





*Science*

*Technology*

*Engineering*

*Math*

# *Top 5 Industries in Tulsa:*



*Aerospace*



*Energy*



*Health*



*IT*



*Agriculture*



## ***TRSA VISION***

An abundance of diverse STEM talent fueling a more globally competitive northeastern Oklahoma.

## ***TRSA Mission***

Building broad, deep and innovative STEM pathways for all students to access high-impact careers.



## GOALS

*TRSA will serve as a catalyst for creation of a collaborative STEM ecosystem producing broad and deep innovative pathways resulting in robust STEM workforce.*

- **CALCULATE** - Create common performance metrics for region's STEM education
- **COMMUNICATE** - Laser focus on communicating STEM opportunities across region
- **COLLABORATE** - Use shared resources to broaden impact of current efforts
- **CULTIVATE** - Bring needed nutrients to STEM ecosystem
  - Collaborative Funding
  - Programming
  - Tulsa Resource Area for STEM Educators (TRASE)
  - Professional Development
  - Mentorship



# ADVISORY COUNCIL



- Ambler Architects
- American Airlines
- Arts & Humanities Council of Tulsa
- APSCO
- Baker Hughes
- Bama Companies
- Booker T. Washington High School
- Broken Arrow Public Schools
- Camp Fire Green Country
- Cancer Treatment Centers of America
- Charles and Lynn Schusterman Family Foundation
- Forest for the Trees
- Jenks Public Schools
- John Hope Franklin Center for Reconciliation
- Junior Achievement of Oklahoma
- KIPP Tulsa
- Matrix Service Company
- Miss Helen's Private School
- Muncie Power
- Muscogee Creek Nation
- NORDAM
- Oklahoma State Department of Education
- OSU - Tulsa
- Oklahoma Innovation Institute
- Osage County Interlocal Cooperative
- Osage Nation
- Project Lead the Way
- Society of Exploration Geophysicists
- STARBASE Oklahoma
- Tandy Supercomputing Center
- T.D. Williamson
- The University of Tulsa
- Tulsa Air & Space Museum & Planetarium
- Tulsa Chamber of Commerce
- Tulsa Children's Museum
- Tulsa City County Library
- Tulsa Community College
- Tulsa Community Foundation
- Tulsa Engineering Foundation
- Tulsa Opera
- Tulsa Public Schools
- Tulsa Symphony
- Tulsa Technology Center
- Union Public Schools
- Williams Companies
- YMCA Tulsa



## ***EVENTS***

TRSA offers around 150 events per year, reaching more than 50,000 students. Below are just a few of our main events:

- STEM Expo
- Engineer Games
- Summer Break Coding Camp
- Tulsa Regional Science Fair
- STEM4All Life Hack
- SeaPerch Challenge
- Difference Makers Camp
- K-12 Drone Competition
- Regional Kite Festival
- Space Week
- You're Kind of a Big Deal Banquet
- Math Mentors

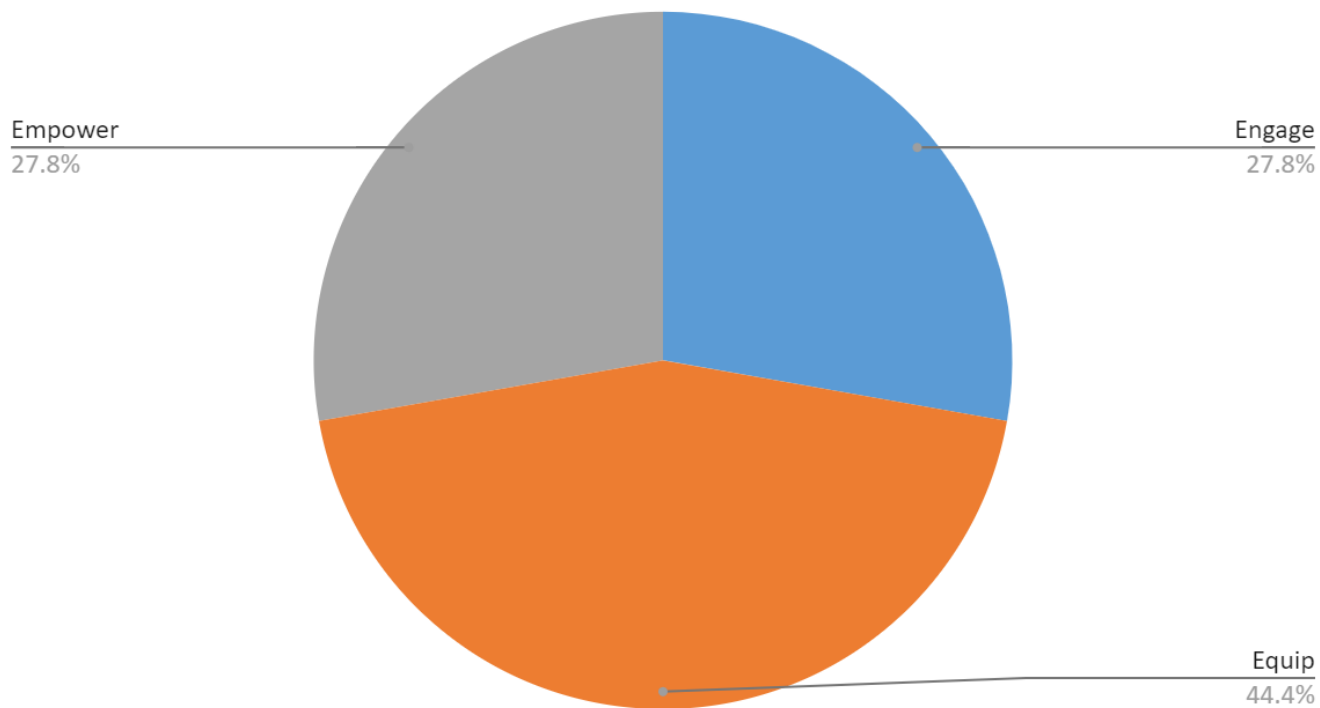


## 2020 TRSA Outcomes

<b>Program Type</b>	<b>Number of Programs</b>	<b>Total Participants for Program Type</b>
<b>Teacher PD</b>	<b>26 sessions</b>	<b>1070 Teachers</b>
<b>TRSA Student Indirect</b>	<b>26 teacher sessions</b>	<b>70,380</b>
<b>TRSA Student Direct</b>	<b>33 events/camps</b>	<b>141,934</b>
<b>TRSA Student STEM Kits(included in Direct Student)</b>	<b>114 sites</b>	<b>63,593</b>
<b>Total</b>	<b>173</b>	<b>212314</b>

# TRSA Programming

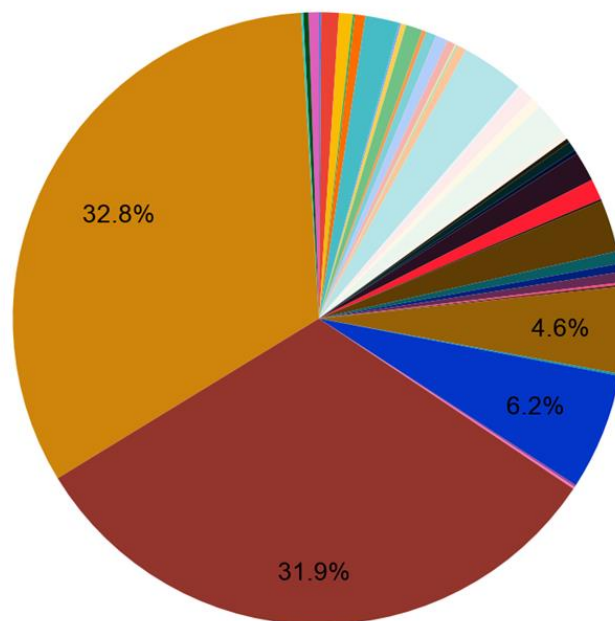
## Number of Programs





# School Districts Served

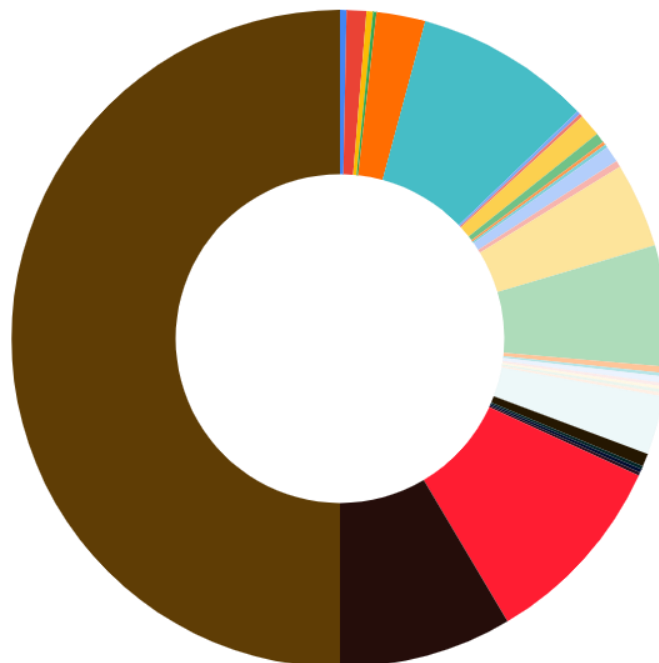
## STEM IN A BAG Kit Distribution



- Ada
- Anderson
- Barsndall
- Bixby
- Bowring
- Broken Arrow
- Butner
- Caney Valley
- Catoosa
- Choctaw Nicoma Park
- Choteau-Maze
- Cleveland
- Collinsville
- Cross Creek
- Dunbar
- EPIC
- Glenpool
- Grand View
- Homeschool
- Hominy
- Jenks
- Justus Tiawah
- Lanier
- Liberty
- Lone Star
- Mounds
- Okmulgee
- Okmulgee
- Oliver
- Oologah-Talala
- Osage
- Owasso
- Pawhuska
- Porter
- Preston
- Private
- Sand Springs
- Sequoyah
- South Coffeyville
- Tenkiller
- TPS
- Union
- Wagoner
- Wagoner
- Wynona



# School Districts Served 2020 Summer Camps

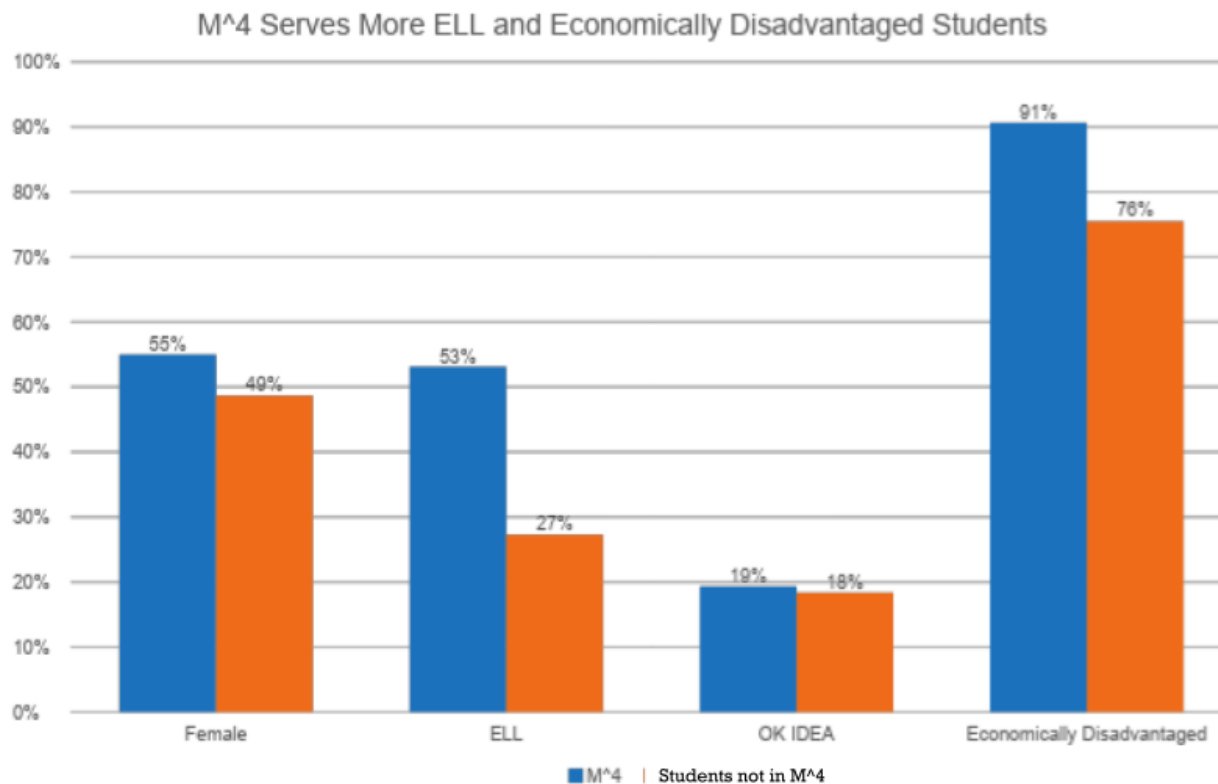


- |  |  |   |   |  |  |
|--|--|---|---|--|--|
| <span style="color: blue;">●</span> Adair          | <span style="color: red;">●</span> Anderson      | <span style="color: yellow;">●</span> Angus Valley          | <span style="color: green;">●</span> Bartlesville   | <span style="color: orange;">●</span> Bixby      | <span style="color: teal;">●</span> Broken Arrow |
| <span style="color: lightblue;">●</span> Claremore | <span style="color: pink;">●</span> Cleveland    | <span style="color: yellow;">●</span> Collinsville          | <span style="color: green;">●</span> Coweta         | <span style="color: orange;">●</span> Edmond     | <span style="color: teal;">●</span> EPIC         |
| <span style="color: lightblue;">●</span> Glenpool  | <span style="color: pink;">●</span> Haskell      | <span style="color: yellow;">●</span> Independent / Private | <span style="color: green;">●</span> Jenks          | <span style="color: orange;">●</span> Kellyville | <span style="color: teal;">●</span> Lonestar     |
| <span style="color: lightblue;">●</span> Mannford  | <span style="color: pink;">●</span> OKC          | <span style="color: yellow;">●</span> Okemah                | <span style="color: green;">●</span> Okmulgee       | <span style="color: orange;">●</span> Oologah    | <span style="color: teal;">●</span> Owasso       |
| <span style="color: black;">●</span> Sand Springs  | <span style="color: darkgreen;">●</span> Sapulpa | <span style="color: darkblue;">●</span> Skiatook            | <span style="color: darkpurple;">●</span> Tahlequah | <span style="color: red;">●</span> Tulsa         | 2 more   |



# Participation Rates by Other Demographics

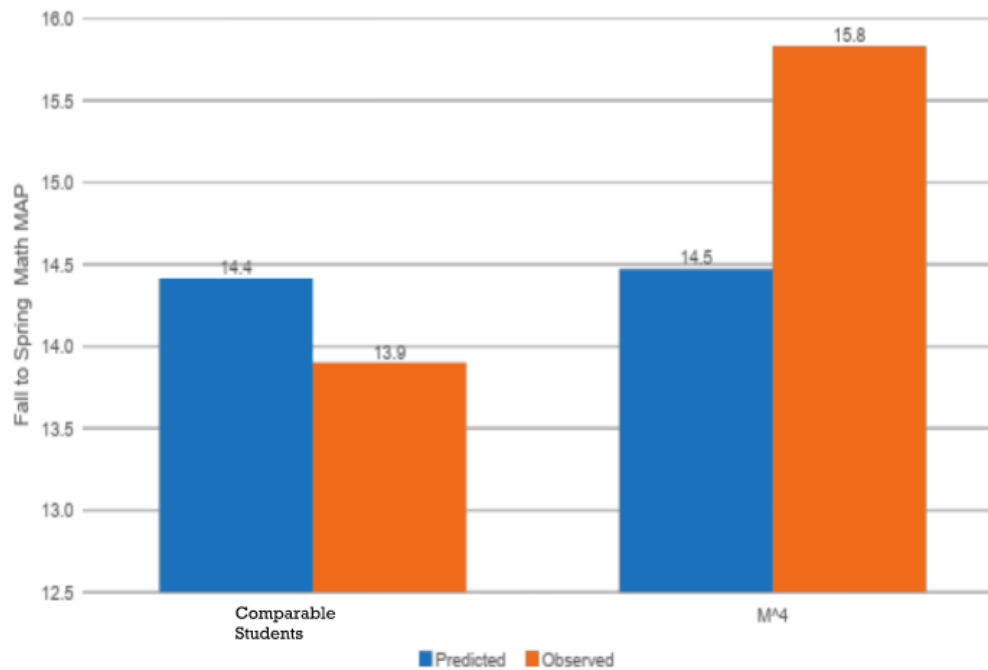
\*Students not in M^4 is K-5<sup>th</sup> grade only to match M^4



# ME AND MY MATH MENTOR: RESULTS

## Fall to Spring Observed and Predicted Math Scores (3<sup>rd</sup> Grade Only, 2016/17 – 2018/19)

M<sup>4</sup> Students Outperform Expectations on the MAP Math Test while  
Students Not in the Program Underperform



## ME AND MY MATH MENTOR: RESULTS



Me and My Math Mentor serves a greater percentage of economically disadvantaged (91%), ELL (53%), and students of color (83%) compared to students not in the M<sup>4</sup> program (76%, 27%, and 74% respectively).



- The average Me and My Math Mentor 3rd grader has higher MAP fall-to-spring growth in math and reading (15.8 and 13.7 points respectively) than students not in the program (13.7 and 11.9 points respectively).
- Importantly, the math gap was found to be significant even when controlling for baseline demographic characteristics and predicted performance while reading was not! This was not the case with fewer data.
- The average Me and My Math Mentor 3rd grader has higher average daily attendance and lower Chronic Absenteeism (96.4% ADA and 5.3% CA) than students not in the program (94.1% ADA and 18.8% CA).



## 2021 Goals

- Develop a STEM PD Academy for teachers so that teachers are strengthened and equipped as they engage in a robust community of practice that encourages them to lead world class STEM experiences for students
- Expand high-quality STEM experiences for students so that Tulsa area students grow in their capacity to tackle real world problems through the application of STEM concepts and practices.
- Review and clarify TRSA's community partnership model so that the STEM ecosystem partnership infrastructure is strengthened resulting in coordination and increased access for all students to high-quality STEM experiences.
- Complete development of a STEM scorecard so that our community is aware of the outcomes and progress in STEM education and can rally together to achieve even greater opportunities for all students and educators in the Tulsa area.



Questions? Contact: [Info@tulsastem.org](mailto:Info@tulsastem.org)

