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I. GRANT PROPOSAL SUMMARY SHEET

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Date

Contact Information

Organization Name: **Keystone STEM Alliance**

ED/CEO Name: Hari Ponugoti

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ED/CEO E-mail: hello@keystonestemAi.org

Phone: 646.223.0826 / [267-270-2226](tel:267-270-2226)

Board Chair Name: Stacey Ballard

Website: keystonestemai.org

Board Chair Approval (check here): ☒

Year Incorporated: 2025

Primary Contact Name: Hari Ponugoti

FEIN: 39-3589749

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hari.p@keystonestemai.org

Organization Information:

☐	Arts, Culture, Heritage	☒	Education, Library	☐	Environment, Animals
☐	Health	☐	Human Services	☐	Social Justice, Civic Engagement
☐	Religion	☐	If other, please describe:		

Field/s of Interest:

- Hands-on Robotics Programs
- STEM Career Pathways
- Workforce Development
- Life Skills & Leadership Development
- Personality Development, Teamwork, Collaboration

Mission:

To Ignite, Inspire, and Impact by empowering youth through hands-on STEM, robotics, and workforce development programs. Through community and global partnerships, we prepare future leaders for careers, service, leadership, and meaningful community impact.

Geographic Area Served (If not all of Chester County, specify primary Chester County regions served):

- Tredyffrin Easttown School District
- Upper Mainline (Berwyn, Chesterbrook, Paoli, Devon, Wayne)

Describe Population Served & Annual Number of People Served. 100+ (including Regular and Summer Camps)

Annual Budget \$ 75,373 (2025), \$140,000 (2026) 0 # of Full-Time Equivalent Paid Staff
95 % of budget for program expenses 5 # of Board Volunteers
3 % of budget for administrative expenses 10 # of Active Non-Board Volunteers
2 % of budget for fundraising expenses 2500 # of Volunteer Hours
100% = total

Top 3-5 funding sources:

1. In-Kind Sponsorships: EADEH Enterprises (2025, 2026)
2. Corporate Sponsorships: Isolite, Comcast, Boeing, TE Connectivity (2025)
3. Membership Fees: highly subsidized membership dues for students @ \$365 per year
4. Summer Camp Income: We run two summer camps every year
5. Foundation Grants: CCCF, AEO Foundation, Gene HaaS Foundation, Argosy Foundation
6. Government: DoD STEM Grant, NASA (2025)

This grant proposal is for: ☒ Direct Service Programs & General Operating &/or ☐ Capacity Building

If Capacity Building Proposal, the focus is:

☐	Contingency Planning	☐	Partnerships, Collaborations	☐	Merger, Closure
☐	Mission, Vision, Strategy	☐	Board Engagement & Leadership	☐	Marketing, Communication
☐	Resource Development	☐	Operations	☐	Technology
☐	If other, please describe:				

Grant Amount Requested from the Community Foundation: \$ 10,000

Proposal Summary: (a few sentences, please)

Keystone STEM Alliance requests **\$10,000 to purchase robotics build materials for BLAST Robotics and our related youth engineering programs**. These funds cover the physical components students design with, build, test, and compete with: control systems and electronics, motors and drivetrain parts, raw stock and fabrication materials, pneumatics and batteries, prototyping supplies, tools and safety equipment, and in-season spare parts.

Build materials are the single largest direct program cost we carry and the one most directly tied to student learning. Every dollar converts into hands-on build hours, where students apply engineering, programming, fabrication, and project management skills to a real machine on a real deadline.

Results will be measured through student participation and retention, build hours delivered, robot readiness at each competition, skills milestones, and post-program student and parent feedback.

II. GRANT PROPOSAL NARRATIVE

Provide clear, concise information in 1-3 pages. Please be brief.

1. Nonprofit's overall aims, key initiatives, key achievements & distinctiveness

Keystone STEM Alliance, Inc. is a nonprofit organization dedicated to expanding access to hands-on **STEM education, robotics, leadership development, and career-ready skills** for young people. Our aim is to help students build confidence, creativity, problem-solving abilities, and technical skills through experiential learning opportunities that connect classroom concepts with real-world applications.

Our key initiatives include robotics programs through BLAST Robotics, **STEM workshops and camps, robotics and innovation labs, community outreach**, and opportunities for students to **participate in [FIRST robotics competitions](#)**. Through these programs, students learn engineering, programming, fabrication, teamwork, communication, leadership, and project management while working on meaningful challenges.

Venturing Crew 181 is a distinctive STEM and youth leadership program developed through Keystone STEM Alliance's partnership with Scouting America, using robotics as a powerful platform to engage high-school students. The program combines hands-on robotics, engineering, and technical skill development with Scouting's established framework for leadership, teamwork, community service, and character development. This unique model creates a pathway for students to grow as both **emerging engineers and community leaders**.

During our 2025-2026 program year, Keystone STEM Alliance expanded its youth programming through robotics competitions, STEM workshops, summer camps, community events, and mentorship. BLAST Robotics earned the **Gardener Award at RampRiot 2025**, the **Rookie All-Star Award at the FIRST Mid-Atlantic Centennial Robotics Competition 2026**, and the **Rising All-Star Award at the FMA Philadelphia Event 2026**. Our **STEM Summer Camp** provided hands-on robotics experiences for students entering grades 4-9, supported by high school student counselors and mentors. The organization also strengthened relationships with **community, corporate, education, and STEM partners**.

We secured an in-kind donation of Workshop space valued around \$60,000 per year and with a commitment of 5 years.

Keystone STEM Alliance is distinctive because it combines hands-on STEM learning, competitive robotics, mentorship, leadership development, and community engagement within one youth-focused pathway. Rather than focusing only on technical instruction, our programs encourage students to become **builders, problem-solvers, mentors, and leaders**. By connecting students with experienced **mentors, volunteers, industry professionals, and authentic engineering experiences**, we seek to

create lasting opportunities for young people to discover their potential and prepare for future education and careers in STEM.

2. Funding request

What specific needs & issues are being addressed, via what programs and services?

Keystone STEM Alliance requests \$10,000 for robotics build materials supporting BLAST Robotics and summer programming. Build materials are the physical inputs students learn on: control systems, motors and drivetrain components, aluminum and polycarbonate stock, fasteners, pneumatics, batteries, sensors, prototyping supplies, tools, safety equipment, and replacement parts.

The need is straightforward. Competitive robotics is a materials-intensive program. Students cannot learn mechanical design, CAD, fabrication, wiring, or controls by reading about them. They learn by cutting, machining, assembling, wiring, testing, breaking, and rebuilding. When materials are short, build time is rationed, students take turns watching instead of working, and the depth of learning drops for the students who need it most.

Three pressures make this acute. First, participation has grown rapidly in our first year, and more students on the build team means more parallel subsystems, more prototyping stock, and more consumables. Second, component and raw material costs have risen sharply, so the same program budget buys measurably less than it did two seasons ago. Third, competition robots take real damage during play, and without a spare parts inventory a single failure can end a student team's season mid-event.

This request also funds smaller training and outreach build kits. These allow new members, middle school students, and STEM2Ignite workshop participants to begin building on day one rather than waiting for access to the main robot, which is the single biggest driver of early dropout among first-year students.

i. Why is it important to fund this now?

KSA is at a critical transition point from an early-stage, predominantly volunteer-led organization to a sustainable community STEM institution. In our first year, we directly engaged more than **100 students**, reached more than **1,200 students through STEM2Ignite and other outreach activities**, and mobilized more than **40 volunteers contributing over 2,500 volunteer hours**.

This growth demonstrates demand, but continuing to scale primarily through volunteer capacity creates constraints on program quality, consistency, fundraising, administration, evaluation, and long-term sustainability.

Investment now will allow KSA to build the professional infrastructure needed **before further expansion**, rather than adding programs faster than the organization can effectively support them. It

will also allow us to leverage our existing workshop, equipment, university relationships, industry partnerships, volunteer base, and community support more effectively.

ii. How will results & impact be demonstrated?

Keystone STEM Alliance will track both participation and learning outcomes against baselines established at the start of the grant period.

- Number of students actively participating in build sessions, and hands-on build hours delivered per student.
- Student retention from the start of the season through the final competition, and returning-member rate.
- Number of students completing skills milestones in CAD, fabrication, wiring, controls, and programming.
- Robot readiness and reliability: subsystems completed on schedule, matches played, and downtime caused by parts shortages.
- Number of new and middle school students onboarded through training and outreach build kits.
- Competition participation and outcomes, including awards and judged recognition.
- Student and parent feedback through pre and post surveys, and mentor assessment of skill growth.

We will report quarterly against these measures and provide a year-end summary to the Community Foundation documenting students served, build hours delivered, skills gained, competition results, and a full accounting of how grant funds were spent by category.

- **Include a description of the expected activities; timeline & costs to implement the initiative. If external consulting services are required, include the anticipated costs & expertise of the consultants to be hired. Include external consultant proposal/s if applicable.**

ACTIVITY	TIMING	PROPOSED COST
Robotics Parts & Materials	MONTHS 1–6	\$10,000
TOTAL	6 MONTHS	\$10,000

