

## General Information

|   |  |
|---|--|
| Grant Number  | 43   |
| Project Title   | Maker Spaces: Helping mold leaders, thinkers, and creators!      |
| Please select the <b>MAIN</b> curriculum area your grant addresses.   | Career & Technology  |
| Does your grant have a technology component? (Will you have technology equipment, software, etc. in your budget?) | <input checked="" type="radio"/> No<br><input type="radio"/> Yes |
| <b>Primary Contact Information</b>  |  |
| First Name  | Michelle   |
| Email   | michelle_shaw@allenisd.org                                       |
| Last Name   | Shaw   |
| Phone Number  | 972-360-4894   |
| Campus  | Lowery Freshman Center   |
| Main Subject  | Other  |
| Grade(s)  | 9  |
| I have co-applicants.   | <input type="checkbox"/>   |

## Describe details of the project

|  |  |
|--|--|
| Grant Number   | 43   |
| <b>Campus/Student Information</b>                      |  |
| Your campus:   | Lowery Freshman Center   |
| Will other campus' be involved/impacted by this grant? | <input checked="" type="radio"/> No<br><input type="radio"/> Yes |
| Your grade(s):   | 9  |
| Will other grades be involved/impacted?                | <input checked="" type="radio"/> No<br><input type="radio"/> Yes |

### Project Purpose

What is the problem, need, or opportunity that this grant will address? Explain **what students will know and be able to do** as a result of this project and/or how a problem will be addresses and/or how a situation improved because of the grant. (500 words or less.)

For students to continue to prepare and grow into 21st Century skills, they need opportunities to use high-level, critical, and creative thinking skills. Maker Spaces give students the resources and the space along with a reason and ample opportunities to design, create, explore, collaborate and learn on their own or with others about a variety of subjects, including but not limited to: engineering, programming, design, computer skills, and art. While tinkering and exploring with Maker Spaces, students may even discover an area for which they are passionate or particularly gifted!

### Project Description

How will the project or program be implemented? Describe activities and tasks.  
Who is the target population and in what ways will they benefit? (500 words or less.)

The MakerSpace is an informal combination of a lab, shop, and study space. Students learn through hands-on exploration. Makerspaces are informal, and an unscheduled activity, most often used before and after school in the Library Media Center. MakerSpaces would change monthly in most cases, and provide all Freshman on campus opportunities to explore STEAM areas and try their hand at something they've never had a chance to try before, like designing a circuit, programming, building, 3D printing, designing, etc. Occasionally, an organization could host scheduled sessions in a MakerSpace. These sessions would generally focus on a single skill, such as coding, 3D design, or building of some sort. Supplies such as

cardboard, plastic, metal, gears, wood, and batteries may be on hand, and available along with necessary tools to complete a project.

**Allen ISD Goals/ TEKS**

Which Allen ISD goals/TEKS does this project support? Provide only two or three examples.

With our core belief in Allen ISD being that **every child deserves the highest quality education,** MakerSpaces will be available to EVERY student at Lowery Freshman Center. MakerSpaces will naturally support the AISD Graduate Profile that states, **students will master the skills needed to design innovative solutions within independent and team settings,** by providing the time, space, resources, and tools for students to gain hands-on experience with self-led projects that would include programming, engineering and design, electronics, 3D printing, and so much more! While there are numerous TEKS that this type of learning environment supports, three that stand out are: In our Social Studies TEKS 31 A and B state: The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings. The student is expected to:

(A) use a problem-solving process to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution; and

(B) use a decision-making process to identify a situation that requires a decision, gather information, identify options, predict consequences, and take action to implement a decision.

In Science- Scientific Processes 2 (E) states that students are expected to: design and implement investigative procedures, including making observations, asking well-defined questions, formulating testable hypotheses, identifying variables, selecting appropriate equipment and technology, and evaluating numerical answers for reasonableness

And in ELA- (26) Listening and Speaking/Teamwork.- Students work productively with others in teams. Students are expected to participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making.

**Measurement**

What specific measurements will be used to evaluate the effectiveness of the project? (500 words or less)

The impact and success of the MakerSpace program will be measured in two parts: First of all through survey and interview feedback from students, teachers, administrations, and parents and secondly through student participation, enthusiasm, and the ability to communicate and apply high-level, critical, and creative thinking skills to other areas of their schoolwork.

**Teaching Methods**

What teaching methods will be used to implement this project? (500 words or less.)

The primary teaching method is for Library Staff to effectively and thoroughly frontload MakerSpace projects with instructions, resources, and possible example outcomes so that students can lead themselves through the MakerSpace projects. Library staff and teachers would make themselves available for support, questioning, and guiding students as needed while the students are interacting with the student-led projects.

**Timeline**

What is the project timeline and the date of implementation?

After the requested items are purchased, it is estimated that the materials will be prepared and the first MakerSpaces will be up and running by November, 2015 and new MakerSpaces will be offered each month throughout the school year.

**Curriculum/System Support**

Explain how this idea or project enhances/supports Allen ISD curriculum or existing systems.

The high-level, critical and creative thinking skills used in student-led projects in STEAM areas support our curriculum by encouraging students to collaborate, question, explore, tinker, make connections and design innovative solutions to problems which directly support the growth of our students as independent thinkers and life-long learners. Each discipline area contains goals of this nature as does our AISD Graduate Profile. By providing these independent hands-on learning opportunities without the fear of adverse consequences, students will explore new areas of interest, work independently and with teams, and grow their 21st Century skills.

**Budget details**

Budget Details \*\* All awarded funds will be available by September of the next school year.

Unit

Total

| Budget Item  | Item Type                           | Cost   | Quantity | Cost   |
|--|-------------------------------------|--------|----------|--------|
| Elenco 300-in-One Electronic Project Lab               | Instructional Supplies or Resources | 106.07 | 1        | 106.07 |
| Electronic Playground 50-in-one                        | Instructional Supplies or Resources | 17.0   | 2        | 34.0   |
| littleBits Electronics Premium Kit                     | Instructional Supplies or Resources | 149.0  | 1        | 149.0  |
| littleBits Electronics Arduino Coding Kit              | Instructional Supplies or Resources | 85.78  | 2        | 171.6  |
| Thames & Kosmos Wind Power 2.0                         | Instructional Supplies or Resources | 35.81  | 1        | 35.81  |
| Thames & Kosmos Air + Water Power                      | Instructional Supplies or Resources | 44.41  | 1        | 44.41  |
| Thames & Kosmos Electricity and Magnetism              | Instructional Supplies or Resources | 45.0   | 2        | 90.0   |
| Snap Circuits Motion Kit                               | Instructional Supplies or Resources | 72.0   | 1        | 72.0   |
| Snap Circuits Extreme SC-750 Electronics Discovery Kit | Instructional Supplies or Resources | 100.0  | 1        | 100.0  |
| Thames & Kosmos Physics Workshop                       | Instructional Supplies or Resources | 50.0   | 1        | 50.0   |
| SolarLab 1.0 Solar Electricity Learning Kit            | Instructional Supplies or Resources | 50.0   | 2        | 100.0  |
| Elenco Solar Deluxe Educational Kit                    | Instructional Supplies or Resources | 20.0   | 2        | 40.0   |
| K'NEX Education - Intro to Structures: Bridges         | Instructional Supplies or Resources | 40.0   | 2        | 80.0   |
| Shipping and handling on some items                    | Other Expenses                      | 50.0   | 1        | 50.0   |

BUDGET TOTAL 1,122.89

Are there any additional funds available for this grant? Campus or District Funds? PTA funds? Let us know if you have or will be seeking funds from other sources to help with this project.

Additional funds?  No  
 Yes

### Signature page and principal contact

| Principal Approval Required   |                  |  |
|---|------------------|--|
| Please provide the Name and Email of your Principal   |                  |  |
| First Name  | Last Name        | Email Address <small>(Completed)</small> |
| Jill  | Stafford         | jill_stafford@allenisd.org               |
| Applicant Signature   |                  |  |
| <p>By entering my name below I signify that I understand that if I move within the District and have written the grant myself, I may take the grant with me to my school (as long as it is appropriate for my classes). If I have written the grant as part of a team, I will leave the grant behind with the team. If I leave AISD, I will leave the grant with the school for which I wrote the grant. As a condition of this grant, I will complete an evaluation form provided by the Foundation.</p> |                  |  |
| Signature   | Michelle R. Shaw |  |
| Date  | 02/27/2015       |  |

### Principal's approval form

I certify that this would be a good use of funds for our school and this grant supports the district goals and/or our campus improvement plans. \*\*Do NOT include any identifiers, such as: campus name, your name, teachers name or mascot \*\*

No actions possible.

Comments

Accept

**History and final disposition of application**

State Change History

State Change \*\*\*\*\*  
03/24/2015 15:03:36  
Submitted

State Change \*\*\*\*\*  
03/31/2015 17:45:29  
Accepted

Grant Status

Grant Awarded  **Yes**  
 **No**

Award Amount 1123