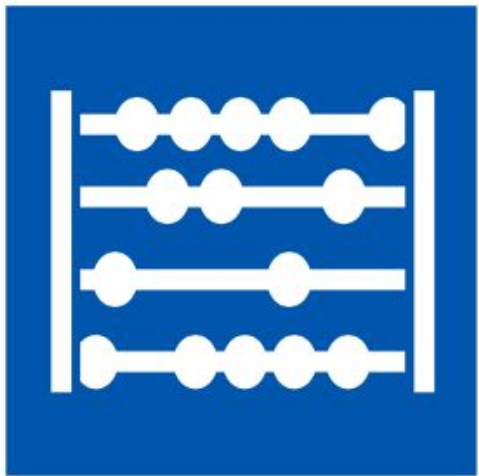
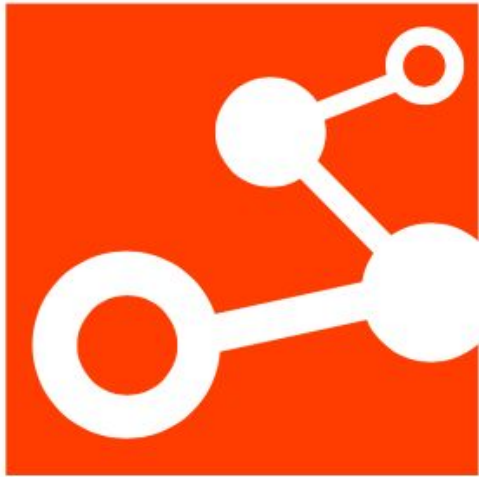




LISD STEM



Program Evaluation

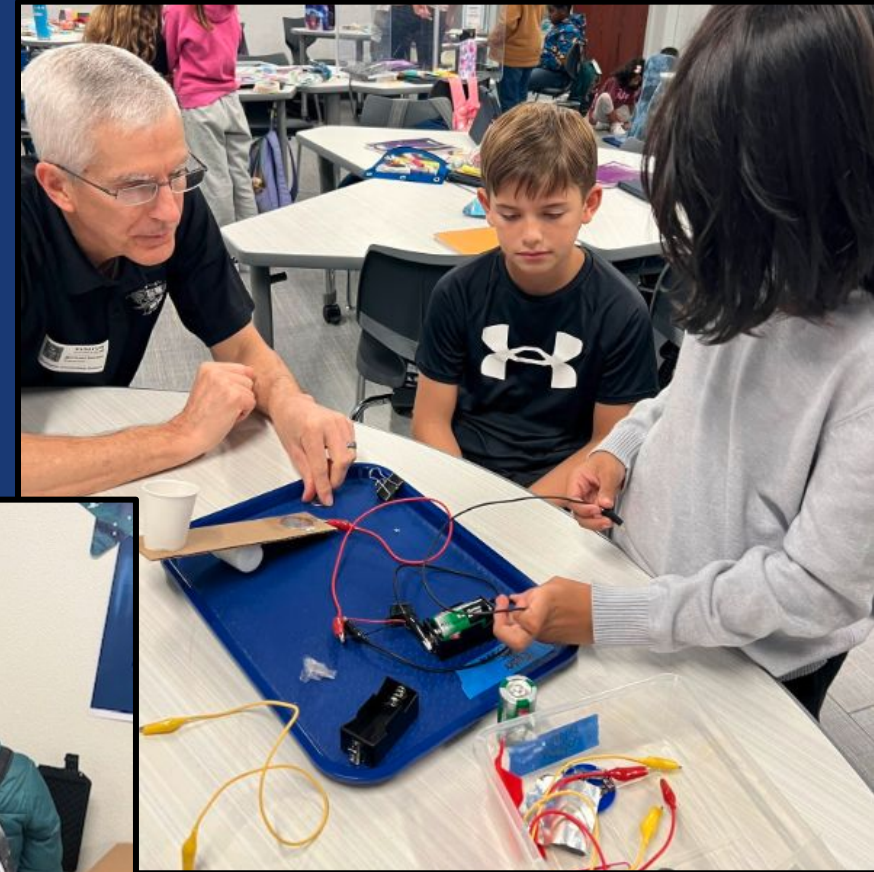
Elementary STEM- Kim Warr
Secondary STEM- Ann Crosby
Secondary Science- Renee Marts

Director of Digital Learning - Dr. Jonas Greene
Director of CTE & CCMR- Dr. Kristin Petrunin

Agenda

- STEM Academy Program Overview and History
- Enrollment & Participation
- Program Data
 - Elementary
 - Secondary
- Findings and Recommendations

Local electricians as project mentors for 4th graders



City of Flower Mound Drone Pilot shared his journey to career with drones

STEM Academy Program Overview & History



PURPOSE:

The LISD STEM Academy Program increases exposure in the elementary & middle grades to science, technology, engineering, and mathematics knowledge and skills while also providing a real-world, project-based curriculum that engages students with STEM Content. It expands school choice program options within LISD to retain and attract students.



STEM Academy Program Overview & History



2018

First STEM Academy Opens

2024

Elementary & Middle School STEM Academy available in all 5 feeder patterns.

STEM Across the District

STEM Specials Program
Wonder Wagon

New TEKS emphasizing Engineering through Science

Elementary School Program Model

Our STEM+ Philosophy

STEM+ strategically integrates content areas of math, science, language arts, and social studies concepts to produce real-world learning experiences for students

Key features include:

- explicit daily instruction in engineering
- enrichment in the computer sciences
- engineering tasks directly connected to STEM-based careers

Engineering

Added content area
in each classroom

Integration, Inventions,
Computer Programming,
Robotics

Computer Science

Added specials
weekly rotation

Technology Applications,
Computer Programming,
Robotics, and Digital Design

Career Connections

Professional Role aligned
with every lesson

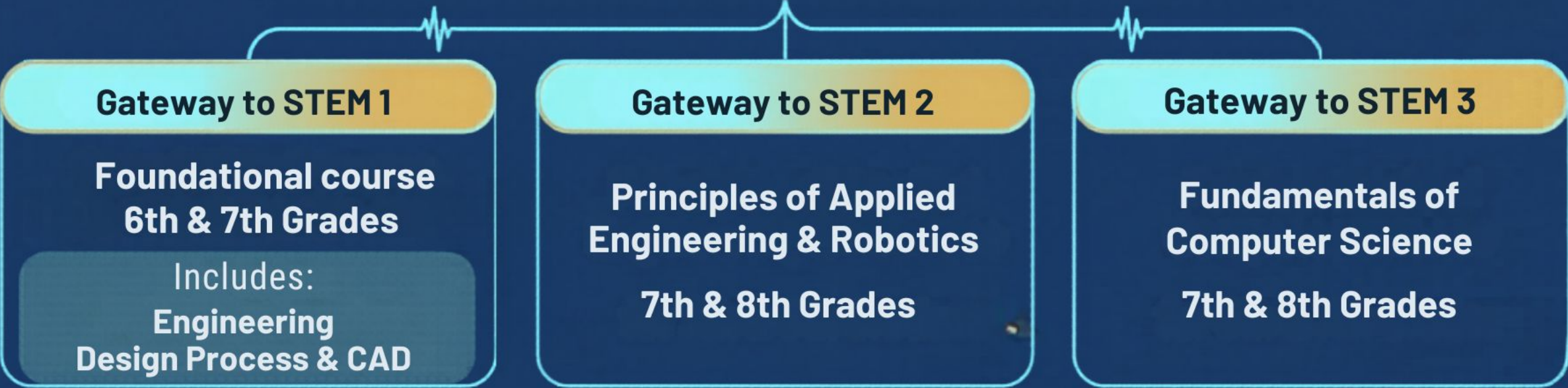
K-5 lessons explore various
engineering fields such as civil,
mechanical, & environmental

Middle School Program Model



Our STEM+ philosophy provides opportunities for exploration in fine arts, athletics, and other electives.

Enhanced Science Curriculum All Students experience design challenges, investigations, and real-world career exploration.



Gateway To STEM 2 and 3 Courses
High School credit & a head start on CTE Programs of Study



STEM Academy Program Data

STEM Academy Program Data

NATIONAL INSTITUTE OF STEM EDUCATION CERTIFICATION

- 168 STEM Academy staff members CERTIFIED
- 50 staff members currently enrolled
- Next cohort with 30 staff members to begin June 1st
- 10 campuses - National STEM Schools of Excellence
- 9 campus renewals -- Lifetime Achievement



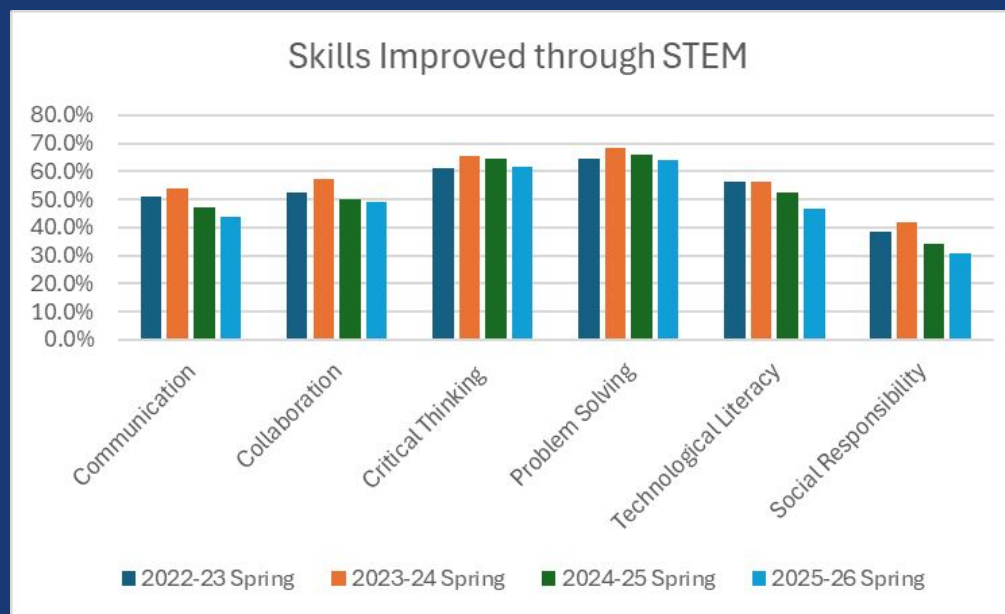
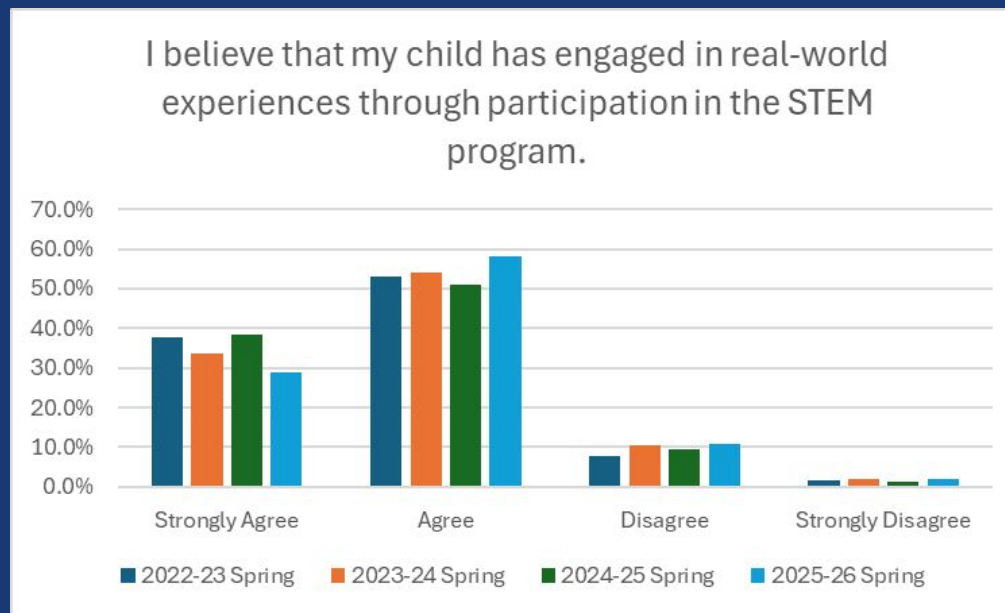
Parent Survey Results

QUESTION 1: “I believe that my child has engaged in real-world experiences through participation in the STEM program”.

Out of the 1,502 responses received on question number 1, **91%** of the parents agreed or strongly agreed with the statement.

QUESTION 2: Select areas in which they had seen improvements in their child related to the following areas: communication, collaboration, critical thinking, problem solving, technology literacy, and social-responsibility.

Parents were able to select multiple options if they saw improvements in multiple areas with their students.



Elementary Data



Elementary School STEM Academy Participation



- **Eligibility:**
 - Students zoned for an elementary STEM Academy
 - LISD in-district students
 - Out of district students
- **Process:**
 - Families can apply for a transfer after attendance at parent info meeting
 - Applications are entered into a randomized selection if the number of applicants exceeds the number of open seats
 - All selected transfers are based on LISD transfer guidelines
- **Communication:**
 - LISD marketing materials
 - Parent Information Sessions




Elementary STEM Academy Enrollment & Participation



	Total Enrollment	Total Transfer Students	Planned to Attend Out of District
2021-22	2527	280	50
2022-23	2639	520	65
2023-24	2826	670	78
2024-25	2851	790	104
2025-26	3245	845	127

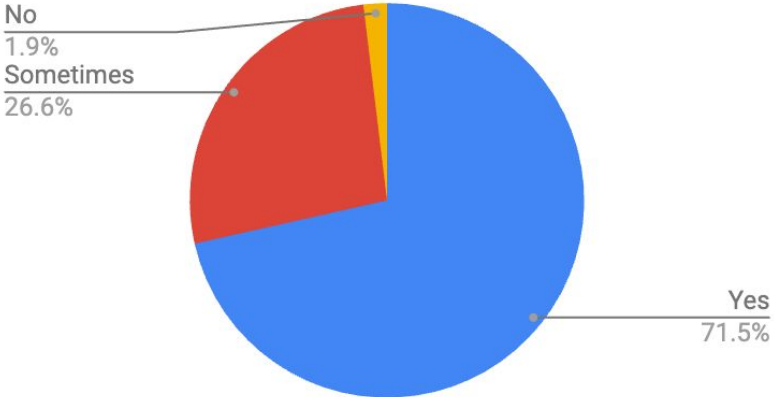
Elementary Student Learning: Engineering Design Process

	Ask	Imagine	Plan	Create	Improve	Share
% of students at or above grade level standard 2024-25						
Kindergarten	93%	92%	89%	89%	90%	89%
1st Grade	84%	88%	88%	88%	89%	89%
2nd Grade	84%	94%	93%	88%	86%	86%
3rd Grade	71%	74%	72%	70%	72%	70%
4th Grade	76%	76%	75%	79%	73%	72%
5th Grade	73%	74%	74%	77%	74%	77%

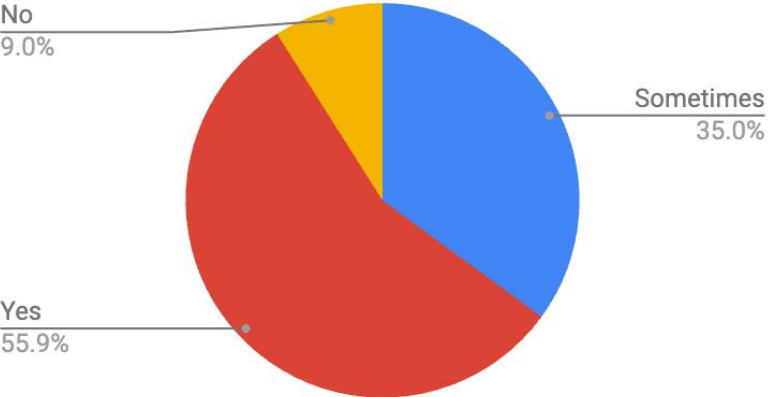
2025 Elementary 3rd Grade Student Survey Results



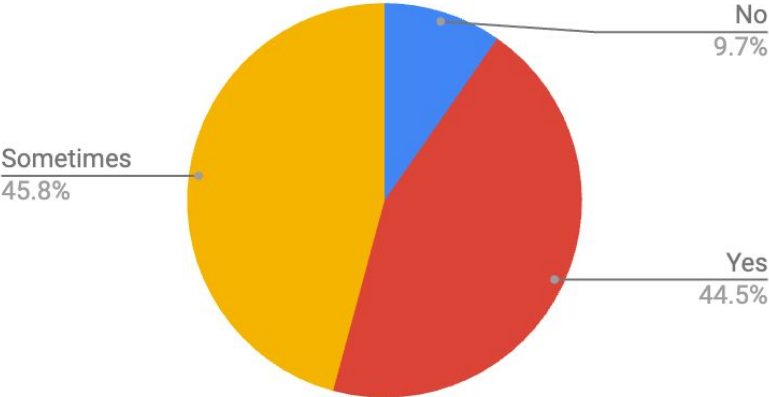
I like working on engineering projects.



I learn about STEM jobs.



I enjoy working in a team.



FINDINGS AND RECOMMENDATIONS - Elementary



FINDING: There will be 25 elementary classroom teachers at STEM Academies that will need certification in the 26-27 school year.

RECOMMENDATIONS:

- National Institute for STEM Education certification cohort in June
- Continue summer work sessions & coaching support for all staff earning their certification

FINDING: Student Learning Data on the EDP shows a distinct difference in proficiency between the primary and intermediate grade levels. The last teacher calibration on the Engineering Design Process Continuum was held in 2024 and new engineering teachers have joined the academies.

RECOMMENDATIONS:

- Professional Learning targeting the gradual release method following a structured withdrawal of assistance, moving from modeling in early grades to students' engineering independence by Grade 5.
- Teacher Calibration sessions scheduled as part of the curriculum previews held three times per year.

FINDING: The K-5 engineering lessons focus on ties to industry professionals and exposure to STEM careers

RECOMMENDATIONS:

- Collaboration with Strategic Partnerships to create an in-house database of industry experts in our local community through the district resource (VOLY).
- Creating roles for professionals supporting STEM classrooms (Feedback Friends, Project Partners, Career Guest Speakers, and Gallery Guests)

Secondary Data



Middle School STEM Academy Participation

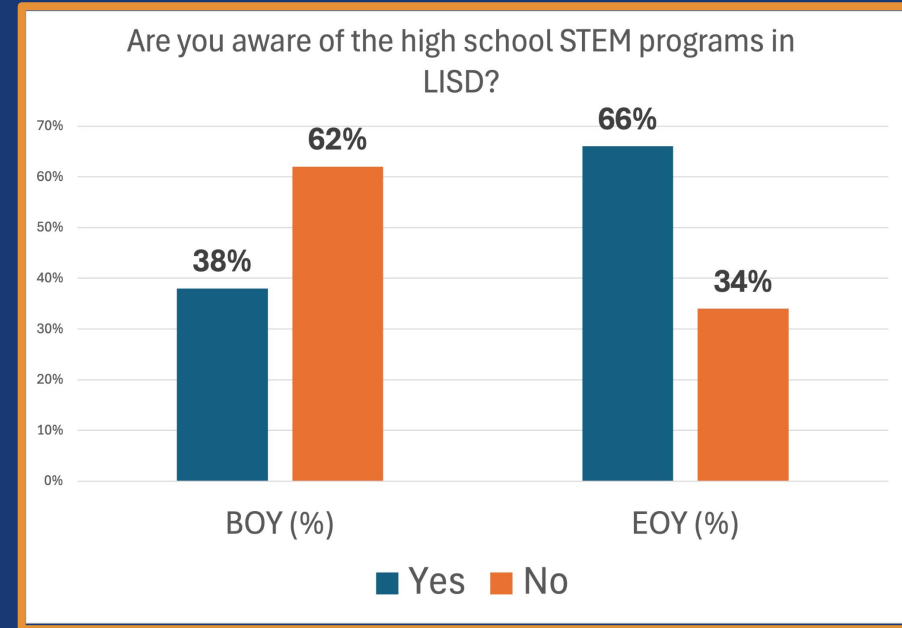
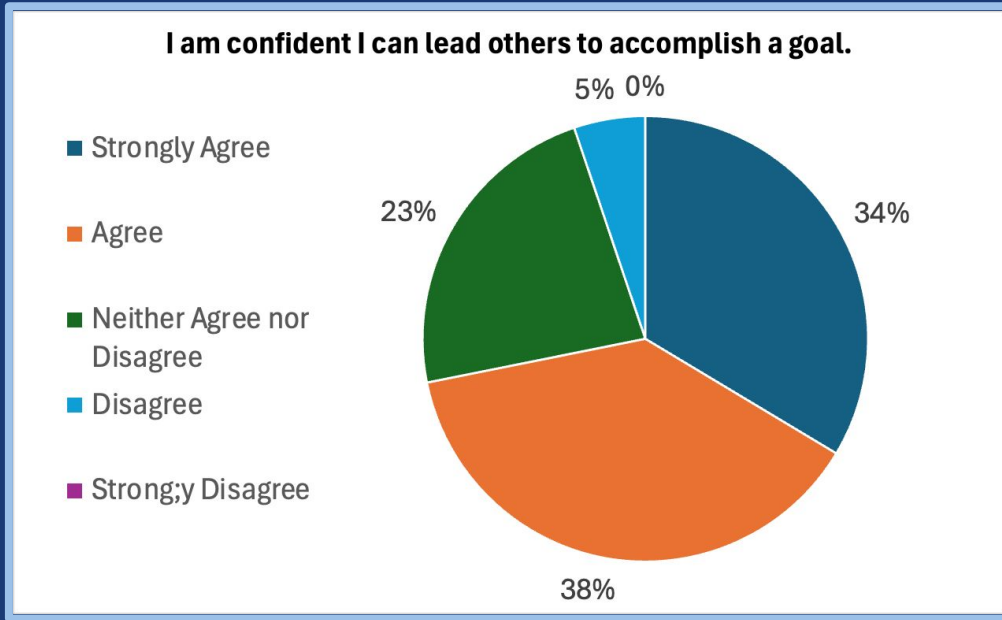


- **Eligibility:**
 - Students zoned for a MS STEM Academy
 - LISD in-district students
 - Out of district students
- **Process:**
 - In-district students, not already zoned to a MS STEM Academy, will use the Open Transfer Window
 - Out of district students can request a transfer after completing new enrollment forms.
 - All requests are based on campus capacity
- **Communication:**
 - LISD Marketing materials
 - Rising 5th Grade visits
 - Parent Information Sessions

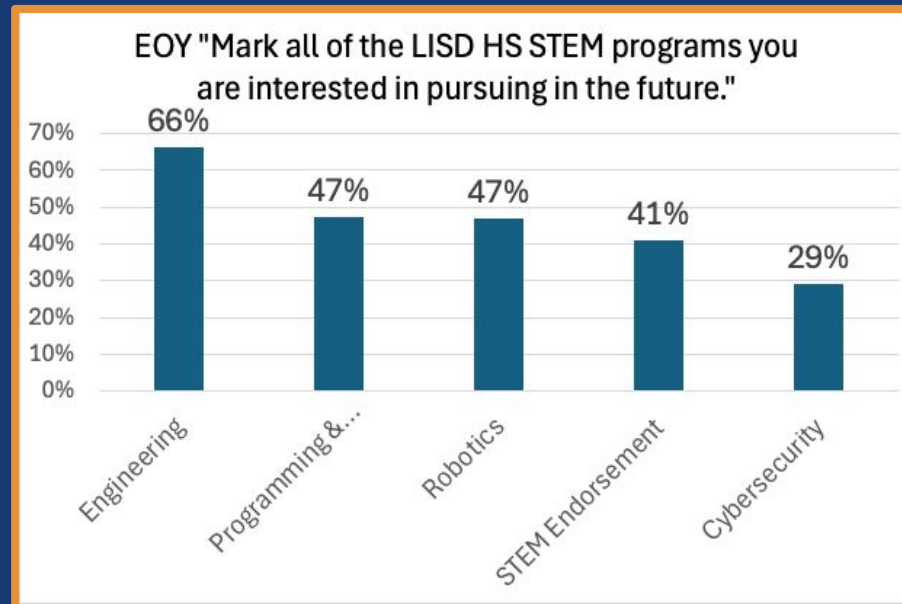
Middle School STEM Academy Enrollment & Participation

	Total STEM Academies Enrollment	Total STEM Electives Enrollment	% of Students in a STEM Elective
	STEM Science	Gateway To STEM 1, 2, 3	
2021-22	3395	295	9%
2022-23	3605	676	19%
2023-24	3578	614	17%
2024-25	3566	726	20%
2025-26	3587	1004	28%
2025-26	STEM Electives HS Credit Course Enrollment		660 Students

2025-26 Middle School Gateway Courses Student Survey Results



Gateway 1, 2 & 3
753 Students
Respondents



Gateway 2 & 3 only
504 Students
Respondents

FINDINGS AND RECOMMENDATIONS - Secondary



FINDING: Regular monitoring of program data is essential to ensuring program effectiveness and long-term success. To accurately evaluate the impact of STEM implementation on student learning, there is a need for consistent, quantitative measures.

RECOMMENDATIONS:

District

- Identify common STEM design challenges for progress monitoring and systematically record results within a data system.

Campus

- Provide regular campus-level administrative updates on STEM progress toward established goals to inform collaboration and guide next steps for support.

FINDINGS AND RECOMMENDATIONS - **Secondary**



FINDING: STEM learning is most impactful when curriculum and instruction intentionally connect to real-world applications, career pathways, and industry partnerships, while also providing opportunities for advancement and recognition within the STEM field.

RECOMMENDATIONS:

Students

- Expand student access to beyond-the-classroom experiences such as student organizations, industry-recognized certifications, or participation in local and regional competitions.
- Embed real-world connections into the curriculum by integrating resources such as Discovery Education, Career Connect, and VOLY opportunities.

Teachers:

- Provide opportunities for all STEM academy teachers to expand their understanding and skills related to STEM instruction through opportunities such as LISD professional learning sessions, STEM organizations credentialing, and immersive experiences with STEM higher education and industry partners.



Summary

- STEM Academy student participation has increased at both elementary and secondary campuses over the last five years.
- Parents and students have consistently reported positive experiences and growth in critical thinking at both the elementary and secondary level.
- STEM Academy campuses have been recognized by the National Institute of STEM Education for the high standards of STEM education promoted across the campus.

Questions?

Program Evaluation Next Steps



Program List with Date of Program Evaluation Presentation

Scorecard Long Range Plan	Program & Budget Cost Analysis	District Programs	State Mandated Programs	PEIMS/ Data Validations/ Audits
Targets set every 3 years	Off legislative years Run by cost per student	PK & Discovery Academy (Fall 2025)	Bilingual Education	Annual audits as determined by OCR, TEA, etc.
DIP Development Aug, Sept	Cost of electives	STEM Academy ES & MS (Spring 2026)	ESL	Data Validation for PEIMS
Progress report at Board Meetings: Dec, Mar, Jun	Cost of basic allotment	Counseling Program-Advisory (Spring 2027)	SPED	Results Driven Accountability
Supt Eval: Jan and April	Cost of athletics	VLA Spring 2028	504	Discipline Validation
	Cost of Sped	Counseling SAC/ SW (Spring 2029)	Gifted and Talented	Assessment Validation
	Cost of VLA	Collegiate Academy (Spring 2030)	Dyslexia	Leaver/ Dropout Validation
	Cost of fine art	LLC NHS and Accelerated (Spring 2031)	Title 2	
	Cost of safety	Spanish Immersion (Spring 2032)	CTE/business partnerships included	
	Cost of PK- effect of PK		PK	
	Cost of Dual/ SIP		LLC/ NHS/ DAEP	