

Grant Number 1127

Project Title Inspire Life Long Learning through Lego Education

Please select the **MAIN** curriculum area your grant addresses. Gifted & Talented

Does your grant have a technology component? (Will you have technology equipment, software, etc. in your budget?)

No
 Yes

Primary Contact Information

First Name Terry

Email terry.rains@allenisd.org

Confirm Email terry.rains@allenisd.org

Last Name Rains

Phone Number 972-236-0600

Campus Anderson Elementary

Main Subject Advanced Academics

Grade(s) Please select all applicable.

I have co-applicants.

Social Media

Please provide your work-related social media contact information.

Facebook

Twitter @RAINSAIMCLASS

Other (please specify)

Grant Number 1127

Campus/Student Information

Your campus: Anderson Elementary

Will other campus' be involved/impacted by this grant?

No
 Yes

Your grade(s):

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.)

The Lego WeDo 2.0 kits will provide engaging, hands-on experiences students need to explore core STEM concepts and link them to real-life phenomenon. The lessons are designed to ignite students natural curiosity, helping them develop essential communication, creativity, collaboration, and critical thinking-skills in a fun and exciting way. Tactile, flexible solutions grow with students as they problem-solve and discover how science, technology, engineering, and math affect their everyday life. The opportunity to explore, and create with the Lego WeDo 2.0 kits can also bring exciting learning experiences in coding programs, and maker spaces in our GT classroom. This Lego kit will bring 21st Century learning experiences into our classroom and the lessons will be connected to real-world problem solving opportunities. The students will be engaged in creating, designing, writing, programming, coding, collaborating, communicating using critical thinking skills and presenting their learning to others .

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 WeDo 2.0 robotic kits are designed to be flexible, cross-curriculum tools that ignite curiosity and integrate easily into the classroom. Lego has made their WeDo 2.0 lessons standard-aligned with lesson plans that provide a variety of learning experiences, including guided learning and problem-solving lessons, that relate directly back to students' real-life questions and observations. Assessment options built in to the lessons help make sure that assessment happens during learning, not after. The activities and tasks that the students are able to perform are endless with this program. Some of the lessons include: Design ways to improve driving safety by helping to prevent drivers from falling asleep and causing an accident. Investigating what characteristics of a building would help make it resistant to an earthquake, using an earthquake simulator constructed from LEGO bricks. Design an automatic LEGO floodgate to control water according to various precipitation patterns. Exploring balance and buoyancy, pushes and pulls and wind energy. There are so many lessons the Lego Education have provided that support our STEAM curriculum, and common core standards.

I have had the opportunity to look on-line at the LEGO Education's lesson plans and they are aligned to NGSS and Common Core State Standards in ELA and Math and provide more than 60 options across multiple STEM/STEAM subjects and learning levels.

Here are some of the opportunities listed on their website for the learner:

Learn to investigate problems and find possible solutions

Build collaboration and communication skills as they share their learning processes with their peers

Learn to see failure as a form of information gathering

Develop an understanding of how parts work together to create a whole

Project Summary

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

The WeDo 2.0 robotic kits by Lego will provide engaging, hands-on experiences students need to explore core STEM concepts and link them to real-life experiences. The students will have the opportunity to become problem-solvers and discover how science, technology, engineering, and math affect their everyday life.

Allen ISD Goals/ TEKS

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

These activities and lessons support goals and TEKS for technology, science, and math. The students will engage in coding their Lego creations to complete a task. This supports the technology TEK by using critical thinking, problem solving, and decision making skills. All STEAM tasks will require, "the ability to problem solve," as they use the given device/supplies to complete the task, project or challenge.

Measurement

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

Each lesson that is provided with the Lego WeDo 2.0 program has a student reflection sheet for assessment. The student sheets provide key objectives for the lesson, exploration stage, planning, building and reflection. The students will also demonstrate their learning through presenting to their class in a variety of ways- Seesaw presentation, Google slides, video, or oral presentation/demonstration.

Teaching Methods

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

The projects have lesson plans provided by Lego Education but will also be adapted to fit our GT curriculum. The students will use the Engineering Design Process to problem solve and create their projects.

Timeline

What is the project timeline and the date of implementation?

The project timeline will be on going throughout the school year with each grade level (K-6) during AIM class.

Curriculum/System Support

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

Our AIM program already provides enrichment for our GT students and this program will enhance that learning. It will provide hands-on opportunities for the students to work at the to level of Bloom's through creating, designing, constructing, developing and writing. The students will also use the Engineering Design Process which will allow them to ask, imagine, plan, create, improve and communicate their ideas.

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

Budget Item	Item Type	Unit Cost	Quantity	Total Cost
We Do 2.0 Robot Kit	Technology	198.0	3	594.0

BUDGET TOTAL 594

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>
Alana	Chisum	alana.chisum@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 Terry Rains

Date 01/29/2019

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 **

No actions possible.

Comments

This grant is in line with our campus goals and objectives that are laid out in the Campus Improvement Plan.

State Change History

State Change terry.rains@allenisd.org
01/28/2019 08:40:16
Submitted

State Change *****
01/28/2019 11:59:51
Accepted

Grant Status

Grant Awarded Yes
 No

Award Amount 594