

General Information

Grant Number	907
Project Title	Concrete to Abstract: Learning Math with Manipulatives
Please select the MAIN curriculum area your grant addresses.	Math - Elementary
Does your grant have a technology component? (Will you have technology equipment, software, etc. in your budget?)	<input checked="" type="radio"/> No <input type="radio"/> Yes
Primary Contact Information	
First Name	Denisse
Email	denisse.rayas@allenisd.org
Last Name	Rayas
Phone Number	915-637-8187
Campus	Boyd Elementary
Main Subject	Math - Elementary
Grade(s)	<input type="text" value="3"/>
I have co-applicants.	<input checked="" type="checkbox"/>
Social Media	
Please provide your work-related social media contact information.	
Facebook	
Twitter	@denisse_rayas
Other (please specify)	

Grant Co-Applicants

Additional Grant Applicants			
First Name	Last Name	Campus	Grade
Maridee	Ryan	Boyd Elementary	3rd
Crystal	Dunlap	Boyd Elementary	3rd
Chinar	Fattah	Boyd Elementary	3rd
Tammy	Smith	Boyd Elementary	3rd
Denisse	Rayas	Boyd Elementary	3rd
Dora	Hawkins	Boyd Elementary	3rd

Describe details of the project

Grant Number	907
Campus/Student Information	
Your campus:	Boyd Elementary
Will other campus' be involved/impacted by this grant?	<input checked="" type="radio"/> No <input type="radio"/> Yes
Your grade(s):	3
Will other grades be involved/impacted?	<input checked="" type="radio"/> No <input type="radio"/> 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 purpose of the project is to involve students in doing mathematics using math manipulatives. According to the NCTM (1989): Students who are actively engaged in meaningful, hands-on, minds on learning experiences learn to: value mathematics, are confident in their ability to solve problems, learn to communicate mathematically and learn to reason mathematically. Therefore the purpose of this grant is to have math manipulative resources for 3rd grade students in the math classrooms. As Papert (1980) stated "manipulatives are objects to think with" and can positively affect learning. Students learn more if they are given their own set of manipulatives to explore mathematical concepts instead of sharing within a group. Group collaboration, student-teacher interactions and individually recorded information to problem situations are other key components whenever manipulatives are used within the classroom.

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 manipulatives will be kept in the math teachers rooms for access during instruction and independent work. In keeping the manipulatives in the math teachers homeroom, all students will be able to benefit from the manipulatives. In addition, the third grade teachers will coordinate with the SSI teachers so the students can use the materials during intervention and after school tutoring and mentoring.

Project Summary

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

Hands on learning helps all students make real life connections. Hands on activities engage multiple types of learners. They allow kinesthetic learners to move while learning, auditory learners to hear academic talk from their peers, visual learners to see what is being created and social learners the opportunity to spend time in a small group with purposeful conversation. Use of manipulatives engage students physical activity, which has been shown to enhance memory and understanding. The purpose of the manipulatives is to bridge the gap between students' intuitive, everyday understanding of mathematics and their understandings of the corresponding formal symbolic representations.

Allen ISD Goals/ TEKS

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

3.3F: Representing equivalent fractions with denominator 2,4,6 and 8 using a variety of objects and pictorial models. Measurement. The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.
 3.7C: Determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes.
 3.2A: Compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate.

Measurement

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

The specific measurements that will be used to evaluate the effectiveness of using manipulatives within the units of 3rd grade curriculum. For example: fractions, area, perimeter, geometry, elapsed time, place value and money. The forms of evaluation will be teacher observations, CFA's and STAAR Simulation Test. Through data meetings, we will evaluate the growth of the students in the areas of the readiness and supporting standards, as well as the process standards TEKS which focus on problem solving. Furthermore, through our campus' PLC time, as third grade teachers we will evaluate the students progress in understanding the concepts on fractions, elapsed time, area, perimeter, geometry, money and place value.

Teaching Methods

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

The teaching methods that will be used consist of guided practice, small group work, teacher table activities, station activities, and assessments over each concept. Through planning with each team weekly, we will effectively implement the manipulatives into our teaching.

A variety of teaching methods will be implemented:

- * Blended Style- Engage students in the learning process (use as many ways as possible)
- * Activity Style- Teacher will play the role of a facilitator to help students develop critical thinking skills and retain knowledge
- * Group Style- Delegator will lead group in lab activities and provide peer feedback.
- * Exploration Style- Students will learn by exploring and research rather than through only direct teach methods.

Timeline

What is the project timeline and the date of implementation?

We would begin using the math manipulatives upon receipt and utilize them throughout the 2018-2019 school year and continuing using the material in future years. It would be used on a daily basis for lessons, spiral review, intervention, weekly tutoring, and to help practice specific TEKS for STAAR review.

Curriculum/System Support

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

The use of manipulatives supports the Allen ISD curriculum by allowing students many different resources to choose a model that connects to their learning to solve problems. The use of manipulatives can be very powerful in explaining the meaning and justifying the use of different mathematical processes. We are developing their mathematical thinking and allowing students to be successful problem solvers.

Budget details

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

Budget Item	Item Type	Unit Cost	Quantity	Total Cost
Build & Learn Geometric Shapes Kit item# GG458	Instructional Supplies or Resources	39.99	3	119.97
Money Hands-On Kit item# GG901	Instructional Supplies or Resources	79.99	3	239.97
Area & Perimeter Hands-On Teaching Kit item# GG585	Instructional Supplies or Resources	79.99	3	239.97
Place Value Hands-On Teaching Kit item# GG581	Instructional Supplies or Resources	79.99	3	239.97
Elapsed Time Write & Wipe Boards - Set of 10 item# FF726	Instructional Supplies or Resources	24.99	6	149.94
Fractions Hands-On Kit item# GG904	Instructional Supplies or Resources	79.99	3	239.97
Fractions & Decimals Hands-On Teaching Kit item# GG583	Instructional Supplies or Resources	79.99	3	239.97
Comparing Fractions Flip Books - Set of 10	Instructional Supplies or Resources	39.99	3	197.97
Real-Working Cash Register	Instructional Supplies or Resources	36.99	3	110.97
What's the Best Strategy? Problem Solving Centers - Complete Set	Instructional Supplies or Resources	149.0	3	447.0
Delivery method	Other Expenses	238.46	1	238.46

BUDGET TOTAL 2,464.16

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. (Not your name)

First Name	Last Name	Email Address(Completed)
Judith	Coffman	judith.coffman@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		Denisse Rayas
Date		02/03/2018

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
Great!

History and final disposition of application

State Change History		
State Change	*****	02/03/2018 10:37:18 Submitted
State Change	*****	02/04/2018 18:27:44 Not Submitted
State Change	*****	02/04/2018 19:05:54 Submitted
State Change	*****	02/05/2018 18:00:09 Accepted
Grant Status		
Grant Awarded	<input checked="" type="radio"/>	Yes
	<input type="radio"/>	No
Award Amount		