



An Analysis of Funding Impact May - December 2018

Nashville After Zone Alliance
Office of Community Engagement
Nashville Public Library



NAZA STEAM INITIATIVE OVERVIEW

Since 2016, the Nashville After Zone Alliance (NAZA) has pioneered ways to inspire youths' interest, engagement, and motivation in science, technology, engineering, arts, and math (STEAM) and connect in-school and out-of-school time learning by offering select funded partners additional funding and resources to test out innovative learning strategies with youth. NAZA has supported partners in its STEAM Initiative by:

- Facilitating partnerships between school teachers and afterschool educators;
- Offering professional development focused on best practices in facilitating high-quality STEAM learning;
- Offering funding to offset the costs of educator time, STEAM supplies, program enrichments, and field trips;
- Providing best-in-class evaluations both of STEAM program quality and youths' perceptions about their experiences.
- Facilitating a learning community through which the partners could share their experiences and expertise.

In turn, these partners have increased youths' access to high-quality STEAM learning experiences and led the nation in exploring STEAM best practices for out-of-school time (OST).



FULL STEAM AHEAD

NAZA's 2018 STEAM Initiative kicked off in May and culminated in December. During that time NAZA enabled 13 afterschool programs in Nashville to provide highly engaging STEAM-based activities and experiences to middle school youth. Partner programs benefitted from a variety of professional and instructional resources including STEAM-focused trainings, a STEAM coach to help program directors and their staff plan meaningful OST activities, access to STEAM equipment, and funding to enhance youth access to STEAM programming and experiences.

OUR REACH

614 youth across Davidson county
were exposed to **68** hours of STEAM
based activities. **13** program sites
located across Davidson county served
youth from Metro Nashville Public schools.

STEAM PARTNERS

Aspiring Youth Enrichment Services

Backfield In Motion

Beech Creek Ministries

Bethlehem Centers of
Nashville

Boys & Girls Club

Coleman Community Center

Conexion Americas

DYMON in the Rough

In Full Motion



Martha O' Bryan Center

Moves & Grooves

Old Hickory Community Center

YMCA

OUR STRATEGY

PROVIDE QUALITY INSTRUCTIONAL RESOURCES

Youth engaged in STEAM-based educational experiences such as learning how to code robots, creating hydroponic gardens, building models of human biology, and designing simple circuits.

Activities were aligned with the Next Generation Science Standards (NGSS) and reinforced what youth learned in the classroom. Furthermore, activities enhanced 21st Century skills such as teamwork and collaboration.

Special emphasis was placed on making real-world connections relevant to youth who are currently underrepresented in the STEAM workforce.



DEVELOP EDUCATOR PARTNERSHIPS & YOUTH WORKERS' CAPACITY

Program partners participated in seven hours of Community of Practice meetings that were facilitated by youth professionals to discuss best practices in social and emotional skill building, ways to increase youth voice, and how to improve instructional relevance for their youth.

Program partners engaged in 25 hours of planning with formal educators to co-plan their program's STEAM activities.

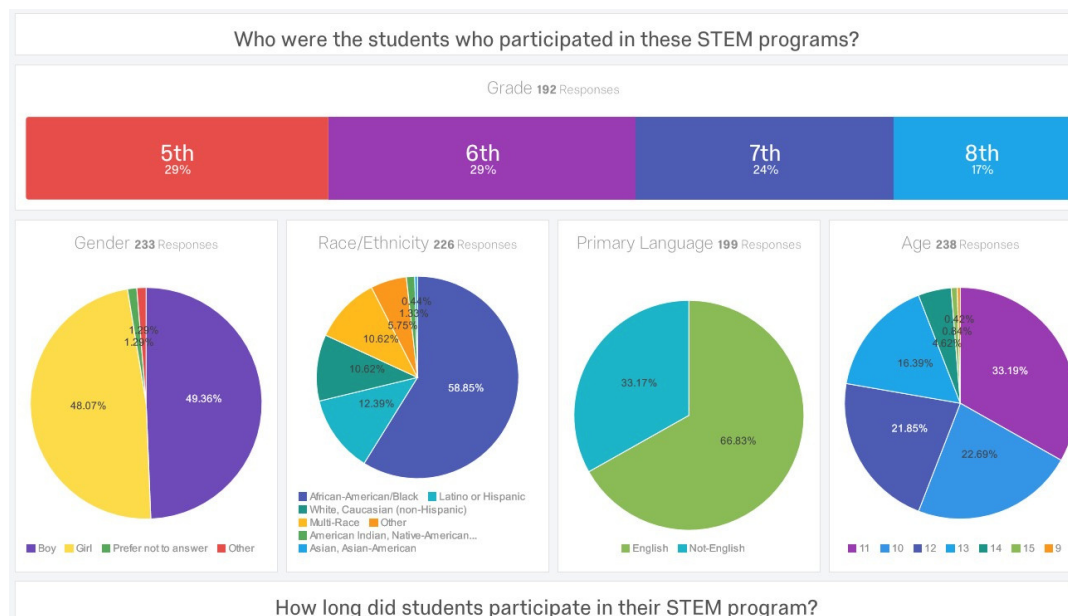
MEASURING IMPACT



YOUTH EXPERIENCES

The Common Instrument Suite (CIS) is a self-report survey developed by Harvard University's PEAR Institute that measures a variety of youths' STEM-related attitudes, including STEM interest and engagement, STEM career knowledge, and STEM identity. This tool was specifically developed with outside-of-school time (OST) STEM programs in mind.

Partners in NAZA's STEAM Initiative in both the summer and fall of 2018 administered the CIS to their youth, allowing the partners and NAZA to better understand youths' experiences in NAZA's STEAM Initiative.

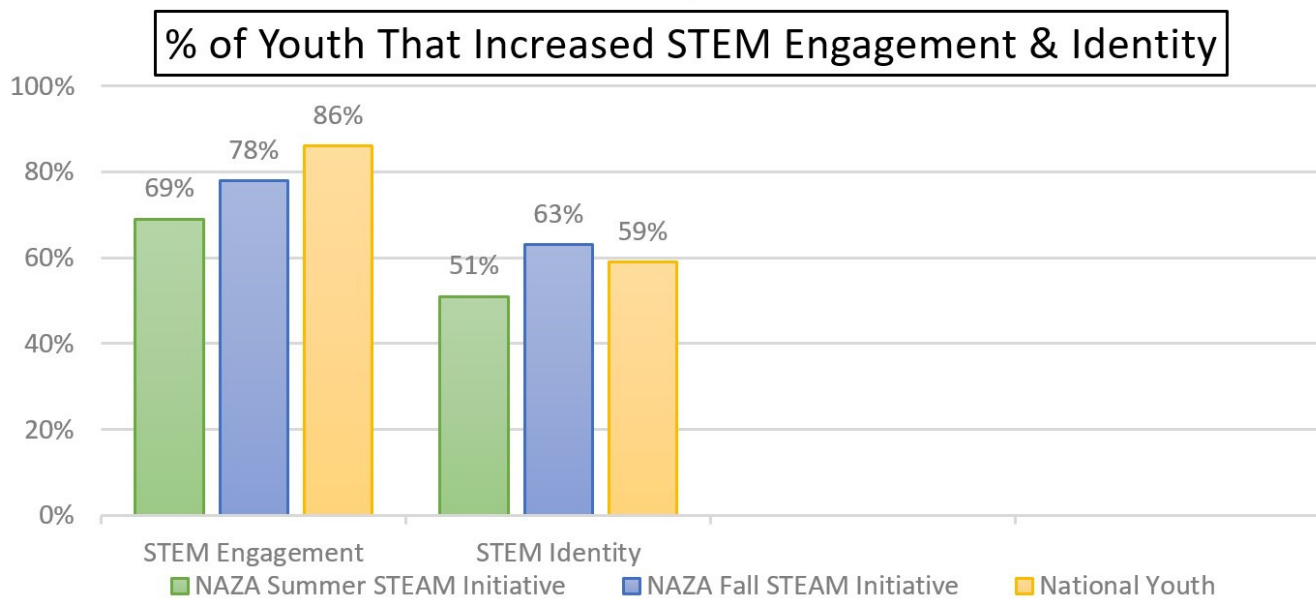


A snapshot of the demographics of youth surveyed in the fall of 2019



STEM ENGAGEMENT & STEM IDENTITY

The CIS survey measures whether youths' attitudes about STEM engagement (i.e. interest and excitement in participating in STEM activities) and STEM identity (i.e. the degree to which youth see themselves as inventors, scientists, engineers, or mathematicians) change as a result of participating in their program.



➤ 69% of youth respondents from NAZA's STEAM Initiative reported an increase in STEM Engagement during summer programming; 78% of youth reported an increase in STEM Engagement during fall programming. The national average for increased STEM Engagement is 86%.

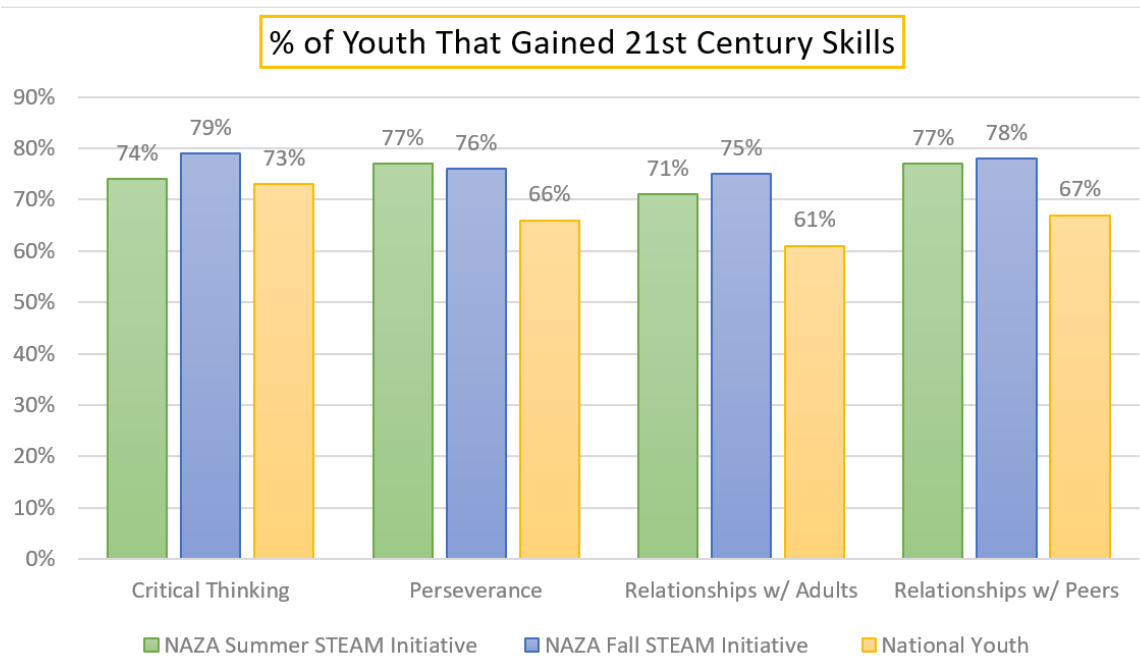
➤ 51% of youth respondents from NAZA's STEAM Initiative reported an increase in STEM identity during summer programming; 63% percent of youth report an increase in STEM identity during fall programming. The national average for increased STEAM Identity is 59%.

MEASURING IMPACT



21ST CENTURY SKILLS

The CIS survey measures whether youth reported increases in four 21st Century Skills including: critical thinking, perseverance, relationships with adults, and relationships with peers.



- 72% of youth respondents from NAZA's STEAM Initiative reported gains in critical thinking skills during summer programming; 79% of NAZA youth reported gains in critical thinking skills during fall programming. The national average for increased critical thinking skills is 73%.
- 77% of youth respondents reported gains in perseverance during summer programming; 76% of NAZA youth reported gains in perseverance skills during fall programming. The national average for increased perseverance skills is 66%.
- 71% of youth respondents reported gains in relationships with adults during the summer; 75% of NAZA youth reported gains in relationships with adults during fall programming. The national average for increased relationships with skills is 61%.
- 77% of youth respondents reported gains in relationships with peers during summer programming; 78% of NAZA youth reported gains in relationships with peers. The national average for increased relationships with peers is 67%.