



Holdenville Education Foundation, Inc.
PO Box 641 • Holdenville, OK 74848
info@hef4ourkids.com

funded



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HEF Staff Only

Grants to Teachers Application Cover Page

*Please use a typewriter or word processor to complete this application.
Submit in the format listed below.*

Date: 3/1/06

Grant Title:

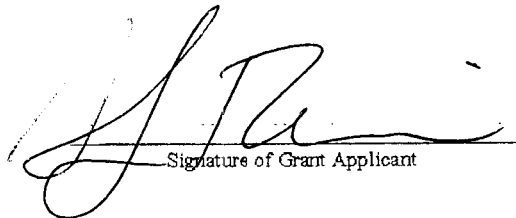
Grant Applicant: Shawndolyn Richmond

School: Holdenville High

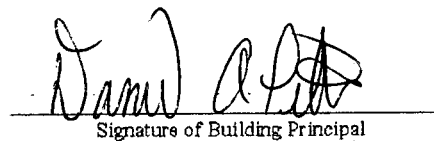
Grade Level: 7-12

Content Area: math

Total Dollar Amount Requested:



Signature of Grant Applicant



Signature of Building Principal

Please mail applications to: Holdenville Education Foundation
PO Box 641
Holdenville, OK 74848
Attn: Teacher Grants Committee

If you have any questions or need further assistance, please contact Shellie Gammil at 379-5484

Grants to Teachers Application Form

Date: February 24, 2006

Grant Title: A Graphing Matter

School: Jr. High School

Grade Level: Seventh, eight, and ninth grades.

Total Dollar Amount Requested: \$3996

1. What is the Major Educational need this grant addresses?

There are three major concerns, addressed by this grant, that impact the students at Holdenville Public Schools. A limited access to technology items, a consistently high failure rate on the state mandated tests, and student's negative attitude about mathematics. These are the battles that are fought daily in our school system.

Our students are expected to have an understanding of how to operate a graphing calculator when they enter college. It is required that all upper level math and science university students own and can operate a graphing calculator. Our students do not have the exposure to this technology at the Jr. High level. They should be introduced to graphing calculators and have frequent opportunities to operate and become comfortable with using this item.

The failure rate for Holdenville students on the state mandated Algebra I test last year was 78%. This is not an acceptable rate and measures must be taken immediately to prevent this from occurring again.

There is a fear of Algebra by many students that is difficult for teachers to combat. Their parents struggled with algebra when they were in school and they share their negative feelings with their children. This is the most difficult task for an Algebra teacher to overcome. Many students enter the Algebra classroom on the first day with the expectation that failure is inevitable.

These three problems will be addressed with the materials in this project. Students will be taught algebra concepts using a variety of activities and methods. The activities will be fun, but the most important goal is to increase active student participation while learning difficult concepts.

2. Approximately how many pupils will be affected by this project, both directly and indirectly?

There are approximately two hundred seventy eight students in seventh, eighth and ninth grades that will have access to the graphing calculators. The graphing calculators and the materials are non-consumable and will be used from year to year.

3. Describe your grant including methods, materials and objectives. Foundation grants are intended to fund a creative teaching plan, so if equipment or materials are requested it should be clearly stated as to why these are an integral part of the plan.

The trend in education is to provide authentic hands-on learning experiences for students. This is a very difficult concept to transfer to Algebra. Many textbook lessons do not show students how to relate Algebra to real world problems. The idea is that if you can “Hook” the students with fun, real-world applications of variables and relationships they will understand that algebra has a purpose and meaning. The curriculum that is requested has a variety of activities that can be utilized by the teachers in grades seven through nine. The teachers will share the materials and calculators.

Many times we become stagnant in our ideas and frustrated with traditional curriculum methods. There is an old saying that applies to this problem, “Insanity is if you continue doing what you have always done, and expecting to get different results”. The current curricula materials used are not working and it is time to try some new innovative ideas. The materials provide activities for the students, but most importantly they provide information for the teachers about new ways to teach and to increase interest and participation. The topics covered by this curriculum include: Someday We’ll All Look Back on This and Graph, A Barrel of Graphs, How to make learning Algebra more interesting, Interested in Building Student Enthusiasm for Mathematics?, Ancient Chinese Mathematics Problems, etc. They are all research based activities that promote students working in cooperative groups to collect and generate data, develop and analyze mathematical models, explore patterns and relevant questions, make and defend predictions, discuss and present their findings and write about their experiences with mathematics. There are many higher level thinking

activities that will be taught in an interesting manner. The students will use activity-oriented approach where students bounce balls, swing pendulums, and check pulses to collect interesting data. The students will use the data that is used to teach students to understand algebraic concepts and techniques. They will be able to investigate real-world scenarios so that they connect mathematics to the world around them.

4. Give a time schedule of implementation.

The grant will begin immediately upon receipt of the materials.

5. Detail your budget request. Include specific information about kinds of materials and equipment needed, sources of supply, and costs (including shipping and handling)

Item	Cost per Item	Total Cost
Graphing Calculators	25@ \$135	3375.00
The Ambitious Horse: Ancient Chinese Mathematics Problems		23.00
Graphing Matter: Activities for Easing into Algebra		19.00
Advance Algebra Through Data Exploration		291.00
Graphic Algebra: Explorations with a Graphing Calculator		21.00
Interested in Building Student Enthusiasm for Mathematics?		8.00
Bakers Choice: See What's Cooking in the Interactive Mathematics Program		227.00
More than Graphs: Mathematical Explorations for Graphing Calculators		32.00
Total		\$3,996

6. What methods will be used for measuring the stated objectives or what definite evaluations will you make to determine whether the grant was successful?

There will be three methods of measuring the success of this project.

1. Teacher observation: This method will be used to evaluate the student interest in Algebra and related topics. This will be evident immediately with increased participation and interest in the subject matter.

2. State Math Scores: The test scores are evaluated and compared yearly. The project will be successful when the failure rate is lowered from its current 78% level.

3. University Information: The school district receives information about our freshmen student's success rate at college. This includes information on how many of our students had to take remediation coursework and how many successfully completed the first year. The long term goal of this grant is to have a positive impact that will be reflected the yearly report.