

Student Technology Fee Request for Funding-Page 1

Program Title: Tools for Mathematics and Science Instruction for K-12 Education

Campus Affiliation: Education Program

Contact Person: Dr. Cherry Banks, Interim Director Email: camb@u.washington.edu

Campus Phone No. 425/352-5331

Campus Box No. 358531

Brief Project Overview

The equipment requested in this proposal would enable UWB teacher interns, Education Minor students, and Education Program graduate students to learn and teach with graphing calculators and motion probes commonly used in K-12 education settings for mathematics and science. The hardware requested in this proposal will also enable the program to teach technological skills required by the OSPI for the Mathematics and Science Middle Grades Endorsement and Secondary Education program.

This project will provide access to critical equipment for all members of the three K-8 teacher education cohorts (90+ students annually) enrolled at UWB and for the mathematics and science education students in the new Secondary Education certification cohort (20+ students), and for 100+ additional Graduate Students and additional Education Minor students enrolled in courses in educational technology. The Quantitative Skills Center currently has access to similar equipment but this request would enable the Education Program to have a classroom set to be used on a daily basis for use by teacher interns when learning how to teach mathematics and science concepts with technology that is currently taken for granted in K-12 schools but which may not have been available when teacher education candidates were in school.

Full description of the project that includes the following sections:

A. The goal of the program or project

The equipment requested in this proposal would be utilized by the Education program with the goals of 1) improving students' content understanding in mathematics and science; 2) to demonstrate how the teaching and learning of mathematics can be enhanced with graphing calculators and probes for data collection; and 3) immerse teacher candidates in the Education Program in commonly used K-12 technology for mathematics and science.

B. A description of the program and how it will benefit the student body

This program will support the purchase of 34 TI-84 Plus Silver Edition graphing calculators for the purpose of teacher interns utilizing them during class to deepen their understanding of mathematics and science concepts as well as to understand how to teach using the graphing calculator to enhance their students understanding. Graphing calculator technology is a basic part of instruction in mathematics and science K-12 setting across the country. However, many of UWB's education majors and minors went to school before graphing calculator technology was readily available. Thus they have not experienced its use as a learner or as a teacher. It is critical that if they are going to teaching mathematics and science that they understand how to integrate it into their classroom teaching. Graphing calculator technology should be utilized everyday as part of teacher interns methods courses to enable them to learn to use the technology and to learn how to teach with the technology. Combined in this request is a request for 15 Go!Motion Probes which allow students to explore scientific phenomena such as distance as a function of time, and velocity and rates of change. In the Education program, it is critical for K-8 teachers as well as secondary mathematics education majors and education minors to have access to this equipment to learn how

both to use it and to develop teaching applications and lesson plans with graphing calculators and motion probes for use in K-12 teaching placements.

C. Specific information about the equipment and/or services being requested

This proposal requests 35 TI-84 Plus Silver Edition Calculators, and 16 Go!Motion Probes to gradually build a collection of probeware for both the graphing calculators and computers suitable for teaching K-12 science and mathematics. This proposal is the beginning of this collection with the Go!Motion probes used for mathematics and simple physics applications. Future purchases are to include probeware for biology such as pressure and Ph sensors, heart rate monitors, temperature probes, etc.

Equipment to be ordered under this proposal:

<u>Description</u>	<u>Cost per system</u>	<u>Quantity</u>	<u>Total</u>
TI-84 Silver Edition EZ Spot Teacher Pack (10 calculators)			
TI-84SESPTP	\$1,290.00 per pack	3 packs	\$3870
Ti-84 Silver Edition Graphing Calculators			
	129.00/calculator	5 calculators	645
<i>Ordering Information: http://www.vernier.com/calc/ti84ps.html</i>			
Go! Motion Teacher 8 Pack			
GO-MOT-TP	\$760 per pack	2 packs	\$1520

Ordering Information: <http://www.vernier.com/go/gomotion.html>

D. How the project will be implemented and by whom

Robin Rider, Assistant Professor in Education, will be teaching the Secondary Science/Mathematics/Language Arts Methods classes in summer of 2008. During these classes and in the Fall 2008 M.Ed. Technology Class, this equipment will be used extensively by the students for individual and group assignments, lesson planning, and demonstration when doing teaching internships. During Winter Quarter, the equipment will be used in the K-8 Mathematics methods courses. Teacher Education Interns will be utilizing the equipment in ongoing work with summer teaching of 6-12 students, fall internships and as part of their regular coursework.

E. What departments will be involved in the installation and support of this project

The equipment will be housed in the LB1-203 Curriculum Lab and managed by Education Program faculty. This is stand-alone equipment and will not be used with UWB computers.

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ITEM (complete description of item, type of product, quantity) *	Unit Cost	Full Cost
TI-84 Silver Edition EZ Spot Teacher Pack - 10 calculators in each Pack – (packs)	\$1290	\$3870
TI-84 Silver Edition Calculators (5)	129	645
Go! Motion Probes Teacher 8 Pack (2)	760	1620
Shipping and taxes		184
Total		\$6319

* This page is a crucial portion of your funding request. Items have to be described in detail, the number of people who this event will serve, quantity and cost of each item, etc. Pricing must be supported by additional documentation from the organization providing the items. Please be specific when listing costs, otherwise your request might not be granted.

The following signatures are required before your application can be considered complete:

Anthony Guerrero, (or designee)
Director, Facility Services

 Date

Comments:

Cynthia Fugate (or designee)
Director, Academic Services

 Date

Comments:
