

PRC 201 - Competitive After-School Robotics Joint Legislative Education Oversight Committee Final Grant Review

October, 2024

Dr. Michael Maher, Deputy State Superintendent, Standards, Accountability, and Research
Dr. Kristi Day, Director, Academic Standards
Dr. Charles Aiken, Section Chief, Science, Mathematics, & STEM

Background

Background

LEGISLATIVE PURPOSE:

- Support schools in their efforts to **increase** the number of **students** interested in pursuing **education and career opportunities** in Science, Technology, Engineering and Mathematics (**STEM**).

FUNDING SOURCE/AMOUNT:

- Session Law 2021-180 and Session Law 2023-134 provided a total of \$2.6 million from **Federal ESSER III funds** to create the **Educational and Competitive After-School Robotics Grant Program** for the 2022-2023 and 2023-2024 school years.
- In March 2024, the SBE approved reallocating funds from PRC 189-Supplemental Academic Enrichment Program to PRC 201 for a total allocation of **\$3,763,446 in funding**.

Targeted Areas for Consideration

- **Quality** of the application based on the grant rubric.
- Priority for **new** applications or those who did not receive an award under the previous grant application.
- **Sought to maximize** funding to serve the greatest number of robotics teams to **increase student participation** across a **broad geographical distribution**.
- Schools serving **economically disadvantaged** populations.
- **First time teams** participating in robotics competitions.
- Districts establishing **feeder teams to build sustainability**.
- Schools ready and able to implement in the **2023-24 season**.

Timeline

November, 2021	<ul style="list-style-type: none">● Session Law 2021-180 passed with \$1,600,000 in funding approved for PRC-201
July, 2022	<ul style="list-style-type: none">● SBE awarded 19 applications totaling \$1,590,075.45
September 2023	<ul style="list-style-type: none">● Session Law 2023-134 passed with \$1,000,000 in funding approved for PRC 201
January, 2024	<ul style="list-style-type: none">● SBE awarded 22 applications totaling \$1,000,000
March, 2024	<ul style="list-style-type: none">● SBE approved transfer of funds from PRC 189 Supplemental Academic Enrichment Program to PRC 201 - After School Robotics Program
April, 2024	<ul style="list-style-type: none">● SBE awarded 23 additional applications totaling \$1,123,454.41
September, 2024	<ul style="list-style-type: none">● ESSER 3 funds must be encumbered by September 30th and liquidated by December 29th, 2024

Funding

Total funding made available - \$3.7 million

Requests received - \$8.2 million

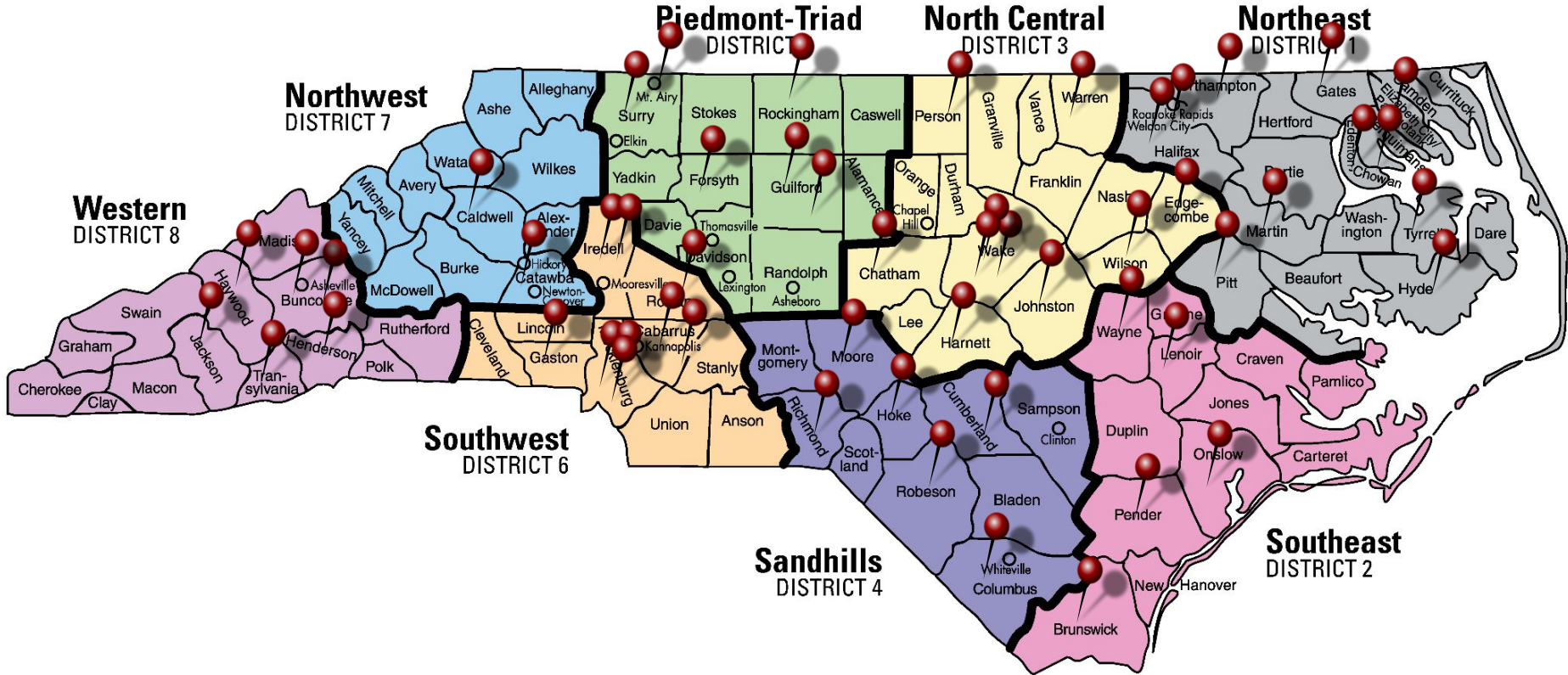
- A total of \$2.6 million in ESSER III funds were provided for After School Robotics programming through the past two budget cycles
 - S.L. 2021-180 allotted \$1.6 million and S.L. 2023-134 allotted \$1 million.
 - An additional \$1.12 million in funding from PRC 189 provided by the SBE in March 2024.

Awards

- Over 3 grant award cycles, the Department received 111 applications from 84 different PSUs
 - In June 2022, the Department received 65 applications with a total request of \$6.1 million.
 - In December 2023, the Department received 46 applications with just over \$2.1 million in requests.
- Number of awards - 64 (55 different PSUs over the 3 award cycles)
 - 19 awards in July 2022
 - 22 awards January 2024
 - 23 awards April 2024.
- Grant participants included PSUs from all 8 SBE regions, all grade levels, with both LEAs and Charter Schools.

Distribution of PRC 201- After School Robotics

Geographic Distribution of Grant Awards

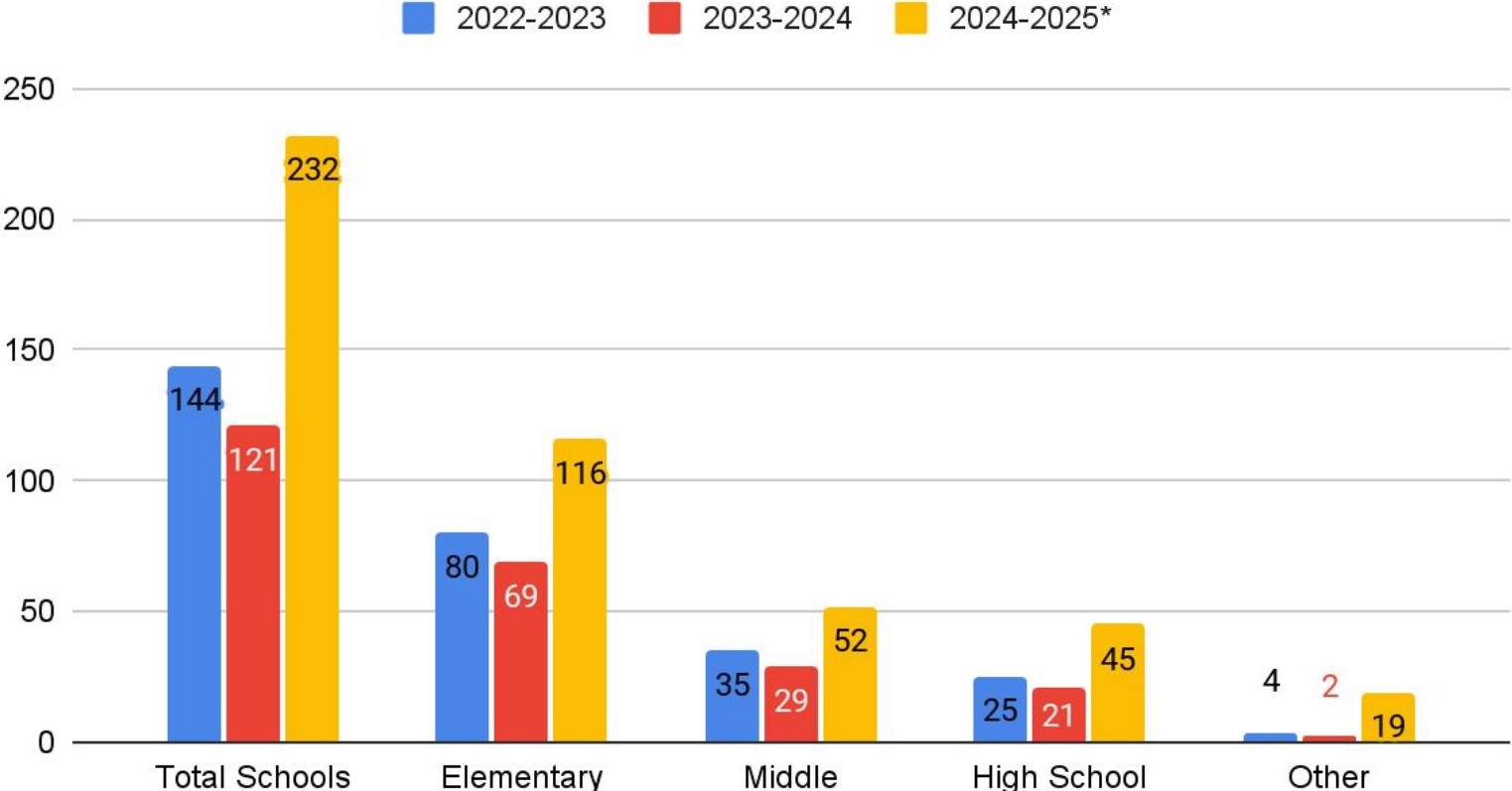


Total Funding & Distribution

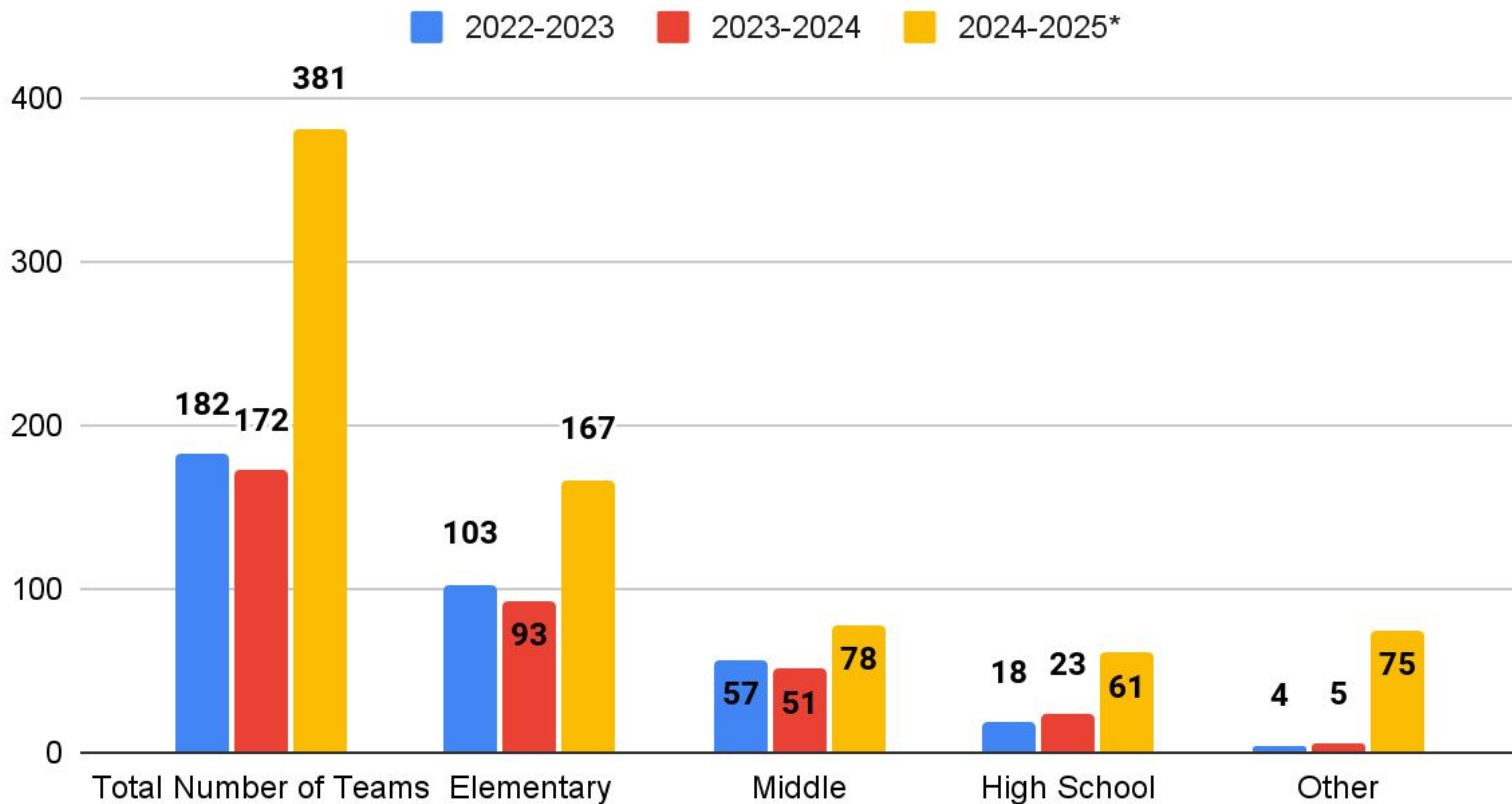
Region	Number of Awardees	Amount of Funding Approved
Northeast	11	\$566,408.66
Southeast	5	\$567,541.00
North Central	10	\$656,018.34
Sandhills	6	\$462,639.93
Piedmont - Triad	6	\$497,769.50
Southwest	9	\$393,335.25
Northwest	2	\$165,264.48
Western	6	\$404,552.70
TOTALS	55	\$3,713,529.86

Impact on Student Participation

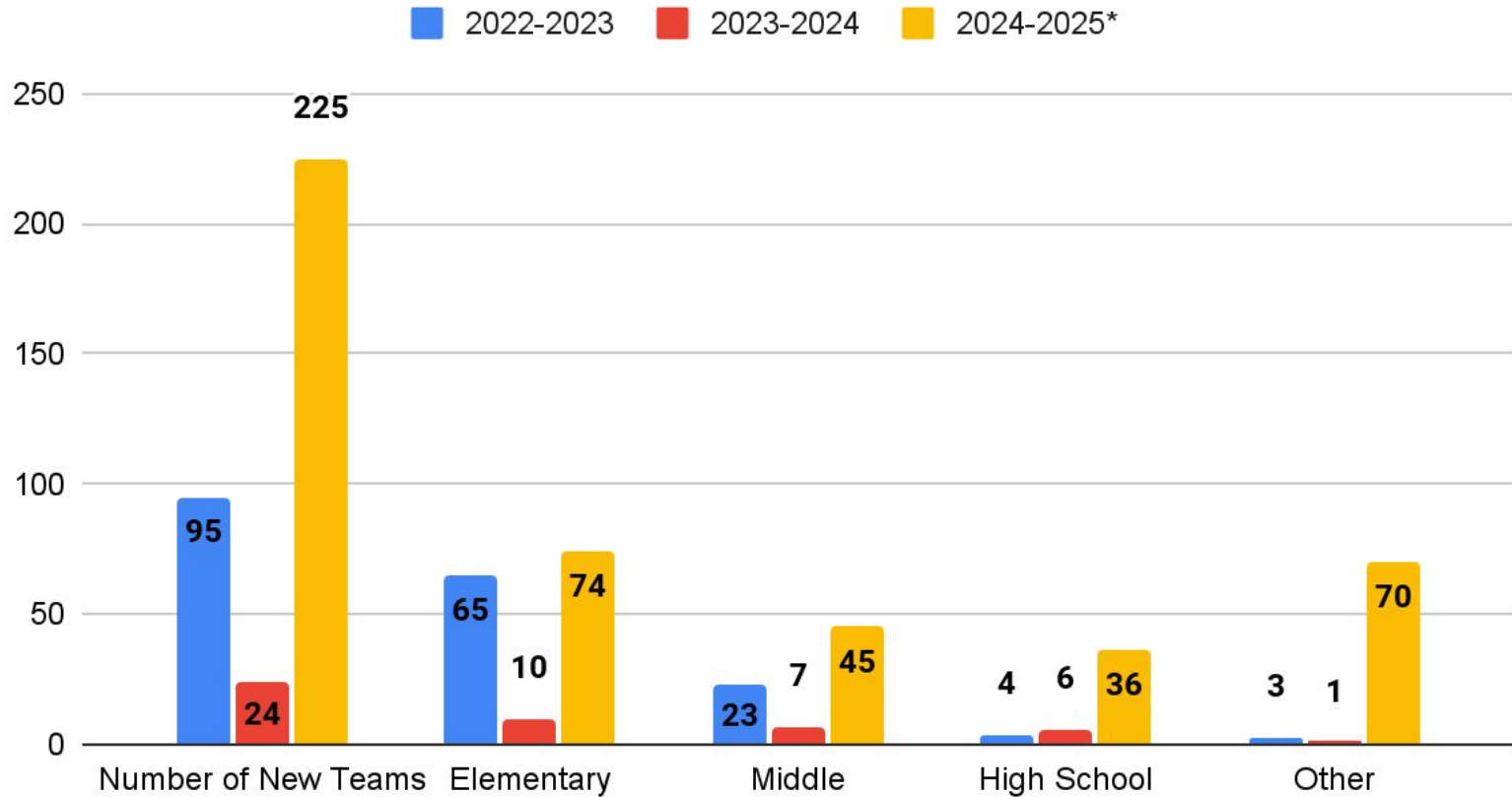
Number of Schools Participating



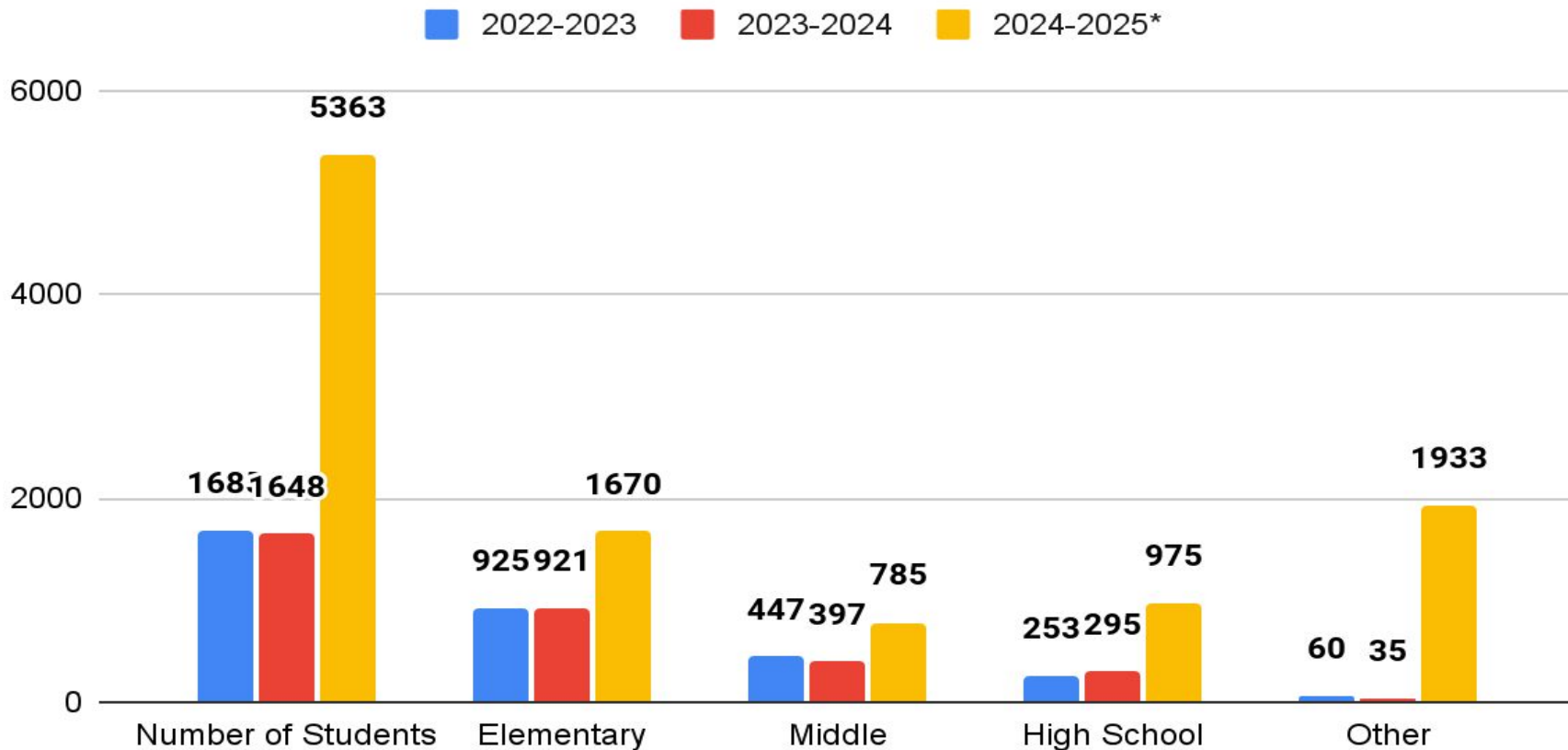
Number of Teams



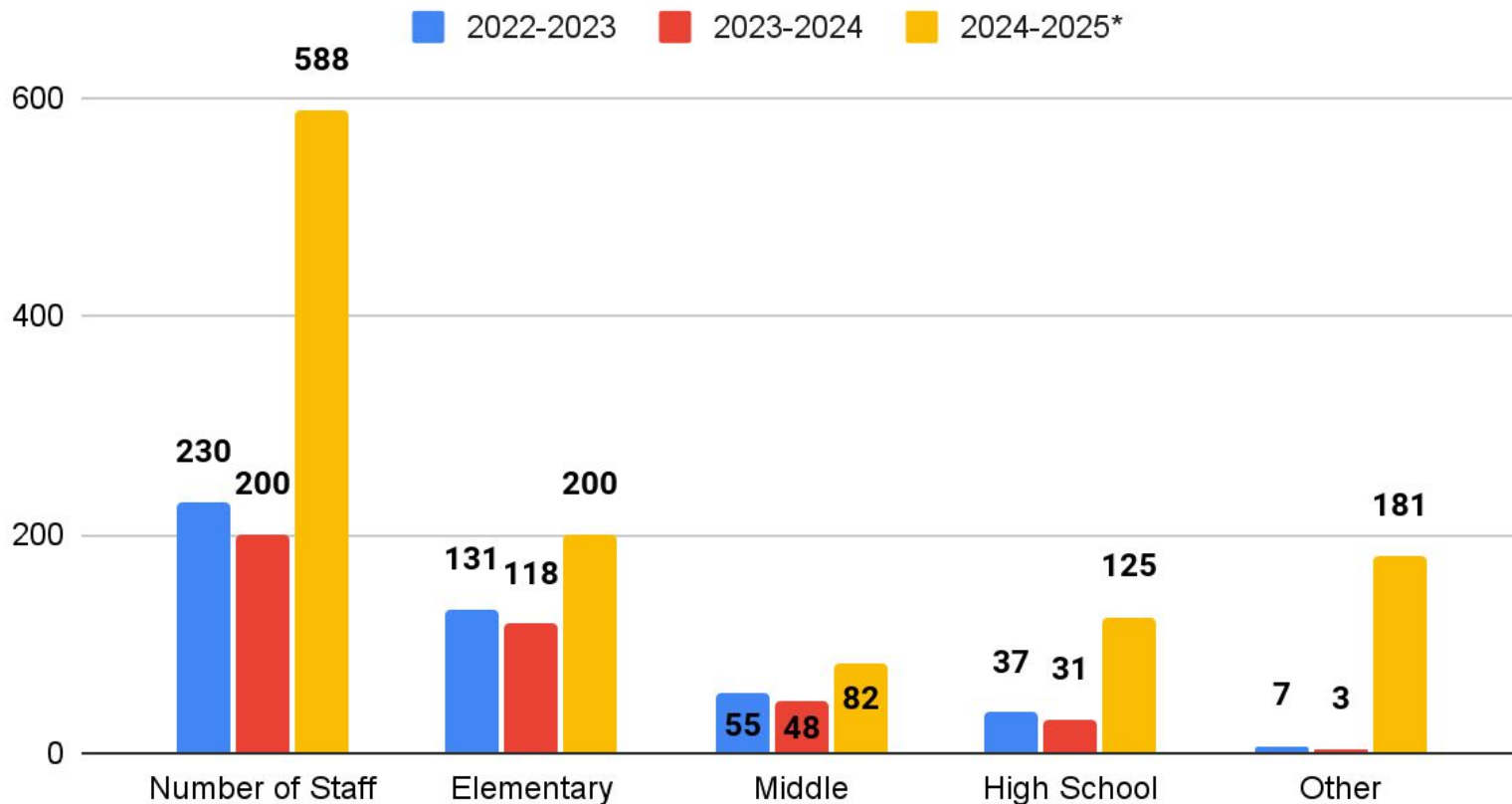
Number of New Teams



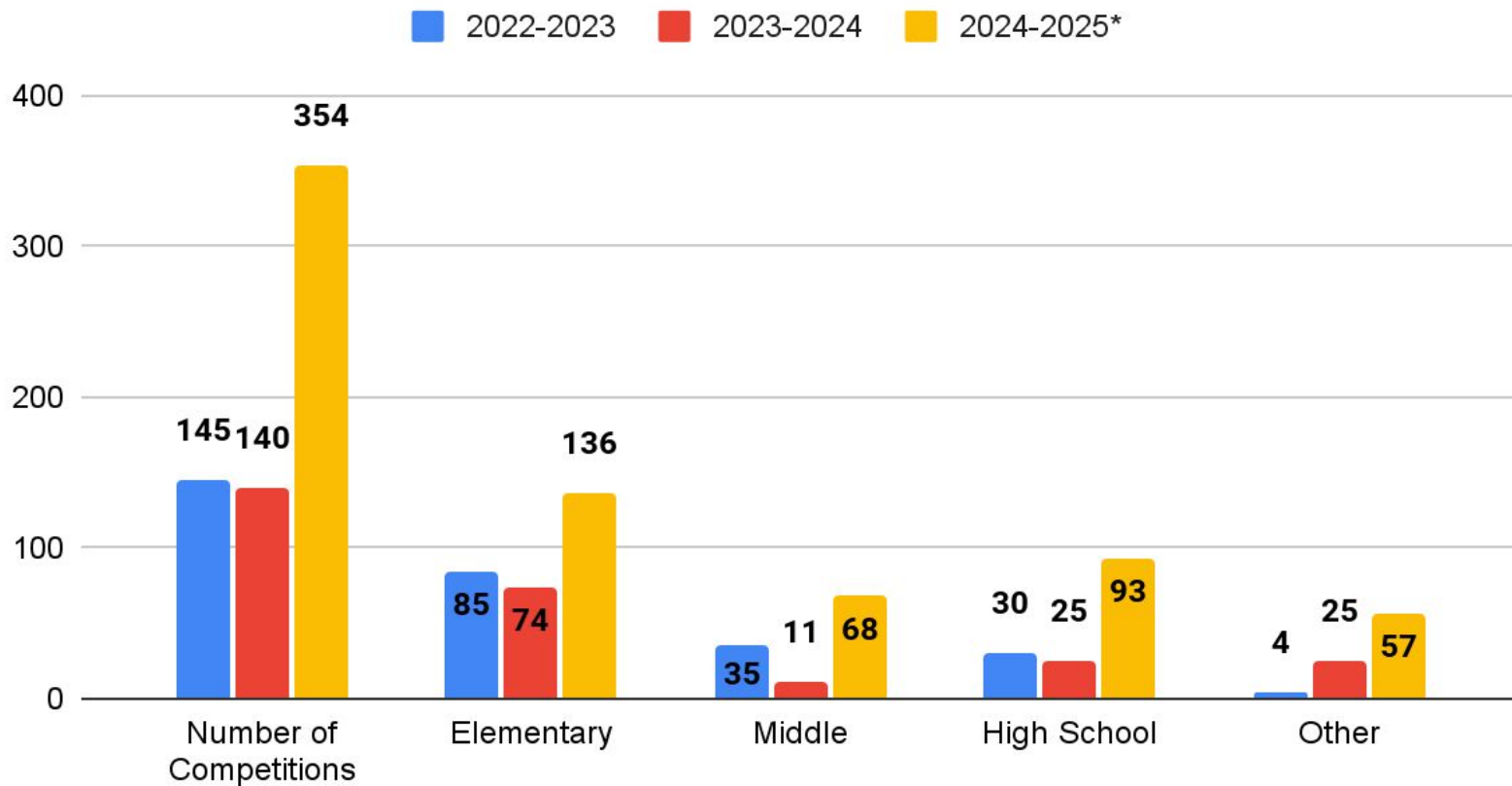
Number of Students Participating in Robotics Teams



Number of Staff Supporting Robotics Teams



Robotics Competitions



PSU Feedback

Awardee Feedback

- *“The grant has successfully reached a **diverse range of students** across elementary, middle, and high schools. Establishing after-school clubs has provided a dedicated space for students to **develop their technical skills, teamwork, and problem-solving abilities.**”*
- *“We were able to obtain 95% of all the materials needed to launch the program (thanks to the grant). We have loads of support from families and the local community. **Students are already talking about the program in the terms of not just this year, but building the program.**”*
- *“At this point we have been able to offer a robust summer camp program **expanding to more schools and serving more students than ever before!** In addition, grant funds allowed us to offer a Coaches Summit during the summer with PD lead by community partner...not only our teachers but teachers from surrounding counties as well.”*
- *“Over **550 students** were able to participate in robotics programs this year. We have grateful coaches who are eager to restart their teams this year. Our **graduating seniors are entering either two or four year schools this fall studying in a STEM field.** Our high school robotics team won at the State level and competed at WORLDS in April 2024. We continue to recruit high school robotics students from 7 different high schools in the county. We held three very successful robotics competitions in our county where multiple teams participated. 104 teams participated in SumoFest. That's 326 students!!”*

Awardee Feedback

- *“The **enthusiasm** generated during the camps extended to staff as well, with two staff members who facilitated the summer camps now taking on leadership roles as coaches for the...team at DF Walker Elementary. This **collaboration** is fostering a culture of **innovation** and **teamwork**, preparing our students for future STEM challenges.”*
- *“**Student learned communication, collaboration, and critical thinking skills that they can use throughout their life.** During the 23-24 school year, all 4 school were able to continue their robotics program and continued to develop teamship and programming skills. Their success also helped them to succeed in other regional robotics and stem competitions. **We now have a feeder pattern from elementary to high school where students can compete at all age levels.**”*
- *“We are celebrating our twenty-four active teams this year. Additionally, our teams excelled in the Robotics competition in April 2024. **Not only did they learn a tremendous amount in preparation for the event, they also gained transferable work skills, such as collaboration, team work, communication, and problem-solving skills, during the event.** Our teams won seven of the nine awards including the Innovative Project Award and the Champion Finalist Award.”*

Awardee Feedback

- *“I have one student who rarely talked at all before participating on the robotics team, and she is speaking so much more now!” Comments like these have shown the... program of **“gracious professionalism”** to be of high value to student participants, going well beyond the field of robotics to develop character and leadership skills in students at a young age.”*
- *“I would like to take this opportunity to state how proud I was of each member of the FRC team, who competed this year. They did not have the best record this season, but **something outstanding happened with this group. With all of the setbacks and obstacles thrown their way, these students never gave up. When adversity hit the team hard, they united together even more diligently to meet the challenges head-on.** Instead of letting the situation get them down, they took the initiative to come back home after our season ended and plan for our next year’s competition season. This included staging a open house at both high schools to help recruit new team members.”*

Awardee Feedback

Challenges -

- Timing due to state budget approvals and ESSER III spending deadlines
- Changes in leadership at the school and district level
- Transportation
- Scheduling conflicts
- Finding enough coaches/mentors/volunteers
- Uncertainty of future funding

Conclusion

“It was truly an awesome experience. I had no idea what I was getting myself into but that competition weekend filled us all up!! **If the world operated like a robotics competition we would all be fine. Everyone helped everyone. Everyone supported and encouraged and cheered everyone on!** Everyone was so nice and welcoming and inclusive and just good people! Truly something special to be a part of.”

“Overall, the growth observed in all of the students is astounding. Their **teamwork, communication, and ability to handle unexpected challenges** have significantly improved from where they started. They **support one another**, share the workload, and eagerly embrace every opportunity that arises. Alongside their technical skills, these qualities make their progress truly impressive and a source of pride for everyone involved.”

Questions?

Howard Ginsburg

K-12 Integrative STEM Specialist

Office of Academic Standards

howard.ginsburg@dpi.nc.gov

Dr. Charles Aiken

Section Chief for Math, Science, STEM

Office of Academic Standards

charles.aiken@dpi.nc.gov