

Grant Number 1058

Project Title Mind Blowing Science!

Please select the **MAIN** curriculum area your grant addresses. ScienceDoes your grant have a technology component? (Will you have technology equipment, software, etc. in your budget?)  
 No  
 Yes

### Primary Contact Information

First Name Regena

Email regena.bell@allenisd.org

Confirm Email regena.bell@allenisd.org

Last Name Bell

Phone Number 214-495-6765

Campus Kerr Elementary

Main Subject Science - Elementary

Grade(s)

1

I have co-applicants. 

### Social Media

Please provide your work-related social media contact information.

Facebook N/A

Twitter @BellRegena

Other (please specify) N/A

Grant Number 1058

### Campus/Student Information

Your campus: Kerr Elementary

Will other campus' be involved/impacted by this grant?  
 No  
 Yes

Your grade(s): 1

Will other grades be involved/impacted?  
 No  
 Yes

### Project Purpose

What is the problem, need or opportunity that this grant will address? Describe the impact of this project on your students. (500 words or less.)

"That just blew my mind! Can we do this again?" asked Carson after our class of first graders completed the Maker Space lesson. The task involved teamwork as well as brain power to execute the project. Kids love the awe and that is the seed of science. There is an old Chinese Proverb that states:

"Tell me and I'll forget; Show me and I may remember; Involve me and I'll understand."

The purpose of this project is designed to provide and involve first grade students with hands-on and process-based experiences. We will heighten children's interest and achievement in the scientific process. Maker Space is a program at our elementary that correlates and enhances our science and math objectives. The newly opened STEAM center and our Maker Space projects offer opportunities where students can imagine, invent and inspire. However, we have a limited amount of sessions, therefore, we need to extend the programs to our classroom.

The goal of this project is to provide a positive attitude toward science processes while building critical thinking skills and written expression necessary for achieving science literacy. Students' reading and writing achievement will improve through activities while fostering a desire for meaningful and personal experiences with science.

### 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.)

"Mind Blowing Science" will be implemented to enhance our present science curriculum for first graders. There will be an extension of projects introduced from The STEAM Center and our Maker Space program. Students will be provided with manipulatives that will afford a link for the concrete thinker to better understand scientific ideas. Mini-lessons will be taught at the beginning of each session to guide students on specific objectives. Students will be free to explore the objective with the provided materials. Risk-taking will be encouraged for developing the understanding of required skills.

The grant will not only improve academic achievement in science, but will also strengthen writing and communication skills. Students will be offered opportunities to create a science journal and work as an individual or in cooperative groups. Photographs will be taken of children as they inquire and create using the materials to hypothesize and make conclusions of their experiment and discoveries. The photos will be used for future discussions, science journals and to share with friends, family and peers. As an experienced primary teacher, I have concluded that:

-A large and varied assortment of manipulatives in the classroom is a vital ingredient in improving science performance. We must surround children with opportunities that enhance problem solving and experimentation.

-Writing everyday is essential for students to become proficient. Suitable mentor texts provide models for children preparing them for the writing process for all subject matter.

-Science and writing are connected with problem solving. When students can explain their reasoning, they are elevating themselves to a higher order of thinking.

Kerr Elementary has a growing diverse population. There are a number of students that enter first grade being identified as "at-risk." We also have a high number of students with English as their second language. As educators, we desire that all children be achieving at grade-level or above. There is a need to provide students with readily available materials that promote learning by effective means. Our classrooms need to be enriched with unique materials that will promote engaging learning for a balanced science program.

A handbook will be distributed to parents with suggested helps and strategies. Learning does not stop at school, but continues in the home environment. The helps will include literacy and math strategies along with science investigations for home. The cover will identify the Foundation for Allen Schools as the provider of grant funding for the project.

### Project Summary

Provide a brief summary for use on the Foundation's website and social media. (2-3 brief sentences)

Pictures and a parent-handbook are available to view on our classroom web page. At the end of the school year, a Power Point will be created to showcase our grant and the Foundation for Allen Schools. Pictures of our science happenings will be posted on Twitter/Kerr and may be shared with the Foundation's website.

### Allen ISD Goals/ TEKS

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

- 1.2 Scientific investigation and reasoning. The student develops abilities to ask questions and seek answers in classroom and outdoor investigations.
- 1.3 Scientific investigation and reasoning. The student knows that information and critical thinking are used in scientific problem solving.
- 1.4 Scientific investigation and reasoning. The student uses age-appropriate tools and models to investigate the natural world.

### Measurement

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

- Objective #1:

By the end of the 2019-2020 school year, 85% of the participating students will improve by at least 50% on their expressive language and scientific vocabulary when writing in their science journals.

- Evaluation #1:

There will be a comparative analysis, using a teacher-made rubric, of the students' first science journal entries in September of 2019 and their last in May of 2020.

- Objective #2:

In May of 2020, 85% of the targeted students will demonstrate a 50% improvement on a teacher made test of basic science skills that correlate with the science TEKS (objectives).

- Evaluation #2

A pretest will be given the second week of school and a post-test administered in May. A comparison of the two sets of scores will be analyzed.

### Teaching Methods

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

Science instruction in our classroom will involve active participation. Mini-lessons will be provided at the beginning of each session using the text, videos, and literature to guide students on the focused objective. The children will be encouraged to explore and document findings in their science journal. The scientific process of asking questions, constructing a hypothesis, testing the hypothesis, analyzing data and communicating their results will be taught and encouraged in their science studies. We will continue to attend Maker Space classes and participate in a field trip to the Allen ISD STEAM Center.

### Timeline

What is the project timeline and the date of implementation?

## Date Activity

July 2019 -Compile an informational handbook for parents

-Make rubric and pre/post assessment tool

-Attend an Allen science workshop

August 2019 -Administer pre-science assessment

-Training of students in the classroom with procedures and materials available

-Introduce the Science Journal to first graders

September 2019 -Educational Grant Funds Request form submitted

-Ordering of materials

-Organize and examine supplies/materials as they are delivered

-Send Parent-Handbook explaining grant and Foundation of Allen Schools to parents

Focus on:

1) Improving writing through science journals

2) Use of manipulatives/experiments to improve critical thinking skills

3) Explanation of and thanks to Foundation for Allen Schools for provisions of grant funds

October 2017 -Continued implementation of science projects

April 2018 -Science assessments administered to track progress, learning needs and interests

-Display science materials and journals at Open House/Thanks to Foundation For Allen Schools

-Field trip to the STEAM Center; Attending our school Maker Space Classes

May 2012 -Administer post-science assessment

-Examine test results to determine if objectives have been met

-Power Point of classroom grant activities submitted to Foundation

Dissemination:

- Weekly newsletters will be sent home to parents informing of classroom activities and science happenings

- The principal will be periodically updated along with the midterm and final update/Power Point to the Foundation For Allen Schools

- Children will share their journals and experiment discoveries with peers and families

- Ideas will be shared with other first grade team members

- Handbook which includes science, reading, math and writing activities will be developed and made available to parents, team members, and other school campuses upon request

- A display will be set up at Open House featuring projects; Information will be shared about The Foundation For Allen Schools

### Curriculum/System Support

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

The "Mind Blowing Science" project can easily be replicated throughout Allen ISD in the primary grades. Teachers in Allen ISD may share the handbook with parents that give suggested activities and sample questions for their children. It is documented that parents are willing to help, but many do not know how to proceed. The parent handbook will offer suggested science activities, math, writing and reading strategy guidelines in maintaining the learning process at home. The way students invest out-of-school time is a critical factor in determining their academic success. Therefore, educators have an obligation to encourage positive and meaningful family involvement in the education process. Parents may help their child develop scientific concepts, build vocabulary, and foster an attitude of curiosity outside the classroom framework. Lesson plans and thematic units will be shared with other school campuses upon request.

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

Budget Item	Item Type	Unit Cost	Quantity	Total Cost
Makerspace: Code and Go Mouse	Instructional Supplies or Resources	39.49	1	39.49

Budget Item	Item Type	Unit Cost	Quantity	Total Cost
Maker Space Keva Connect	Instructional Supplies or Resources	50.0	1	50.0
Knex Imagine	Instructional Supplies or Resources	38.5	1	38.5
Maker Space Lego Classic	Instructional Supplies or Resources	48.5	1	48.5
Frog kits/live frogs and habitat	Instructional Supplies or Resources	20.0	6	120.0
Snails	Instructional Supplies or Resources	5.0	6	30.0
WITKA 99 Pieces Magnetic Building Blocks	Instructional Supplies or Resources	20.99	1	20.99
MindWare KEVA: Color Planks	Instructional Supplies or Resources	53.0	1	53.0
Science Library from Scholastic	Instructional Supplies or Resources	130.0	1	130.0
Keva Maker Space Planks	Instructional Supplies or Resources	49.95	1	49.95
Hex Bugs	Instructional Supplies or Resources	6.95	5	27.8

BUDGET TOTAL 608.23

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

### Principal Approval Required

Please provide the Name and Email of your PRINCIPAL. (Not your name)

First Name	Last Name	Email Address <small>(Completed)</small>
Ardath	Streitmatter	ardath.streitmatter@allenisd.org

### Applicant Signature

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.

Signature Regena Bell

Date 01/22/2019

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 \*\*

Comments

I fully support increasing the resources for teachers to incorporate MakerSpace in their classrooms.

State Change History

State Change regena.bell@allenisd.org  
01/23/2019 09:32:25  
Submitted

State Change \*\*\*\*\*  
01/23/2019 18:00:40  
Accepted

Grant Status

Grant Awarded  Yes  
 No

Award Amount 609