

Grant Number 1208

Project Title Star Gazers Unite!

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 Mary Claire

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Last Name March

Phone Number 214-755-9848

Campus Ford Middle School

Main Subject Science - Secondary

Grade(s) 8

I have co-applicants.

Social Media

Please provide your work-related social media contact information.

Facebook facebook FMS Staff

Twitter @sciencediva8

Other (please specify)

Grant Number 1208

Campus/Student Information

Your campus: Ford Middle School

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

Your grade(s): 8

Will other grades be involved/impacted?
 No
 Yes

Please select all grades that will be involved/impacted by the grant.

Pre-K
1
K

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.)

Our 8th-grade students must understand and apply the concept that Stars, like human fingerprints, are unique to every individual, but this also occurs in our stars. Stars emit different colors due to their chemical makeup. Students understand that the stars they see are white due to the vastness of the universe. We have Spectrum Tubes containing gases such as Hydrogen, Helium etc., in a sealed glass tube that we burn in the classroom. This helps our students visualize the different color spectrum of each gas, and its wavelength. Their understanding of the EM Spectrum becomes more understandable. They then analyze the color against an element chart showing the wavelengths of that element and color code it on the assignment.

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 tube with an element is placed in the Spectrum Tube Electrical Supply unit and turned on. The students view the light using a Spectra Scope and determine which element is emitting light based on the wavelength and color in the Spectra Scope. The students then make a hypothesis of the element and is confirmed by the teacher. The students continue until all tubes are shown and begin a color coded diagram of the elements wavelengths and answer questions regarding the EM Spectrum and "fingerprint" of the stars. Unfortunately, the gases inside the tubes burn out often as they are used every year.

Project Summary

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

This lab creates interest and curiosity in exploring the universe and most students are completely engaged. We will post the students viewing the lab and using the spectrascopes on our Facebook page and Twitter.

Allen ISD Goals/ TEKS

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

TEKS 8.8 A B C D E

Measurement

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

Students will be tested on the EM Spectrum, understanding waves and frequency thorough quizzes including vocabulary. They are also tested on this TEKS and a project is designed in which the students draw a constellation and create a Shoe Box Planetarium. This lab also brings some additional references to the Chemistry Unit in that they recall how each element emits different colors. They tend to quiz and test well after doing this lab.

Teaching Methods

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

Introduced as a lab but written as a collaborative learning project, they work as a team to make an educated guess on the element's identification. Team members discuss what element it is using a color-coded Element chart showing the EM Spectrum of that element. The student's answers are confirmed by the teacher and the students then color the spectrum for that gas before we move on to the next elements.

Timeline

What is the project timeline and the date of implementation?

This Unit, Waves and the Universe is taught each year usually in the Spring Semester. It is a difficult unit to comprehend as all of a star's activity is at night. Date of implementation is August 2019-2020.

Curriculum/System Support

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

There is not an opportunity for students to view stars and the universe without a powerful telescope and field trips to such places and expensive. In addition to the cost of a field trip, the stars are only visible at nighttime.
This lab is one that supplements the students learning the EM Spectrum while studying Stars and the Universe.

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

Budget Item	Item Type	Unit Cost	Quantity	Total Cost
Iodine	Instructional Supplies or Resources	64.4	2	128.8
Spectro Scopes	Instructional Supplies or Resources	9.95	10	99.5
Bromine	Instructional Supplies or Resources	70.3	2	140.6
Nitrogen	Instructional Supplies or Resources	84.0	2	168.0

BUDGET TOTAL 536.9

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(Completed)
Matt	Russell	matthew.russell@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 Mary Claire March

Date 01/31/2019

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 would be a great opportunity for our students to see parts of the visual spectrum that they might not otherwise have an opportunity to see.

State Change History

State Change mary.march@allenisd.org
01/31/2019 15:41:21
Submitted

State Change *****
02/01/2019 16:22:25
Accepted

Grant Status

Grant Awarded Yes
 No

Award Amount 537