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Q1 LEA School/District Name

Little Rock School District

Q2 LEA Contact Name

Amber Harbin

Q3 LEA Contact Title

STEM Coordinator

Q4 LEA Contact Email

amber.harbin@lrsd.org

Q5 LEA Contact Title

STEM Coordinator

Q6 LEA Contact Phone Number

5014472766

Q7 Grant Level Proposal

Small - Under \$7,500

Q8 PROPOSAL DESCRIPTION (MAX 3000 Characters) - provide a narrative regarding the need for the proposed program/project, specific goals to be achieved, and how if funded the program is likely to achieve those goals.

Forest Heights STEM Academy proposes Appalooza Competition innovative computer science project to promote relevant, real-world computer science learning and stimulate interest in advanced computer science studies. The FHSA Appalooza Competition project is a two-part proposal: 1) Engage students in real-world app development to meet the needs of our school partner, St. Vincent's Hospital, and 2) Increase the number of students (with a focus on under-represented populations) to engage in advanced level computer science courses. The goals of the project are twofold: 1) increase the number of students who pursue degrees and employment in the field of computer science, and 2) show students how computer science can increase the health and safety of Arkansans. Currently, all 7th-grade students at FHSA take an app development course. In this course, students use MIT App Inventor to create a functional app for the Android platform. Students work with a partner to develop an app; however, students need direction to determine which problem they should solve. Often times the unlimited amount of choices overwhelms students. Appalooza will work with FHSA Partner in Education, St. Vincent's Hospital, to develop a list of five key issues at the hospital to solve through the development of an innovative software application. Partners from the hospital will visit the campus and educate the students on the identified challenges. These needs will be shaped into the Appalooza Competition for FHSA seventh grade students. After students gain an understanding of identified hospital needs, they will use the design process to create an app to address one of the issues identified by St. Vincent Hospital. Students will use the following checklist to create their app: Address a challenge posed by the project partner, St. Vincents Hospital. Use three formats to document work: App Inventor comments Project design notebook Named versions of a project Use teamwork to develop the application. Demonstrate use and explanations of appropriate algorithms. Use a project display format (such as a presentation board, video, web page, etc) to clearly explain and promote the app and connect to the original challenge. Once students have completed entries, a showcase event - Appalooza - will engage FHSA students, staff, families, and partners in exploring and evaluating student entries. FHSA students, staff and families will select a people's choice winner while representatives from St. Vincent will select a winner within each of the five challenges. The competition will engage students in the development of socially-relevant software applications, while serving as the recruitment and promotion tool for a new FHSA 8th grade advanced computer science elective course, to be initiated in the 2019-2010 school year. The relevant and rigorous competition will assist students in understanding the impact of computer science and motivate them to sign up for the elective course.

Q9 PROPOSAL TIMELINE (MAX 1500 Characters) - list major activities of your proposal with approximate target dates

December 2018 - Promote receipt of the grant; Engage in program planning; Finalize project calendar; Facilitate partner outreach; Finalize competition guidelines; Create and design competition promotional materials. January 2019 - Coordinate St. Vincent presentations; Launch competition. February 2019 - Purchase student prizes. March 2019 (after Spring Break) - Close competition; Plan showcase event and judging. April - Coordinate school event to showcase entries and designate winners. May - June - Project impact monitoring, reporting and follow-up.

Q10 PROPOSAL EXPECTED RESULTS (MAX 1500 Characters) - Describe the student outcomes, or changes, that will result if this proposal is funded.

The project goals are outlined in the project description. Many positive outcomes from students will occur through the implementation of the program. Students will experience: Increased understanding of the real-world relevance of coding and computer science. High levels of engagement through real-world aspects of a mobile application need and use. High student demand for 8th grade advanced computer science course elective. Development of student skills for project design and implementation. Improved academic performance stemming from relevant, real-world computer science experience and use of analytical and logic skills in the app prototype development process. The successes of the project will be measured by analyzing the number and quality of entries, and charting the number of students enrolled in CS course. Entrants will complete a survey to provide qualitative information about their experience. Formative assessment scores will be monitored to gauge any noticeable difference between competing and non-competing eighth graders. Interactions with the school partner stemming from the competition will be noted and St. Vincent's will complete a partner survey to provide insights into what works and what can be improved for future competitions. Showcase event attendees will also have the opportunity to complete a feedback ticket at the event as part of casting their vote for the people's choice winner.

Q11 PROPOSAL EXPECTED IMPACT (MAX 1500 Characters) - Describe the estimated number of students, teachers, and/or community members that will be impacted and how they will be impacted if this proposal is funded.

The Forest Heights STEM Academy Appalooza Competition is expected to have a large impact on the school community and the St. Vincent Hospital community. Approximately 150 7th-grade students from FHSA will be directly involved in the creation of apps to solve the proposed problems from our school partners. Once the apps are created the Appalooza Competition will take place in the school cafeteria. This will provide an opportunity for the 700 student enrollment and their families, along with the hospital leadership staff to attend the showcase and judge the event. A typical evening event at FHSA will bring out 200 plus families. The hospital leadership staff contains roughly 100 nurses, department heads, doctors, and staff members all of whom will be invited to attend and judge the competition. The winners of the competition will also have their work displayed on a large poster to be showcased in the hospital's lobby. By displaying in the hospital this will provide another level of impact as every person to pass through the lobby will see the impact of school-community collaboration and how computer science transcends the walls of tech-based companies and has practical application to our everyday lives.

Q12 INNOVATIVE ASPECT (MAX 1500 Characters) - Describe why this proposal is creative and should receive funding as an out of the box way to support student growth/achievement.

The proposed project represents an "out of the box" way to support student growth and achievement. The program utilizes competition to strategically develop student interest in advanced computer science coursework. Receipt of the Innovation in Computer Science grant will initiate an easily replicated annual program for seventh graders to ensure ongoing high levels of participation in an advanced coursework elective for eighth graders. In this way the investment extends well beyond the period of funding and represents an opportunity to spark implementation of the first annual Appalooza competition as a financially-supported pilot program. Because the program is high impact and relatively straightforward to implement, FHSA anticipates clear results that will prompt establishment of the competition as an annual school event. The competition engages middle-level students in professional skill development and relevant applied learning through positioning competition entries as solutions to real-world needs. The advanced computer science course to be offered the following year provides a next natural step for students developing an interest in coding and computer science. The competition represents an affordable way to stimulate student interest while connecting with existing coursework. Additionally, the program strengthens school and community partnerships and provides a direct and visible way for partners to positively influence student achievement and learning.

Q13 TRANSFORMATIVE POTENTIAL (MAX 1500 Characters) - Describe how this proposal if funded and implemented beyond your program has the ability to raise student achievement across the state.

The competition is a replicable project in that once the inaugural event occurs, competition guidelines and information can be provided to any inquiring school district or school. IN addition, the LEA Contact for the program works with Districts around the state providing Project Lead the Way training and technical assistance. Thus many ongoing opportunities to discuss the project and relay the impacts are available. The competition is an affordable and engaging way to engage community partners while making student computer science experiences relevant. The community connection and context of creating a solution to agency needs can be replicated in many facets and forms. Pronounced health care needs in rural areas present an opportunity for student learning in computer science within the realm of health care agencies that may be experiencing challenges similar to St. Vincent's. The immersion of student work into the real-world context and placement of students in the position of social innovators is a research-based means of increasing engagement and positively impacting academic achievement.

Q14 FOLLOW UP and/or MARKETING/OUTREACH (MAX 1500 Characters) - Describe how your organization will follow up on this program after completed and/or how it will be marketed to and awareness raised within the community if the proposal is funded.

In order to ensure we reach as many students and families as possible the leadership team of FHSA will raise awareness within the school community and hospital community through the following means: 1) use of our in-district communication methods emailing all elementary school principals and inviting their students and families to attend the showcase as well as parents of FHSA students through automated phones calls, emails, and text messages 2) press releases to local media outlets informing of the school-community, receipt of funding, and providing information about the student showcase 3) information will be posted to the school and district website 4) posters and invitation will be directly sent to St. Vincent's leadership team informing of the competition and inviting them to be apart of the showcase judging. In an effort to obtain feedback and ensure we follow up with those stakeholders involved, the FHSA leadership team and STEM coordinator will: 1) debrief with St. Vincent's leadership team 2) discuss with the 7th-grade students an opportunity to take an advanced computer science course in 8th grade and possible options for high school 3) collect data on enrollment advanced computer science course 4) revisit goals of grant and have FHSA leadership team complete end of project survey.

Q15 Budget Proposal

FHSA Innovation Grant 2018 Budget.pdf (151KB)

FHSA Innovation Grant 2018-2019

Budget

Color Printing for: 1) Competition Promotional Materials and Guidelines & Showcase Event Posters: \$1570.00

Refreshments for Partner/Stakeholder Planning Meeting to Kick Off Project = \$200

Student Prizes (18 prizes - 1st, 2nd, and 3rd place for the People's Choice Award as well as each of the five challenge categories developed by St. Vincent's Hospital): 6 x \$150 (\$900) for first place awards; 6 x \$75 (\$450) for second place awards; 6 x \$30 (\$180) for third place awards = \$1,530*

*Student awards will be educational in nature and related to computer science. Prizes will be determined through consultation with the Arkansas Department of Education Innovation in Computer Science grantors.

Printing and display materials for high-quality presentation boards for first place winners (for display in the St. Vincent's Lobby): First place for People's Choice and all five competition challenge areas (6) x \$200 each = \$1,200

Refreshments for Showcase Event Attendees: \$500

Devices for the advanced computer science class: \$2,000

TOTAL BUDGET - \$7,000.00