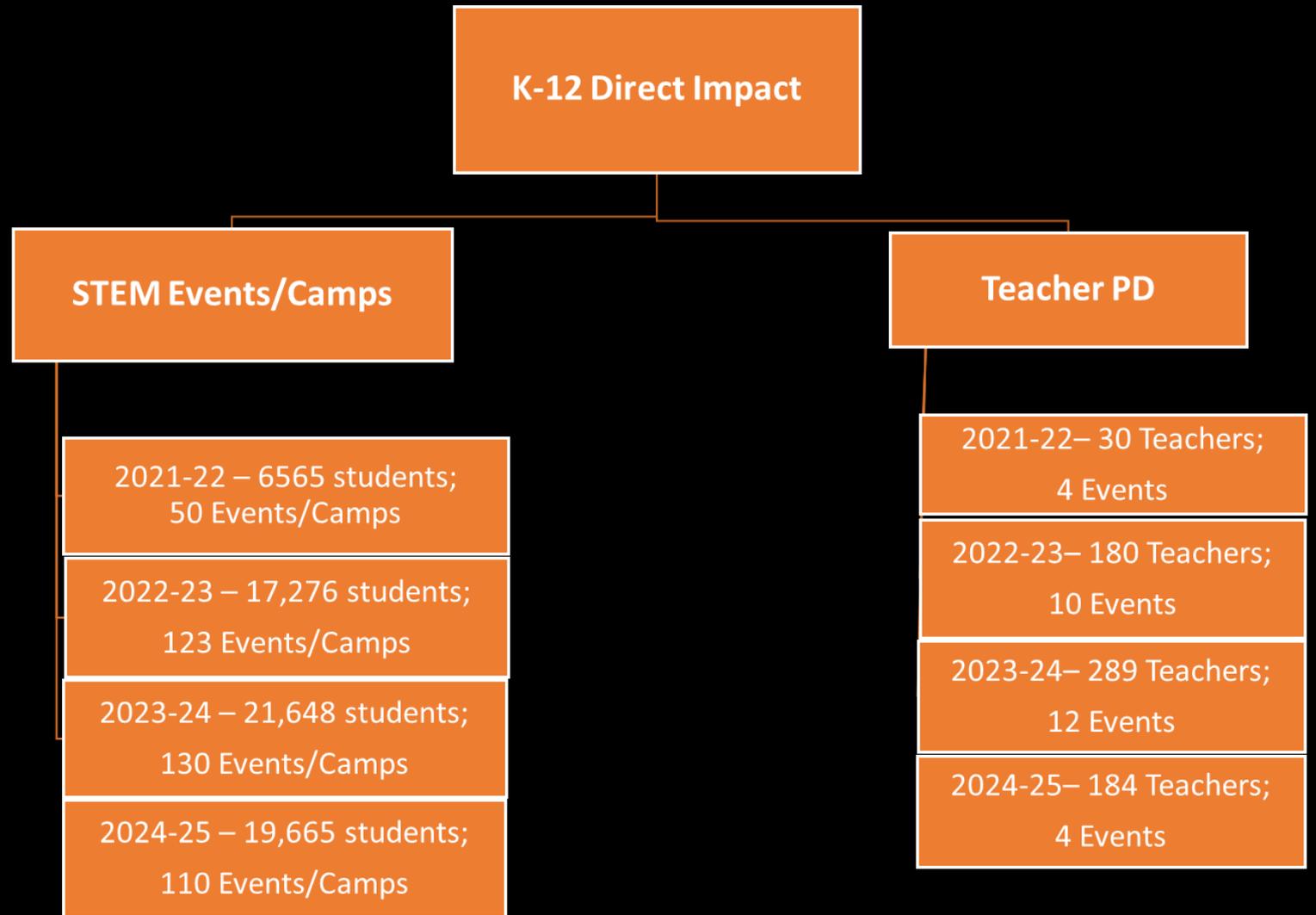
Teacher PD Contact Hours

103

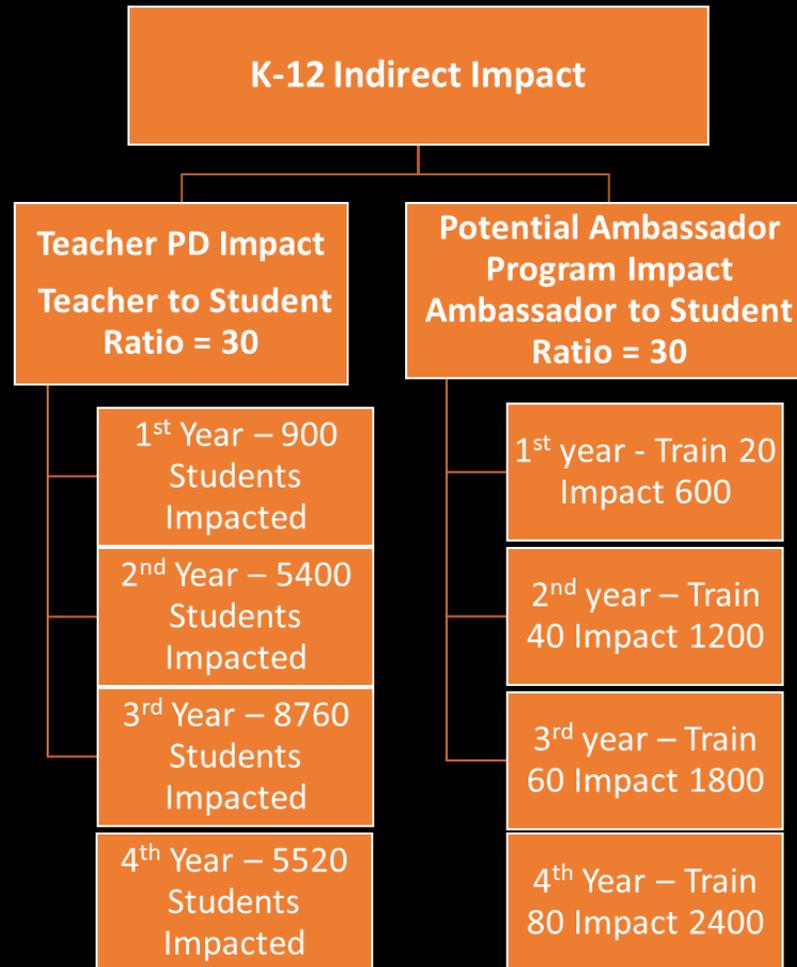
Teachers Reached



2022-25 Outcomes



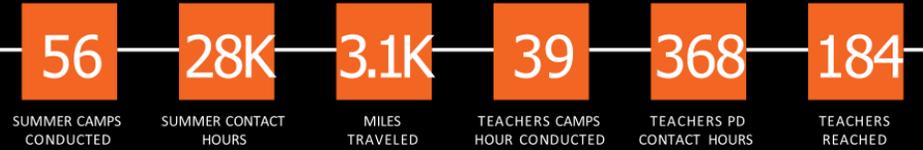
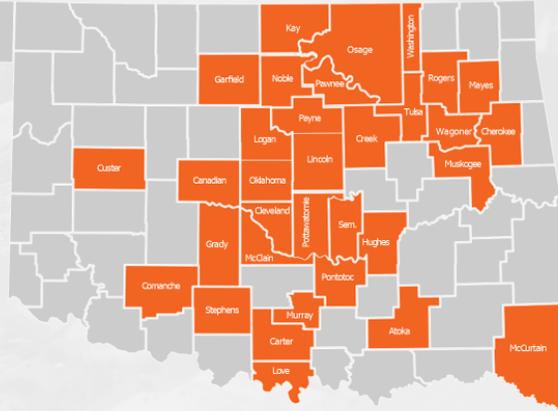
2022-25 Indirect Impact Potentials



CEAT K-12 STEM

CORE PROGRAMS

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34 COUNTIES COVERED BY CAMPERS
 +
14 OUT OF STATE CAMPERS
 +
2 INTERNATIONAL CAMPERS

SUMMER 2025 IMPACT

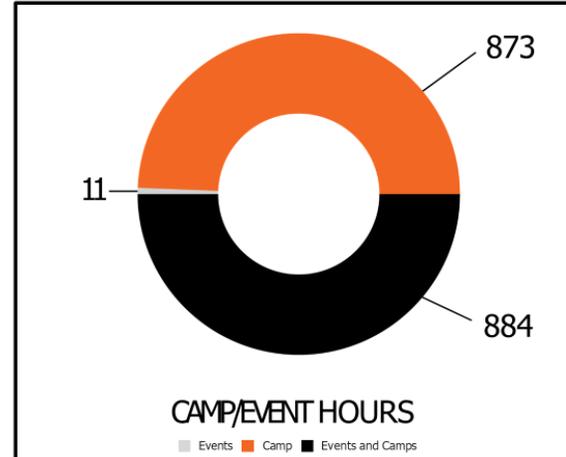


SUMMER CAMP/EVENTS IMPACT

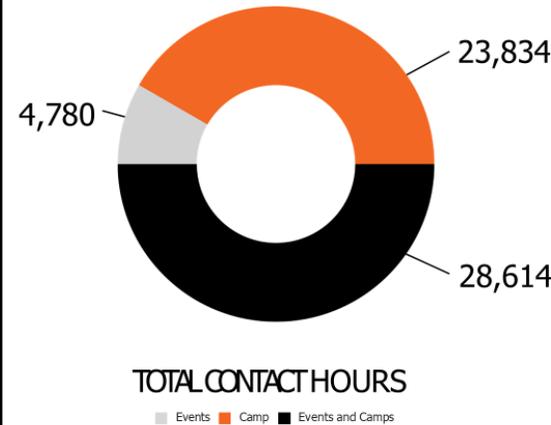


TEACHER PROFESSIONAL DEVELOPMENT

2,915
 TOTAL SUMMER CAMPERS IMPACTED
 OVER THE COURSE OF
28,614
 TOTAL SUMMER CONTACT HOURS



CAMP/EVENT HOURS



TOTAL CONTACT HOURS

SUMMER DATE FOR TEACHER PD

FACULTY TEACHER CONFERENCE
2 Hours
28 Participants

STILLWATER TEACHER
32 Hours
6 Participants

STEM PLAYGROUND TEACHER
1 Hour
70 Participants

CTI FALL SUMMIT TEACHER
4 Hour
80 Participants



K-12 STEM
 College of Engineering,
 Architecture and Technology

Program Enhancements

- Micro-credentials
- Teachers
- STEM Ambassador Program
- Interns



Justification for Support:

- Provide K-12 STEM experiences that improve Science & Math Proficiencies
- Increase the growth of STEM workforce and draw more qualified STEM students.
- Elevate and amplify extension by reaching rural Oklahoma
 - We have a departmental goal to reach all 77 Counties.
- Reach rural and under-resourced students.
- Reach all students providing Teacher PD, Summer Camps, and STEM Opportunities (expos, fairs, workshops)

Leveraging Other Resources

- Professional staff salaries are covered by Dean Huang, OSU College of Engineering, Architecture and Technology
- OSU Foundation PhilanthroPete, Oklahoma Foundation.
- Dr. Moiser Teacher Professional Development Conference
- We remain supportive to faculty who write grants with STEM outreach requirements.

Garden Oaks Community Center

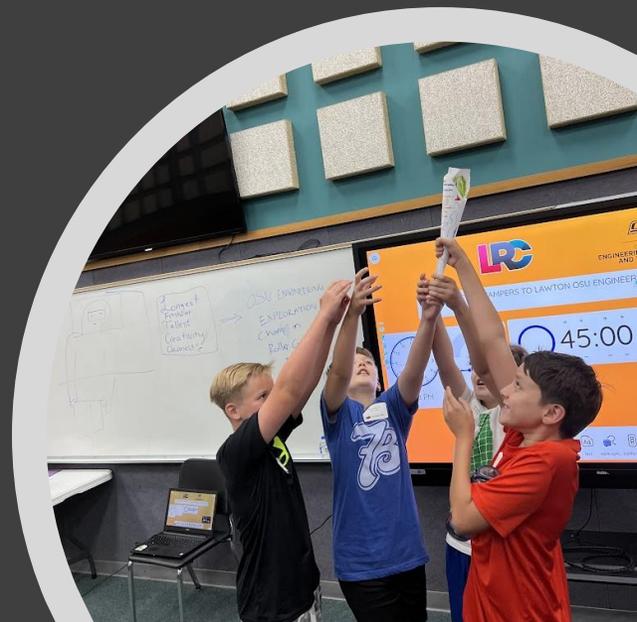


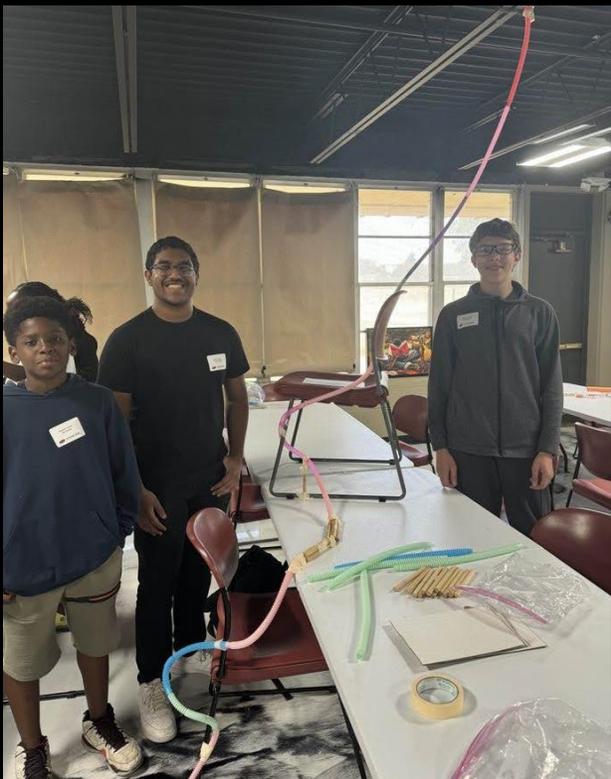
Engineering Adventure (K through 5th)





Engineering Exploration (6th through 8th)





Engineering Discovery (9th through 12th)



Teacher Professional Development

Includes:

- Teachers
- Districts
- Schools

Career & Technical Education Educators

Yearly Growth & Impact

Activity List

- Roller Coaster Copycat Game
- Water Filter
- Paper Airplanes
- Airplane Launchers
- Film Canister Rockets
- Match The Charge
- Toothpick Structures
- Ferris Wheel Challenge
- Catapult Design Challenge
- CD Spinners
- Drones
- Straw Rockets
- Motorized Windmills
- Color Changing Cabbage
- Hot Hands
- Whoosh Bottle
- Paper Plate Flyer
- Mini Light Saber
- Squishy Circuits
- Snap Circuits
- Hula Hoop
- Paper Chain
- Planting on Different Planets
- Pizza Garden
- 2 ingredient Dough
- Kazoo
- Order Pickup Simulation
- Rocket Shapes
- Soap propelled Boats
- Sailboats
- Paper Plate Maze
- Make Bots
- Sled Engineering Challenge
- Oil Spill Cleanup
- Stem Survivor Challenge
- Hydraulic House
- Chemical Car
- Weather Shelter
- Pinball Machine
- Hydraulic Drawbridge

Year 2022	Year 2023	Year 2024	Year 2025
6,595	17,456	21,937	19,849

• Summer Camps

2022	2023	2024	2025
1,300	1,603	2,103	1775

• Teacher Professional Development

2022	2023	2024	2025
30	180	289	184

Year-Round Activities

STEM Fairs

STEM Nights

STEM Challenges

Classroom Visits

School Tours

**Average five per month*



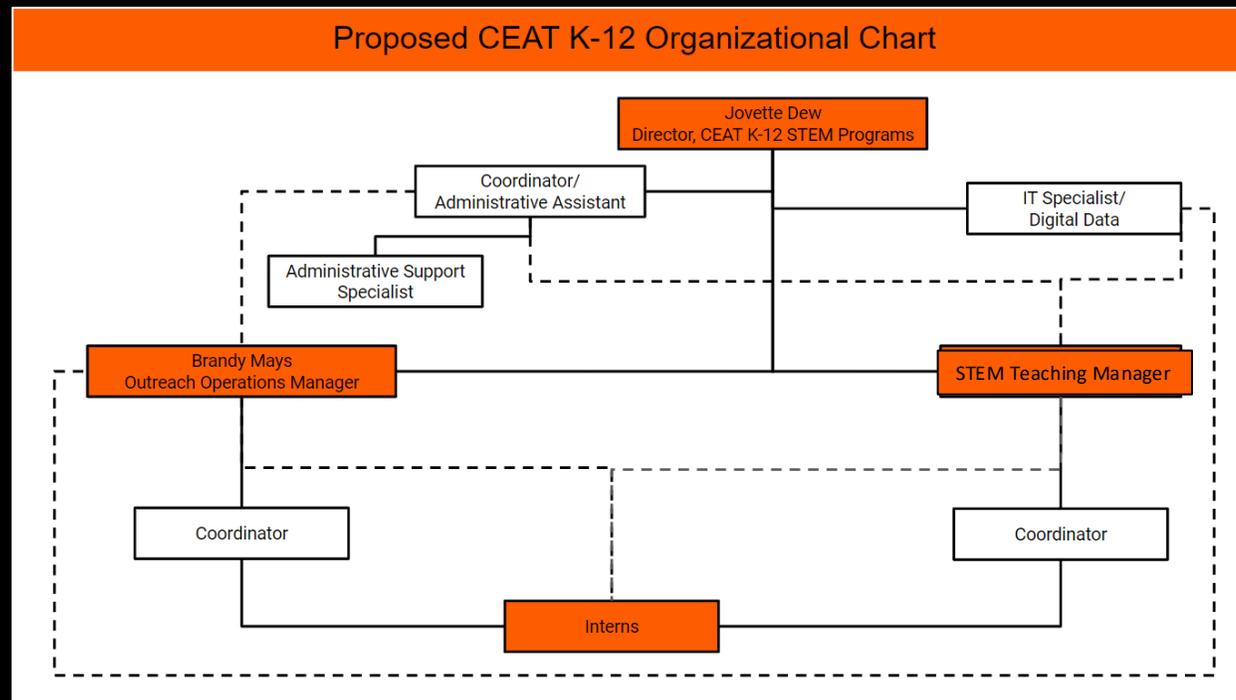
Testimonials

- Teacher feedback and comments
 - *"I absolutely love how much all the activities and discussion pertained to me as a teacher and my classroom. I also loved that we actually did the activities, so we took on the role as our students and experienced how the activities are implemented and/or modified to your grade level curriculum."*
- Student comments
 - *"I like sketching the buildings before I built the structure."*
 - *"I liked the experiment with the plants."*
 - *"playing and fiddling with the robot"*
- Parent comments
 - *"My son loved STEM camp this summer. He had the best time and definitely plans to attend again next summer. You guys are doing an amazing job with this program. Thank you for all you do!"*

Organization Chart

Dr. Hanchen Huang, CEAT Dean

Dr. Ed Kirtley, Associate Dean Engineering Extension



Abbreviated Schedule

January – April Outreach

- Teacher Professional Development
- March Camp Website Live
- April Senior Design Expo
- **Intern Training - May**
- **Camps June-July**
- **Camp close out-
August**

September – December Outreach

- CEAT Career Fair
- Women in STEAM
- TSA Design Challenge
- Broken Arrow PS Aviation Day
- Senior Design Expo
- OSU-Tulsa Deck the Halls with STEM

How can you help?

Revenue Potential

- Outstanding Projects
- OSU Foundation
- Faculty Supported projects
- STEM Camps & Academies

Operating Needs

- Summer Camps Operations
 - Salaries for Interns, Training, Telephone/IT Needs, Supplies
- Stem Nights/ Classroom visits
 - Supplies
 - Travel and Per Diem

CEAT K-12 STEM Outreach Program

Delivering the Boots



Thank you!



Connect with us



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[@12Ceat](https://twitter.com/@12Ceat)



[@osuceat_stem_activities](https://www.instagram.com/@osuceat_stem_activities)

Questions &
Comments?

How can we help
you?

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