

Application for the Magnet School Assistance Program Grant
Submitted by Tucson Unified School District (TUSD)
Project STEAM emPowered

Table of Contents

Introduction	1
Competitive Preference Priority #1: Need for Assistance	4
Competitive Preference Priority #2: Evidence-based Magnet Program	10
Competitive Preference Priority #3: Selection of Students	15
Competitive Preference Priority #4: Increasing Racial Integration and Socioeconomic Diversity	16
Competitive Preference Priority #5: Interdistrict and Regional Approaches	18
Competitive Preference Priority #6: Supporting a Diverse Workforce	21
A. Desegregation	23
B. Quality of Project Design	36
C. Quality of Management Plan	90
D. Quality of Personnel	109
E. Quality of Project Evaluation	127
Appendix A: Desegregation Plan, BOE Resolution, MSAP Assurances	A-1
Appendix B: Job Descriptions and Resumes	B-1
Appendix C: Letters of Support	C-1
Appendix D: Evidence of Promise and Full Studies	D-1
Appendix E: GEPA and Abstract	E-1
Appendix G: Other Documents	G-1

Introduction

Project Title: **Project STEAM emPowered**

Tucson Unified School District (TUSD) is seeking funding to implement **Project STEAM emPowered**. **Project STEAM emPowered** will address concrete needs in TUSD. Project goals include: 1) The prevention of minority group isolation and socio-economic isolation at Tully K5 Magnet, 2) The significant whole school theme revision of Tully K5Magnet School, and 3) The completion of the STEAM/STEM+ K-12 pathway in TUSD.

Tully K5 Magnet holds a 'D' label according to the Arizona Department of Education's A-F label system. Tully K5 Magnet currently serves 310 students and has capacity for 500. Tully has had declining enrollment since 2014. This proposal will significantly revise Tully K5 Magnet's theme to Science, Technology, Engineering, Art, and Mathematics (STEAM). Implementing **Project STEAM emPowered** will have three effects: 1. Increase student achievement at Tully, 2. Prevent minority group isolation and reduce socio-economic isolation by attracting new diverse families to increase enrollment, and 3. Complete the STEAM magnet thematic pathway to Mansfeld Middle STEM+ School and Palo Verde STEAM High School.

Tully K5 Magnet has a complicated history. In school year (SY) 2015-2016, Tully K5 Magnet was a STEM Magnet that completed the magnet STEM pathway in TUSD. SY 2015-2016, Tully held a label of "B" as measured by the Arizona Department of Education A-F accountability system. However, in that same year, a recommendation was made by the federal courts overseeing the TUSD desegregation case to transition Tully to an Open Access GATE Magnet. In SY 2016-2017, Tully K5 Magnet's A-F label fell to a "C." Subsequently, Tully had three different school principals in six years. The current principal led Tully K5 Magnet through the COVID-19 pandemic and continues to bring stability to the system. During this time (since SY

2015-2016), the number of students who qualify for free and reduced lunch has steadily increased, as has the number of students who qualify for Exceptional Education or English Language services. Finally, in SY 2021-2022, Tully K5 Magnet’s label fell once again to a “D.”

The heart of **Project STEAM emPowered** is Tully K5 Magnet Elementary’s whole school theme revision to STEAM. This revision will not only increase student achievement for all students at a failing school but will also be the catalyst for preventing minority group isolation and promoting diversity and equity at Mansfeld STEM+ Magnet Middle School and Palo Verde STEAM Magnet High School. Creating truly integrated and equitable environments through the STEAM pathway will require Tully K5 Magnet Elementary to provide students with strong STEAM foundational skills through a comprehensive plan that includes recruitment and media exposure, STEAM professional development and resources for teachers, systems training for leaders, and school renovation. This proposal to transform Tully K5 Magnet Elementary fills a needed gap in the STEAM pathway and cannot be realized without the MSAP grant funds.

Competitive Preference Priority 1: Project Need

(1) The cost to fully implementing the magnet schools project as proposed.

The cost to implement **Project STEAM emPowered** fully and effectively would be \$1,250,000 annually for five years. TUSD does not have sufficient funds or the necessary resources to initiate and implement this project. MSAP funds will be used to:

- Develop the highly specialized STEAM-focused curriculum
- Purchase necessary materials, equipment, and technologies that are vital to implementing a robust STEAM curriculum

- Implement a comprehensive and aggressive marketing strategy to attract students and families from diverse backgrounds
- Hire effective and diverse teachers from STEAM fields
- Provide targeted and on-going professional development to enhance the skills of the staff
- Provide job-embedded coaching around STEAM practices
- Provide job-embedded coaching related to instructional practice
- Establish community and strategic partnerships that will support and sustain curriculum development, professional development, and real-world STEAM experiences for students
- Fund classroom and building enhancements to allow for a STEAM rich learning space that sustains authentic learning environments
- Fund the extensive outdoor playground to provide an outdoor STEAM learning space
- Fund the hallway renovation upgrades to the existing building to provide dynamic spaces to display student STEAM work

To successfully implement the magnet programs proposed by this project, MSAP Grant funding is essential (*please see detailed Budget Spreadsheet and Narrative*).

(2) The resources available to the applicant to carry out the project if funds under the program were not provided.

If funds under the MSAP program were not provided, the District would not be able to deploy **Project STEAM emPowered**. The funding for school sites from TUSD supports basic infrastructure of facilities, general office supply materials and equipment, and the salaries (including benefits) of classroom teachers, administrative staff, and support staff. While schools across the District have received federal Elementary and Secondary School Emergency Relief Fund (ESSER) monies to support and sustain needed programming and infrastructure projects

during the height of COVID-19, this funding ends in school year 2023/2024 and therefore are insufficient to initiate and sustain **Project STEAM emPowered**. Additionally, ESSER monies were intentionally designed to mitigate impact of academic, health and infrastructure vulnerabilities that were a result of COVID-19, and not to establish new programming vital to the reduction of minority group isolation.

TUSD lacks the funds to engage all the systems and structures identified in the proposal which are necessary to develop, implement, and successfully sustain **Project STEAM emPowered** and make it a reality that can be sustained. Currently, the District does not have the personnel or financial resources in its Curriculum and Instruction Department to develop a highly specialized STEAM-focused curriculum, provide targeted and on-going professional development, or provide job-embedded coaching around STEAM practices. TUSD does not have the personnel capacity or financial resources in its Communications Department to implement a comprehensive and aggressive marketing strategy to attract students and families from diverse backgrounds. And lastly, TUSD lacks the funding and the personnel capacity in its Facilities Department to fund the extensive indoor and outdoor building upgrades needed for this project.

(3) The extent to which the costs of the project exceed the applicant's resources.

According to the most recent data provided by the U.S. Census for the 2020 fiscal year, per-pupil spending for PreK-12 schools in Arizona (ranked 48th in the United States out of fifty states) is reported at \$8,785. Arizona has the least funded school system in the country, according to the U.S. Department of Education. According to the country's gross domestic product, the state of Arizona only spends 2.5% of its wealth on K-12 education. The US Census also calculates the nationwide childhood poverty rate to be 17% which mirrors Arizona's state

average. However, the city of Tucson’s childhood poverty rate, where TUSD is located, sits at 30%, 13% above the national average. Meanwhile, Arizona is one of only eight states in the country that fails to account for the effects of student poverty in its school funding formula. Given this disregard for student poverty in the level of funding, it is challenging to ensure that the District is meeting the needs of its population. Funds that provide principals with the means to enhance instructional programs are limited to Title 1 monies.

In addition, increases in charter school allocations and increases in private school vouchers at the state level have placed a significant burden on TUSD, already challenged by the needs of its diverse population in an urban setting. For example, TUSD students represent seventy-five languages, nearly 5,000 (or 10%) students are English language learners, and 82% of the overall student population identifies as an ethnic minority. Despite barriers, TUSD remains steadfast in its commitment to high-interest, innovative, and meaningful instructional Magnet programs that are critical to student success, to eliminate the achievement gaps of minority students, and to prepare students for the 21st century global workspace. The MSAP grant funds will be important in supporting these goals.

(4) The difficulty of effectively carrying out the approved plan and the project for which assistance is sought, including consideration of how the design of the magnet school project impacts the applicant’s ability to successfully carry out the approved plan.”

Effectively implementing the proposed **Project STEAM emPowered**, with a potential impact on approximately 1,800 students in the TUSD STEAM pathway, will not be possible without the requested MSAP grant funding. The proposed project requires significant funding to lay the foundation for success such as the provision of STEAM resources including sustainable professional development, instructional coaching expertise, equipment, curriculum development, and enrichment programs implementation. Additionally, the project will

significantly change the school theme and fund classroom renovations of one school and will repair the STEAM theme pathway to two schools to provide TUSD families the opportunity of a full K-12 STEAM education.

The heart of **Project STEAM emPowered** is Tully K5 Magnet Elementary's whole school theme change to STEAM. This revision will not only increase student achievement for all students at a failing school (Tully currently has a "D" label in the state accountability system) but will also be the catalyst for preventing minority group isolation and promoting diversity and equity at Mansfeld STEM+ Magnet Middle School and Palo Verde STEAM Magnet High School. Creating truly integrated and equitable environments through the STEAM pathway will require Tully K5 Magnet Elementary to provide students with strong STEAM foundational skills through a comprehensive plan that includes recruitment and media exposure, STEAM professional development and resources for teachers, systems training for leaders, and community partnerships. This proposal to transform Tully K5 Magnet Elementary completes a gap in the STEAM pathway and cannot be realized without the MSAP grant funds.

The true goal of eliminating minority group isolation is to establish culturally competent, integrated, inclusive, and equitable schools, where students from diverse backgrounds feel valued, and engage in relevant work. These goals can be accomplished through a systems approach, with intentional training in equitable and culturally responsive practices that involve all instructional stakeholders. MSAP grant monies will support training costs and school initiatives that foster these goals.

Research shows that a STEAM education positively impacts student achievement and teacher efficacy. In high poverty, urban elementary schools, students who received just nine hours of STEAM instruction made improvements in achievement ([Graham & Brouillette,](#)

[2017](#)). When STEAM lessons are directly connected to literacy, it can positively impact cognitive development, increase reading and math skills, and help students reflect meaningfully on their own work and that of their peers ([Cunnington et al., 2014](#)). In addition, researchers found that STEAM trained teachers showed higher levels of teacher collaboration, cross-content learning, dialogue, and classroom organization ([Harris & de Bruin, 2017](#)).

With funds from the MSAP grant, Tully K5 Magnet Elementary will adopt efficacious STEAM curriculum models; one to be woven throughout the content areas, one to support a shift to project and problem-based teaching and learning, and one to be offered as a school day elective and after school program. Students will tap into their exploratory nature in project and problem-based learning, be engaged in learning that feels like play through storytelling and “hands-on” materials, and be encouraged to present their learning to peers, families, and the larger community through semesterly presentations of learning. STEAM is a thematic continuum in Kinder through fifth grade. The continuum will develop the habits and practices of a scientist, tech entrepreneur, engineer, digital artist, and/or mathematician at the secondary level. Tully graduates will feed directly into successful magnet STEAM middle and high schools.

The expenses required for a whole school theme change paired with the classroom renovation cost to implement innovative STEAM programming are more than the District can provide. Moreover, the costs of boosting transportation for out of boundary Magnet students to complete the magnet pathway, and a targeted media campaign to support **Project STEAM emPowered** goals necessitates a significant investment from external funding such as from MSAP. With MSAP funds, TUSD will be able to address the changes outlined in the project, address any challenges, and remain true to the goals outlined in the District’s strategic plan. If

we are committed to opening pathways of opportunities to careers in STEAM fields, we need to start with our youngest learners. We must take the steps toward making **Project STEAM emPowered** a reality for TUSD students and their families and position Tully as the flagship STEAM elementary school in the district.

Competitive Preference Priority 2: New or Revised Magnet Schools Projects and Strength of Evidence to Support Proposed Projects

TUSD proposes to significantly revise the theme of one of its existing elementary magnet schools to create a new STEAM whole school magnet. The revision of the existing program is needed 1) to prevent racial isolation and increase socioeconomic diversity, 2) to increase student achievement through evidence based instructional practices and 3) to build staff capacity to create the conditions for innovative teaching and learning.

Although Tully is currently racially integrated, due in large part to the court-ordered desegregation racially weighted lottery system that has been in effect for over a decade in TUSD, the number of Hispanic students is steadily increasing. As the District is now in Unitary status and does not use race as a priority in the magnet lottery, it is expected that more Hispanic students will apply and enroll at the school. Minority group isolation at Tully is therefore projected to increase. Tully has a Free and Reduced-Price Lunch Percentage of 90%, indicating socioeconomic isolation among low-income students. This whole school theme change to STEAM will attract students of diverse races and socioeconomic backgrounds to the school which will **prevent** minority group isolation and reduce the socioeconomic group isolation for low-income students. TUSD has compelling evidence from our application data over recent years that the district STEM+ Middle

School (Mansfield) and the district STEAM High School (Palo Verde) brings a diverse applicant pool.

Tully K5 Magnet School currently has a letter grade of ‘D’ on the most recent A-F state accountability rating and has had persistently low achievement in math and science. Since 2016-17, Tully has consistently dropped in letter grade performance each year, culminating in a ‘D’ letter grade in 2021-22. Integrating arts into STEM as well as other subjects will also increase engagement and therefore academic achievement as well. Currently, no formal integration of STEAM principles and no STEAM learning options are available at the school. A focus on STEAM will address these failures in math and science, and across the curriculum. Also, student satisfaction will increase with higher academic performance from STEAM curricular integration.

Sustained, long-term, quality professional development for faculty and staff at Tully is needed to turn the school around. Training and coaching in using Inquiry, Project, and Problem-based learning experiences, as well as technology that supports collaborative learning experiences will increase quality of teaching and increase teacher efficacy which has been shown to have positive outcomes for students.

The **Project STEAM emPowered** instructional and programmatic approaches are research-validated and meet the standards of What Works Clearinghouse without reservation.

Citation #1	Newman, D., Finney, P. B., Bell, S., Turner, H., Jaciw, A. P., Zacamy, J. L., & Gould, L. F. (2012). Evaluation of the Effectiveness of the Alabama Math, Science, and Technology Initiative (AMSTI). Final Report. NCEE 2012-4008. <i>National Center for Education Evaluation and Regional Assistance</i> . Retrieved from
-------------	--

	<p>https://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_20124008.pdf</p> <p>Meets WWC Standards without reservations</p> <p>This study was prepared using Single Study Review Protocol 2.0 and Review Standards 2.1</p> <p>https://ies.ed.gov/ncee/wwc/Study/78616</p>
<p>Citation #1 Outcomes</p>	<p>An important finding in this study is the positive and statistically significant effect of AMSTI on mathematics achievement as measured by the SAT 10 mathematics problem solving assessment administered by the state to students in grades 4-8. After one year in the program, student math scores were higher than those of a control group that did not receive AMSTI by 0.05 standard deviation, equivalent to 2 percentile points. (pp. 106)</p> <p>This study reviewed the results of the Alabama Math, Science and Technology Initiative. The theory of action model showed that if teachers had access to 1) professional development, 2) program materials, technology, and other resources, and 3) in school support, this would result in a change in practice which would then impact student achievement.</p> <p>This theory of action hypothesized that, after receiving the professional development, teachers would change their classroom practice, using the most effective strategies to engage students and increase achievement. In particular, the AMSTI program focused on three types of instruction:</p> <ul style="list-style-type: none"> • Inquiry-based instruction. • Hands-on instruction. • Instruction using higher order thinking skills. <p>One of the primary objectives of the AMSTI professional development was to increase teacher content knowledge in the subjects they teach. Teacher perceptions of</p>

	<p>student engagement were also solicited, because AMSTI was expected to increase student engagement as students shift to more hands-on, inquiry-based learning.</p> <p>Changes in classroom instructional strategies, especially an emphasis on more active-learning strategies, are important to the AMSTI theory of action. Therefore, a secondary investigation of classroom practices was conducted, based on data from survey responses from teachers. For both mathematics and science, statistically significant differences were found between AMSTI and control teachers in the average reported time spent using the strategies. The effect of AMSTI on these instructional strategies was 0.47 standard deviation in mathematics and 0.32 standard deviation in science. (pp. 107)</p>
<p>Citation #1 Relevance to Project</p>	<p>This study included 4th through 8th grades. Forty-three percent of participants identified as minority and 59% had free and reduced-price lunch status. While these numbers do not exactly mirror the demographics at Tully, they are comparable. The theory of action model showed that if teachers had access to 1) professional development, 2) program materials, technology and other resources, and 3) in school support this would result in a change in practice which would then impact student achievement.</p> <p>The lynchpins of Project STEAM emPowered are the same as found in AMSTI: Professional Development in project based, hands on and inquiry learning as well as STEM content (provided by Project Lead the Way and PBL Works), access to high quality materials, technology and other resources (PLTW modules and other supplies as indicated in the Budget Narrative), and job embedded coaching (TUSD Magnet office and Instructional Leadership Team at Tully). The study</p>

	suggests that if all these pieces are in place student achievement will increase.
Citation #2	<p>Investigating Causal Effects of Arts Education Experiences: Experimental Evidence from Houston's Arts Access Initiative. Research Report for the Houston Independent School District. Volume 7, Issue 4</p> <p>Bowen, Daniel H.; Kisida, Brian (2019). Houston Education Research Consortium. Retrieved from: https://eric.ed.gov/?id=ED598203</p> <p>Meets WWC Standards without Reservations</p> <p>This study was prepared using Review of Individual Studies Review Protocol 4.0 and Review Standards 4.0</p> <p>https://ies.ed.gov/ncee/wwc/Study/88827</p>
Citation #2 Outcomes	<p>This study focuses on elementary and middle school students enrolled in Houston public schools who received additional funding per student to provide arts partner-provided educational experiences. The study's outcomes showed that students who participated in the Arts Access Initiative had higher levels of academic achievement, as measured by standardized test scores in reading and math, than those who did not. Additionally, the study found that students who participated in the program were more likely to attend school regularly and to graduate from high school on time.</p> <p>The study also showed that the benefits of the Arts Access Initiative were greatest for students who were economically disadvantaged and for those who had lower levels of academic achievement prior to participating in the program. These</p>

	<p>findings suggest that arts education experiences can be beneficial for students at risk of falling behind academically. (Tables 3 and 4) (pp.27-28)</p> <p>Overall, the study provides compelling evidence for the positive impact of arts education experiences on academic achievement and other outcomes for students.</p> <p>WWC reports “Statistically significant positive effects found in grades 4 and 7” for general Literacy Achievement outcomes.</p>
<p>Relevance of Citation #2 to Project</p>	<p>The populations in this study are similar in socioeconomic status (50% families in poverty) and in racial/ethnic (70% Hispanic) backgrounds to student population at Tully. The study suggests that integrating arts experiences is a promising model to raise academic achievement, reduce academic gaps among students who are underrepresented in STEAM and by doing this will attract a more diverse student population. Project STEAM emPowered has a commitment to arts integration as by the inclusion of a lead art teacher who will lead art classes for students and support arts integration in lessons and projects for teachers, a dedicated art space, and community arts partners.</p>

Competitive Preference Priority 3: Selection of Students

Admission Process for TUSD Magnet Schools

The District uses a lottery process to admit students in a way that is fair and prevents minority group isolation. This process has been critical to help integrate formerly racially concentrated magnet schools.

Selection and participation in all TUSD Magnet schools is based on student interest. **No academic criteria, entrance exam, or audition is used to screen or select students.** At Tully, as at all TUSD Magnet schools, all students, (attendance area or out-of-area applicant students) will receive the same curriculum and magnet theme related experiences.

To maintain the racial integration and/or to reduce minority group or socioeconomic isolation in magnet schools, the district has a randomized lottery that has priority weighting in the following areas:

- Child of a district employee
- Sibling of students currently attending the magnet school
- In-boundary/district student
- Out of district student

To further ensure that a diverse group of students apply to Tully, marketing and recruitment efforts will target specific neighborhoods via select zip codes to recruit students who are socially, economically, ethnically, and racially diverse. This approach will ensure that Tully remains integrated and aids in preventing minority group isolation through the magnet pathway schools of Mansfield STEM+ Magnet Middle School and Palo Verde STEAM Magnet High School.

Competitive Preference Priority 4: Increase Racial and Socioeconomic Diversity

Minority group isolation has been an issue in TUSD. Historically, TUSD was one of many school districts in the United States that engaged in racial segregation of students. Even after *Brown v. Board of Education*, TUSD continued to practice and engage in systemic forms of isolation. This practice was continued until 1974, when Judge William P. Copple ordered TUSD to fully desegregate its schools, because of two, “separate lawsuits against the district to address disparities in the education of African American and Mexican American students,” (Tucson

Weekly, 2017). This decision forced TUSD to implement several changes, including busing students to and from sites and creating magnet schools to attract students from different racial or ethnic backgrounds. The magnet schooling system has allowed TUSD to intentionally address minority group isolation in meaningful and progressive ways.

- The commitment to reduce minority group isolation is evidenced by years of work toward addressing academic disparity gaps and continued efforts to integrate schools. This work is outlined by the district’s Unitary Status Plan (prior to 2022), and they continue to be goals in TUSD’s Post Unitary Plan. **Project STEAM emPowered** is a prime example of how TUSD remains committed to the reduction of minority group isolation. **Project STEAM emPowered** has an intentional design structure, wherein students from different socio-economic, ethnic, and racial backgrounds will be targeted for participation. There is evidence that affirms that when students learn in racially and socio-economically diverse classrooms, they are afforded “cognitive and academic benefits,” (Century Foundation, 2019). To support best practices and to honor the important aim of the MSAP grant, the district will target a diverse population for participation in **Project STEAM emPowered** as follows:

- Consult with leading market experts to perform a SWOT (strengths, weaknesses, opportunities, and threats) on current marketing and student recruitment strategies to inform an evidenced-based strategic marketing plan, which places the disruption of minority group isolation, and the celebration of diversity at the heart of a marketing campaign.
- Create an evidenced-based strategic marketing plan that engages a diverse audience and encourages enrollment and integration. At a minimum, this plan will include multiple

strategies to reach a diverse audience, e.g., geo-targeted advertising, search-engine optimization, and strategic community partnership development.

- Execute a multi-year cycle of continuous improvement with a focus on achievement in English Language Arts and Mathematics. The aim of the continuous improvement cycle is to raise the Arizona State Board of Education letter grade for the school participating in Project **STEAMemPowered** from a “D” (where it currently is) to a “B” or higher. District enrollment data indicates that those schools with a label of “B” or higher have more applications and lottery submissions than those whose labels are “C” or lower. District level lottery and enrollment data also supports the conclusion that with increased applications comes increased potential for achieving diversity goals and the reduction of minority group isolation.
- Engage in **selection processes not driven by entrance exams**, an application where academic achievement is not weighted, or the establishment of additional lottery weights that can create barriers for entrance.

Competitive Preference Priority 5: Inter-District and Regional Approaches

TUSD sits in Pima County, Arizona, one of the most expansive counties in the United States by land area. Because of this, TUSD has adopted a regional approach to organization. five regions exist, titled as follows: 1) Silverbell, 2) Santa Cruz, 3) Arroyo Chico 4) Arcadia, and 5) Pantano. Assistant Superintendent of Schools is assigned to each region. The existing Magnet Schools in TUSD, however, are pan regional, as identified in Table CPP5-1 below:

Table CPP5-1: TUSD Magnet Schools by Region

Region	Silverbell	Santa Cruz	Arroyo Chico	Arcadia	Pantano
Number	1	7	1	3	N/A

Tully Magnet Elementary, the targeted school for engaging in **Project STEAM Empowered**, is in the Silverbell Region. If awarded the MSAP grant, Tully K5 Magnet Elementary’s vertical pathway will align with STEAM magnet secondary schools so that students will now have a new feeder middle school and high school. The middle school is Mansfeld STEM+ Magnet, which is in the Arroyo Chico region. Mansfeld’s STEM+ Magnet’s feeder high school is Palo Verde STEAM High School in the Arcadia region. The MSAP award will not only provide opportunity for Tully K5 Magnet Elementary to have an evidenced based STEAM theme, but it will also complete a magnet pathway because no STEAM or STEM+ elementary school currently exists. Although the MSAP award specifically focuses on Tully Magnet Elementary in the Silverbell region, the schools in the entire pathway will also have opportunities engage in the following activities to promote a ‘consortium approach’ to program implementation.

- Adoption of STEAM Practices across the curriculum. Tully K5 Magnet Elementary, the participating school in **Project STEAM Empowered**, will collaborate with feeder schools (Mansfeld STEM+ Magnet and Palo Verde STEAM High School) to unpack Next Generation Science Standards (NGSS) STEM practices. Note that the site Principal, the site Magnet coordinator, and Magnet central leadership will design professional development and training, with follow-up job embedded coaching to ensure successful implementation of STEAM practices.
- All Magnet Schools in TUSD including Tully, will engage in Effective Schools Framework (ESF) training. The ESF, a continuous school improvement model, provides deep level

understanding related to the success criteria for high quality, high achieving schools. The ESF has five levels, which include: 1) Strong school leadership and planning, 2) Strategic hiring, 3) Positive school culture, 4) High quality instructional resources and materials and 5) Effective instruction. Site leadership inclusive of Principal, Magnet coordinator, and Instructional Leadership Team, will attend quarterly trainings on ESF, with job embedded coaching from the Magnet Department between quarters. ESF will give common language, common practice, and deep understanding of the systems and structures that make schools successful as measured by state level data (A-F letter grade), benchmark data, and school quality survey data. One expected result of implementing ESF systems in TUSD magnets school is increased applications to Magnet schools, which, in turn, can reduce minority group isolation. Note that central leadership will co-develop a strategic marketing plan to create a racially and socio-economically diverse applicant pool to further solidify integration efforts.

- Central Magnet Leadership will create a 5E + R² (Re-assess and Re-teach) Instructional Model to drive instruction in all Magnet Schools. A focus on teaching and learning will also result in increased applications to Magnet schools. John Hattie's longitudinal research on key factors related to student achievement points to "collective teacher efficacy" as the most significant factor that has the most impact on achievement (Hattie, J. 2017). Therefore, when teaching becomes more efficacious, students will achieve at higher levels. Higher achievement levels will help Magnet schools obtain "A" and "B" labels as measured by state data which will attract families (from all geographic, racial, and socioeconomic backgrounds) to apply.

-

Competitive Preference Priority 6: Commitment to a Diverse Workforce

TUSD is committed to fostering diverse and inclusive learning environments and continuously works towards the goals outlined in the Unitary Status Plan (USP). The USP states, “All District schools shall seek to have a racially and ethnically diverse staff,” (USP doc 1713 pg. 20). Having teachers from different racial, ethnic, and socio-economic backgrounds increases cultural relevancy with exposure to different life experiences for students and faculty. TUSD deploys specialized procedures for targeted teacher recruitment, follows the Teacher Diversity Plan (TDP) outlined in the USP, and offers meaningful and continuous professional learning to instructional and administrative staff on culturally responsiveness.

Targeted Recruitment

TUSD utilizes research-based recruitment tools and models aimed specifically at recruiting African American teachers and administrators. Strategic advertising highlights the District’s culturally responsive and multicultural curriculum framework, New Teacher Induction Program, financial incentive opportunities, as well as the District’s commitment to diversity, inclusion, and non-discrimination. TUSD has also worked to develop strategic partnerships in its efforts to recruit teachers of color, building relationships with Historically Black Colleges and Universities, the National Alliance of African American School Educators, the Urban League, and the Interdenominational Ministerial Alliance. In conjunction with those efforts, the District implements research-based practices such as *early posting and hiring* which results in more racially diverse hires, *high-touch recruiting* which involves actively prioritizing prospective candidates of color, *grow your own programs* which incentivizes non-certified staff to complete four-year degrees and seek teaching certification, as well as *leadership training* which promotes work environments that encourage the retention of teachers of color and supports African

American leaders (Carver-Thomas, D. 2018).

Teacher Diversity Plan

TUSD's Teacher Diversity Plan (TDP) details strategies, including providing teacher incentives, professional advancement opportunities, and transfers to educators to diversify school sites districtwide. Teacher recruitment among District schools is designed to proactively find and cultivate candidates to transfer into open positions that would improve diversity and to identify voluntary opportunities to swap personnel between schools even in the absence of an open position. TUSD's TDP outlines a commitment to continuing to monitor the diversity of administrative teams and bring balance to the teams whenever and wherever possible. To that end, the District actively recruits selected District administrators to transfer to schools where their presence will improve administrative diversity. The ongoing efforts of the TDP have resulted in increased student access to high quality schools led by diverse teachers and school leaders.

Culturally Responsive Professional Development

Tucson Unified School District's Professional Development (PD) program ensures that all District personnel receive ongoing professional development regarding diversity and the District's prohibitions on discrimination based on race and ethnicity. All District teachers and school leaders attend weekly site-based PD as well as quarterly full day district-level PD. TUSD operates under the belief that the classroom teacher has the largest impact on student achievement and recognizes the importance of including students' cultural references in all aspects of learning. To that end, the District offers professional learning pathways that embolden teachers to engage thoughtfully with

students from diverse racial, ethnic, cultural, and linguistic backgrounds using Culturally Responsive Pedagogical strategies.

Expanding on TUSD’s comprehensive efforts, **Project STEAM emPowered** aims to hire diverse educators to support the project and immerse all teaching staff at Tully Magnet Elementary in high-quality PD that increases student outcomes and interest in STEAM learning and STEAM careers. Tully’s majority minority student body comprises groups underrepresented in STEAM fields. Studies show minority and female students are, “less likely to consider STEM as a career path because it does not appear to be for them,” ([Tissenbaum & Leftwich, 2020](#)). Students of color need to interact with STEAM teachers and stakeholders that serve as role models of what a student wishes to achieve, which, in turn brings about increased student engagement and achievement. In addition to the robust STEAM PD and job embedded coaching around STEAM integration, **Project STEAM emPowered** will also be supported by the District’s Magnet Department Effective Schools Framework Model rollout which, at its core, offers a clear vision for magnet school leaders of effective instruction through strategic staffing, high-quality instructional materials and assessments, and positive school culture.

A. DESEGREGATION

A(1) Effectiveness of strategies for the elimination, reduction, or prevention of MGI

As discussed in Competitive Priority 4, the Tucson Unified School District has created desegregation plans since 1974. These plans were all in response to federal court cases that were filed against TUSD for academic disparity, lack of access to high quality schools, and minority group isolation (specific to African American and Latino students). In 2013, the Tucson Unified School District created a Unitary Status Plan (Appendix A-1) that incorporated the following action steps to reduce minority group isolation:

- Effective systems for student placement:
 - Clear and effective strategies for student assignment that provided a revised application and selection process for Magnet Schools and Programs, as well as for Open Enrollment
 - The review of attendance boundaries, feeder patterns, and pairing and clustering.
 - A structure for Magnet School systems and accountability
 - Outreach and recruitment to support student enrollment
- Transportation systems that supported the reduction of MGI
- A focus on education and school quality, which included:
 - A focus on hiring leaders, teachers, and support staff from diverse racial and ethnic backgrounds
 - Ensuring culturally responsive instruction was at the heart of TUSD pedagogy
 - Ensuring access for all learners to Advanced Learning Experiences (ALEs), which included honors classes, dual credit classes, dual language classes, and gifted and talented programming
- A strategic focus on evidenced based methods to address social and emotional needs of students in an effort to reduce discipline disparity
- Family and community engagement
- Equitable access to extracurricular activities
- Equitable access to technology, with appropriate facilities for the most vulnerable populations based on an equity index.

The implementation of the Unitary Status Plan intersected well with the 5-year TUSD strategic plan (2014-2019), which created systems related to curriculum, diversity, facilities improvement,

budget priorities, and communication. This effective implementation led to TUSD's achievement of Unitary Status in Fall of 2022.

Now the Tucson Unified School District remains positioned to continue implementing the above-mentioned systems to further prevent minority group isolation, increase academic achievement for all students, and close academic disparity. **Project STEAM emPowered**, is about the significant whole school revision of Tully K5 Magnet's theme, changing it from Open Access GATE to STEAM. Throughout the Project Design section of the application, it will become clear that the heart of **Project STEAM emPowered** is grounded in strengthening the instructional capacity of all teachers through training, professional development, and job embedded coaching.

In addition to instructional focus, **Project STEAM emPowered** will help establish leadership, data, and community engagement systems that will collectively result in increased student achievement in English Language Arts (ELA) and Mathematics. The applicant believes that this research-based approach will achieve the overarching goal of increasing academic outcomes and closing disparity. West Ed, 2017) With a focus on continuous improvement, diverse enrollment applications will come. This is evidenced by racial diversity in applications for "A" and "B" schools across the Tucson Unified School District. Simply put, the higher the state label, the more applicants for a school.

Low Socioeconomic Status Isolation

Tully K5 Magnet is not only a Majority Latino school (> 60%), but its "Free and Reduced Lunch" population is 90.03%. Tully's prevalent poverty status is comprised of students that chose Tully through the Magnet application process, and from "in-boundary," neighborhood qualification. This is especially important as the neighborhood where Tully is located, called "El

Rio Acres,” which has an elevated crime index as measured by Tucson Police Department Statistics, as well as Neighborhood Scout, an online tool that measures crime in given zip codes to support home purchasing decisions. The elevated poverty rates at Tully K5 Magnet have an intersectional relationship with the global pandemic caused by COVID-19 in that Tully K5 Magnet has had declines in student achievement because of interrupted learning. Note the tables below that highlight this truth.

Table A1:

State of Arizona A-F Labels at Tully K5 Magnet			
SY 16-17	SY 17-18	SY 18-19	SY 21-22
B	C	C	D

Table A2:

School Year 17-18 Arizona Academic Standards Assessment Data	
ELA	Mathematics
31.6%	30.9

Table A3:

School Year 18-19 Arizona Academic Standards Assessment Data	
ELA	Mathematics
29.9%	31.5%

Table A4:

School Year 21-22 Arizona Academic Standards Assessment Data	
ELA	Mathematics
11.3%	7.1%

Note, students in the State of Arizona did not take their state mandated assessment in School Year 19-20, and insufficient data existed for School Year 20-21. **Project STEAM emPowered** will

systematically address the additional needs that are clear in the abovementioned data through the following structures, which inherently disrupt socio-economic isolation, and prevent MGI:

- Structured support to address the continuous improvement cycle
- Leadership development
- Instructional leadership development
- Systems to support instructional practice
- Systems to support rich, theme based (STEAM), learning experiences
- Systems for outreach to obtain a diverse applicant/enrollment pool

Also, the Tucson Unified School District Magnet Department, housed in the department of Equity, Diversity, and Inclusion, will engage a consultant to design a strategic marketing plan. This plan will reflect a variety of marketing strategies that will support the prevention of minority group isolation. Strategies from the marketing plan are detailed in section A (3). The strategic marketing plan is important for Tully K5 to effectively meet the goals identified in **Project STEAM emPowered**. The fusion of a focus on achievement and marketing will be key as the selection criteria for students is balanced and founded in an equitable approach for Magnet entrance.

A (2) Importance of the results or outcomes likely to be attained by the project

In A (1), the data is clear that access to rich learning experiences, which result in increased academic achievement is not occurring. Additionally, there are a variety of subsequent data sets in tables below, which demonstrate that:

- Enrollment is declining in the Tucson Unified School District

- The percentage of Hispanic/Latino students in the Tucson Unified School District is increasing
- The percentage of Anglo students has decreased in TUSD since 2010 by seven percentage points.
- The percentage of African American students is marginally increasing in TUSD; two percentage points since 2010.
- The pace that Anglo students are “leaving” TUSD is higher than the pace in which African American students are enrolling. This coupled with increased Hispanic/Latino enrollment ensures that there remains a need to prevent minority group isolation at Tully K5 Magnet.

Table A2-1:

Hispanic Enrollment and Total Enrollment 2010 – 2022							
	2022	2020	2018	2016	2014	2012	2010
Total Enrollment	41,631	41,865	45,750	48,049	48,798	51,415	53,566
Hispanic Enrollment	25,896	25,815	27,978	29,478	29,855	31,116	31,528
Percentage Hispanic Enrollment	62%	62%	61%	61%	61%	61%	59%
Percentage Anglo Enrollment	18%	19%	20%	20%	21%	23%	25%
Percentage African American Enrollment	10%	10%	9%	9%	9%	8%	8%

Table A2-2:

Schools Hispanic Enrollment 10/1/2023 (40th Day)			
School	Hispanic Enrollment	Total Enrollment	Hispanic Enrollment Percentage
Tully K5 Magnet	189	313	60%
District	25,896	41,631	62%

Furthermore, the table below indicates an increase in students that qualify for Free and Reduced Lunch, which supports the claim that poverty is increasing at Tully K5 Magnet, and the school is becoming more concentrated by socio-economic status. This points to the fact that whole school thematic revision is needed to help disrupt such concentration.

As previously mentioned, in school year (SY) 2015-2016, Tully K5 Magnet was a STEM Magnet that completed the K12 magnet STEM pathway in the Tucson Unified School District. In SY 2015-2016, Tully held a label of “B” as measured by the Arizona Department of Education A-F accountability system. Yet, in that same year, a recommendation was made by the federal courts overseeing the TUSD desegregation case to transition Tully to an Open Access GATE Magnet. In SY 2016-2017, Tully K5 Magnet’s A-F label fell to a “C.” Then came administrative turnover, teacher attrition, the COVID-19 pandemic, and an increase in socio-economic isolation, which led to a drop (to a “D”) in their state letter grade.

Table A2-3:

	Free and Reduced Rates at Tully K5 Magnet and TUSD					
	SY17-18	SY18-19	SY19-20	SY20-21	SY21-22	SY22-23
Tully	83.5%	82.04%	100%	90.03%	90.03%	90.03%
TUSD	66.39%	65.47%	70.33%	70.83%	66.07%	71.47

Throughout Project STEAM emPowered, the Tucson Unified School District will ensure the successful completion of the following programmatic **objectives**:

- By June 30th of each school year, 80 percent of students in grades 3-5 will increase their reading/language arts score by eight percentage points or more, as measured by the State Standardized end of year test.
- By June 30th of each school year, 80 percent of students in grades 3-5 will increase their mathematics score by eight percentage points or more, as measured by the State Standardized end of year test.
- By the 40th of each school year, no rise in minority group isolation will occur as measured by 40th day enrollment reports.
- By June 30th, 2025, 90 percent of teachers will use STEAM practices weekly in their instruction, as measured by instructional walkthrough data.

These four objectives strongly support the competitive priorities identified in the MSAP application. There is no doubt that Tully K5 Magnet has a financial need, because of inadequate state allocations to support quality education and related programs. Additionally, there are academic deficits as evidenced by Arizona Academic Standards Assessment (AASA) data, further aligning the first two objectives to competitive priorities. The fourth objective is about the application of a whole school theme change, which aligns to competitive priority two. A focus on STEAM and increased academic outcomes will improve the number of magnet enrollment applications. Increased academic outcomes and subsequently, a better state label (“A” or “B”) will improve the reputation of the school and increase enrollment. This reasoning further supports racial and socio-economic diversity and aligns to competitive priority four (increased achievement equals more applications).

A (3) Effectiveness of plan to recruit from social, economic, ethnic and racial backgrounds

The Tucson Unified School District through **Project STEAM emPowered** will execute and implement a variety of strategies that support the recruitment of students from diverse social, economic, ethnic, and racial backgrounds. That includes:

Strategic Location of Project Schools

Tully K5 Magnet is strategically located in Tucson, Arizona. It is in the El Rio Acres neighborhood, which is located five to seven minutes from Highway 10, a major highway that creates easy access to multiple, diverse (socio-economic and racially) areas in Pima County. Also, Tully is within a four-mile area of two elementary schools and one K-8, all three of which are frequently oversubscribed.

Soliciting Parental Input for Magnet Themes

Tully K5 Magnet administration developed a survey distributed digitally to all parents, requesting input into the theme change proposal. Also, families who attended the quarterly Family Activity Night in the third quarter were encouraged to use a school device to complete the survey if they had not already done so. At this time, over 80% of respondents were in favor of a schoolwide theme change to STEAM. Follow-up reminders were emailed and were also in the school's weekly newsletter.

Tucson Magnet School Selection Process

Selection and participation in all TUSD Magnet schools is based on student interest. **No academic criteria, entrance exam or audition is used to screen or select students.** The TUSD Governing Board Policy concerning Magnet Schools and Programs is: "Magnet Schools and Programs" refers to a program within a school or a school which focuses on a theme or specific instructional approach, such as a specific academic area, a particular career, or a specialized learning

environment; attracts students of diverse racial and ethnic backgrounds; and encourages students to choose a school other than their attendance boundary school to participate in the magnet theme or instructional approach offered at that program or school. Schools designated as Magnet Schools/Programs may or may not have a dedicated attendance zone. Students who reside in a school attendance zone with a Magnet Program are automatically enrolled at that school; however, high school students who want to attend the Magnet Program must apply for the Program even if they live in the school attendance zone. In relation to the application process for Magnet Schools/Programs, the following occurs:

- Students who wish to attend a Magnet School/Program must submit a School Choice Application (JFB-E1). Applicants may apply for a maximum of three school choices, including Magnet Programs, Magnet Schools, and Open Enrollment Schools.
- Applications are available at all school sites, online, at School Community Services and at the Family Engagement Centers.

Marketing and Recruitment Plan

TUSD will develop a Marketing Plan to support a vision of increasing enrollment, preventing MGI, and ensuring a welcoming environment for all TUSD families. This marketing plan will guide student recruitment at Tully K5 Magnet. Part of this marketing plan will include training for front office staff and the site Magnet coordinator by SchoolMint. This training will include topics that address:

- Creating an inclusive space for a diverse community
- Using inclusive and appropriate language
- Customer service and branding (value statements)

- Scheduling for site tours

Additionally, the following will occur to support **Project STEAM emPowered**:

- The creation of a Tully K5 Brand
- The establishment of a strategic social media campaign inclusive of Facebook and Instagram posts, pictures, and videos.
- Geo-targeted advertising using social media to target families from diverse backgrounds.

Outreach and Recruitment: School Choice Fair, Open Houses, School Tours and Showcases

TUSD shall review and revise its strategies for the marketing to and recruitment of students to provide information to a diverse group of community members about the educational options available in the District. These revised strategies shall include, but are not limited to:

- Holding marketing and recruitment fairs for students and parents in geographically diverse District locations.
- Creating or amending an informational guide describing offerings at each school site. The guide shall be distributed via mail and email to all District families; posted on the website in all major languages; and available in hard copy at all school sites, the Family Center(s), and the District Office.
- Assisting with enrollment, attendance, and program questions and concerns.
- Engaging with community groups to share information and involve local stakeholder organizations in the enrollment process, as coordinated through the office of the Senior Director of Equity, Diversity, and Inclusivity.

- Hiring or contracting for appropriate technology to manage the assignment process; and developing a web-based interface for families to learn about schools and submit application(s) online.

To support the organizational outreach and recruitment system, the following timeline will be implemented annually:

Table A3-1:

Outreach and Recruitment Action	Date
Customer Service Training for Office Manager and Front Office Staff specific to the inclusivity of diverse populations	July 2023
Purchasing of marketing materials for Tully K5 Magnet including card stock, mailers and the scheduling of Facebook/Social Media Posts, which will target socio-economic and racially diverse populations (ongoing)	August 2023
Tully K5 Magnet Open House - Fall	September 2023
Boo at the Zoo (Diverse population attends annually)	October 2023
Customer Service Training for Office Manager and Front Office Staff specific to the inclusivity of diverse populations	October 2023
Magnet Symposium	October 2023
Magnet Fair	November 2023
Zoo Lights (Diverse population attends annually)	December 2023
Customer Service Training for Office Manager and Front Office Staff specific to the inclusivity of diverse populations	December 2023

Kindergarten Round-up	February 2024
Tully K5 Magnet Open House - Spring	March 2024
Customer Service Training for Office Manager and Front Office Staff specific to the inclusivity of diverse populations	March 2024

The strategic marketing plan will be developed in the first year of funding to support additional outreach and recruitment action steps. Student enrollment goals will benefit from this plan. See: Table A3-2.

Table A3-2:

Table A3-2. Student Enrollment Goals						
School	10/1/2022 (Baseline)	10/1/2024	10/1/2025	10/1/2026	10/1/2027	10/1/2028
Tully K5 Magnet	310	341	375	413	454	498

A(4) Interaction among students of social, economic, ethnic and racial backgrounds
Culturally Responsive Teaching

The District has a number of commitments in its Unitary Status Plan to provide all administrators and certificated staff with training on how to create supportive and inclusive learning environments for African American and Latino students with an emphasis on curriculum, pedagogy, and cultural responsiveness. The training focuses on learner-based approaches that emphasize students’ cultural assets, backgrounds, and individual strengths.

Social-emotional Responsive Teaching

TUSD administrators, certified teachers, and classified staff attend SEL (Social and Emotional Learning) training at the beginning and throughout the school year to meet the social and emotional needs of students and focus on adult relational practices that have tremendous influence on student engagement and school culture. A School Quality Survey is administered annually to staff, students, and families. This data informs systemic decision-making processes on culture and climate to support the overall social-emotional well-being of TUSD schools.

A (5) Extent to which there is a quality conceptual framework underlying the proposed research or demonstration activities

The Effective Schools Framework is the underlying conceptual framework for the proposed development, implementation, and sustainability activities of **Project STEAM Empowered**. The five levers 1) Strong School Leadership and Planning, 2) Strategic Hiring, 3) Positive School Culture, 4) High Quality Instructional Resources and Assessments, and 5) Effective Instruction are aligned with the goals and objectives of **Project STEAM emPowered** as outlined in the Logic Model(*Appendix # A-2*).

B. QUALITY OF PROJECT DESIGN

B1: Extent to which each magnet school will improve student academic achievement

Project STEAM emPowered will establish a high-performing, integrated magnet school where all students are academically successful. Additionally, **Project STEAM emPowered** will create a school culture that encourages students to be creative, innovative, and engage in hands-on learning experiences led by effective classroom teachers and school leaders. The expectation is that Tully will become so successful that an increase in the number of enrollment applications from across the diverse regions in the Tucson Unified School District will result and prevent continued minority group isolation from a racial and socio-economic lens.

Rationale for Theme Selection

TUSD currently supports three STEM/STEAM Magnet Schools. Each one has demonstrated success in Magnet School Systems. Two of TUSD’s STEM/STEAM Magnet Schools have received the Magnet Schools of America (MSA) certification in addition to other awards that include the Magnet Schools of America Award of Excellence (Mansfield Middle School Magnet) and the Magnet Schools of America Award of Distinction (Tucson High Magnet School). Palo Verde Magnet High School is the third TUSD STEM/STEAM Magnet. Palo Verde Magnet High School currently holds a “B” label as measured by the State of Arizona A-F accountability system. Tully K5 Magnet, the grant subject, would become a feeder school to Mansfield Middle School and then Palo Verde High School, thus completing the K12 STEAM pathway.

TUSD has a longstanding commitment to STEM/STEAM teaching and learning with multiple partnerships, including the nearby University of Arizona. Additionally, significant educator talent exists in STEM/STEAM schools in the TUSD that will help create the conditions for Tully Magnet Elementary to significantly revise its schoolwide theme to STEAM. Tully Magnet Elementary is also a majority-minority school, with 88% of students identifying as a race or ethnicity other than white, a critical statistic when considering access, equity, and a commitment to disrupting demographics in STEM/STEAM based fields and careers. In the [2023 National Science Foundation](#) report on diversity trends in STEM workforce, readers learned that “Collectively, Hispanic, Black, American Indian, and Alaska Native people made up 31% of the U.S. population, but only 20-25% of STEM workforce.” When Tully K5 Magnet was surveyed about a theme change to STEAM, 81% of respondents (comprised of families and staff) stated that they have interest in changing the theme from Open Access GATE to STEAM.

Curriculum Aligned to State Standards and Integrated with Magnet Theme

Every school and teacher in TUSD are required to follow district curriculum maps for grade level and content areas, and district scope and sequence calendars. These documents (curriculum maps and scope/sequence calendars) provide the roadmaps for teachers to know what Arizona College and Career Readiness standards to teach and when to teach them. Teachers will use common formative assessments and quarterly assessments to monitor student progress on state standards.

Built into the calendar are bi-weekly common formative assessments (CFAs) and quarterly benchmark assessments aligned to the pacing guides and emphasize specific state standards. The results from the CFAs will help teachers understand how well students are learning content in real time on identified learning targets. The results from the quarterly benchmark assessments will help teachers understand what standards students mastered and what standards need to be revisited. Teachers will collaborate in grade level teams regularly during their professional learning communities (PLCs) time each week to review aspects of the lessons that worked well, potential problems and progress in meeting standards mastery for all students. The following week's lessons are adjusted based on their review.

Leadership support during PLCs will include the Instructional Data Interventionist who will help to collect and disaggregate CFAs and quarterly benchmark data into pertinent subgroups to indicate trends and the Magnet Coordinator who will assure the STEAM magnet theme integration from ongoing professional development into all lessons. The principal will monitor the workflow, STEAM focus, and academic expectations of teachers.

Throughout the Project Design portion of **Project STEAM emPowered**, Project Lead the Way, the National Inventors Hall of Fame, and PBL Works will provide professional development tied to these roadmap documents. Additionally, **Project STEAM emPowered** will use the 5E +

R² Instructional Model that is specific to Magnet Schools in TUSD. The skills developed from professional development by teachers will support a school wide expectation that STEAM based lessons will align to district curriculum maps, quarterly assessments, and scope and sequence calendars which, in turn, is aligned to the Arizona Revised Statute related to the teaching of Arizona College and Career Readiness standards.

This multi-pronged approach to improve effective teaching strategies includes pacing timelines, high common academic expectations, spiraling of standards, short cycle and summative assessments, and planning during the PLCs. Additionally, the skills developed from professional development by teachers will support a school wide expectation that STEAM based lessons will align to district curriculum maps, quarterly assessments, and scope and sequence calendars which, are aligned to the Arizona Revised Statute related to the teaching of Arizona College and Career Readiness standards.

TUSD Initiatives in Support of MSAP

The TUSD Magnet Department is in the process of deploying key initiatives to support **Project STEAM emPowered**. Those key initiatives include the Effective Schools Framework (ESF) and 5E + R² Instructional Model. Both initiatives will be complemented with robust job-embedded coaching and professional learning led by the Magnet Department, the Project Director, the Project Coordinator, the Data Analyst, and the Instructional Leadership Team. These key initiatives include:

The Effective Schools Framework (ESF)

The ESF is designed to improve site leadership systems procedures and has become a recipe for successful Magnet schools. The goal of the ESF is to provide a clear vision for what

Magnet schools across the District do to ensure an excellent education for all Magnet students. ESF is based on years of educational research of best practices, placing an emphasis on logical and robust school systems that puts effective instruction at its core.

Five levers are identified in the ESF which include: 1) Strong School Leadership and Planning, 2) Strategic Hiring, 3) Positive School Culture, 4) High Quality Instructional Resources and Assessments, and 5) Effective Instruction. Within each lever, success criteria clearly identify the systems, district commitments and essential actions, which are necessary to create strong schools and strong school systems. ESF intersects with MSAP goals because the outcome is to develop capacity of leaders and staff. ESF serves as the structure for effective implementation of **Project STEAM emPowered** by training site leaders in systems thinking to set the school wide vision for long term planning, implementation, and sustainability while simultaneously the teachers, placing instructional effectiveness at the heart of all decisions.

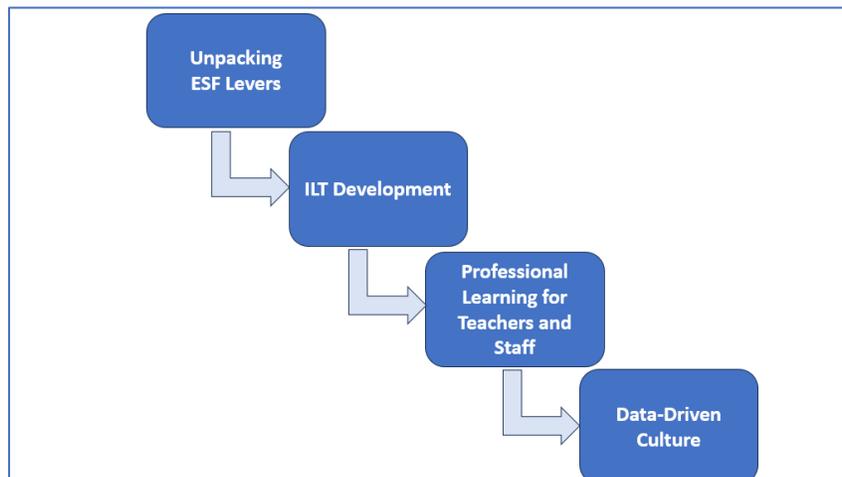
The ESF initial training occurred on April 18th, 2023, for key leadership stakeholders, including targeted Magnet school principals, Regional Assistant Superintendents, and Directors/Project Managers from the department of Curriculum and Instruction. All Magnet school principals will receive an additional two-day ESF training in June of 2023. Continued training and semi-monthly job embedded coaching will occur through SY (School Year) 23-24 related to ESF. This continued training and job embedded coaching will be specific to:

- Unpacking each lever to effectively understand success criteria and district/school commitments.
- The development of a site based Instructional Leadership Team (ILT) with clear roles and responsibilities of each team member (Lever 5). Part of this development

process also includes assigning teachers to ILT members for weekly instructional observation and coaching feedback.

- Creating rich professional learning experiences for teachers and staff.
- Effectively designing a standards-based short cycle assessment system with monitoring/disaggregation student level data to inform academic interventions and the “re-teach” and “re-assess” cycle (*Please see further information about reteach and reassess below in 5E + R² bullet point*).

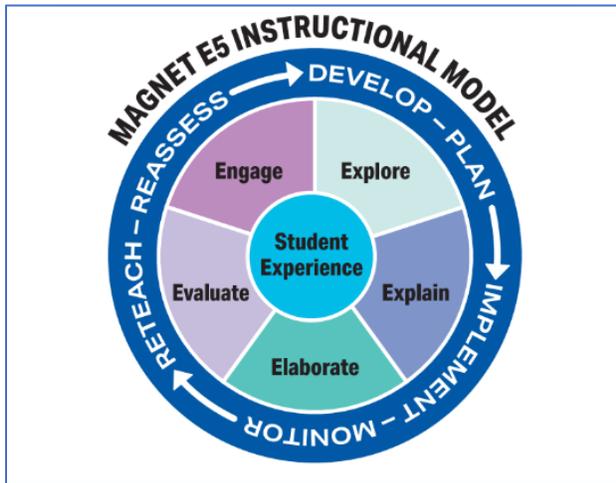
Diagram B1:



5E + R² Instructional Model

5E+R² is an instructional model. While the focus of ESF is on school leadership and schoolwide systems, 5E+R² is a pedagogical model for teachers. It is aligned to Lever 5 in ESF (Effective Instruction). The U.S. Department of Education defines an instructional model as a tool that, “Can unite school leaders, teachers, and students with shared goals, a shared understanding of how to reach the goals, and a shared vocabulary for discussing teaching and learning.” The

Magnet Department has tailored the 5E + R² Instructional Model to meet the needs of each Magnet school in the TUSD to ensure a rich, theme-based learning experience for students.



In the 5E + R² Instructional Model, each “E” is representative of a learning phase. Those include Engage, Explore, Explain, Elaborate, and Evaluate. These phases are designed to demonstrate what the student will experience as a learner. The teacher, on the other hand, works to 1) Develop and plan lessons, 2) Implement

the lesson and monitor student proficiency in skills/standards, and 3) Re-teach lessons based on formative or short cycle assessment data with follow-up “re-assessment.” 5E+R² is a necessary component when pivoting to engage a community in a whole school thematic change. This instructional model will be the driver of all STEAM based instruction and will support **Project STEAM emPowered** goals related to academic achievement, STEAM based teaching, and how Tully K5 Magnet will change its State of Arizona A-F label to an “A” or “B,” resulting in increased enrollment applications, preventing increased minority group isolation.

Job Embedded Coaching

Instructional Coaching is provided by the Tully K5 Magnet Instructional Leadership Team (ILT) to teachers and support staff. Job embedded coaching refers to an instructional observation of a teacher, not based on evaluation but on instructional development, followed by feedback. Each time a teacher is observed in this way, the ILT member will remain 10 to 15 minutes and use the 5E + R² Instructional Protocol as a guide to support and document the ILT observation. Follow-up

coaching will be related to the 5E + R² Instructional Protocol. Coaching will occur in both written form (via email) and conversations.

Tully K5 Magnet Initiatives to Support MSAP

The **5E + R² Instructional Model** will explicitly link lessons and classroom assessments to core academic standards, establish consistency in lesson planning for Professional Learning Community (PLC) work among teachers, support cross curricular project-based learning objectives, and be the driver of all STEAM based instruction. At the core of this model is a framework of relationship-building including:

- teacher to students (and families) on a daily basis to discuss their personalized learning plans and various formative assessments.
- teacher to teacher on a weekly basis in the PLCs to discuss student interventions based on results of data and to share and reflect upon professional practices.
- teacher to administrator on a weekly basis in PLC's and in the classroom to maintain the sense of purpose, urgency and focus on student learning.
- district to teacher and administrators quarterly to support principals and to ensure that the school faculty is invested in the process and able to discuss data with fluency.

This Instructional Model is the foundation house for all STEAM based, problem-based, and project-based activities that will occur at Tully K5 Magnet. Specific professional development plans will be explained in the professional development section of the MSAP application.

Tully K5 Magnet School Instructional Leadership Team

In the second semester of SY 2022-2023, Tully K5 Magnet developed an Instructional Leadership Team (ILT), comprised of the Principal, the Magnet coordinator, Reading and Math Interventionists, the Multi-Tiered Systems of Support (MTSS) coordinator, and two teacher leaders. All teachers at Tully K5 Magnet Elementary have an instructional coach from this team. The instructional coaches have scheduled weekly observations, utilizing an Instructional Protocol, with follow-up job embedded coaching to improve teacher efficacy. Note that the ILT development work has been in response to the Effective Schools Framework (ESF) training (*detailed in Tully initiatives in Support of the MSAP Grant*) and is directly in alignment to lever one of ESF (Effective Leadership and Planning). This team is responsible for the day-to-day implementation of **Project STEAM emPowered**. The principal chairs ILT team meetings, which occur each week, and is the primary leader at the site level. In addition to chairing the ILT, the Principal has extensive leadership responsibilities related to **Project STEAM emPowered**, which include:

- Working with the ILT to ensure effective scheduling of walkthroughs
- Working with the ILT to disaggregate instructional walkthrough data to inform feedback and “tweaks” in site based professional development
- Participating in and overseeing implementation of Project Lead the Way and PBL Works professional development
- Evaluating instructional and support staff
- Continuous communication with different stakeholder groups (teachers, staff, parents, guardians, and Magnet Department)
- Working to implement effective culture and climate systems
- Working to develop teacher and staff celebrations systems

- Continuous monitoring of the implementation of **Project STEM emPowered**
- Working with District Magnet Department to receive job embedded coaching related to the Effective Schools Framework and the 5E + R² Instructional Model
- Additional managerial and leadership duties that are within the role of school principal

John Hattie’s longitudinal research on behaviors and actions that impact student achievement identified that “collective teacher efficacy” is the most significant influence on student outcomes. The observation/coaching/feedback cycle in place at Tully K5 Magnet has a clear goal of building this “collective efficacy” ([Kraft et al., 2018](#)).

Tully K5 Magnet School – Professional Learning Communities

Tully K5 Magnet currently has an existing grade level teacher collaboration structure called a Professional Learning Community (PLC). Grade level PLC teams will meet weekly at Tully and will utilize a PLC Meeting Protocol co-designed with the ILT. The PLC will support the development of a data driven culture wherein quarterly benchmark assessments, quarterly projects (as part of **Project STEAM emPowered**), as well as short-cycle assessments (interim quizzes and tests provided each two to three weeks) will be evaluated, and data disaggregated. The data collected in the weekly PLC Protocol feedback forms will inform academic interventions to increase student achievement and to close academic disparities.

This PLC structure at Tully Magnet School aligns to Lever 5 (Effective Instruction) of the Effective Schools Framework. The site MTSS (Multi-Tiered Systems of Support) Coordinator will organize and schedule all the above-mentioned assessments and support/facilitate grade level collaboration that occurs in Professional Learning Communities. Benchmark data disaggregation will inform academic interventions provided by the Reading and Math interventionists identified

in the budget portion of the MSAP proposal. These academic interventions will be targeted (based on student level academic need) and will occur both in a small group and in a 1:1 setting. Targeted students receiving academic interventions will be provided progress monitoring assessments every two to three weeks related to the standards, skills, and concepts that students are learning. The site will use an online tool to provide the progress monitoring assessment.

Tully K5 Magnet – After School Programming

Tully K5 Magnet Elementary has an after-school program. This programming includes classes for targeted English Language Arts and Mathematics academic interventions and homework help. **Project STEAM emPowered** will be able to increase the offerings with STEM kits from the National Inventors Hall of Fame (NIHF). NIHF would bring the addition of computer coding, robotics, maker, and visual art clubs which have all been shown to increase academic achievement ([Talan, 2021](#)) ([Bowen & Kisida, 2019](#)). With **Project STEAM emPowered** support students will be targeted for participation in the academic after-school program using AASA (Arizona's Academic Standards Assessment), Benchmark, and Formative Assessment Data, but will also have choice in attending extracurricular clubs as well. Review of data to adjust placement in after-school academic programming will occur each semester. Attendance in the after-school program will be closely monitored to ensure effective participation.

Tully K5 Magnet School Garden

The garden at Tully Magnet Elementary has served as a small outdoor learning environment for selected students and two classes. The expansion of the learning opportunities that the MSAP grant will provide would enable more students to learn through problem-based and project-based experiences in the garden. **Project STEAM emPowered** will further increase

hands-on learning experiences, as well the application of STEAM understandings by applying technological solutions to existing problems in nature, which makes STEAM more relevant to students and increases student engagement and achievement ([Karaçalli & Korur, 2014](#)). The MSAP funds will allow more students to experience STEAM in the garden during and after school and ensure alignment between thematic commitments.

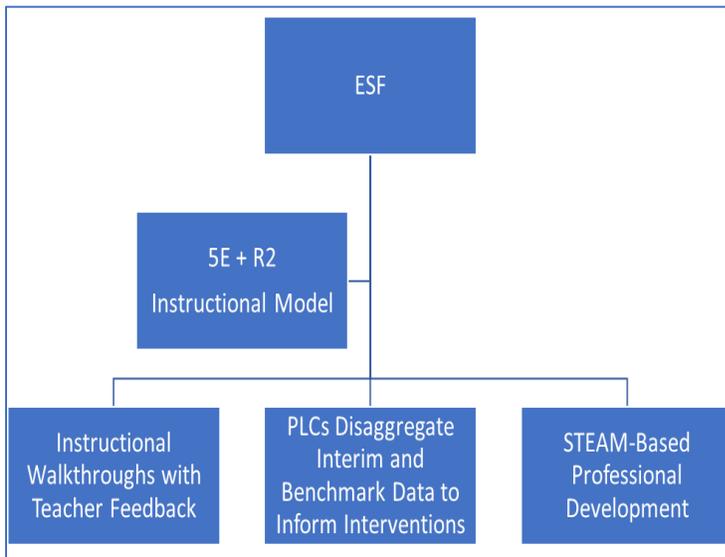
Tully K5 Magnet - Partnerships

Tully K5 Magnet has a proven record of developing enduring partnerships with local and national companies, community organizations, and parent volunteers. These partners often provide needed support such as donating shoes, backpacks, or hygiene items. Volunteers read with students or act as monitors on the playground. **Project STEAMemPowered** partnerships will be expanded to also engage STEAM partners, such as the University of Arizona, Saguaro National Park, and local mural artists. These partnerships will continue to benefit the school after MSAP funding ends. An after-school program research study found that after-school programs that include community partnerships with strong relationships with school principals, teachers, and students were successful at improving students' homework completion, homework effort, positive behavior, increased student initiative ([Little, 2008](#)). **Project STEAMemPowered** will create many more possibilities for new partnerships with a STEAM focus that will be sustained to increase student achievement at Tully and continue beyond the life of the grant with written commitments such as multi-year MOUs.

Instructional Effectiveness Innovation

To continue to support student academic achievement, Tully K5 Magnet will focus on increasing instructional effectiveness through training, professional development, and job

embedded coaching; additionally, data driven systems will be emphasized for academic interventions and collaboration through professional learning communities (PLCs). The organizational structure of the leadership framework and instructional model can be identified in the graphic below.



The Effective Schools

Framework (ESF) is a recipe for successful schools and is a core driver related to how Tully’s leadership will organize their efforts specific to increasing academic achievement.

ESF will be the “house” that supports a data driven culture, effective PLC

implementation, and the successful application of STEAM based professional development through the 5E + R² Instructional Model. The District Magnet Team has developed this 5E + R² Instructional Model to enable all site level stakeholders (principal, magnet coordinator, support staff, teachers) to use a common language and understand critical components related to effective instructional practices. The 5E + R² Instructional Model will be used for STEAM based thematic integration and is in alignment to ESF Lever 5 (Effective Instruction).

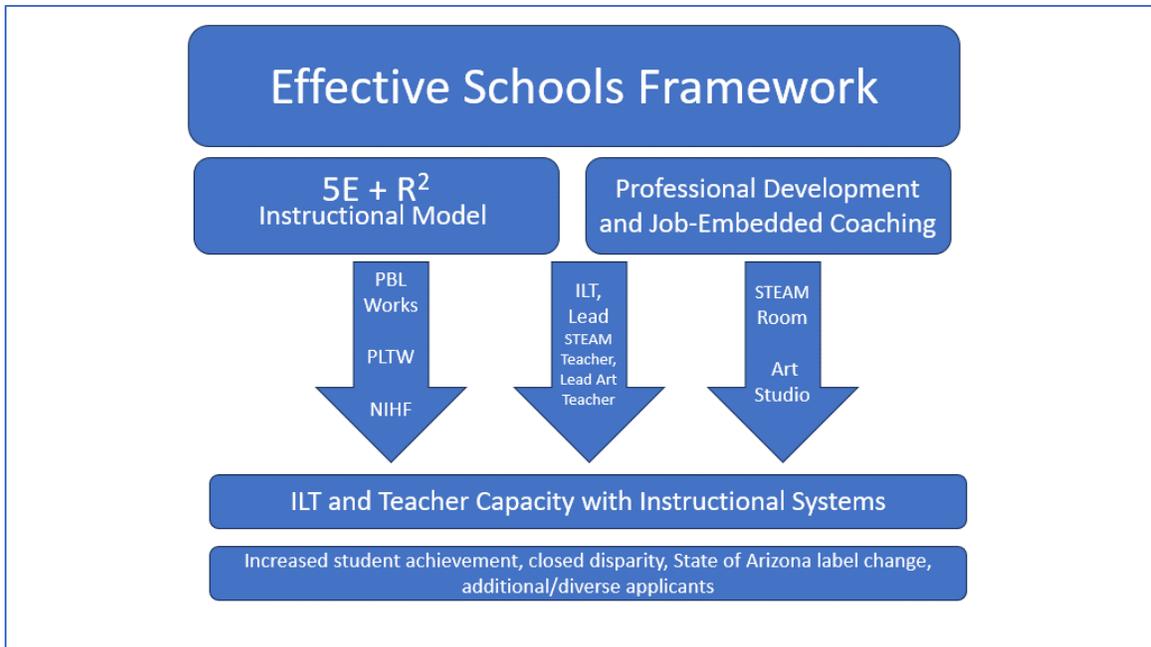
STEAM professional development from Project Lead the Way (PLTW) will be provided to the Instructional Leadership Team (ILT) and classroom teachers to provide tools and resources to create STEAM-based lessons. PLTW is a leader in STEM and STEAM based curriculum, which complements core content areas. Ongoing training that shows how to access and use high-quality STEAM-based resources aligns to ESF Lever 4 (High quality resources and assessments). Training

and job embedded coaching will be provided in relation to the Project Lead the Way curriculum by the PLTW facilitators, Instructional Leadership Team, as well as the MSAP Project Coordinator and additional Magnet Department team members. *(Further description and timeline of PLTW is detailed below in section B2).*

The National Inventors Hall of Fame (NIHF) is a national leader in STEM and STEAM based instructional resources, which allow students to become inventors, “makers,” critical thinkers, and designers. Tully K5 Magnet, through **Project STEAMemPowered** will partner with the National Inventors Hall of Fame to empower after-school and elective teachers through training facilitated by the NIHF and Tully K5 Instructional Leadership Team. Tully K5 Magnet electives and after-school teachers will receive NIHF training specific to the use of NIHF modules. However, the instructional driver that will guide the use of such tools and resources will be the 5E + R² Instructional Model. *(Further description and timeline of NIHF is detailed below in section B2).*

All the above-mentioned initiatives will create “Collective Teacher Efficacy” by ensuring a focus on instructional coaching, increasing teachers' in-depth knowledge of Arizona College and Career Readiness Standards, embedding data driven systems into the instructional cycle to support academic outcomes, and implementing key instructional, research-based strategies found in the 5E + R² Instructional Model, etc. ([Hattie, J, 2015](#)).

Diagram B4:



Key Elements of Magnet Theme

A key component of **Project STEAM emPowered** element is STEAM-related professional development. Our partners will provide distinct, but overlapping skill development that will support the whole school theme change with through training on:

- STEM curriculum, methods, and materials (Project Lead the Way)
- After-school engagement and learning (The National Inventors Hall of Fame)
- Problem and project-based learning (PBL Works).

These three partners will provide classroom-level professional development to the MSAP Project Coordinator, the Magnet PDAT, and Tully K5 Magnet Elementary staff throughout the grant cycle, as outlined in the **Project STEAM emPowered** professional development plan and tables N-Q. This will increase teacher capacity will positively impact student learning and academic achievement at Tully K5 Magnet

The Lead STEAM teacher will work with classroom teachers and the Lead Art teacher to produce seamless integration of STEAM during the school day classes, in after school clubs, and at family events. The Lead STEAM teacher will also manage the STEAM Room and work with students during Open Make time before and after school. Open Make time is designed to encourage students to use individualized agencies in project choices and increase self-determination opportunities.

The Lead Art teacher will not only teach the principles and techniques of art to students, but they will also be a key collaborator with peer teachers to incorporate design and visual learning into the creation and display of project products and artifacts. Aesthetics are important in the presentation and communication of STEAM concepts that students will be doing during the Exhibitions and Presentations of Learning. The Lead Art teacher will provide this aesthetic support for students and teachers. A well-equipped and beautiful dedicated art space encourages creativity and self-expression, which are also components of success in STEAM.

The STEAM Room (makerspace) supports 21st century learning skills including technology, engineering, and math. It will be organized for innovative making, computer-aided design, digital fabrication, physical computing, and various high and low-tech projects. Student access to high-quality devices, materials, equipment, and components used in STEM professions provides benefits that students can carry with them in their continued secondary, college, and career readiness journey. Project **STEAMemPowered** will remove access barriers to high quality, up-to-date science, engineering and tech materials, tools, and equipment for Tully's students and especially, for low-income students. ([Ejwale, J. 2013](#)). The long-term impact of Tully and the greater STEAM pathway in TUSD will help support the reduction of underrepresented minorities and women in STEM fields.

Community partnerships with parents, local industry, businesses, and educational institutions are fundamental to the success of **Project STEAM empowered**. Currently, Tully K5 Magnet has multiple existing community partners. Those with a STEAM focus are the University of Arizona's School Garden Initiative, Saguaro National Monument, and the Watershed Management Group. With the whole school theme revision to STEAM, Tully K5 Magnet Elementary will form new STEAM-focused partnerships with Raytheon, University of Arizona, Southern Arizona Regional Science and Engineering Fair (SARSEF), and others.

Tully K5 Magnet has an established after-school program with clubs for targeted ELA (English Language Arts) and Math and ELA academic interventions, homework help, chess, crafts, gardening, and other activities. **Project STEAMemPowered** will be able to increase the offerings with STEM kits from the National Inventors Hall of Fame, computer, coding, robotics, and visual art clubs which have all been shown to increase academic achievement (Talan, 2021) (Bowen & Kisida, 2019).

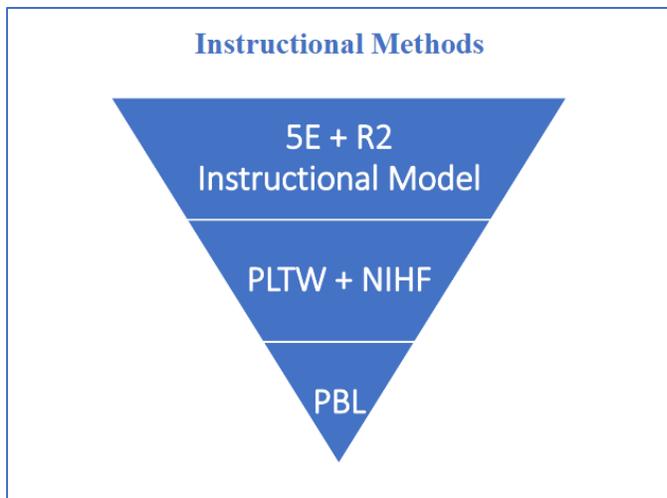
The garden at Tully Magnet Elementary has served as a small outdoor learning environment for after-school clubs and targeted classes. The expansion of the learning opportunities, such as installation of a water harvesting system, will enable more students to learn through problem-based and project-based experiences in the garden. Asking students to solve real world problems outside the classroom in the garden directly connects STEAM themes during the school day to afterschool activities and increases student engagement and achievement (Karaçalli & Korur, 2014). This approach also provides alignment between school day and after school thematic commitments.

Whole-School Thematic Programs in STEAM

As Tully K5 Magnet significantly revises the theme and becomes a whole school STEAM Magnet, a complete K-12 STEAM pathway will be established in the TUSD. This significant revision of theme will help reduce socioeconomic group isolation for low-income students and increase engagement and academic achievement for all students by attracting students and families interested in STEAM and engaging students in real-world projects and the application of their learning. Because Tully K5 Magnet is currently integrated, Tully students will be integral in preventing minority group isolation by matriculating to Mansfield STEM+ Magnet Middle School and Palo Verde STEAM Magnet High School, (also Whole-School Magnets) which strengthen the STEAM magnet pathway in TUSD. The pathway constitutes whole-school magnet themes at every school level K-12 including elementary, middle, and high school in the TUSD.

Academic Achievement		
School/Performance Measure AASA	English Language Arts Proficiency	Math Proficiency
TUSD Elementary Average	31.5%	27.1%
Tully Magnet Elementary	11.3%	7.1%

Instructional Methods to Achieve MSAP Goals



TUSD is implementing the 5E+R² Instructional Model (ESF Lever 5) in all magnet schools. The 5E Instructional Framework, which was developed originally for science education, has now been tailored to support all content areas at TUSD Magnet Schools. The 5E+R²

Instructional Model has phases of learning, which include Engage, Explore, Explain, Elaborate, and Evaluate. These phases are designed to demonstrate what the student will experience as a learner. The teacher, on the other hand, will work to 1) Develop and plan lessons, 2) Implement the lesson and monitor student proficiency in skills/standards, and 3) Re-teach lessons based on formative or short cycle assessment data with follow-up “re-assessment.” This component will engage a community in a whole school thematic change. The 5E+R² Instructional Model will be the driver of all STEAM based instruction and will support **Project STEAM emPowered** goals related to academic achievement, STEAM based teaching, and will help K5 Magnet change its State of Arizona A-F label to an “A” or “B.” The 5E+R² Instructional Model also supports a constructivist approach to learning, where students build or ‘construct’ learning, rather than “passively take in information.” This approach also celebrates inquiry-based, project-based, and problem-based learning experiences. Tully K5 Magnet will be poised to be an exemplar of constructivism, due to the whole school theme change to STEAM, and the adoption of problem-based and project-based learning experiences ([Fazelian, et al., 2010](#)).

Our professional development partners will support this approach by:

- PBL Works will provide training to the Instructional Leadership Team and to directly to teachers in relation to how to design an engaging STEAM based projects that students will engage in across all content areas to increase learning and achievement overall (Kingston, 2018).
- Project Lead the Way is also project-based learning, with a focus on STEM. All teachers will receive professional development, in Project Lead the Way instructional methods and curriculum. This activity-, project-, and problem-based (APB) instructional design centers on hands-on, real-world activities, projects, and problems that help students understand how the knowledge and skills they develop in the classroom can be applied in everyday life. The APB approach scaffolds student learning through structured activities and projects that empower students to become independent in the classroom and help them build skill sets to apply to an open-ended design problem. This approach provides students with unique opportunities to work collaboratively, identify problems, apply what they know, persevere through challenges, find unique solutions, and lead their own learning.
- The National Inventors Hall of Fame (NIHF) will focus on the afterschool program and electives during the school day. NIHF integrates multiple subjects in project-based curricula and instruction. All modules from the NIHF are hands-on, inquiry-based, and project-based learning (PBL), which effectively aligns to the 5E+R² Instructional Model (ESF Lever 5), which will drive the instruction of the NIHF modules. All modules are hands-on, inquiry-based, and project-based learning (PBL). Additionally, teachers will be encouraged to incorporate entrepreneurial concepts into their teaching. This methodology fosters risk-taking and creates an atmosphere of

acceptance of people and ideas, which is a central purpose in a magnet school as it concerns racial and socioeconomic diversity ([Falk, 2018](#)). The Instructional Leadership Team and afterschool teachers will receive professional development and job embedded coaching related to NIHF tools and resources.

The scheduling and scope of **Project STEAM emPowered** professional development opportunities can be viewed in the Professional Development section B2. Finally, students will develop greater data literacy through computers, 3D printers, microcontrollers, electronics, and robotics components. This technology will prepare students to feel and be capable in a rapidly growing field that impacts aspects of our modern livings. Research has indicated that the earlier students have learning opportunities and guidance in the fields of Science, Technology, Engineering and Math the more likely they are to choose to continue learning in these fields throughout secondary and post-secondary schooling ([Morgan, et al., 2016](#)).

Innovative Learning Spaces Critical to Project STEAM emPowered

The structural environment has a strong influence on student engagement and learning. Creating innovative learning spaces is integral to the Project STEAM empowered vision and the implementation of ESF Lever 4. Tully K5 Magnet Elementary has several areas that will be transformed into spaces that are conducive to learning that will lead to higher student achievement. ([Marchand, et al., 2014](#)) The STEAM Room will be one such space. This redesigned classroom will house the materials, tools, tech, and equipment that will be used to design and construct projects. The organized and accessible environment will be flexible, according to the needs of the students, with multi-purpose tables and seating options, safety features, optimal lighting, ventilation, and temperature. This place is student-centered and designed for making, creating, collaborating, and communicating. Students will learn to express

themselves and their culture in this space through a variety of mediums. In the STEAM Room, students are encouraged to move away from being directed to becoming self-directed independent learners. ([Kim, et al., 2018](#)) Project Lead the Way lessons can be taught in this space and individual students and class projects can use this space before school and after school.

The STEAM Art Studio presently has a kiln and soe supplies but lacks studio working and storage spaces including a wet sink, flexible furniture, shelving, materials organizers, and other items. A well-equipped Art Studio can more easily support student artistry, creativity, and aesthetic visual literacy. The Art Studio will be the dynamic working environment that produces the design, craftsmanship, presentation, and display of all STEAM projects and work. In **Project STEAM emPowered** the A in STEAM includes not only Art, but also Aesthetics. The cultural components of art are well known, but a widespread appreciation of how the arts can communicate and reinforce the development of a STEAM identity is less well understood, which is a priority of **Project STEAM emPowered** (Emdin, 2022 {non-linkable book}).

Innovative learning spaces also include spaces to display student work. For this reason, the design and renovation of hallways and shared community spaces is integral to the transformation of Tully as a whole school STEAM magnet school as well as optimizing student learning. ([Eckhoff, 2019](#)) Adjustable shelving, display cases, bulletin boards, freestanding display boards will contribute to the ongoing exhibition of learning that embodies **Project STEAM emPowered**.

Outdoor learning spaces are essential to studying the natural world and human-nature interactions. The expansion of the garden and the newly installed water harvesting system will provide numerous opportunities for STEAM lessons and activities. Tucson is in the Sonoran Desert with six months or more of very hot weather. This makes shade structures over tables and seating indispensable. They are also needed to make the garden more usable. The indoor and

outdoor stages are defined presentation spaces that Tully K5 Magnet already has that will be refurbished to become beautiful spaces for learning and learning demonstrations. The outdoor stage will instantly become a usable space with a shade structure over it to protect students and families from the heat and sun.

Project STEAM emPowered includes a STEAM themed playground, appropriate for K-5 students. Learning how the world works in informal settings is important, and often taking these topics out of the classroom and encouraging students to explore phenomena in their own time makes them even more fun and exciting. ([Ramey-Gassert, 1997](#)). STEAM themed playground equipment is designed to spark a child’s interest and encourage them to explore STEAM, giving the opportunity for them to keep on discovering and never stop learning. The interest in STEAM generated by playing with STEAM specialized equipment can be seen at museums, aquariums and nature centers and leads to learning that can be maximized within the classroom. ([Kisiel, 2013](#)). As the noted child psychologist Jean Piaget reminds, “Play is the work of childhood” (Piaget, 1962) and the STEAM playground at Tully will provide many occasions for this “work”.

Student Activities

As mentioned in the Initiatives to Support **Project STEAM emPowered** section, Tully K5 Magnet Elementary has after school activities for students with tutoring for ELA and math as well as chess, crafts, choir, garden, and other clubs. **Project STEAM emPowered** will add a STEAM focus for these clubs, with students able to choose from National Inventors Hall of Fame Invention kits, coding club, robotics, STEAM Room clubhouse and Art club. These activities extend the learning beyond the school day and increase opportunities for engaging in STEAM experiences.

Tully K5 Magnet Elementary is unique in the quality and variety of electives offered to students at each grade level. Students can currently choose from offerings such as coding, music,

chess, art, Spanish, garden, and yoga. With **Project Steam emPowered**, the investment in high quality materials and curriculum for elective choices will create more and enhanced STEAM rich offerings for electives.

Project STEAM emPowered is committed to regularly demonstrating student learning. Tully K5 Magnet Elementary will have two whole school exhibitions of learning each year. These exhibitions will be open to the public. Student work will be showcased and provide a forum for students to share their learning processes and products with an audience outside of the classroom. Students will be able to articulate how their projects connect to grade level standards. These exhibitions will become part of the Tully culture to empower students to have agency over their learning, to be able to articulate their learning and to know that their ideas and discoveries matter ([Berger, 2003](#)).

Tully Magnet Elementary teachers have committed to Presentations of Learning (POL) for a minimum of two STEAM modules that they teach. During POLs, students present their learning, grounded in artifacts/evidence from their own work to a panel of peers and adults who can offer feedback and support for next steps. When peers, teachers and community members come together to engage with student work and provide authentic feedback, they become invested in students' growth and serve as active contributors to the school community. POLs provide an opportunity for all students to celebrate, reflect, plot a course forward, and ask for the support they need. They ensure that all students are seen and provide insight into what learning experiences students find most meaningful and relevant to their lives. Note that each STEAM based POL will be scored against a standards-based rubric to inform feedback directly to students.

Tully K5 with the support from MSAP funds will help to celebrate learning outside the school walls., Tully K5 Magnet Elementary will participate in the local and regional Science Fairs, the

School Maker Faire, and STEM team competitions such Elementary Science Olympiad events, Odyssey of the Mind, and First Lego League. Tully K5 Magnet students will also participate in local and national art competitions and shows throughout the school year. Tully K5 Magnet is the proud home to the 2023 TUSD Spelling Bee Champion and the school has recently organized a math league competition team. These STEAM opportunities recognize effort and motivate students to pursue their passions. The likelihood of further study in these subjects ([Morgan, et al., 2016](#)). increases with recognition, celebration, and encouragement.

B (2): Extent to which training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among recipients of those services

To launch, maintain, and refine **Project STEAM emPowered** successfully at Tully K5 Magnet Elementary school, extensive professional learning for teachers, administrators, and faculty is required across all subject areas to fully implement this significant magnet theme revision. Professional development for the Tully Magnet Elementary community will be multidimensional, involving overarching District initiatives, site-based work, and national partners.

The District will provide professional development (PD) for Tully’s leadership in the Effective Schools Framework while TUSD’s Magnet Department delivers professional learning around the 5E+R² instructional model specific to the needs of Tully K5 Magnet School. (*See table B6 below for a detailed breakdown of District PD programming for Tully Magnet Elementary.*) The national partners providing professional development for **Project STEAM emPowered** include Project Lead the Way, National Inventors Hall of Fame, Buck Institute, Magnet Schools of America, and School Mint. (*See tables B7-B11 below for a detailed annual breakdown of national partner PD programming for Tully Magnet Elementary.*)

ESF and 5E+R² Professional Development

TUSD is committed to providing its schools and their leaders with an equity-based framework through which to manage and lead their individual school sites and a model for instruction that meets all learners' needs. This framework and model will support and enhance **Project STEAM emPowered**. The Effective Schools Framework (ESF) is an asset-based framework for principals and their leadership teams to effect best practices. It identifies five levers essential for successful school outcomes: strong school leadership and planning, strategic staffing, positive school culture, high-quality instructional materials and assessments, and effective instruction.

The District’s Magnet Department will complement the Effective Schools Framework with intentional professional learning for Tully’s teachers and support staff in 5E+R². It provides a carefully planned sequence of instruction that places students at the center of that learning. Instructionally, this model is grounded in best practices where fidelity to the development of magnet theme-based lessons is critical. The implementation of the 5E + R² instructional model is intended to ensure the success of each student.

Table B6: ESF and 5E+R², Year 1 PD Plan (District Funded)	
<p><u>ESF Training:</u></p> <p>Magnet school leaders will receive five full-day ESF trainings and workshops to unpack each of the five levers with time embedded to diagnose their school campus to fine-tune plans of continuous improvement. Through</p>	<p><u>Year 1, then on-going:</u></p> <ul style="list-style-type: none"> • In-person • One 1-day training + two 2-day trainings, then on-going

<p>evidence collection, focus group interviews, and campus observations, each magnet school principal and ILT, with support from their regional superintendent, will work to determine 1-2 high-leverage focus areas for campus improvement each year.</p>	<ul style="list-style-type: none"> • District leadership, magnet principals, magnet school ILT members
<p><u>5E + R² Instructional Model (District Funded):</u></p> <p>Magnet schoolteachers and their instructional leaders, placed into three staggered implementation groups, will receive intentional 5E overview training, followed up with a series of half day guided 5E planning and support workshops.</p>	<p><u>Year 1, then on-going:</u></p> <ul style="list-style-type: none"> • In-person • One 2-day training + Monthly Implementation Cohort Check-Ins • Online • Three ½-day trainings + Monthly Implementation Cohort Check-Ins • ILT members and magnet schoolteachers, by Implementation Cohort

Project Lead the Way Professional Development

The national partners providing professional development (PD) for **Project STEAM emPowered** include Project Lead the Way, National Inventors Hall of Fame, Buck Institute, Magnet Schools of America, and School Mint. *(See tables L-P below for a detailed annual breakdown of national partner PD programming for Tully Magnet Elementary.)* The District will provide professional development for Tully’s leadership team in the Effective Schools Framework

while TUSD’s Magnet Department delivers professional learning around the 5E+Rsquared instructional model. (See table Q below for a detailed breakdown of District PD programming for Tully Magnet Elementary.)

Project Lead the Way (PLTW) plays a pivotal role in **Project STEAM emPowered**. This partner provides professional learning that prepares Tully K5 Magnet teachers to transform their classrooms into STEM learning laboratories. The PD is designed to meet teachers where they are with innovative tools and resources needed to create hands-on, immersive STEM learning experiences for Tully K5 Magnet Elementary students that are aligned to state standards. This project would implement PLTW Core Training PD, PLTW Launch Classroom Teaching PD, and PLTW Launch Lead Teacher Training for Tully’s stakeholders. This project would also include PLTW District Transformation Training for school sites and district level leadership to aid in the grant's long-term sustainability.

Table B7: Project Lead the Way, Year 1-5 PD Plan (Grant Funded)	
<p><u>PLTW Core Training:</u></p> <p>PLTW Core Training incorporates authentic, meaningful, and best-in-class online facilitation practices that ensure the quality delivery of course content. All participants interact and learn together in an environment that offers expanded resources, exciting networking opportunities, and the engaging high-quality</p>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> • 3-day training • In-person • Tully K5 teachers, Instructional Leadership Team (ILT) members, school counselor, interventionists, and teaching assistants • MSAP Project Coordinator • With ILT coaching/feedback follow-up

<p>learning experience that teachers expect from PLTW.</p>	
<p><u>PLTW Launch Classroom Teacher Training:</u></p> <p>During PLTW Launch Classroom Teacher Training, teachers develop an understanding of the activity-, project-, problem-based (APB) instructional approach at the core of all 43 PLTW Launch modules. They embrace their role as facilitators of learning as they gain familiarity with grade-level modules and experience how to plan and implement PLTW Launch modules in the classroom.</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • 2-day training • In-person • Tully K5 teachers, Instructional Leadership Team (ILT)members, school counselor, interventionists, and teaching assistants • MSAP Project Coordinator • Includes on-going access to PD resources • Includes on-going support related to PLTW modules • With ILT coaching/feedback follow-up
<p><u>PLTW District Transformation Training:</u></p> <p>PLTW District Transformation Trainings (DTTs) provide in-depth professional development to district and school site leadership for schoolwide implementation and integration of PLTW with the goal of building a lasting program.</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • Mix of live and interactive online learning • 10 Sessions • ILT members, grade level team leaders, school site administrator, Project Director, Magnet Program Manager, Magnet PDAT

	<ul style="list-style-type: none"> • MSAP Project Coordinator • Includes post-training support • Includes on-demand equipment usage webinars, instruction sheets, videos, other resources • Access to the PLTW Solution Center
<p><u>PLTW Launch Lead Teacher Training:</u></p> <p>Focused on enabling districts and schools to create capacity in support of sustainable program growth, the Lead Teacher Training is a train-the-trainer experience designed to develop instructional leaders and program champions.</p> <p>Selected school site teachers will engage in PLTW Launch activities, projects, and problems; experience PLTW Launch modules; and delve into pedagogical strategies. They also gain an understanding of adult learners and build instructional leadership competencies to be able to train and support PLTW Launch Classroom Teachers at their school</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • 2-day training • In-person • Includes access to PLTW PD resources • Includes yearlong access to additional PLTW opportunities • Tully K5 Teachers - 2 lower elementary, 2 upper elementary teachers, school site Magnet coordinator, and school site Curriculum Service Provider • MSAP Project Coordinator • With ILT coaching/feedback follow-up
<p><u>PLTW Virtual Academy:</u></p>	<p><u>Year 4-5:</u></p> <ul style="list-style-type: none"> • On-going 1-hour sessions

<p>Ongoing virtual PD to support theme and module specific professional learning to challenge students to think critically and be collaborative problem-solvers.</p>	<ul style="list-style-type: none"> • Quarterly • Online • Tully K5 teachers, Instructional Leadership Team (ILT) members, school counselor, interventionists, and teaching assistants • With ILT coaching/feedback follow-up
--	--

National Inventors Hall of Fame Professional Development

The National Inventors Hall of Fame (NIHF) has a significant function in **Project STEAM emPowered**. This partner will enable Tully K5 Magnet Elementary to offer a robust and well-rounded STEAM program to its students and their families with engaging STEAM school day elective classes and a meaningful and interactive STEAM after-school programming. The NIHF mission is to recognize inventors, promote creativity, and advance the spirit of innovation and entrepreneurship. All NIHF curricula provide strategies and best practices to integrate STEAM and hands-on learning concepts with high-quality, high-interest materials that meet national and state standards. **Project STEAM emPowered** would implement NIHF’s Invention Project for Tully’s school day elective classes and Club Invention for the afterschool program. Both programs offer customizable professional learning workshops that empower and support teachers, school-site leadership teams, site instructional coaches, teacher assistants, and staff.

<p>Table B8: <u>National Inventors Hall of Fame, Year 1-5 PD Plan (Grant Funded)</u></p>	
<p><u>Instilling an I Can Invent Mindset PD:</u></p>	<p><u>Year 1:</u></p>

<p>This PD introduces strategies for open-ended learning through invention education.</p> <p>Teachers will learn to promote creativity and student-led learning through divergent thinking, collaboration, and play. This PD meets state standards, supports social-emotional learning, and promotes the value of intellectual property literacy.</p>	<ul style="list-style-type: none"> • ½ day workshop • In-person • School Day Elective: Tully K5 Teachers - 2 lower elementary teachers and teacher assistants, 2 upper elementary teachers and teacher assistants, Magnet coordinator, Curriculum Service Provider, school site administrator • After School Program: all afterschool Tully K5 teachers, teaching assistants, after school program coordinator • MSAP Project Coordinator • With Tully K5 ILT coaching/feedback follow-up
<p><u>Instilling an I Can Invent Mindset PD, Part 2:</u></p> <p>This PD focuses on taking invention education strategies and skills to the next level. It will equip teachers to strengthen their teaching techniques to provide their students with immersive experiences that empower hands-on opportunities to practice. Part 2</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • ½ day workshop • In person • School Day Elective: Tully K5 Teachers - 2 lower elementary teachers and teacher assistants, 2 upper elementary teachers and teacher

<p>integrates Next Generation Science Standards into all content areas, engages in discussion and reflection for exploring STEAM concepts, and applies NIHF’s create, test, and recreate approach to learning.</p>	<p>assistants, Magnet coordinator, Curriculum Service Provider, school site administrator</p> <ul style="list-style-type: none"> • After School Program: all afterschool Tully K5 teachers, teaching assistants, after school program coordinator • MSAP Project Coordinator • With Tully K5 ILT coaching/feedback follow-up
<p><u>Innovative Educator Institute PD:</u></p> <p>This PD will extend the learning and capacity of teacher-participants. It focuses on collaboration, self-directed learning, and persistence. Tully teachers will learn skills that can be transferred directly into their elective classrooms. Skills like sharing and reflecting on hands-on learning experiences, collaborating on strategies that instill a growth mindset, and exploring transference methods that build students’ confidence, creativity, and problem-solving skills.</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • 2-hour workshop • In person • School Day Elective: Tully K5 Teachers - 2 lower elementary teachers and teacher assistants, 2 upper elementary teachers and teacher assistants, Magnet coordinator, Curriculum Service Provider, school site administrator • After School Program: all Tully K5 after schoolteachers, teaching

	<p>assistants, after school program coordinator</p> <ul style="list-style-type: none"> • MSAP Project Coordinator • With Tully K5 ILT coaching/feedback follow-up
<p><u>NIHF Virtual Academy:</u></p> <p>Ongoing virtual PD to support elective classes and after school programming with fundamental skills and techniques to encourage innovative, creative thinking and the confidence to facilitate equitable, student-centered learning experiences.</p>	<p><u>Year 4-5:</u></p> <ul style="list-style-type: none"> • On-going 1-hour sessions • Quarterly • Online • Tully K5 elective teachers, Instructional Leadership Team (ILT) members, teaching assistants, after schoolteachers, afterschool program facilitator • With Tully K5 ILT coaching/feedback follow-up

The Buck Institute, PBL Works Professional Development

The significant whole school theme revision at Tully Magnet Elementary necessitates a new framework to deliver a fully integrated STEAM curriculum. Because both Project Lead the Way (*referenced above in table B7*) and National Inventors Hall of Fame (*referenced above in table B8*) are project-based programs, the teacher trainings offered by the Buck Institute's PBL

Works will strengthen teacher efficacy in implementing STEAM into all content areas, building program cohesion. PBL Works will bring high-quality, engaging Project Based Learning PD training for Tully’s teachers and support staff and will also build the capacity of school leaders to create the conditions necessary for teachers to implement high quality projects that are in alignment with state standards. The Buck Institute emphasizes advancing racial equity and research confirms that project-based learning empowers students, especially those furthest from opportunity. PBL engages students in learning that is deep, long-lasting, and relevant to their lives. Tully teachers and support staff will take part in PBL Works 101 training series, PBL Works 201 training series, Sustained Support Visits, and Teacher Online Consultancies. To further build capacity and sustainability for **Project STEAM emPowered**, Tully’s Instructional Leadership Team (ILT), along with the District’s Magnet Department will take part in PBL Leadership training, PBL Coaching training, and PBL Classroom Walkthroughs training.

Table B9: Buck Institute/PBL Works, Year 2-5 PD Plan (Grant Funded)	
<p><u>PBL 101 trainings:</u></p> <p>This foundational workshop in Project Based Learning is based on the Buck Institute’s model of Gold Standard PBL. It is the recommended gateway to begin a teacher’s PBL journey. In this workshop, teachers design a Gold Standard project for their students and learn equity-centered teaching practices to facilitate high-quality PBL. The</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • 3-day workshop • In-person • Includes access to PBL Works online resources • Tully K5 teachers, Teaching Assistants, school site Magnet coordinator, school site principal, and

<p>PBL 101 workshop models the Project Based Learning process.</p>	<p>school site Curriculum Service Provider</p> <ul style="list-style-type: none"> • MSAP Project Coordinator • With Tully K5 ILT coaching/feedback follow-up
<p><u>Sustained Support Visits:</u></p> <p>These workshops deepen a teacher’s ability to implement a Gold Standard project by learning how to reflect on and strengthen the essential project design elements and project-based teaching practices in a specific project. Sustained Support Visits are designed to provide focused support for teachers to implement projects effectively. Focus areas include:</p> <ul style="list-style-type: none"> • Building a PBL Culture • Formative Assessment • Implementation Studio • Literacy • Managing the Process • Peer Critique • Project Design Refresh 	<p><u>Year 2-3:</u></p> <ul style="list-style-type: none"> • On-going 1-hour sessions • Quarterly • Online • Tully K5 teachers, Teaching Assistants, school site Magnet coordinator, school site principal, and school site Curriculum Service Provider

<ul style="list-style-type: none"> • Student Reflection • Sustained Inquiry 	
<p><u>PBL 201 trainings:</u></p> <p>These workshops deepen a teacher’s understanding of how to integrate the PBL Equity Levers into the design and facilitation of Gold Standard PBL in a way that fosters equity in the classroom. PBL 201 works to improve the classroom teacher’s project facilitation skills in ways that lead to high-quality student work and rigorous thinking by reflecting on a project and investigating specific strategies that can strengthen project implementation.</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • 3-day workshop • In-person • Includes access to PBL Works online resources • Tully K5 teachers, Teaching Assistants, school site Magnet coordinator, school site principal, and school site Curriculum Service Provider • MSAP Project Coordinator • With Tully K5 ILT coaching/feedback follow-up
<p><u>Online Teacher Consultancies:</u></p> <p>Teachers obtain PBL implementation support with a series of one-on-one or small group consultancy sessions with PBL experts throughout the school year. Teachers receive</p>	<p><u>Year 3-4:</u></p> <ul style="list-style-type: none"> • 20 consultancy hours per year x 2 years • Online • Individual Tully K5 elective teachers, or teacher teams

<p>“just in time” guidance, support, and resources during project implementation.</p>	
<p><u>PBL Leadership:</u></p> <p>This training is designed for school and district leaders (principals, assistant principals, deans, department heads, grade level leaders, and others responsible for instructional coaching) to learn how to support teachers who completed PBL 101 to implement Gold Standard PBL in their classrooms. This workshop will be scheduled with PBL 101 for teachers.</p> <p>This training asks school leaders to dig in to learn how to grow the conditions needed for Gold Standard Project Based Learning to thrive at a school site.</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • 3-day workshop • In-person • Tully K5 ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists) • TUSD Magnet Department members • MSAP Project Coordinator
<p><u>PBL Coaching:</u></p> <p>These workshops develop and deepen the expertise of the on-site PBL instructional coaches or school-site leaders. School leadership will engage in this experience by creating a PBL Coaching Toolkit to help</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • 3-day workshop • In-person • Tully K5 ILT members (school site principal, magnet coordinator,

<p>support teachers with implementing Gold Standard PBL.</p>	<p>curriculum service provider, MTSS Coordinator, and interventionists)</p> <ul style="list-style-type: none"> • TUSD Magnet Department members • MSAP Project Coordinator
<p><u>PBL Classroom Walkthroughs:</u></p> <p>PBL Classroom Walkthroughs training builds the capacity of school leaders or instructional coaches to develop a deeper understanding of what Gold Standard Project Based Teaching Practices look like in action. Buck Institute’s National Faculty offers targeted expert consulting focused on 1-3 specific PBL Teaching Practices identified in advance by the school leader or instructional coach.</p>	<p><u>Year 4-5:</u></p> <ul style="list-style-type: none"> • Two, 1-day workshops • In person • Tully ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists) • TUSD Magnet Department members • MSAP Project Coordinator

Magnet Schools of America (MSA) Professional Development

Magnet Schools of America’s (MSA) focus on innovation and preparation is important to Tully’s **Project STEAM emPowered**. MSA founded The National Institute for Magnet School Leadership (NIMSL) as the technical assistance arm of their organization. Their mission is to provide professional development and expertise to magnet school leaders and their schools. MSA customizes training and services to meet the specific needs of participating magnet schools. NIMSL guides magnet schools in becoming models of diversity, equity, and inclusion as described in the Magnet School Standards of Excellence. The NIMSL team supports magnet schools with

these key activities tailored to their unique context and aligned to the MSAP purposes. Tully's significant schoolwide theme revision requires support at all levels, particularly at the school site leadership level, with an emphasis on program sustainability after the grant's life. With that in mind, this project would implement MSA's Leading Successful Magnet Schools and Sustainability FIRST professional development leadership workshops.

Table B 10: Magnet Schools of America, Year 1-5 PD Plan (Grant Funded)	
<p><u>Excellent Magnet Implementation:</u></p> <p>This workshop capitalizes on the opportunity to engage early with awardees to forge a clear path in a sustainable and exemplary magnet program. With the goal of strengthening a program's cadence in building a healthy viable magnet school/program. The provider will clearly articulate a path in implementing a magnet theme revision, support and build capacity around a magnet mindset, and lead educators in full service supports for sustainability and excellence.</p>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> • Two 3-day workshops • In-person • Tully K5 ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists) • Magnet Department team • Two 1-day workshops • In-person • Tully K5 Instructional Leadership Team
<p><u>STEAMify/STEMify Workshop:</u></p> <p>This workshop focuses on implementing the best practices of Science, Technology,</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • 3-days • In-person

<p>Engineering, Arts, and Mathematics that are vital to creating a high functioning magnet pathway K-12. These workshop sessions will focus on matching current practices to the Next Generation Science Standards and Engineering Practices.</p>	<ul style="list-style-type: none"> • Tully K5 teachers, Instructional Leadership Team (ILT)members • TUSD Magnet Department members • Tully ILT members of TUSD STEAM pathway sites, Mansfeld Middle School and Palo Verde High School
<p><u>Leading Successful Magnet Schools:</u></p> <p>This workshop will provide participants an opportunity to examine exemplary practices in model magnet schools throughout the country. Teacher leaders, school administrators, and magnets support personnel will be introduced to several tools for planning next steps to strategically implement the MSA Standards of Excellence to guide school sites toward model magnet schools and programs.</p>	<p><u>Year 3:</u></p> <ul style="list-style-type: none"> • 2-days • In-person • Tully ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists) • TUSD Magnet Department members
<p><u>Recruitment and Retention:</u></p> <p>This professional learning experience provides a student recruitment / retention framework based on a whole system approach of support for students and families. The session will focus on practical strategies and</p>	<p><u>Year 4:</u></p> <ul style="list-style-type: none"> • 2-days • In-person • Tully K5 ILT members (school site principal, magnet coordinator,

<p>best practices that work at the school level to ensure magnet students are successfully retained through high school.</p>	<p>curriculum service provider, MTSS Coordinator, and interventionists)</p> <ul style="list-style-type: none"> • TUSD Magnet Department members • Tully K5 ILT members of TUSD STEAM pathway sites, Mansfeld Middle School, and Palo Verde High School
<p><u>Sustainability FIRST:</u></p> <p>This workshop provides an opportunity for teachers and administrators to engage in strategic data collection tracking protocol of key and critical elements to ensure a viable sustainable magnet school and/or program after MSAP funding. Additionally, participants will analyze successful models identified for their sustainability over time.</p>	<p><u>Year 5:</u></p> <ul style="list-style-type: none"> • Yearlong • Dates TBD • Tully K5 ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists) • TUSD Magnet Department members

School Mint Professional Development

Project STEAM emPowered means a significant schoolwide theme change for Tully Magnet Elementary. To increase enrollment at Tully and attract and retain a diverse student body, a strategic enrollment management plan that includes professional development in the areas of the recruitment process, enrollment solutions, and retention strategies is required. School Mint is a K-12 provider of strategic enrollment management solutions. They focus on helping schools and

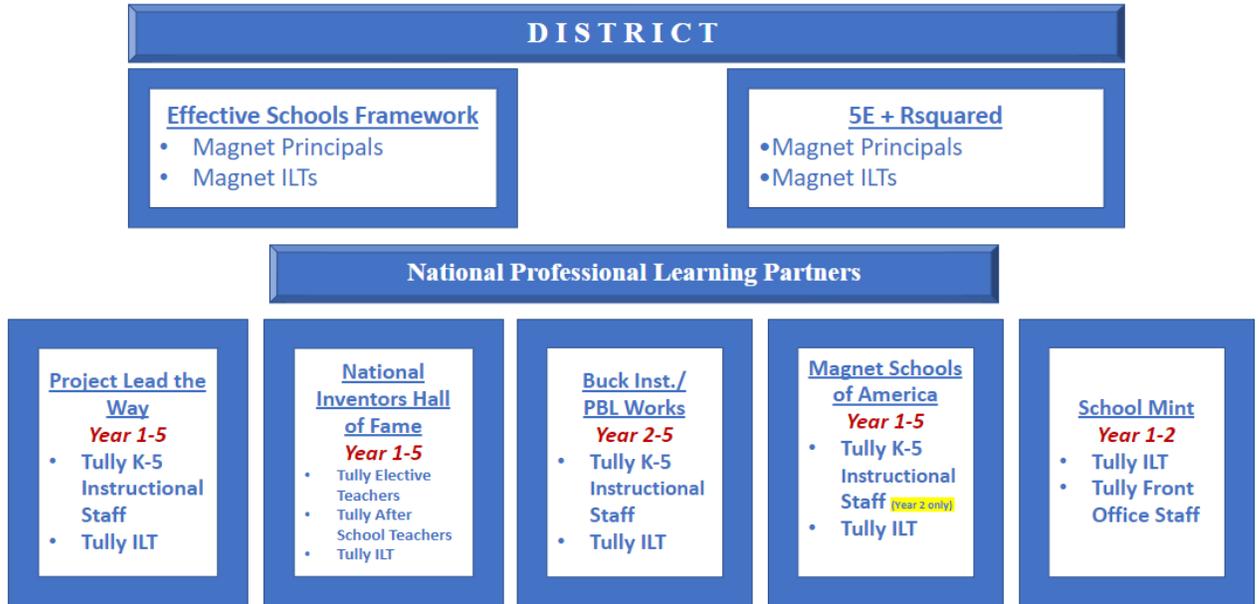
districts attract, enroll, and retain students to boost enrollment, improve financial sustainability, and drive positive student outcomes. School Mint offers professional development related to enriching the customer or family experience (for front office staff). Further training is related to effective school tours, and for the creation of data-driven enrollment systems that yield significant results. **Project STEAM emPowered** would engage Tully’s front office staff, as well as their magnet coordinator and school site principal, in School Mint’s Secret Shopper and Strategic Enrollment Management Training 101.

Table B 11: School Mint, Year 1-2 PD Plan (Grant Funded)	
<p><u>Secret Shopper:</u></p> <p>This experience helps the front office staff at a school site understand the current parent experience when interacting with the school. This is the foundation for helping to improve recruitment outcomes. SchoolMint will send a secret shopper to a school to measure the experience of a potential parent including pre-engagement, school tour, and follow-up. The result of this work is a robust report outlining strengths and opportunities for improvement to help boost enrollment that a School Mint enrollment expert will review with a school staff.</p>	<p><u>Year 1:</u></p> <ul style="list-style-type: none"> • 3 secret shopper days • In-person • 1 day training • Tully K5 Front office staff (office manager, attendance clerk, community liaison, school nurse) • Tully K5 ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists), Magnet Department Program Manager, Magnet Department

	Professional Development Academic Trainer
<p><u>School Mint Strategic Enrollment Management Training 101:</u></p> <p>In this course, school leaders and front office staff receive training in the fundamentals of student recruitment, the essentials of customer service, how to deliver a great school tour, building an enrollment growth plan, running a marketing campaign, and designing a robust communications strategy.</p>	<p><u>Year 2:</u></p> <ul style="list-style-type: none"> • 6, 1-hour sessions • In-person • Tully K5 Front office staff (office manager, attendance clerk, community liaison, school nurse) • Tully K5 ILT members (school site principal, magnet coordinator, curriculum service provider, MTSS Coordinator, and interventionists), Magnet Department Program Manager, Magnet Department Professional Development Academic Trainer

Diagram B 12:

Professional Learning at Tully Magnet Elementary



B3: The extent to which each magnet school will encourage greater parental decision-making and involvement

Tully K5 Magnet School is committed to encouraging greater parental decision-making and involvement in their child(ren)'s education. The significant revision of Tully’s magnet theme as proposed in **Project STEAM emPowered** will give purpose for parents to become learning partners with the school. Tully has an established parent network and the opportunities provided by the MSAP funding will expand this network for greater parental decision-making and involvement. When all these activities and events below are calendarized, the school will open to the Tully families, on average, about twice a month with the majority of activities being held in the evenings to accommodate working parents. The Magnet coordinator will support this Parent network as the point person and will coordinate communication, scheduling, sign ups and reminders to parents. Some of these activities are also highlighted in the:

- STEAM advisory committee: The school will establish a STEAM advisory committee, which will include a diverse group of parents, guardians, community members, and educators that will meet monthly. To ensure a diverse committee, Tully K5 Magnet will work to obtain representation from different racial, ethnic, and socio-economic groups at the school. The committee provides a forum for parents to share their ideas, connections, and suggestions about how to improve and/or expand the school's STEAM program, increase parental involvement, and form enduring partnerships. This committee will reflect the diversity of Tully student body.
- TUSD School Quality Surveys are administered annually to families. The data from these surveys is used to modify systems, activities and procedures to improve school culture and climate.
- Focus groups and/or surveys will be conducted annually, made up of parents, families, and other community members, who reflect the diversity of Tully demographics, to gain insight into the experiences and perspectives about the STEAM theme of these various stakeholders.
- The results of a family survey about the significant revision of the Tully theme showed 82% of respondents were interested in this change.
- English language classes for parents who are not fluent in English are held at Tully., the school provides weekly English language classes. By improving their English skills, parents can communicate more effectively with their child's teachers, understand school policies and procedures, and support their child's learning. This program is run by volunteers from the Tucson community.

- Parent and family member volunteers: The school encourages parents to volunteer their time and expertise to support the school's STEAM program. By volunteering in classrooms, on field trips and at school and/or the after-school program, parents and family members can play an active role in their child's education and contribute to the school community.
- Quarterly Family Game Nights: In conjunction with fun learning activities such as math games, read-alouds, and logic puzzles, these well attended events allow parents and Tully staff to interact informally and build positive relationships. Parenting classes are also offered during the evening for students and families. Historically, these events have been well-attended and used to gather feedback from parents in focus groups and surveys. responses from parents.
- Family STEAM nights: These future events encourage families to participate in hands-on activities related to Science, Technology, Engineering, Arts, and Mathematics (STEAM). Parents can gain a better understanding of the skills and knowledge their children are learning at school .by participating in these activities side-by-side with them. Together with the Steam Activity nights, these events will be held quarterly.
- Quarterly Exhibitions of Learning and Presentations of Learning: These whole school and classroom level events provide students with the opportunity to showcase their learning to their parents, and other members of the community. Parents serve as experts, judges, mentors, and on panels to support student learning and presentations. During these events and the work leading up to the events, parents can learn about their child's progress and learning goals, provide feedback, and support their child's learning.

- School Maker Faire/Science Fair: The school organizes an annual Science Fair and School Maker Faire to showcase student, parent and community makers’ creativity, and ingenuity. These events bring together experts, hobbyists, students and interested learners to share and acquire new skills, engage in hands-on activities, and to celebrate imagination, inspiration, and innovation. Parents are encouraged to participate in displays of their own, as event organizers, recruiters, logistical volunteers, and judges for Science Fair.

B (4) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

Project STEAM emPowered provides students at Tully with a well-rounded education that focuses on both core academics and on (STEAM) education. Tully will strengthen the partnerships that they already have in place that are dedicated to advancing STEAM education for all students. These partnerships permit Tully to bring in experts from various fields and cultures to provide students with hands-on experiences, mentors, and field trips that reinforce classroom learning. Looking to the future, Tully plans to expand its partnerships with more community-based organizations, educational institutions, and businesses as STEAM partners to continue to provide its students with innovative and engaging educational opportunities.

Table B 14:

Partnership	Description	Engagement Frequency
Project Lead the Way	Provides curriculum, materials and tools, professional development for STEM Modules	Daily use of curriculum and materials, professional development quarterly

National Inventors Hall of Fame	Professional development for elective STEM modules and afterschool staff	After-school, 1x week electives, professional development one quarter
PBLWorks	Professional development in Project-based learning	Each semester starting year 2
Watershed Management Group	Planning (with student input) and installation of water harvesting system. Lessons associated with water use and conservation	Monthly
University of Arizona Garden Workshop	Garden support, volunteers, materials, lessons with students	Daily
Pima County: <ul style="list-style-type: none"> • Master Gardeners • Department of Environmental Quality 	Volunteers, mentors, guest speakers, tools and materials. Lessons with students and teachers	Monthly
Altrusa Literacy, Leadership Development Volunteers	Purchase books, read w/students, volunteer in garden	Weekly

Southern Arizona Regional Science and Engineering Fair	Science and Engineering Fair support, professional development	Quarterly
Saguaro National Monument	Expansion of learning opportunities about the natural world through hikes, camp outs, lectures	Quarterly
Davis Monthan Air Force Base (Wright Flight)	Elective course that teaches students about aviation history, engineering, and goal setting	Once per week

B (5) The potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding.

The TUSD recognizes the merit and mission of magnet school choice for students and their families. The district is committed to supporting high-interest, integrated magnet school programs across its twelve magnet school sites. The MSAP grant is essential to moving toward realizing this commitment. Much of the costs involved in implementing **Project STEAM emPowered** are associated with funding the training, curriculum, resources, equipment, and enhancing the school site facilities. Grant funds are also earmarked for the vital training of support staff, which is critical to student recruitment and retention. Once MSAP funding is exhausted, the district, through its Equity, Diversity, and Inclusiveness (EDI) Department, its Magnet Department, and systems put in place at Tully will ensure program sustainability.

The TUSD has shown a good faith effort in supporting STEAM education. The district has installed Smart boards in all classrooms and allocated one-to-one laptops and tablets for all students at Tully. TUSD also ensures that each magnet school has a specialized budget beyond their regular allocation to sustain magnet programming with the full integration of school theme, targeted recruitment, and academic excellence in mind. The District's Magnet Department has developed K-12 magnet theme pathways for families to choose from that benefit well over 7,000 TUSD students. Many of the District's magnet schools are award winners. Of the twelve magnet schools in TUSD, four are certified with Magnet Schools of America (MSA). Two have received Merit Awards of Excellence with MSA, while another received a Merit Award of Distinction. Two have been identified as demonstration schools; three more are earning their MSA certification. The MSAP grant will ensure the capacity building needed to initiate the STEAM program change at Tully, as well as complete TUSD's K-12 STEAM theme pathway, which the district will sustain.

TUSD has a proven record of accomplishment in supporting magnet programming with strong community partnerships and impactful stakeholder groups. The district, through its Magnet Department, funds and organizes an annual TUSD Magnet Schools Symposium event, supports each magnet school principal and school site magnet coordinator to attend Magnet Schools of America's (MSA) annual National Conference on Magnet Schools, and sends Magnet Department leaders to MSA's annual Magnet Schools Policy Training Conference. The TUSD Magnet Schools Symposium invites for-profit and non-profit business leaders from the local community to a day of conversation, collaboration, and interactive magnet school site tours with the aim of building upon and celebrating existing community partnerships and creating new community connections. MSA's National Conference provides integral leadership development for high-quality, innovative instructional programs that promote choice, diversity, equity, and academic excellence for all

students. Participants are also exposed to an extensive array of professional development opportunities that promote equity and diversity and tour a variety of magnet-theme schools of all grade levels within the host city. MSA's Policy Training Conference allows TUSD's district level magnet leaders to connect and advocate at an elevated level. Participants have opportunities to network with nationwide magnet school leaders as well as their own Congressional representatives, advocate for federal funding for their magnet schools, and empower their magnet schools with year-round advocacy. All of which will assist in supporting **Project STEAM emPowered** after the life of the grant.

As outlined in section B2, and detailed in tables B6-B11 above, the professional development funded by the MSAP grant will protract **Project STEAM emPowered** well after the grant runs its course. An intentional plan for professional learning, steeped in adult learning theory, accompanied by job embedded coaching for teachers and support staff in district funded positions builds sustainability and is designed to support Tully in a continuous school improvement cycle. High quality professional learning that leads to increased teacher efficacy has a positive effect on student achievement. These are strong indicators of school capacity building ([Goddard, R., Hoy, W. K., & Hoy, A. W., 2000](#)) that continue when the grant ends.

Tully Magnet Elementary's significant schoolwide theme revision under **Project STEAM emPowered** will continue to be supported by other district funded positions and district level leaders. TUSD funds a magnet coordinator position at each of its twelve magnet schools, including Tully. The duties of a site magnet coordinator, detailed further in appendix B, are to conduct professional development related to both content and pedagogy of magnet theme, collect data, and work with appropriate personnel to provide the site with relevant and up-to-date information regarding magnet school information. TUSD's Magnet Department funds four full-time positions;

a Senior Director of Equity, Diversity, and Inclusiveness, a Magnet Program Manager, a Magnet Professional Development Academic Trainer, and a Magnet administrative assistant (*please refer to job descriptions in appendix #B*). This department is tasked with supporting the District's magnet schools by providing guidance around theme fidelity, magnet curricula, curriculum integration, program evaluation, marketing and recruitment, community involvement, and developing community and business partnerships. The district level magnet team is responsible for developing and monitoring magnet policies and procedures, conducting all necessary professional development, and acting as liaison to the greater TUSD community. These District supported and financed positions will provide ongoing assistance to **Project STEAM emPowered** at Tully both during and well after the end of federal MSAP funding.

Other district level systems that TUSD has in place to sustain the life of the MSAP grant and **Project STEAM emPowered** are quarterly progress monitoring of all magnet school sites, strategic magnet enrollment supports, and critical principal training for all magnet leaders. As referred to in section B2 and detailed in table B6, the District is committed to providing its magnet schools and their leaders with training in the Effective Schools Framework (ESF), an equity-based framework through which to manage and lead their individual school sites.

Tully Magnet Elementary's status as a 21st Century Community Learning Center School (21CCLC) lends itself to the potential for the incorporation of project purposes, activities, and benefits into the ongoing program of the school site at the end of federal funding from the MSAP grant. Tully's 21CCLC grant currently aids their afterschool program. It is expected that Tully will renew the 21CCLC grant at the end of the cycle in the school year 2026-2027. When that occurs, 21CCLC will continue to support the incorporation of STEAM after school programming utilizing

National Inventors Hall of Fame units and resources (as referred to in section B2 and detailed in table M) throughout the five-year cycle of the 21CCLC grant (From SY 2026/27-.SY 2030/31).

Table B 15 below identifies the sustainable benefits funded by the TUSD that lends itself to the potential for the incorporation of **Project STEAM emPowered** into the ongoing program of the school site at the end of federal funding from the MSAP grant.

Table B 15:

Name of Sustainable Benefit	Central District Funded	EDI Department Funded	Magnet Department Funded	21 CCLC
Smartboards	X			
1:1 Laptop/Tablets	X			
Specialized Magnet Budget	X			
Est K12 Pathway School Choice	X			
Magnet Schools Symposium			X	
Magnet School Site Coordinator			X	
Sr. Director, EDI		X		
Magnet Schools Program Manager			X	
Magnet Schools PDAT			X	
MSA Conferences			X	
Qtr Progress Monitoring			X	
Enrollment Ambassadors		X		
ESF/5E Training		X		
After School Program				X

C. QUALITY OF MANAGEMENT PLAN

C (1) Secretary considers adequacy of plan to achieve objectives of the proposed project on time, within budget, including defined responsibilities, timelines and milestones

TUSD will maximize its use of resources and personnel to achieve the objectives, deliver on the performance measures, and sustain the overarching goals of **Project STEAM emPowered**. TUSD has highly qualified, diverse, and experienced project personnel, with clearly defined responsibilities for the effective implementation of the proposed significant thematic revision for Tully Magnet Elementary and K12 thematic pathway repair. The responsibility for developing and maintaining the management of **Project STEAM emPowered** at Tully will involve a collective of district level, school site level, and community stakeholder collaborators to implement the project objectives. This process assures a variety of perspectives and support from all levels of diverse district staff, school site personnel, parents and students, and community partners.

The **Project STEAM emPowered** management team will include key personnel with significant roles and responsibilities to ensure proper and efficient administration of the MSAP resources. The management structure, the description of responsibilities, and major tasks are delineated in diagram C1 and tables C2-C3 below. As the resume of each team member indicates (located in appendix B), each team member is highly qualified to implement the proposed project.

KEY DISTRICT LEVEL PERSONNEL

Kamren Taravati, Senior Director of EDI, 1.0 (District Funded)

This position will have a supervisory and leadership role in Project STEAM emPowered but will not be funded by MSAP funds. Under the direction of the Assistant Superintendent of EDI, the Senior Director of Equity, Diversity, and Inclusiveness is responsible for the following:

- Leading, overseeing, and managing all aspects of the Magnet Department
- Evaluating staff in the Magnet Department
- Creating, evaluating, and monitoring the implementation of the Magnet Department's strategic plan
- Co-creating the professional development plan for Magnet School leaders and Magnet School Coordinators
- Providing leadership coaching to Magnet site Instructional Leadership Teams
- Managing the creation of the district Effective Schools Framework (ESF), and managing the creation of the 5E + R² Instructional Model
- Monitoring budgetary purchases and expenditures
- Other managerial and leadership duties to successfully meet the needs of Magnet schools and corresponding initiatives

The Senior Director of EDI will mentor, coach, and evaluate the MSAP Project Coordinator and will collaborate to co-create systems that ensure the success of **Project STEAM emPowered**.

Erin Collins, Magnet Program Manager, 1.0 (District Funded)

This is not a grant funded position, but an existing position within TUSD. Under the direction of the Senior Director of EDI (above) is responsible for working with site and central staff on magnet curricula, curriculum integration, district-wide program continuity, program evaluation, marketing and recruitment, family, and community involvement, and developing community and business partnerships. Additionally, the Magnet Program Manager is responsible for developing and monitoring magnet policies and procedures, conducting all necessary professional development, grant writing, and acts as a liaison to the TUSD community. The Magnet Program Manager will:

- Collaborate with central and site staff to develop, establish, and evaluate magnet school policy and procedures; ensure that state and federal requirements are followed.
- Coordinate central and site efforts to strengthen magnet programs; includes ensuring the continuity of specific magnet themes K-12.
- Develop and monitor the quarterly evaluation plan of existing magnet school programs.
- Identify, investigate, and pursue all applicable federal, state, local and business assistance grants and/or relationship opportunities, including the Magnet Schools Assistance Program Grant.
- Provide in-services and leadership to staff on district integration needs and magnet school policies and procedures.
- Take leadership in directing, coordinating, planning, and implementing professional development related to magnet themes and shares research related to the themes and student learning.

- Manage Magnet PDATs (Professional Development Academic Trainer) and Magnet coordinators in the development of standards-aligned magnet curriculum at individual sites, direct development of new instructional strategies, direct the implementation and evaluation of new alternative programs including technology integration, and direct development of unique and distinctive curricular course offerings.
- Manage the preparation of media and promotional items to publicize magnet school programs.
- Communicate, market, and promote magnet schools to the public.
- Coordinate with magnet school sites in the analysis, evaluation, and improvement of student achievement.
- Direct the evaluation of magnet program activities, and progress and ensures that state and federal requirements are followed.

The Magnet Program Manager will also work to co-create systems with the MSAP Project Coordinator and necessary stakeholders that ensure the successful implementation of **Project STEAM emPowered**, specifically from a curriculum, instruction, and professional development perspective.

Twila Busby, Magnet Professional Development Academic Trainer, 1.0 (District Funded)

This is not a grant funded position, but an existing position within TUSD. Under the direction of the Magnet Program Manager (above) the Magnet PDAT serves as a member of the Magnet Department team, in multiple capacities to support Magnet initiatives and Magnet theme integration across TUSD’s twelve magnet school sites. The Magnet PDAT will:

- Design and deliver professional development for Magnet Coordinators on topics including thematic integration, targeted recruitment, marketing, and the MSA Magnet Pillars.
- Design and deliver professional development for Magnet School teachers on topics including thematic integration, closing disparity gaps, and academic innovation
- Collaborate with Magnet School site ILTs around job embedded coaching, 1:1 teacher coaching and feedback.
- Support with Magnet school sites in the analysis, evaluation, and improvement of student achievement.
- Support site Magnet Coordinators with quarterly and annual Magnet reporting requirements.
- Attend recruitment and enrollment fairs.

The Magnet PDAT will also work to implement systems with the Magnet Program Manager and MSAP Project Coordinator that ensure the successful implementation of **Project STEAM emPowered**, specifically from a curriculum, instruction, and professional development perspective.

KEY DISTRICT LEVEL DEPARTMENTS

Curriculum and Instruction Department

The District's Curriculum and Instruction Department (C & I) will provide necessary core curriculum, instructional resources, and professional learning to aid in the implementation of the grant. C & I oversee two departments that will support **Project STEAM emPowered**, the

Assessment and Evaluation Department as well as the Language Acquisition Department (they are both detailed below).

- **Assessment and Evaluation** implements procedures for quality assessment, data collection, and data analysis to ensure the accuracy and validity of student achievement that drive the decision-making process. This office will be responsible for providing select, identified student achievement and demographic data pertinent to the project and function as the project's internal evaluator.
- **Language Acquisition** serves eligible English Language Learners (ELLs) in grades K-12. The objective of the program is to support the development of English language proficiency in the areas of listening, speaking, reading, and writing. This department is also committed to helping students and parents learn English by providing translation and interpretation services in all major languages spoken by families in TUSD.

School Community Services Department

The role of School Community Services is to increase parent awareness of magnet schools, expedite student placement in appropriate K-12 magnet programs, and assist magnet school sites with enrollment as needed. School Community Services will:

- Execute the magnet school lottery.
- Capture magnet application data.
- Communicate application and lottery data to school site magnet coordinator.

Financial Services Department

The Financial Services Department provides effective, efficient, and timely management of district financial transactions including planning, estimating, and controlling revenues and

expenditures; receiving and investing revenues; disbursing payroll and vendor payments; all procurement activity; and accounting for all transactions in a manner meeting Arizona Department of Education and TUSD Governing Board guidelines.

GRANT FUNDED PERSONNEL

MSAP Project Coordinator, 1.0 FTE (Grant Funded)

The MSAP Project Coordinator will oversee **Project STEAM emPowered** to ensure timely and effective implementation within the projected scope of the budget. The MSAP Project Coordinator will monitor and coordinate the day-to-day curricular and professional learning operations of the project, oversee the project budget, and provide the guidance needed to effectively guide the implementation of **Project STEAM emPowered** as proposed.

In this project the MSAP Project Coordinator will monitor all aspects of the **Project STEAM emPowered** budget to include assisting project staff with processing purchase orders; and compiling all budget-related information, in collaboration with staff from the District's Financial Services Department, for the required annual and final performance reports. Therefore, the MSAP Project Coordinator will be responsible for monitoring the schools' expenditures as well, ensuring the funds are expended as proposed and on time.

The MSAP Project Coordinator will communicate and coordinate with:

- District-level Personnel to oversee support services and identify and solve any District level challenges to project implementation and/or progress.
- Project Management Team Personnel to monitor activities, including purchases made with MSAP funds; magnet theme implementation and curriculum development; professional development requests; and performance report preparation to ensure that

performance measures are accomplished, and the project budget is being utilized as approved in a timely manner.

- School Site Personnel to support and review progress toward meeting project-level objectives; evaluation feedback; and school specific needs or changes to the project.

The MSAP Project Coordinator will:

- Work closely with the school site instructional leadership team (ILT) to ensure timely implementation of theme, curriculum development, and professional development.
- Assist with design and monitoring of magnet curricular framework/course of study.
- Monitor the school site's progress towards meeting project goals and objectives.
- Work with the site ILT to craft a sustainability plan, including searching for future grant opportunities.
- Collaborate site ILT to design and implement semesterly, schoolwide student learning showcases.
- Collect, organize, and provide data to the external evaluator.
- Complete and submit all Ad-Hoc and Annual Performance Reports in collaboration with school-site personnel and the External Evaluator.
- Cultivate further partnerships between the community and Tully K5 Magnet.
- Review evaluation feedback and work directly with site ILT to impact changes.

MSAP Data Analyst, .5 FTE (Grant Funded)

The MSAP Data Analyst works with Tully K5 Magnet principal, the MSAP Project Coordinator, the site instructional leadership team, and teachers to access, analyze, and collect relevant student achievement data to improve instruction across the curriculum. The MSAP Data

Analyst is committed to improving staff assessment skills, data analysis and data collection skills to ensure that students meet state and district academic standards. The MSAP Data Analyst will:

- Analyze and prepare reports from local, state, and national assessment data as it relates to individual student performance and school improvement.
- Develop and maintain historical student and school data files to monitor and track performance.
- Interpret and review assessment data with administrators and teachers; support planning of action steps as outlined in the grant.
- Compile data from multiple assessments to develop student, subject, grade-level, or school achievement profiles.
- Work with staff schools, as needed, in one-on-one and group settings to conduct training in the use of data to improve student results as outlined in the grant.
- Ensures the validity of all data presented to staff.
- Attends, and leads as appropriate, training sessions and site meetings related to assigned responsibilities.

MSAP Internal Evaluator, .5 FTE (Grant Funded)

Housed in TUSD's Assessment and Evaluation Department, the MSAP Internal Evaluator will conduct formative and summative evaluations to assess whether the GPRA measures and project outcomes are attained and assist with preparing the annual and final performance reports required by the United States Department of Education (ED). The Internal Evaluator will:

- Design all data-collection instruments, rubrics, and surveys.

- Collaborate with the Magnet Department to design Professional Learning Community protocols.
- Conduct annual school-site visits and prepare visit reports.
- Conduct school-site interviews, focus groups, observations, and data collection.
- Analyze all District/school quantitative/qualitative data to address performance measures found in the evaluation plan.
- Assist with preparing the annual and final performance reports required by the United States Department of Education (ED).

Lead STEAM Teacher, 1.0 FTE (Grant Funded)

The Lead STEAM teacher will collaborate with the MSAP Project Coordinator, the Tully K5 principal, the site instructional leadership team, the Lead Art Teacher (detailed in the following section) and the teachers on integrated thematic instruction related to STEAM as outlined in the grant. The Lead STEAM teacher will assist the site magnet coordinator to foster and develop project partners and in developing dynamic magnet curricula, designing authentic, experiential, and interdisciplinary projects related to the STEAM theme. The Lead STEAM Teacher will:

- Model, deliver, and craft rich student-centered learning experiences around Science, Technology, Engineering, Arts, and Math.
- Create and implement strategies for weaving STEAM experiences into multi-disciplinary curricula from grades K through 5.
- Work in partnership with teachers and support staff, modeling consistent effective teaching with technology, engagement, lesson plan design, use of technology, STEAM, and online tools.

- Assist with on-going professional development and job-embedded coaching around the connection between science, technology, engineering, art, and math.
- Identify and apply educational and technology-related research, the psychology of learning, and instructional design principles in guiding use of technology in education.
- Identify resources, plan, and design staff development activities to support professional growth in learning technologies.
- Participate in professional development experiences that involve observation, evaluation, and application of the use of technology to support instruction.
- Utilize data driven teaching practices to ensure students success and achievement.
- Keep current on research surrounding effective learning for all types of learners including English Learners and historically underserved populations.

Lead Art Teacher, 1.0 FTE (Grant Funded)

The Lead Art Teacher will provide for arts integration instruction of students by working with the MSAP Project Coordinator, the school principal, the site instructional leadership team, the Lead STEAM Teacher (detailed in the previous section) and the teachers to develop, select, and modify instructional plans and material; and presenting them using arts integrated instructional techniques which meet the needs of all students. The Lead Art Teacher will provide an atmosphere and environment conducive to the intellectual, physical, social, and emotional development of students. The Lead Art Teacher will co-collaborate and consult on cross-curricular STEAM projects with a particular focus on polished, professional, interactive final student presentations of learning. The Lead Art Teacher will:

- Develop and implement plans to improve student performance through arts integration, especially in the areas of STEAM.
- Work with teachers and support staff to model how to plan and implement high-level arts integrated lessons, assessments, and curriculum mapping across the disciplines.
- Conduct professional development in Integrated Arts Teaching and Learning.
- Provide direct, instructional support, modeling and guidance to teachers integrating arts within the classroom and content areas.
- Conduct research and utilize data driven teaching practices to ensure students success and achievement.
- Keep current on research surrounding effective learning for all types of learners including English Learners and historically underserved populations.

KEY SCHOOL SITE PERSONNEL (Not Grant Funded)

The following school site personnel are integral to implementing the proposed project and to ensuring the desired outcomes for the project are attained. All positions detailed below are existing positions that are funded by TUSD. The principal and school leadership team will establish schoolwide expectations among staff to embed STEAM concepts into student learning and to monitor student academic progress. This strategic system is managed and promoted by the Site Principal. Critical to the success of this approach is the interwoven accountability system that this MSAP grant will support where the Magnet Office, the Project Coordinator, the Principal, the leadership team, and the faculty are in continual collaboration and communication.

Tully K5 School Site Principal, 1.0 FTE (District Funded)

The principal will have a significant role and responsibility towards ensuring proper and efficient administration of **Project STEAM emPowered**. The school site principal will:

- Work collaboratively with the MSAP Project Coordinator and Tully K5 Magnet coordinator to hire highly qualified school-based staff including the STEAM teacher, and the STEAM consultant.
- Collaborate with and manage the site Instructional Leadership Team (ILT) encompassing the magnet coordinator, school counselor, content interventionists and Multi-Tiered Systems of Support facilitator, and other assigned staff to assist with the implementation and needs of **Project STEAM emPowered**.
- Monitor grant objectives to ensure that milestones are met within the required timelines and that the intended impacts on students are achieved.
- Manage Project Lead the Way Lead STEAM teacher activities to support goal attainment as per the management plan objectives.
- Design theme-specific magnet curriculum and on-going professional development strands in conjunction with the MSAP Project Coordinator and site ILT.
- Manage the magnet curriculum and ensure it is supported via responsible fiscal decisions and actions.
- Ensure site ILT and magnet coordinator attend the appropriate trainings by District staff regarding diversity, equity and inclusion, implementation of magnet processes and protocols; attend professional development concentrated on infusing theme-based practices across curriculum; collaborate with District and industry partners in implementing magnet program with fidelity.
- Execute the Desegregation plan and project design including, but not limited to, the design, implementation, and reporting of the efficacy of **Project STEAM emPowered**.

- Collaborate with site magnet coordinator to Cultivate business and other community partnerships to support, enhance, and sustain **Project STEAM emPowered**.
- Collaborate with site magnet coordinator and community liaison to recruit parents to participate in school site council through community school events, school messenger messages, formal and informal meetings.
- Disaggregates data to measure efficacy of **Project STEAM emPowered** and to ensure progress toward programmatic goals.

Tully K5 Site Magnet Coordinator, 1.0 FTE (District Funded)

The Tully K5 Site Magnet coordinator position coordinates the activities and services to facilitate the Magnet Program at Tully K5. The Tully K5 Magnet coordinator will conduct professional development related to both content and pedagogy of magnet theme, collect data, and work with appropriate personnel to provide Tully K5 Magnet with relevant and up-to-date information regarding Magnet School Information. The Tully K5 Magnet coordinator will:

- Coordinate with appropriate personnel to develop, manage, and monitor the magnet curriculum at Tully.
- Provide instructional feedback to teachers and administration regarding magnet themes.
- Conduct outreach, recruitment, and marketing to ensure students, families, and the public are aware of Magnet School programs.
- Desegregate data including enrollment, grade, AASA (Arizona Academic Standards Assessment or other state mandated assessments), SchoolCity, DIBLES, and unit assessment to appropriate personnel.

- Conduct professional development as related to both content and pedagogy of magnet theme.
- Create collaborative relationships with outside resources including local and national businesses, charitable and professional resources, and community resources.
- Oversee a network of Tully parent activities and events including communication, scheduling, outreach, calendaring, and reminders to increase parent engagement.
- Attend all district training required for teachers and relevant to adult learning theory.
- Coordinate with Tully K5 principal and teachers to access, analyze, and collect relevant student achievement data to improve instruction across the curriculum.
- Using current research informs the district of the best methods and policies that will ensure an equitable educational experience for Magnet School students.
- Serve as a resource to TUSD personnel regarding magnet school regulations, guidelines, governing board policies, and specialist rulings.
- Research magnet school curriculum practices and applies knowledge of training best practices and instructional design principles.
- Coordinate federal and district report preparation and data collection.
- Serve on the Tully Instructional Leadership Team (ILT) to assist with the implementation and needs of **Project STEAM emPowered**.

Multi-Tiered Systems of Support (MTSS) Facilitator, 1.0 FTE (District Funded)

The MTSS Facilitator will promote and facilitate the MTSS process for supporting all students in academic, social, emotional, and behavioral needs. Evaluate student data to improve identified areas of need, make data-informed and evidence-based suggestions and solutions, and provide Tier 1 professional development. Assist with Professional Learning Communities (PLCs)

to identify data, solutions, and resources. Facilitate Tier 2 and 3 support and act as a case manager. Work with all stakeholders to further the equity work in Positive Behavior Intervention Strategies (PBIS), restorative practices and the fair treatment of students of color in the school. The MTSS Facilitator will:

- Coordinate and facilitate the implementation of academic and social-emotional interventions for students in need of support towards meeting course standards.
- Use data to identify students for Tier 2 or 3 intervention support.
- Deliver research-based strategies and techniques to support students individually or in small groups.
- Assist teachers and instructional staff in addressing student learning using the MTSS framework; provide guidance on strategies, tools, and techniques to effectively instruct all students.
- Develop, document, and maintain ongoing intervention plans in the intervention management system.
- Maintain progress monitoring data on how students are responding to intervention plans to adjust as needed.
- Communicate with families regarding student progress and provide strategies families can use at home.
- Serve on the Tully Instructional Leadership Team (ILT) to assist with the implementation and needs of **Project STEAM emPowered.**

School Counselor, 1.0 FTE (District Funded)

The Tully K5 Magnet school counselor's role is to provide all students with the necessary skills to be successful academically, socially, and emotionally. The school counselor will:

- Teach initiative-taking, prevention based, and data driven guidance curriculum/standards in classrooms or with planned small groups.
- Work with small groups or individual students concerning educational plans, appraisals, and advisement.
- Respond to crisis situations, individual problems, and groups of students with immediate needs.
- Program plan, deliver professional development, collaborate with community relations, consult with teachers, and others concerning the program, data analysis, program evaluation and student results.
- Serve on the Tully Instructional Leadership Team (ILT) to assist with the implementation and needs of **Project STEAM emPowered**.

Reading and Math Interventionists 2.0 FTE (District Funded)

The role of the Math and Reading Intervention Specialist is to provide individual or small group instruction to students who are struggling academically in math and/or reading either online or on site. The Interventionist position is responsible for supporting student achievement in the areas of Mathematics and English Language Arts with special attention to Tier II and III instruction. This position is also responsible for monitoring, reporting, and communicating student progress and performance. The Interventionists will:

- Provide high quality instruction to individual students and small groups.

- Use data to provide instruction to students and to bring their skills to grade-level.
- Collaborate with teachers, administration, and families to help identify best practices for individual and small groups of students.
- Use identified research-based interventions focused specifically on individual student needs.
- Maintain data-based documentation of continuous monitoring of student performance and progress.
- Provide data to school teams and participate in decisions about student progress.
- Communicate with teachers, administration, and families regarding student progress.
- Assist with identifying students for placement in intervention groups.
- Participate in meetings with teachers, administration, and families to discuss student placement and progress.
- Provide diagnostic assessments for students as needed.
- Provide input for program development.
- Support implementation of assessment tools and data management systems.
- Serve on the site Instructional Leadership Team (ILT) to assist with the implementation and needs of **Project STEAM emPowered**.

District-Level Staffing

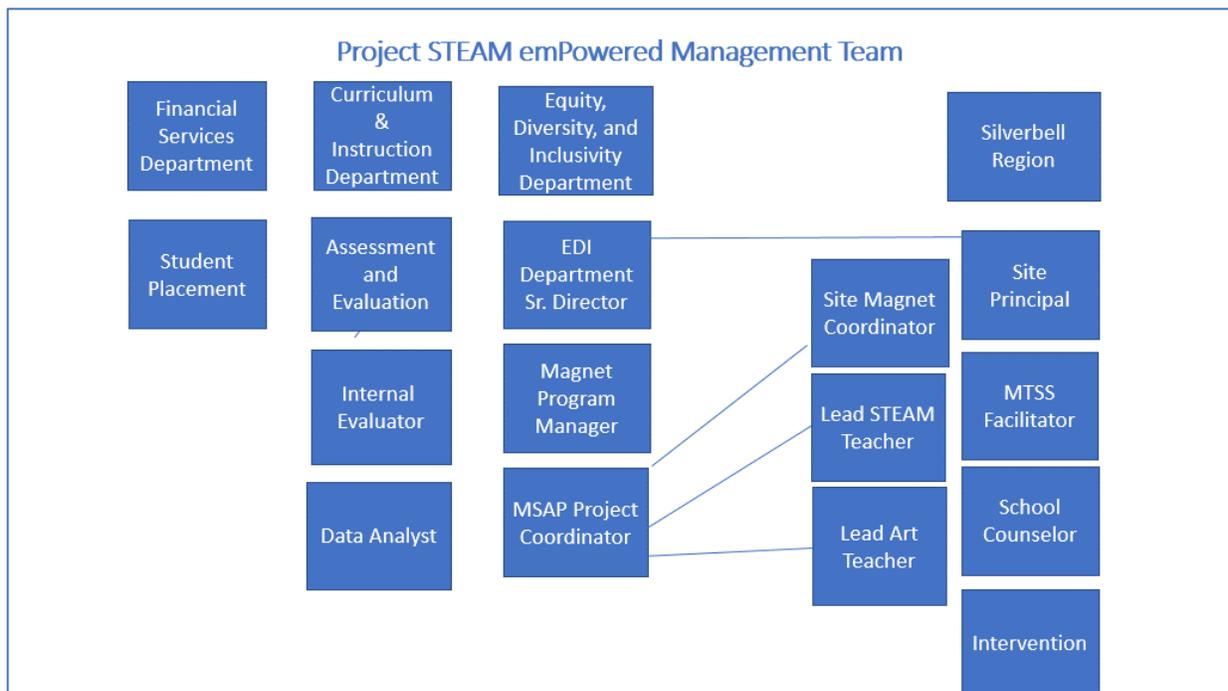
There are several district level personnel that will work to ensure the successful implementation of **Project STEAM emPowered**. Those employees are as follows:

- Kamren Taravati: Senior Director of Equity, Diversity, and Inclusivity (Project Director)
- Dr. Kinasha Brown: Assistant Superintendent of Equity, Diversity, and Inclusivity
- Erin Collins: Magnet Program Manager

- Twila Busby: Professional Academic Trainer
- MSAP Project Coordinator: To be determined
- Data Analyst: To be determined
- Evaluator: To be determined

Please reference the “Quality of Personnel” section for detailed explanations of district-level staffing, their roles and responsibilities, and their qualifications.

Diagram C 1: District Magnet Organizational Structure Chart



C (2) Extent to which the costs are reasonable in relation to the number of persons to be served and to the anticipated results and benefits

As mentioned in the ‘Needs’ section of the competitive priorities, TUSD has significant financial gaps due to inadequate state funding for schools. Additionally, Tully K5 Magnet has a “D” label as measured by the Arizona A-F accountability system. The intersection of both variables indicates urgency and need. That said, the applicant has worked to ensure that the costs

are reasonable to those needs. Note the budget below in Table C1 is in alignment to the strategies, proposals and initiatives outlined in the Project Design in the application.

Table C1:

Project STEAM emPowered Budget					
Categories	Year 1	Year 2	Year 3	Year 4	Year 5
Personnel	236,000	240,560	245,210	249,952	254,794
Fringe Benefits	75,520	76,792	78,467	79,984	81,534
Travel	22,000	22,000	22,000	22,000	22,000
Equipment	218,300			80,000	
Supplies	33,576	27,500	27,500	27,500	27,500
Contractual	436,600	436,600	436,600	436,600	436,600
Construction	290,000				
Total Direct Cost	1,311,996	803,452	809,777	896,036	822,428
Indirect Cost (3.52%)	46,182	28,282	28,504	31,540	28,949
Training Stipend					
Total	1,358,178	831,734	838,281	927,576	851,377

D. QUALITY OF PERSONNEL

D(1)(a): The project director is qualified to manage the project

Grant Funded

The MSAP Project Coordinator is a grant-funded position which currently does not exist as a district level role in the Magnet Department. It is also important to note the applicant is hiring a coordinator for this role, as there is a current district level director, which will not be funded by

MSAP monies. Therefore, the district Magnet Department will hire for this unfilled position. The responsibilities for the MSAP Project Coordinator include:

- Work closely with the school site instructional leadership team (ILT) to ensure timely implementation of theme, curriculum development, and professional development.
- Assist with design and monitoring of magnet curricular framework/course of study.
- Monitor the school site's progress towards meeting project goals and objectives.
- Work with the site ILT to craft a sustainability plan, including searching for future grant opportunities.
- Collaborate site ILT to design and implement semesterly, schoolwide student learning showcases.
- Collect, organize, and provide data to the external evaluator.
- Complete and submit all Ad-Hoc and Annual Performance Reports in collaboration with school-site personnel and the External Evaluator.
- Cultivate further partnerships between the community and the school.
- Review evaluation feedback and work directly with site ILT to impact changes.

Necessary experience for this position includes:

- Valid Teacher and/or Arizona Administrative Certificate
- IVP/Fingerprint Clearance Card
- Experience in project management, project design, and/or instructional coaching
- Knowledge of grants, budgets, compliance requirements, and
- Knowledge of data driven systems
- Effective collaborator, communicator, and organizer

- Experience and knowledge of STEAM based instructional practices

D(1)(b): Other key personnel are qualified to manage the project

District-Funded Staff

Sr. Director EDI, Kamren Cory Taravati

Kamren Taravati is the current Senior Director of Equity, Diversity, and Inclusivity. Mr. Taravati's role is to lead, manage, and monitor district level initiatives related to the twelve Magnet Schools that exist in the TUSD. Mr. Taravati leads a current team of three district level personnel, and serves 12 Magnet School Principals, eight assistant principals, as well as Site Magnet Coordinators, Site Support Staff, and teachers. In this role, Mr. Taravati has accomplished:

- The complete revision of the Magnet Site Plan template.
- The design of a department strategic plan
- Critical work with a district level team to execute two hundred site visits spread among 12 campuses.
- The support of a quarterly progress monitoring structure for each Magnet School in TUSD
- The chairing and leadership of the Magnet Oversight Committee
- Ongoing professional development provided to Principals, Magnet Coordinators and Site Level staff related to a myriad of topics that include leadership systems, effective instructional coaching conversations, effective writing methods, and budget analysis

Mr. Taravati was a site level administrator for 11 years, an instructional coach, a consultant, and a teacher. Mr. Taravati partnered with West Ed (for 5 years) related to the design of site-specific continuous improvement systems in his role as site principal. This work led to the increase of the state letter grade at three different schools (Middle School, K-8, and High School.) Mr. Taravati will support the leadership, management, and implementation of **Project STEAM**

emPowered. Additionally, Mr. Taravati will coach, mentor, guide, and evaluate the Project Coordinator, whose core responsibility will be to oversee the effective implementation of **Project STEAM emPowered.**

Magnet Program Manager, Erin Collins

Erin Collins, the Magnet Program Manager, with 23 years of experience in public education (*please see Magnet Program Manager description above in section C and resume in appendix B*), has served TUSD for 15 years. She holds a bachelor's degree in politics with an emphasis in Constitutional Law, a K-8 Teaching Certificate, and a Master of Educational Leadership. In her role Ms. Collins is responsible for working with site and central staff on magnet curricula, curriculum integration, district-wide program continuity, program evaluation, marketing and recruitment, family, and community involvement, and developing community and business partnerships. Additionally, she is responsible for developing and monitoring magnet policies and procedures and conducting all necessary professional development. As previously stated, Ms. Collins will also work to co-create systems with the Project Coordinator and necessary stakeholders that will ensure the successful implementation of **Project STEAM emPowered**, specifically from a curriculum, instruction, and professional development perspective.

Magnet Professional Development Academic Trainer (PDAT), Twila Busby

Twila Busby, the Magnet PDAT has 20 years of service in public education (*please see Magnet PDAT description above in section C and resume in appendix B*). instructing youth and adults, securing resources, and implementing effective programs for students both in the United States and abroad. Ms. Busby holds a Master's in Educational Psychology, a Bachelor's in Health Sciences, as well as a K-12 Arizona Teaching Certificate. In her role as Magnet PDAT, Ms.

Busby serves as a member of the Magnet Department team in multiple capacities to support Magnet initiatives and Magnet theme integration across TUSD's twelve magnet school sites. As stated above in section C, Ms. Busby will work to implement systems with the Magnet Program Manager, Erin Collins, and the Project Coordinator that ensure the successful implementation of **Project STEAM emPowered**, specifically from a curriculum, instruction, and professional development perspective.

School Site Personnel

Principal, Sean Wilken

Sean Wilken has been the proud principal of Tully K5 Magnet School for the past four years (*please see school site principal description above in section C and resume in appendix B.*) Before joining the Tully Tiger Team, Mr. Wilken had seven years of experience as a school administrator and ten years of classroom teaching and instructional coaching experience. Mr. Wilken holds a master's degree in educational leadership and, bachelor's degree in education. He sees his role as a school administrator through the 'servant leadership' lens; sharing power, developing teacher leadership capacity, and putting the needs of the Tully community first, and is beloved by the staff and students. (e.g., Several teachers from Mr. Wilken's former school site followed him to Tully when he earned the principalship there.)

In his role as school site principal, Mr. Wilken supervises and provides instructional support and feedback to the teaching staff through goal setting, coaching, and classroom observations; he and the Tully ILT are responsible for interviewing and hiring teachers and support staff, providing meaningful professional development for teachers and support staff, leading the site's Positive Behavior Intervention System (PBIS) team, and supporting Professional Learning Community (PLC) teams in the creation of a common formative

assessment cycle. As principal, Mr. Wilken is a member of Tully's School Site Council, works to maintain the school budget, secures funding for core content and Magnet theme resources and materials, and works with Tully families and community partners to support Tully students. As stated above in section C, Mr. Wilken will work to implement systems with the Project Coordinator and the Site Magnet coordinator to ensure the successful implementation of **Project STEAM emPowered**.

Magnet coordinator, Michelle McCollum

Michelle McCollum is the Magnet coordinator at Tully K5 Magnet School. She has thrived in this position for the last four years. Ms. McCollum has 35 years of experience in education, from the university level to the elementary school level. In her role as Magnet coordinator she provides, organizes, and archives all documentation of Magnet activities, coordinates federal, state, and district reports and data collection, conducts outreach, recruitment, and marketing to ensure students, families, and the public are aware of Tully's Magnet program, and creates collaborative relationships with outside resources including local and national businesses, charitable and professional resources, and community resources to support Tully's teachers and students.

Ms. McCollum is also an indispensable member of Tully's Instructional Leadership Team (ILT). As an ILT member she observes teachers weekly and provides instructional feedback and coaching regarding magnet theme integration. Ms. McCollum also conducts professional development for Tully's instructional staff as related to both content and pedagogy of magnet theme and coordinates with sites to develop and implement data collection models and tools as related to magnet theme to capture benchmark student achievement data. Another facet of her role on the ILT is to support Tully's Professional Learning Communities (PLCs). Ms.

McCollum assists PLC teams with data disaggregation in relation to student achievement data to improve instruction, she provides resources and supports to teachers with identifying and planning interventions for Tully students who are not making adequate academic progress. As stated above in section C, Ms. McCollum will work to implement systems with the Project Coordinator and the school site principal, Sean Wilken to ensure the successful implementation of **Project STEAM emPowered**.

MSAP-Funded Staff

Internal Project Evaluator, .5

The District will contract the services of an internal Project Evaluator to conduct the evaluation of this project. The Project Evaluator will collaborate with the Assessment and Evaluation Department to independently conduct all key aspects of the evaluation, including collection of key outcomes data, analysis, and reporting of the project findings. Given the scope of work required for **Project STEAM emPowered**, we have allocated the Project Evaluator as a .5 position. Data will be provided consistent with Department of Education guidelines, in a way that protects teacher and student privacy and identifies comparison students by only a unique number and no other personal information. The Project Evaluator will work with the MSAP Project Coordinator to document the program's resources, including equipment and human capital, to determine the costs. This information can inform future modifications to magnet design.

TUSD will seek to hire and retain a highly qualified Project Evaluator. Requirements for this position will include a bachelor's degree in data science, education, statistics, social work, or public policy, at least three years of experience with applied research or program evaluation, excellence written and oral communications skills, the ability to problem solve and work well

both collaboratively and independently, including receiving constructive feedback from colleagues. The Project Evaluator must also have strong organizational, management, and analysis skills, experience in the development and design of research and evaluation tools, surveys, and questions, data and program analysis experience, the ability to access and analyze a wide array of student-level, institutional, state, and national datasets. Furthermore, the Project Evaluator must possess the ability to complete diverse tasks ranging from long-term, multi-stage evaluator projects to fast-paced, ad-hoc evaluator data requests, and the ability to simplify complex information for diverse audiences with varying degrees of expertise. Once the MSAP grant is awarded, the district will follow the Board of Education's hiring policy to ensure equity in hiring.

Data Analyst, .5

The District will contract the services of a .5 Data Analyst to support **Project STEAM emPowered**. As detailed in Section C, the Data Analyst will work with the school site principal, the MSAP Project Coordinator, the site instructional leadership team, and teachers to access, analyze, and collect relevant student achievement data to improve instruction across the curriculum. Given the scope of work required for **Project STEAM emPowered**, we have allocated the Data Analyst as a .5 position. The Data Analyst is committed to improving staff assessment skills, data analysis and data collection skills to ensure that students meet state and district academic standards.

TUSD will seek to hire and retain a highly qualified Data Analyst. Minimum requirements for this position include an Arizona teaching certificate, an Arizona IVP fingerprint clearance card, three years of teaching experience, knowledge of classroom assessment models and rubric design, one year of experience providing instructional data analysis, an understanding

of school improvement, knowledge of research on best practices, specific to models to improve student achievement, experience working with diverse student populations, and experience with word processing, database, and spreadsheet programs. Once the MSAP grant is awarded, the district will follow the Board of Education's hiring policy to ensure equity in hiring.

Lead STEAM Teacher, 1.0 and Lead Art Teacher, 1.0

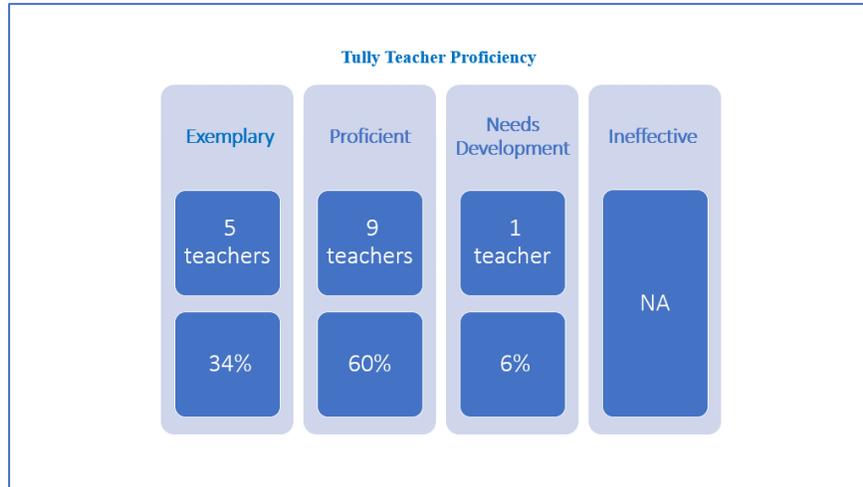
The Lead STEAM Teacher position and the Lead Art Teacher position are full-time, grant funded positions (*please see job description in Section C*). Both will have classroom experience in STEAM and Art integration areas at the K-5 level and will have demonstrated a high level of effectiveness in their most recent evaluation. Those selected for these positions will also have at least three years of experience in a teacher leadership role (e.g., coach, mentor, etc.) demonstrating and understanding of adult learning theory and an ability to successfully provide support to adults. Responsibilities include helping plan, develop, and monitor the theme-based program and the curriculum that supports STEAM theme integration. The Lead STEAM and Art Teachers will support the school site ILT with ensuring the Magnet program is aligned with the state approved requirements and curriculum as well as the goals of the MSAP grant and Magnet Schools of America's Standards of Excellence. Also, the Lead Teachers will help inform the school site ILT and teachers of the implications of curriculum adjustments. The Lead Teachers will work closely with the MSAP Project Coordinator and Magnet Department team to ensure the continuation STEAM theme integration after year 5 of the grant. The Lead STEAM and Art Teachers will coordinate community resources related to the magnet school program and assist with marketing the magnet program to reduce minority group isolation.

The District will seek qualified candidates that have a degree in a STEAM and Art field and experience with integrated lesson planning and design, adult learning theory, as well as the

ability to coordinate. The district will also seek candidates with experience in desegregation strategies and initiatives.

D(1)(c): Teachers are qualified to implement special curriculum of the magnet schools

Table D1: Tully Teacher Proficiency



D (2): Experience and training related to curriculum development and desegregation

The Senior Director of EDI (Kamren Taravati), the Magnet Program Manager (Erin Collins), and the District Professional Academic Trainer (Twila Busby) have extensive experience related to curriculum development. Kamren Taravati has written curriculum maps for grades six through twelve. Kamren Taravati has also edited and revised culturally responsive curriculum maps for grades six through twelve. Kamren Taravati’s curriculum maps reflected a sequence of Arizona College and Career Readiness standards with appropriate resources, tools, and assessments embedded in the maps; this was for Social Studies and English Language Arts. Erin Collins and Twila Busby have also written culturally responsive curriculum maps for the TUSD. Erin Collins wrote Social Studies specific curriculum maps reflective of Arizona College

and Career Readiness standards with a Project Based Learning emphasis for grades six through twelve. Twila Busby wrote curriculum maps, K-12, which embedded Arizona College and Career Readiness standards, Common Core Standards, and Next Generation Science Standards. Additionally, the Magnet Department team (Kamren Taravati, Erin Collins, and Twila Busby) have tailored the 5E + R² Instructional Model to meet the needs of the TUSD. To fully support the implementation of **Project STEAM emPowered**, the Tucson Unified School District Magnet Department will hire a MSAP Project Coordinator that is experienced in thematic curriculum design.

Kamren Taravati (Senior Director of EDI) chairs the Coordinated Student Assignment Committee in TUSD, whose focus is to create systems and policies that support integration across TUSD. Additionally, Kamren Taravati oversees 12 Magnet Schools in TUSD. Each Magnet School must write a Magnet Site Plan; within these plans, there are action steps tied to school level data tied to continued desegregation efforts. As Erin Collins and Twila Busby are also part of the Magnet Department, they are trained to support Magnet Plan writing, review, and implementation with appropriate accountability structures that includes a quarterly progress monitoring system.

Leadership and teachers at Tully K5 Magnet have varied experience in relation to curriculum map design, but they have extensive experience related to the writing, reviewing, and implementation of culturally responsive lesson plans, which by TUSD Governing Board policy must be reflective of Arizona College and Career Readiness standards with appropriate tools and resources embedded in the lesson plans. Tully K5 Leadership, teachers and staff are also required to take a course using the online, asynchronous, quiz related to district student enrollment, which supports district desegregation efforts.

Table D2: Timeline for Implementation of **Project STEAM emPowered**

Timeline for Implementation of Project STEAM emPowered	
Quarterly Milestones SY 2023-2024	Person(s) Responsible
Year 1 – Quarter 2	October 2023- December 2023
Post the following positions on the district online human resources/hiring tool (Applitrack): MSAP Project Coordinator, Data Analyst, and Evaluator	Magnet Department Project Director
Interview applicants for the following positions: MSAP Project Coordinator, Data Analyst, and Evaluator	Project Director MSAP Project Coordinator
Obtain multiple quotes for the outdoor learning spaces	Project Director MSAP Project Coordinator (when hired)
Post the following positions on the district online human resources/hiring tool (Applitrack): Lead Art Teacher, Lead STEM Teacher	Principal ILT Member MSAP Project Coordinator
Interview applicants for the following positions: Lead Art Teacher, Lead STEM Teacher	Principal ILT Members Project Director
Obtain quotes for laptop and desktop computers	MSAP Project Coordinator Magnet coordinator Office Manager
Obtain quotes for Laser Printers	MSAP Project Coordinator Magnet coordinator Office Manager
Post the following positions on the district online human resources/hiring tool (Applitrack): ELA Interventionist Teacher, Math Interventionist Teacher	Principal ILT Member MSAP Project Coordinator
Interview applicants for the following positions: ELA Interventionist Teacher, Math Interventionist Teacher	Principal ILT Members Project Director
Obtain quotes for 3D printer	MSAP Project Coordinator Magnet coordinator Office Manager
Obtain quotes for Maker Space supplies	MSAP Project Coordinator Magnet coordinator Office Manager
Evaluation Planning	Project Evaluator (when hired) Project Director MSAP Project Coordinator (when hired)
Finalize annual contract with Project Lead the Way	Principal Project Director MSAP Project Coordinator
Finalize annual contract with National Inventors Hall of Fame	Principal Project Director MSAP Project Coordinator

Finalize annual contract with School Mint	Principal Project Director MSAP Project Coordinator
Finalize annual contract with MSA Consultant	Principal Project Director MSAP Project Coordinator
Design and purchase updated recruitment materials that reflect Tully's theme change	Principal TUSD Communications Dept Magnet coordinator MSAP Project Coordinator
Update Tully's TUSD website and Facebook page to reflect theme change	Magnet coordinator
Attend on-going student recruitment/family outreach events	Principal Magnet coordinator Magnet Department
Quarterly Magnet School Progress Monitoring Meeting	Principal Magnet coordinator Magnet Department
E5+R ² Training provided by Magnet Department	Tully Instructional Staff Principal Magnet coordinator
Magnet Schools of America Policy Training Conference	Magnet Department
Obtain quotes for Art and STEAM Room refurbishment work	MSAP Project Coordinator Magnet coordinator Office Manager
On-going weekly Tully ILT Meetings	Principal MSAP Project Coordinator ILT
On-going weekly Instructional Coaching/Feedback cycle	Principal ILT
On-going weekly Magnet Department Site Support Visits	Principal ILT Magnet Department
On-going weekly PLC Meetings	Principal ILT
Quarterly Milestones	Person(s) Responsible
Year 1 – Quarter 3	January 2024- March 2024
Quarterly Magnet School Progress Monitoring Meeting	Principal Magnet coordinator Magnet Department
Set dates/times for Art and STEAM Room refurbishment work to occur	MSAP Project Coordinator Principal ILT
Attend on-going student recruitment/family outreach events	Principal Magnet coordinator Magnet Department

Begin planning STEAM Summer Programming	Principal Magnet coordinator MSAP Project Coordinator After School Coordinator
Order the outdoor learning spaces	Magnet Department Project Director MSAP Project Coordinator (when hired)
Order the laptop and desktop computers	Magnet Department Project Director MSAP Project Coordinator (when hired)
Order Laser Printer	Magnet Department Project Director MSAP Project Coordinator (when hired)
Order the 3D printers	Magnet Department Project Director MSAP Project Coordinator (when hired)
Order Maker Space supplies	Magnet Department Project Director MSAP Project Coordinator (when hired)
Obtain quotes for flexible seating furniture	Magnet Department Project Director MSAP Project Coordinator (when hired)
Set Project Lead the Way PD training calendar	Principal Magnet coordinator MSAP Project Coordinator
Set National Inventors Hall of Fame PD training calendar	Principal Magnet coordinator MSAP Project Coordinator
On-going weekly Tully ILT Meetings	Principal MSAP Project Coordinator ILT
On-going weekly Instructional Coaching/Feedback cycle	Principal ILT
On-going weekly Magnet Department Site Support Visits	Principal ILT Magnet Department
On-going weekly PLC Meetings	Principal ILT
Set School Mint (marketing) PD training calendar	Principal Magnet coordinator

	MSAP Project Coordinator
Set MSA Consultant PD training calendar	Principal Project Director MSAP Project Coordinator
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Quarterly Milestones	Person(s) Responsible
Year 1 – Quarter 4	March 2024- May 2024
Quarterly Magnet School Progress Monitoring Meeting	Principal Magnet coordinator Magnet Department
Magnet Schools of America Leadership Conference	All Magnet School Principals All Magnet School Coordinators Magnet Department MSAP Project Coordinator Project Evaluator
Order the flexible student seating furniture	MSAP Project Coordinator Magnet coordinator Office Manager
On-going weekly Tully ILT Meetings	Principal MSAP Project Coordinator ILT
On-going weekly Instructional Coaching/Feedback cycle	Principal ILT
On-going weekly Magnet Department Site Support Visits	Principal ILT Magnet Department
On-going weekly PLC Meetings	Principal ILT
On-going Project Lead the Way (PLTW) PD training and job-embedded coaching	PLTW Trainers MSAP Project Coordinator
On-going National Inventors Hall of Fame (NIHF) training and job-embedded coaching	NIHF Trainers MSAP Project Coordinator
Reorder STEAM supplies, units, and modules for following school year	MSAP Project Coordinator Office Manager
Prepare annual reports	Project Director MSAP Project Coordinator Principal
Initial MSA training and job embedded coaching	MSA Trainers
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Quarterly Milestones SY 2024-2025	Person(s) Responsible
Year 2 – Quarter 1	August 2024- October 2024
Finalize annual contract with Buck Institute, PBL Works	Principal Project Director

	MSAP Project Coordinator
On-going Project Lead the Way (PLTW) PD training and job- embedded coaching	PLTW Trainers MSAP Project Coordinator
On-going National Inventors Hall of Fame (NIHF) PD training and job-embedded coaching	NIHF Trainers MSAP Project Coordinator
Pre-Session review of State Test (AASA) data to inform academic interventions for targeted students in reading and mathematics.	MSAP Project Coordinator Data Analyst Project Evaluator
School day academic interventions for targeted students in reading and mathematics	MSAP Project Coordinator Data Analyst Project Evaluator
Develop the progress monitoring assessment structure for students receiving academic interventions in reading and mathematics	MSAP Project Coordinator Data Analyst Project Evaluator
Short cycle assessment structure begins	Tully Instructional Staff ILT
On-going Professional Learning Community (Teacher Collaboration)	Tully Instructional Staff ILT
Instructional Leadership Team (ILT) designs schedule for instructional walkthroughs/observations and feedback as it pertains to 5E+R ²	Principal ILT
Quarterly training begins for Instructional Leadership Teams related to the Effective Schools Framework (ESF)	Magnet Department
Job-embedded coaching provided by the Project Director and MSAP Project Coordinator begin to the ILT in relation to the ESF begins	Project Director MSAP Project Coordinator
Obtain quotes for outdoor turf	MSAP Project Coordinator Project Director Office Manager
Obtain quotes for outdoor shade structure	MSAP Project Coordinator Magnet coordinator Office Manager
Obtain quotes for outdoor seating	MSAP Project Coordinator Project Director Office Manager
Obtain quotes for outdoor audio/amplification system	MSAP Project Coordinator Project Director Office Manager
Obtain quotes for hallway renovation work	MSAP Project Coordinator Project Director Office Manager
On-going weekly Tully ILT Meetings	Principal MSAP Project Coordinator ILT
On-going weekly Instructional Coaching/Feedback cycle	Principal

	ILT
On-going weekly Magnet Department Site Support Visits	Principal ILT Magnet Department
On-going weekly PLC Meetings	Principal ILT
On-going E5+R ² Training provided by Magnet Department	Tully Instructional Staff Principal Magnet coordinator
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Quarterly Milestones	Person(s) Responsible
Year 2 – Quarter 2	October 2024- December 2024
Data analyst and evaluator review progress monitoring data to measure growth toward objectives	Data Analyst Project Evaluator
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Magnet Schools of America Policy Training Conference	Magnet Department
Set PBL Works PD training calendar	Principal Magnet coordinator MSAP Project Coordinator
Order outdoor turf	MSAP Project Coordinator Magnet coordinator Office Manager
Order outdoor shade structure	MSAP Project Coordinator Magnet coordinator Office Manager
Order outdoor seating	MSAP Project Coordinator Magnet coordinator Office Manager
Order outdoor audio/amplification system	MSAP Project Coordinator Magnet coordinator Office Manager
Begin hallway renovation work	MSAP Project Coordinator Project Director Principal
On-going weekly Tully ILT Meetings	Principal MSAP Project Coordinator ILT
On-going weekly Instructional Coaching/Feedback cycle	Principal ILT
On-going weekly Magnet Department Site Support Visits	Principal ILT Magnet Department
On-going MSA training and job-embedded coaching	MSA Trainers

On-going weekly PLC Meetings	Principal ILT
Quarterly Milestones	Person(s) Responsible
Year 2 – Quarter 3	January 2025- March 2025
Begin planning STEAM Summer Programming	Principal Magnet coordinator MSAP Project Coordinator After School Coordinator
Installation of outdoor turf	MSAP Project Coordinator Vendor
Installation of shade structure	MSAP Project Coordinator Vendor
Installation of outdoor seating	MSAP Project Coordinator Vendor
Installation of outdoor audio/amplification system	MSAP Project Coordinator Vendor
Initial PBL Works Training and job-embedded coaching	PBL Works Trainers MSAP Project Coordinator
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Quarterly Milestones	Person(s) Responsible
Year 2 - Quarter 4	March 2025- May 2025
Magnet Schools of America Leadership Conference	All Magnet School Principals All Magnet School Coordinators Magnet Department MSAP Project Coordinator Project Evaluator
Reorder STEAM supplies, units, and modules for following school year	MSAP Project Coordinator Office Manager
Implement STEAM Summer Programming	Principal Magnet coordinator MSAP Project Coordinator After School Coordinator
Data analyst and evaluator disaggregate quarterly benchmark data in reading and mathematics	Data Analyst Project Evaluator
Set goals and objectives timeline for years 3-5 of grant	Project Director MSAP Project Coordinator Principal
Prepare annual reports	Project Director MSAP Project Coordinator Principal

The table titled, *Timeline for Implementation of Project STEAM emPowered*, above, outlines the major project milestones in **Project STEAM emPowered** in years one and two of the MSAP grant. **Project STEAM emPowered** aims to provide a significant theme revision and a comprehensive STEAM (Science, Technology, Engineering, Arts, and Math) themed education to Tully students. The project's implementation is divided into five years, with the first two years being the primary focus of significant programming. During this time, the project will hire key personnel, purchase essential materials, and launch STEAM professional development programs. Additionally, the project will implement critical schoolwide systems to drive and support **Project STEAM emPowered**. While many of these milestones will be recurring and continuing throughout the remaining three years of the project, by the end of year two of the grant, the Project Director, MSAP Project Coordinator, and school site Principal will evaluate the project's achievements and objectives to establish a timeline for the milestones to be accomplished in years three to five.

E. PROJECT EVALUATION

E(1) How the applicant will assess, monitor, and evaluate the impact of the activities funded under this part on student achievement and integration.

Formative Evaluation

The evaluation will assess the effectiveness of project implementation, process and outcome measures, and overall impact of the MSAP goals including reducing socio-economic and racial/ethnic isolation, increasing student achievement, and sustainability. The **Project STEAM emPowered** evaluation will be directed by Dr. Halley Freitas, Senior Director Assessment & Evaluation (A&E) in TUSD. Dr. Freitas has an extensive qualitative and quantitative skill set more with than 30 years of evaluation experience, of which 17 have been directly involved with

school-based research and evaluation. Dr. Freitas directs a team of nine researchers and managers in A&E with the primary duties of educational research/evaluation to inform policy decisions, data literacy coaching at schools, data management, and all district academic testing. Dr. Freitas and her team are experts in research design, statistical analysis, survey and focus group research, data management, and can present complex findings in easy-to-understand formats. Please see Dr. Freitas's resume for more information. Dr. Freitas and her team will collaborate with the Data Analyst (TBD) on all technical aspects of the evaluation including the rigorous design to establish promising evidence.

The continuous improvement process goal: Continuous improvement is inherent to the evaluative process. It will include a multi-method approach with both process and outcome measures to provide data-driven feedback to program staff and partners. Data from all sources will be analyzed using qualitative content (surveys, observations, PD logs, activity logs, student data) and quantitative statistical methods (quasi-experimental modeling) among multiple stakeholders including students, parents, teachers, school leaders, and other staff. Utilizing both quantitative and qualitative methods will allow for multiple and independent sources of data. These data sets can then be triangulated in analysis to provide a realistic picture of program impact. The evaluation team will provide feedback to the Magnet Office, Project Coordinator and Principal for continuous improvement via phone, email, zoom, and in person quarterly meetings. The Data Analyst will also provide quarterly reports and presentations on student progress toward project goals.

Formative Evaluation: The formative evaluation will focus on the implementation of the project and aligns to the activities and outputs laid out in the logic model. The formative evaluation will inform the evaluation how the activities are being conducted by school staff. The formative

evaluation will focus on the implementation of the STEAM curriculum in the classroom from walkthrough data and the site-based Professional Learning Communities (PLCs) use of data-driven decision-making from common formative assessment results. Information from the formative evaluation by the A&E team and the Data Analyst will be timely quarterly feedback to the district Magnet Office, Project Coordinator, Principal about school culture and practices.

- Curriculum implementation: The fidelity of the use of the new STEAM content in classrooms will be observed through walkthroughs and observations by the Magnet Office, the Project Coordinator, and the Instructional Leadership Team. Evidence from walkthrough rubrics and written feedback will be provided to the Data Analyst to aggregate into a measure of the level of school level implementation. This monitoring information will assist teachers and the leadership team in assessing progress towards transforming Tully into a STEAM integrated learning environment.
- Professional Learning Communities: Teachers and supporting leadership staff will use skills from the PD to develop STEAM lesson plans that align to state standards. The PLC provides time for teacher teams to reflect on teaching practices and content and to adjust as needed. A product of the PLC will be a protocol feedback form with success criteria defined to improve student learning immediately for those students who still need support and to enrich learning for those students who have mastered the standards. The Data Analyst will review the process and evidence from PLC agendas, feedback forms, the number of referrals into and out of the MTSS process, and the scheduling of CFAs by grade.

Process Evaluation: The process evaluation will provide data analysis on more formalized data sources to understand program impact including surveys, enrollment and applicant pool data,

teacher evaluations, staff demographics, PD logs, and Parent logs. The process evaluation aligns primarily to the short-term and some medium-term outcomes laid out in the logic model and also provides timely feedback from the evaluation team. The A&E team and the Data Analyst will provide semi-annual impact analysis reporting about the extent to which the school is meeting grant objectives to the district Magnet Office, Project Coordinator, Principal, and faculty.

- **Surveys:** The School Quality Survey (Student/Staff/Parent) measures school climate, social integration, and satisfaction among peers in the school. It is administered once a year in the spring. The Student Survey of Teachers (SST) assesses classroom climate and cultural responsiveness and is administered once a year in the fall. The Student/Parent Magnet Survey (SMS) assesses an inventory of interest and participation in STEAM projects and events and will be administered once a year at the end of the academic year. For the MSAP evaluation, these surveys will measure the extent to which students at Tully feel a sense of belonging and social integration (SQS student) and if they feel that their culture is reflected in the curriculum (SST), if they feel that the Tully STEAM projects are engaging. Finally, staff surveys will be conducted to understand satisfaction with professional growth opportunities (SQS-staff).
- **Data Webpages:** A&E provides several webpages to support data-driven decision-making in TUSD. For the MSAP evaluation, these webpages and the underlying source data will examine the extent to which Tully has met its goals each year in terms of enrollment and specifically magnet enrollment, applicant pool data, matriculation patterns, subgroup membership, student academic performance, and staffing demographic profiles. The data webpages are:

- *The TUSDwebData* page offers TUSD staff immediate access to a large repository of district and school level academic, enrollment, attendance, and survey trends over time that can be compared by school. TUSDwebData will be used for ongoing monitoring of Tully's outcomes and goals by the district Magnet office and the leadership team. All data on TUSDwebData can be broken out by racial/ethnic subgroups, and other student demographics.
- *SchoolCity* is the student-level repository for teachers and staff to monitor and group students in real time for all academic data including benchmarks, DIBELS, state assessments, and other assessments. This data will support decision-making during PLCs. Every student in SchoolCity has an assessment history page that organizes all assessment data in both a summary form and a drill down form to access the raw data, when available.
- *K-5 data dashboard* offers administrators a means to review various assessment and demographic data by teacher, grade, subgroup, or student. This data will support the principal in examining student academic progress by teacher.
- *The DRIVE* is a repository for data-related resources and includes the district assessment calendar, overviews of the district assessments and evaluations, data-driven literacy resources, school letter grade and other state level information, and helpful links to district applications, interventions, and supports. This resource will support the school staff in planning the instructional cycle.
- Teacher evaluations will provide feedback on professional practice, leadership, and effectiveness and guide professional development direction. For the MSAP evaluation,

teacher evaluations will be reviewed to understand the extent to which high-quality teaching practices are observed and documented.

- The Professional Learning Portal (PLP) will be used to collect PD activity logs. PLP is the software utilized by TUSD to track and monitor PD activities and identify participants. The PLP collects data on the type of PD opportunities provided, the number of participants, length of training and attaches a syllabus containing learning outcomes and objectives.
- Family and Partner engagement: Family attendance logs will be maintained at the school site to understand the extent to which families are participating in the regularly scheduled family and community events held at Tully. Memorandums of Understanding (MOUs) will be collected from community and business partners to formalize their roles and activities and to confirm that they align and contribute to the STEAM theme priorities.

Summative Evaluation: The summative evaluation activities will be conducted to assess the extent to which the project has reached the intended medium-term and long-term outcomes as laid out in the logic model. The A&E team and the Data Analyst will provide an annual report describing the summative evaluation results to describe the impact of the MSAP grant on student achievement. The following assessments are utilized across the district and will also be used at Tully K5 Magnet Elementary to measure student academic achievement both annually and in an ongoing basis:

- AASA in grades 3 - 5: Student mastery and growth will be measured using the Academic Standards Assessments (AASA) in ELA and Math. This standardized assessment is given to all students, grades 3-8 statewide each year and provides four levels of performance mastery by grade and subject including Minimally Proficient, Partially Proficient, Proficient, and Highly Proficient. One year's growth can be measured per student with two years of data by comparing a student's scale score against the expected scale score

growth of the model. Linear regression will be the statistical process used to predict observed data against predicted data (or the state mean) of growth and performance.

- DIBELS mCLASS literacy screener is administered 3 times a year to all students, grades K-3 to measure reading/literacy ability. Students are rated as well below benchmark, below benchmark, at benchmark, and above benchmark. The level of difficulty increases with each administration of the assessment to reflect age and grade level expectations.
- Quarterly Benchmark progress monitoring assessments: Another measure of student mastery and growth are the district quarterly benchmark assessments administered three times a year for grades 2-8. These assessments have been aligned to the state standards in ELA and Math, contain four mastery performance levels, and are highly predictive of AASA performance. Finally, these assessments are also aligned with the district pacing guide and the scope and sequence.

This section explains the **implementation plan and evaluation focus by project year.**

Each performance measure listed below in the evaluation plan is associated with a larger goal laid out in the logic model and will show continuous improvement.

Goal 1: Tully STEAM Magnet Elementary will prevent Minority group isolation and decrease socioeconomic group isolation for low-income students.

Performance Measure 1.1. By June 30th each year, the community interest in Tully will increase by 10% as measured by the number of submitted magnet application acceptances. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.1. Increased Magnet applications to Tully						
	Baseline Yr: 2022-23	Year 2: 2023-24	Year 3: 2024-25	Year 4: 2025-26	Year 5: 2026-27	Year 6: 2027-28
	58	60	66	72	78	84

Performance Measure 1.2. By November 1st of each year of the grant **Project STEAM emPowered** will increase student enrollment including Magnet out of boundary placement by 10% or until capacity as measured by the 40th-day enrollment records. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.2. Increased Enrollment at Tully (40 th Day)					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
310	341	375	413	454	498

Performance measure 1.3. By November 1st of each year, the percentage of fifth grade Tully STEAM Magnet students who matriculate to Mansfield STEAM Magnet Middle School for 6th grade will increase by 8% or a total of 30% by the end of the five years. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.3 Percent of Students who matriculate from Tully Magnet K5 to Mansfield Magnet Middle School (40 th Day)					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
43%	43%	51%	59%	67%	75%

Performance Measure 1.4. By November 1st each year, the socio-economic isolation of low-income students will decrease by 5% with Year 1 as the baseline or a total of 20% by the end of five years as measured by the 40th-day enrollment records and socio-economic data collected annually in the registration packets. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.4. Decreased percent of socio-economic isolation of students at Tully (40 th Day)					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
90%	90%	85%	80%	75%	70%

Performance Measure 1.5. By June 30th each year, the percentage of students who will feel a sense of belonging and social integration will increase by 5% each year using Year 1 as the baseline

year, as measured by the Student School Quality Survey administered each spring to students in grades 3 - 5. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.5. Increased social integration at Tully					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
71%	70%	75%	80%	85%	90%

Performance Measure 1.6. By June 30th each year, the percentage of students who will feel their culture is reflected in the curriculum and resources will increase by 5% each year using Year 1 as the baseline year, as measured by the Student Survey of Teachers administered each fall to students in grades 3 - 5. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.6. Increased culturally responsive curriculum and resources					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
70%	70%	75%	80%	85%	90%

Performance Measure 1.7. By June 30th each year, the percent of students who will agree each year that STEAM and the arts connect to real-world applications to solve social problems will increase by 5% each year or meet 90% using Year 1 as the baseline year, as measured by the Student Magnet Survey administered at the end of the year to students in grades 3 – 5.

Table AE Goal 1: Performance Measure 1.7. Increased STEAM engagement					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
NA	TBD	TBD	TBD	TBD	90%

Performance Measure 1.8. By June 30th each year, the percent of full academic year K-5 students who will have participated and presented in 4 STEAM projects and/or events will increase by 5% each year using Year 1 as the baseline as measured by the teacher grade book and the Magnet

coordinator’s presentation/display logs. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 1.8. participation in STEAM project-based learning					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
70%	70%	75%	80%	85%	90%

Evaluation Methods for Objective 1: Data to assess performance measures 1.1, 1.2, 1.3, and 1.4 will come from enrollment records and district magnet lottery application records for all enrolled students on the 40th day of each year. Results from these performance measures will be compared to outreach and recruitment logs and marketing materials to examine the impact of the marketing plan. The data for performance measures 1.5, 1.6, and 1.7 will be derived from three different annual student surveys (Student School Quality Survey, Student Survey of Teachers, and the Student STEAM Survey) for students in grades 3 – 5 administered once throughout the year to measure the social and cultural impact of schooling on students as well as the level of engagement and interest in STEAM activities. Performance measure 1.8 will collect data on the frequency of programmatic products throughout the school year from project-based learning.

Goal 2: Tully STEAM Magnet will increase student achievement for all students.

Performance measure 2.1. By June 30th each year, 80% of students in grades 3 – 5 will increase proficiency by a minimum of 8% on the state standardized tests in ELA and Math each year for a total gain of 40% or higher over 5 years. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 2: Performance Measure 2.1. Increased student proficiency in ELA and Math on state testing						
	Most Recent Data	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
	2021-22	2023-24	2024-25	2025-26	2026-27	2027-28
ELA	11%	13%	21%	29%	37%	45%

Math	7%	8%	16%	24%	32%	40%
------	----	----	-----	-----	-----	-----

Performance measure 2.2. At the end of each quarter, students in grades 3 - 5 will increase overall proficiency on quarterly benchmarks in both ELA and Math by 5% each year when compared to the year prior. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 2: Performance Measure 2.1. Increased student mastery in ELA and Math in grades 3 – 5 on quarterly benchmarks.

	2022-23	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
Q1 ELA	35%	35%	40%	45%	50%	55%
Q2 ELA	36%	35%	40%	45%	50%	55%
Q3 ELA	40%	40%	45%	50%	55%	60%
Q1 Math	36%	35%	40%	45%	50%	55%
Q2 Math	37%	35%	40%	45%	50%	55%
Q3 Math	42%	40%	45%	50%	55%	60%

Performance measure 2.3. At the end of each quarter, students in grades K-2 will show a 5% increase in early literacy from BOY to EOY on the DIBELS mCLASS screener each year when compared to the year prior. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 2: Performance Measure 2.1. Increased student early literacy in grades K-2 on DIBELS mCLASS.

	2022-23	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
EOY	18%	20%	25%	30%	35%	40%
MOY	17%	20%	25%	30%	35%	40%
EOY	28%	30%	35%	40%	45%	50%

Performance measure 2.4. By the end of the five years in 2027-28, The achievement gap between ethnic/racial subgroups will be narrowed by 5% as measured by annual state testing using the most recent data from 2021-22. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases. Each ethnicity will have a minimum of ten students with valid test scores to be counted as a subgroup.

Table AE Goal 2: Performance Measure 2.4a. Decreased achievement gap among ethnicities in student mastery in ELA in grades 3 – 5 on state testing.						
ELA	Most Recent Data 2021-22	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
African Am	0%	5%	12%	20%	28%	35%
Hispanic	15%	15%	22%	30%	38%	45%
White	15%	15%	22%	30%	38%	45%

Table AE Goal 2: Performance Measure 2.4b. Decreased achievement gap among ethnicities in student mastery in Math in grades 3 – 5 on state testing.						
Math	Most recent Data 2021-22	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
African Am	5%	5%	12%	20%	28%	35%
Hispanic	6%	10%	17%	24%	31%	38%
White	19%	20%	26%	32%	38%	44%

Evaluation Methods for Goal 2: Data for performance measures 2.1 and 2.4 will be derived from the state-standardized achievement tests in ELA and Math. Data will be disaggregated by grade, subject, and subgroups (ethnicity, socio-economic status, ELL, ExEd, etc.) to understand trends for grades 3 - 5. Scale scores and performance levels will be examined to understand the percentage of students at grade level mastery and the percentage of students on the cusp of a proficiency level who may need additional supports. Additionally, an analysis of the percent mastery by the standard will be conducted to understand which standards students performed well on and which standards need additional supports. Performance measure 2.2 derives data from the quarterly benchmarks to assess whether students mastered recently taught standards aligned to the district scope and sequence. Moreover, quarterly benchmark standards analysis and item analysis will provide greater insight into student understanding and misconceptions. Performance measure 2.3 derives data from DIBELS mCLASS, an early literacy screener for grades K-3. Like the state test results, the quarterly benchmark data and the DIBELS mCLASS data are divided into performance levels and will be disaggregated by grade, subject,

and subgroups (ethnicity, socio-economic status, ELL, ExEd, etc.) to understand learning and proficiency trends. The quarterly benchmark data and the DIBELS mCLASS data will also be used by the district and site staff on a quarterly basis to assess student progress and plan forward about which standards/concepts will need additional support and spiraling during interventions and/or after-school tutoring.

Performance measure 3.1. By June 30th each year, the percentage of teachers who agree each year that professional development provides applicable skills including data-driven practices, supports a greater understanding of student diversity, and builds a community where teachers feel valued and recognized will increase by 5% each year or meet 95% as measured by the Staff SQS each year. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 3: Performance Measure 3.1 Percent of teacher satisfaction with professional development.					
Most Recent Year: 2021-22	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
90%	90%	95%	95%	95%	95%

Performance measure 3.2. By June 30th each year, the percentage of teachers who achieve the highest rating (distinguished) on the Danielson Observation rubric completed by the Site Principal will increase by 2% or will meet a 95% schoolwide goal as measured by the Teacher Evaluation protocol. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 3: Performance Measure 3.2: Percent of teachers who score distinguished on the Teacher Evaluation protocol.					
2022-23	Baseline Yr 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
79%	80%	84%	88%	92%	95%

Performance measure 3.3. By June 30th, 2028, 95% of teachers will utilize STEAM practices in their instruction on a weekly basis, as measured by instructional walkthrough data. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 3: Performance Measure 3.3: Percent of teachers who utilize STEAM practices in the classroom.					
2022-23	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
0%	45%	60%	75%	90%	95%

Performance Measure 3.4. By June 30th each year, the percentage of staff at Tully will represent the diverse ethnicities/races of the community it serves with an increase in staff diversity by 2% a year or a total of 10% over five years. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 3.4. The percent of diversity among Tully staff.					
2022-23	Baseline Yr: 2023-24	Year 2: 2024-25	Year 3: 2025-26	Year 4: 2026-27	Year 5: 2027-28
30%	30%	32%	35%	38%	40%

Evaluation Methods for Goal 3. Data to assess Goal 3 will be derived from professional development training and resulting certification, the Teacher School Quality Survey, the results from the Teacher Evaluation, the results from the classroom walkthroughs/observations, and employee demographics from Human Resources Department. Performance measure 3.1 will derive data from the Staff School Quality Survey and will assess the extent to which teachers value professional development, data-driven decision-making, and feel supported professionally. Performance measure 3.2 will derive data primarily from the Teacher observation data from the Danielson Rubric protocol that Principals are required to collect annually as part of the Teacher Evaluation. Performance measure 3.3 will be collated from classroom walkthrough rubrics completed throughout the year on the evidence of STEAM practices. Performance measure 3.4

be sourced from the Human Resources department and will inform the project leads on the progress towards diversity in recruiting and hiring efforts for Tully’s teaching staff.

Goal 4: Tully STEAM Magnet Elementary will increase parent involvement, family engagement, and community partnerships.

Performance measure 4.1. By June 30th each year, the percent of families who participate in Tully activities/events will increase by 5% to a total of participation of 25% of the school’s population by Year 5. Because Year 1 will initiate the implementation of the program, it will serve as the baseline year for annual increases.

Table AE Goal 1: Performance Measure 4.1. Family participation levels.					
	Baseline Yr:	Year 2:	Year 3:	Year 4:	Year 5:
2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
5%	5%	10%	15%	20%	25%

Evaluation Methods for Goal 4. Data to assess Goal 4 will be collected with participation logs during Tully activities, events, volunteerism, and off campus fairs and competitions. Community partner participation will also be collected through participation logs and MOUs as part of the larger community involvement in Tully’s STEAM-infused culture.

Ongoing Communication

The formative, process, and summative evaluation together will create a continuous flow of both short- and longer-term data trends to monitor the program process and to assess impact. The formative and process evaluative communication structure is ongoing with quarterly and bi-annual reports to the Magnet Office, Project Coordinator, Tully Principal, and site staff for planning and reflection. The formative, process and summative evaluation will identify any barriers to implementation as well as the methods used to overcome them. It will also identify what is working well.

Feedback to the project director will be provided with recommendations for program improvement on an ongoing basis. The Data Analyst will meet with the Project Team including the Magnet Director, Project Coordinator on a semi-monthly (District Magnet Office) and the Project Coordinator, Site Principal and Leadership Team on a quarterly basis (School based) to review the process findings from the quarterly benchmarks, the DIBELS data and other data as it becomes available. The Data Analyst will create and present easy to read reports that will disaggregate data by subgroups, grades, and subjects and will link data to prior school trends and/or overall district trends as a comparative. The Data Analyst will also review the formative findings with the team quarterly to examine how well the school is implementing the STEAM program structurally in terms of the administration of formative assessments, completed feedback forms from the PLC meetings, and observation documentation from the walkthroughs. The Data Analyst and members of the A&E Team will be available via email, phone, zoom, and/or in-person meetings on a frequent basis with the project team, and as needed.

The annual report will be shared with families, partners, and other stakeholders to review and provide feedback and will be posted on the school website. The findings will also be shared in stakeholder meetings and during school events. Additionally, the Project Coordinator will collaborate with district departments to present findings with the principal annually at the Governing Board meeting, and through press releases and social media.

Evaluation Reports and Deliverables

The evaluation will provide timely information for measuring progress, making programmatic adjustments, strategic planning, and keeping the program focused on its goals. All process and outcome data will be analyzed, and the findings summarized at regular intervals throughout the year. The Project Coordinator, the Principal, and the evaluation team will meet

quarterly to share the formative and process evaluation information. Annual reports also will inform the district Magnet Office and the Department of Education regarding the program's progress in achieving its goals and objectives. The evaluation design will be reviewed and revised as appropriate. The reports and timelines are:

- September – DIBELS BOY report
- Mid-October – quarterly benchmark report and the project implementation report.
- End of October – 40th-day reports of student enrollment, magnet student placement, matriculation to STEAM magnet feeder school enrollment, ethnicity, and socioeconomic status enrollment reports as well as teacher demographic profiles.
- End of December - quarterly benchmarks report, DIBELS report, semi-annual data summary report, and the project implementation report.
- End of January - Student Survey of Teachers report
- Mid-March – quarterly benchmark reports and the project implementation report.
- End of April – Student, Parent, Staff SQS Survey reports, EOY DIBELS report
- End of May – Student/Parent STEAM Survey report, Student participation in STEAM project report, and the project implementation report.
- End of June – State standardized test scores in ELA and Math, Teacher Evaluation report
- End of September – Annual report to MSAP

Conference Presentations

Tully K5 Magnet School will apply to the Magnet Schools of America (MSA) conference in Year 3 (2025-26) on the progress made toward grant objectives because of the MSAP funding. Additionally, in Year 5 (2027-28), Tully will apply once more to MSA to present the findings

from the rigorous quasi-experimental study on the impact of the MSAP grant on student achievement.

Annual and Final Performance Reports

Annual reports will be submitted to MSAP by September 30th each year. The first three annual reports from 2024, 2025, and 2026 will document the MSAP objectives and the Project outcomes aligned to each goal. Each report will provide baseline data and annual progress to meet project goals. In the final two years, 2027 and 2028, the annual report will also provide the results from a rigorous statistical study to examine the impact of Tully’s STEAM magnet program on student achievement. This study will be quasi-experimental and use a Value-Added Methodology. For more information, please see the section called, ‘Evidence of Promise and Final Evaluation Report’.

Evidence of Promise and Final Evaluation Report

Under the direction of Dr. Freitas, the evaluation team will also conduct a rigorous quasi-experimental research study using the Value-Added Model (VAM) to provide promising evidence of relevant findings of the school’s contribution to student learning. This method was chosen to evaluate the effectiveness of Project **STEAM emPowered** program with the outcome being increased student academic performance. This VAM study will examine the difference between a student’s actual score on the state standardized assessment and the score they were expected to achieve. This difference is the estimated “value” that the teacher or school added during the year to the students’ learning growth in ELA and Math. A student’s expected score is based on the student’s prior test score history and measured characteristics, as well as how other students in the district actually performed on the assessment. ELA and math performance, measured by the state

standardized tests, are the key outcome measures and are included in the logic model, in addition to being included in the project and program objectives.

The assessment of the other variables listed on the logic model such as reduced socio-economic group isolation, increased enrollment, increased teacher knowledge and skills, increased family and community participation, and increased diversity of Tully's staff will be addressed in the project evaluation. These process and outcome measures are intended to examine the project impact but are limited in determining that the program, and in particular the STEAM instructional practices, caused a change in student academic performance. Please see E1 in this section for more details. Conversely, this VAM study will examine the extent to which changes in student academic performance can be attributed to instruction in Tully's K5 STEAM magnet program.

Study Design: VAM is a method intended to isolate the school's contributions from factors outside the school's control that can strongly affect student test performance. These factors typically include the student's general intelligence, socio-economic status, and parental involvement. VAM can be used to measure the school's contribution each year by comparing the current test scores of their students to the scores of those same students in previous school years. The scores are then compared to the scores of other students in the same grade in other schools. VAM therefore seeks to isolate the contribution, or value added, that each school provides in a given year. This approach is assumed to be fairer than simply comparing student achievement scores or gain scores without considering potentially confounding 'out of school' contextual variables. VAM will be a covariate adjustment model that includes one prior state standardized assessment in grade 4 and up to two prior assessment scores for grade 5 and a set of measured characteristics for students. The model uses error-in-variables regression to account for the measurement error in the covariates used.

Tully will undergo a complete thematic transformation and will need time for full implementation of program procedures and practices. During Years one through three, process and outcome measures described in the logic model and project and program goals will be the focus of data collection, accountability, and reporting. Year three will also serve as the baseline year for VAM Study. In Years four and five, the evaluation team will provide a VAM study at the end of each year to examine the impact of students who have been exposed to Tully's STEAM Magnet program for up to three years.

To measure student growth and to attribute that growth to educators or schools, at least two sources of data are required: student ELA and math scores that can be observed over time and information describing how students are linked to schools and teachers. Both student and classroom characteristics are statistically controlled for in the VAM. The comparison group will consist of matched students within the district with similar demographics, prior state standardized test scores, and similar school K-5 contexts. Additionally, to the extent possible, teachers' years of experience and demographics will also be matched in the comparison classrooms. Using these characteristics in the model will help to ensure fair comparison between teachers of diverse groups of students. VAM functions best when using a limited number of variables, typically ranging anywhere from four to six. The student demographic variables below will be evaluated for inclusion in the study to match the treatment and comparison group with the ones that produce sufficient variance will be included. These co-variables will also be controlled by the regression model.

- State standardized data: Grades 3 – 5 in ELA and Math. Models are estimated separately by grade and subject using scores from each grade and subject as the outcome.

- Exceptional Education status: used to control the effects related to which disabilities, if any, the student has and is indicated by the presence or absence of a specific exceptionality.
- English Language status: used to control for effects related to whether a student has limited English proficiency. It is based on whether a student has been identified as an EL student and is enrolled in a program or receiving EL services.
- Gifted status: used to control effects related to whether the student is gifted, indicating the presence or absence of a gifted exceptionality.
- Student attendance: used to control for effects related to student attendance. It is measured as the percentage of days a student attended school during the school year.
- Student mobility: used to control effects related to changing schools during the school year. It is measured as a count of the number of schools beyond the first one that a student has enrolled in.
- Class size: used to control for effects related to the number of students in a class.
- Socio-economic status: used to control effects related to poverty.
- Ethnicity: used to control for effects related to ethnicity/race.

The comparison group will be well-matched based on these covariates. The comparison group will be a set on non-magnet schools (as many as six schools) in the district that resemble Tully K5's student and teacher demographics, student state standardized performance. Additionally, the comparison schools should not provide a STEAM-focused curriculum. TUSD's A&E team will use a statistical linear regression process to compare the student performance of Tully K5 STEAM magnet school to non-magnet, non-STEAM schools. This process will take a student's past test scores to predict the student's future test scores, on the assumption that students

usually score each year as well as they have in past years. The student's actual score is then compared to the predicted score. The difference between the predicted and actual scores in this study is assumed to be due to the school, rather than to the student's natural ability or socioeconomic circumstances.

Analysis Plan: To investigate the impact of **Project STEAM emPowered**, linear regression will be used because it is the foundation for the two most used statistical procedures with a VAM: Multiple Linear Regression (MLR) and Hierarchical Linear Modeling (HLM). Multi-level HLM is academically appealing to be able to nest variables. However, in educational research where measures are far from exact, MLR and HLM produce almost identical results. Correlations between predicted values produced by the two different methods range from .98 to 1.0. Given the relative ease of calculation and data requirements of single level MLR compared to the multi-level HLM, A&E will choose MLR as our preferred method of VAM. This approach predicts a measure such as a math score using one or more predictor variables. The measure to be predicted is referred to as the dependent measure and the predictor variables are referred to as the independent variables. The equation below shows where: Y' is the value to be predicted, the "b" values represent the regression weights, and the "X" values are the predictors.

$$Y' = a_0 + (b_1 \times X_1) + (b_2 \times X_2) + (b_3 \times X_3) + (b_4 \times X_4) + \dots$$

This method of linear modeling will produce Predicted values and Residuals. Residuals are typically considered as an estimate of error for a single prediction. The average of all residuals for all predictions used to calculate the regression weights should be zero. However, the residual is important in a Value-Added Model. The residual is the difference between the observed and the predicted score ($X_{obs} - X_{pre} = \text{Residual}$). If the residual is positive, it indicates that the person scored "higher than expected." If on the other hand the residual is negative, it indicates the person

scored “lower than expected.” If the average residual is negative for a school or classroom, it indicates that on average, the students scored lower than expected based on the school's demographic make-up and previous performance. Since the average residual is based on multiple measures, it is more dependable than a single student measure.

This study will be using data from multiple grades in years three through five at Tully with grades 3 to 4 and 4 to 5 as the unit of analysis. Because of the different grades, test scores may need to be standardized. To interpret the results of the VAM, the residuals will need to be examined. If a residual is evident, the implication is that school characteristics have impacted student performance above and beyond the anticipated impacts of demographic variables and prior achievement. The residual therefore becomes a key measure of performance comparison between magnet schools and non-magnet schools.

Outcomes: The evaluation plan has multiple layers of evaluation measures starting with the short- and longer-term outcomes described by the logic model, the project and program objectives, and the VAM research study. Each layer uses student achievement on the state standardized test as a primary measure. The VAM evaluation will identify the comparison group by adhering to the strict methodological matching procedures listed above. The advantage of using VAM is that it removes the variance caused by demographic variables that are beyond a school's control. Variance is removed that is known to have a positive or negative effect on student achievement. This approach attempts to “level the playing field” by leaving only the school or teacher effects to be compared. To assess the impact of the VAM, the residuals will need to be examined. The residual therefore will become a key measure of performance comparison between magnet schools and non-magnet schools. In summary, project outcomes will be determined by assessing the school effect (or residual) and showing overall, how well students met expected

scores. A positive effect indicates that, on average, students met or exceeded their expected scores. A negative effect indicates that, on average, students did not meet their expected scores.

This VAM study will be included in the Annual MSAP report in Years 4 and 5 and a synthesis of the two years of research with recommendations will be included in the Final Report.

E(2) The extent to which the methods of evaluation include the use of objective performance measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.

Evaluation Questions, Objectives and Performance Measures

The **Project STEAM emPowered** uses measures that are related to project goals and the MSAP program goals. All the MSAP objectives listed below are integrated into the outcome measures associated with the project. This integration was intended because the goals of the MSAP are aligned with the goals of this project. The success of this project is connected to the larger vision of the MSAP grant of increased student achievement, reduced minority isolation, and increased teacher professional STEAM skills. The activities, and short- and longer-term outcomes from the project logic model link to the project and MSAP performance measures.

Table AF: Project Objective, Evaluation Question and Aligned Performance Measures		
Project Objective (PO)	Evaluation question	Performance Measure (Project or MSAP)
Objective 1: By June 30 th of each school year, 80 percent of students in grades 3-5 will increase their Reading/ Language Arts score by 8 percentage points or more, as measured by the State Standardized end-of-year test.	To what extent does the percentage of students from major racial/ethnic groups score proficient or above on State assessments in reading/ language arts as compared to the previous year?	Project and MSAP Project Performance Measures 2.1 and 2.4
Objective 2 By June 30 th of each school year, 80 percent of students in grades 3-5 will increase their Mathematics score by 8 percentage points or more, as measured by the State Standardized end-of-year test.	To what extent do the percentage students from major racial/ethnic groups score proficient or above on State assessments in math as compared to the previous year?	Project and MSAP Project Performance Measures 2.1 and 2.4
Objective 3: By the 40 th day of each school year, no rise in minority group isolation will occur, as measured by 40 th -day enrollment reports.	To what extent do the MSAP-related marketing and family recruitment activities: -reduce minority group and socio-economic isolation and	Project and MSAP Project Performance

	-increase student enrollment?	Measures 1.1, 1.2, and 1.4
Objective 4: By June 30 th , 2028, 95 percent of teachers will utilize STEAM practices in their instruction on a weekly basis, as measured by instructional walkthrough data.	To what extent do teachers use the skills learned from professional development and expectations from school leadership to translate into STEAM practices in the classroom?	Project and MSAP Project Performance Measures 3.2 and 3.3
Objective 5: By the 40 th day of School Year 2030-31, the prevention of MGI and stable socio-economic diversity will mirror the fifth year of the MSAP cycle, as measured by 40 th enrollment reports.	-To what extent will Tully STEAM continue to operate as a Magnet school three years after Federal funding ends? -To what extent does the percentage of students from major racial/ethnic and SES groups score proficient or above on State assessments in both reading/language arts and math three years after Federal funding ends as compared to the final project year?	Project and MSAP Project Performance Measures 1.1, 1.2, 1.3, 1.4, 2.1, 2.4, 3.3, and 4.1

Resources

- Bell, A., Chetty, R., Jaravel, X., Petkova, N., & Van Reenen, J. (2018). Who Becomes an Inventor in America? The Importance of Exposure to Innovation*. *The Quarterly Journal of Economics*, 134(2), 647–713. <https://doi.org/10.1093/qje/qjy028>
- Berger, R. (2003, February 6). *An Ethic of Excellence: Building a Culture of Craftsmanship with Students*. <https://doi.org/10.1604/9780325005966>
- Bowen, D., & Kisida, B. (2019). *Investigating Causal Effects of Arts Education Experiences* [Review of *Investigating Causal Effects of Arts Education Experiences*]. Houston Education Research Consortium. <https://eric.ed.gov/?id=ED598203>
- Cunnington, M., Kantrowitz, A., Harnett, S., & Hill-Ries, A. (2014). Cultivating Common Ground: Integrating standards-based visual arts, math and literacy in high-poverty urban classrooms. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*, 10(1). <https://doi.org/10.21977/d910119294>
- Dole, S., Bloom, L., Doss, K. K. (2017). Engaged learning: Impact of PBL and PjBLwith elementary and middle grade students. *Interdisciplinary Journal of Problem-based Learning*, 11(2), Article 9. <http://dx.doi.org/10.7771/1541-5015.1685>
- Drake, K. N., Long, D. (2009). Rebecca's in the dark: A comparative study of problem based learning and direct instruction/experiential learning in two 4th-grade classrooms. *Journal of Elementary Science Education*, 21(1), 1-6. Retrieved from:
<https://eric.ed.gov/?id=EJ849707>

- Duchak, Oksana. (2014). Visual Literacy in Educational Practice. *Czech-Polish Historical and Pedagogical Journal*. 6. 10.2478/cphpj-2014-0017.
- Eckhoff, Angela. (2019). Public Displays of Children's Work in Early Learning and Elementary School Settings as Documentation of Children's Learning Experiences. *International Journal of Early Childhood*. 51. <https://doi.org/10.1007/s13158-019-00233-8>.
- Ejiwale, J. (2013). Barriers To Successful Implementation of STEM Education. *Journal of Education and Learning (EduLearn)*. 7. 63. 10.11591/edulearn.v7i2.220. Retrieved from: https://www.researchgate.net/publication/287545425_Barriers_To_Successful_Implementation_of_STEM_Education
- Emdin, C., (2022). *STEM, STEAM, make, dream : reimagining the culture of science, technology, engineering, and mathematics*. International Center For Leadership In Education, Inc.
- Falk, J. H., & Meier, D. (2018). Camp invention 2017 pilot study report. *Institute for Learning Innovation*. Retrieved from: https://www.invent.org/sites/default/files/2021-02/ILI_Evaluation_Summary_Camp_Invention_May2018.pdf
- Falk, J. (2018) *Camp Invention Evaluation Report*. Institute for. Learning Innovation. ii
- ChangeMaker Consulting LLC. (2014). *Camp Invention® Evaluation* .
https://www.invent.org/sites/default/files/file-upload/2018-11/2019_Misc_Camp_Evaluation_Print_%2B_Digital.pdf
- Fazelian, P., Ebrahim, A. N., & Soraghi, S. (2010). The effect of 5E instructional design model on learning and retention of sciences for middle class students. *Procedia - Social and Behavioral Sciences*, 5, 140–143. <https://doi.org/10.1016/j.sbspro.2010.07.062>

- Goddard, R., Hoy, W. K., & Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479-507. <https://doi.org/10.3102/00028312037002479>
- Graham, N. J., & Brouillette, L. (2017). Using Arts Integration to Make Science Learning Memorable in the Upper Elementary Grades: A Quasi-Experimental Study. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*, 12(1). <https://doi.org/10.21977/d912133442>
- Harris, A., & de Bruin, L. R. (2017). Training teachers for twenty-first century creative and critical thinking: Australian implications from an international study. *Teaching Education*, 29(3), 234–250. <https://doi.org/10.1080/10476210.2017.1384802>
- Hattie, J. (2015). High-Impact Leadership. *Educational leadership*, 72(5), 36-40. Retrieved from: <https://www.ascd.org/el/articles/high-impact-leadership>
- Jeong, H., Hmelo-Silver, C., & Jo, K. (2019). Ten years of Computer-Supported Collaborative Learning: A meta-analysis of CSCL in STEM education during 2005–2014. *Educational Research Review*. Retrieved from: <https://doi.org/10.1016/j.edurev.2019.100284>
- Joyce, B., & Showers, B. (1982). The coaching of teaching. *Educational leadership*, 40(1), 4. Retrieved from <https://eric.ed.gov/?id=EJ269889>
- Karaçalli, S., & Korur, F. (2014). The Effects of Project-Based Learning on Students' Academic Achievement, Attitude, and Retention of Knowledge: The Subject of “Electricity in Our Lives.” *School Science and Mathematics*, 114(5), 224–235. <https://doi.org/10.1111/ssm.12071>

- Kim, Y. E., Edouard, K., Alderfer, K., & Smith, B. K. (2018). Making culture: A national study of education makerspaces. *Philadelphia, PA: Drexel University*.
https://www.researchgate.net/publication/336530623_Making_Culture_A_National_Study_of_Education_Makerspaces
- Kingston, S. (2018). Project Based Learning & Student Achievement: What Does the Research Tell Us? PBL Evidence Matters. 1(1), 1-11. Retrieved from:
<https://eric.ed.gov/?id=ED590832>
- Kisiel, J. (2013). Introducing future teachers to science beyond the classroom. *Journal of Science Teacher Education*, 24(1), 67-91. <https://doi.org/10.1007/s10972-012-9288-x>
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence. *Review of Educational Research*, 88(4), 547–588. <https://doi.org/10.3102/0034654318759268>
- Krajcik, J., Schneider, B., Miller, E. A., Chen, I-Chien., Bradford, L., Baker, Q., Bartz, K., Miller, C., Li, T., Codere, S., & Peek-Brown, D. (2022). Assessing the Effect of Project-Based Learning on Science Learning in Elementary Schools. *American Educational Research Journal*, 60(1), 70–102. <https://doi.org/10.3102/00028312221129247>
- Little, P. (2011). School-community learning partnerships: Essential to expanded learning success. *Expanding and Opportunities*, 71. Retrieved from
<https://www.expandinglearning.org/expandingminds/article/school-community-learning-partnerships-essential-expanded-learning-success>
- Loughlin, C. E., & Suina, J. H. (1982). *The learning environment: an instructional strategy*. Teachers College Press, Columbia University.

Marchand, G. C., Nardi, N. M., Reynolds, D., & Pamoukov, S. (2014). The impact of the classroom built environment on student perceptions and learning. *Journal of Environmental Psychology, 40*, 187–197. <https://doi.org/10.1016/j.jenvp.2014.06.009>

Morgan, P.L., Farkas, G. Hillemeier, M.M, & Maczuga, S. (2016). Science achievement gaps begin very early, persist, and are largely explained by modifiable factors. *Educational Researcher, 45* (1), 18-35.

<https://journals.sagepub.com/doi/pdf/10.3102/0013189X16633182>

National Institute for Excellence in Teaching (2012). Beyond “job-embedded”: Ensuring that good professional development gets results. Retrieved from:

<https://eric.ed.gov/?id=ED533379>

National Science Foundation (NSF). (2023). *Women, minorities, and persons with disabilities in science and engineering*. Retrieved from: www.nsf.gov/statistics/wmpd.

Newman, D., Finney, P. B., Bell, S., Turner, H., Jaciw, A. P., Zacamy, J. L., & Gould, L. F. (2012). Evaluation of the Effectiveness of the Alabama Math, Science, and Technology Initiative (AMSTI). Final Report. NCEE 2012-4008. *National Center for Education Evaluation and Regional Assistance*. Retrieved from:

https://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_20124008.pdf

Piaget, J. (1962). *Play dreams and imitation in childhood*. WW Norton.

Ramey-Gassert, L. (1997). Learning science beyond the classroom. *The elementary school journal, 97*(4), 433-450. <https://doi.org/10.1086/461875>

- Rehmat, A. P., & Hartley, K. (2020). Building engineering awareness: Problem-based learning approach for STEM integration. *Interdisciplinary Journal of Problem-based Learning*, 14(1), 1-15.
- Talan, T. (2021). The Effect of Educational Robotic Applications on Academic Achievement: A Meta-Analysis Study. *International Journal of Technology in Education and Science*, 5(4), 512–526. <https://doi.org/10.46328/ijtes.242>
- Tissenbaum, M., & Ottenbreit-Leftwich, A. (2020). A Vision of K-12 Computer Science Education for 2030. *Communications of the ACM*, 63(5), 42-44. <https://doi.org/10.1145/3386910>
- Yildirim, B. (2016). An Analyses and Meta-Synthesis of Research on STEM Education. *Journal of Education and Practice*, 7(34), 23-33.