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**Program Director:**

Dr. R. Wayne Stewart, Dean of Education

**OPSU Faculty:**

Mr. Jerry Mihelic, Education Dept.

Ms. Jana Peterson, Mathematics Dept.

Ms. Shawna Lyle, Mathematics Dept.

Ms. Elaina Stewart, McKee Library

**Area Workshop Teachers:**

Mr. David O'Sullivan, Guymon High School

Ms. Nancy Roberts, Yarbrough Schools

Ms. Bonnie Miller, Plainview School

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The 2007 seminar will focus on creating and using math representations (charts, graphs, tables, etc.), and will continue to emphasize math literacy to help teachers discover ways to combine literacy with computation and numeration in their mathematics lessons. This grant will provide funds to bring math teachers across grade levels to campus for an intensive workshop during the summer of 2007, where they will continue their learning of how to teach the reading and writing of math problems, learn new pedagogical skills in creating and teaching math representations, and increase their technology skills for presentations to their students. Participants will become familiar with graphing software packages, Microsoft Office Suite, websites that support graphing, and other graphing tools, such as graphing calculators and SMART Boards.

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**IMPROVING TECHNOLOGICAL SKILLS TO  
PROMOTE COMPREHENSION  
OF MATHEMATICAL REPRESENTATIONS**

**OBJECTIVES OF THE WORKSHOP:**

**Seminar Participants will:**

develop higher-level knowledge of math content in constructing and interpreting various mathematical representations

identify troublesome mathematics vocabulary as it applies to the representation of mathematical concepts, and develops strategies to help students assimilate new vocabulary

develop strategies for teaching reading comprehension of math problems as they relate to mathematical representations

create assessment instruments to measure student achievement in the areas of mathematical representations

analyze student achievement data and increase their reflective practices to improve instructional strategies

develop presentations using technology to communicate mathematical representations in their classrooms and to share these with their peers

**Students of the Participating Teachers will:**

show improvement in their ability to comprehend mathematical representations appropriate to their grade level as measured by a teacher made pre-post test



**Oklahoma Panhandle State  
University**

Application Form must be received by:  
APRIL 13, 2007

Math-Ese 2-D Workshop  
SCHOOL OF EDUCATION  
BOX 430  
GOODWELL, OK 73939

580-349-1406

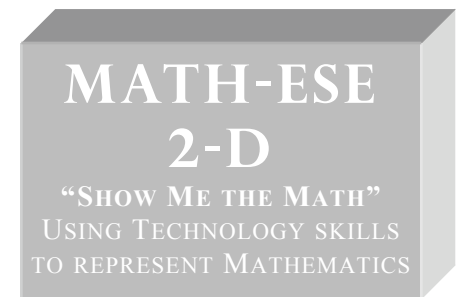
E-MAIL: [rwstewart@opsu.edu](mailto:rwstewart@opsu.edu)

CONTACT THE OPSU SCHOOL OF EDUCATION FOR ADDITIONAL  
APPLICATION FORMS

**OKLAHOMA  
PANHANDLE STATE  
UNIVERSITY**

**A workshop for Oklahoma  
teachers funded through a grant  
from the**

**Oklahoma State Regents  
for Higher Education**



**May 29 – June 2 and June 9, 2007  
Follow-up Sessions Sept. 2 and Nov. 17  
Oklahoma Panhandle State University**



**OPSU SCHOOL OF EDUCATION**

**Preparing effective teachers who are  
Competent, Caring, and Committed!**

Tuesday	Wednesday	Thursday	Friday	Saturday	Saturday
9:00AM-5:00PM	9:00AM-5:00PM	9:00AM-5:00PM	9:00AM-5:00PM	9:00AM-4:00PM	9:00AM-4:00PM
Orientation and presentation of workshop objectives. W. Stewart HMH 127	The participants will be divided into three cohort groups and will rotate between the different presentations—one each day. Topics include: Working with Excel, Using Specialized Mathematical Software for Graphing and Geometry, and Using Specialized Software for Statistical Data. The groups will receive training in the morning sessions and will work on their projects in the afternoon sessions			The participants will be divided into three cohort groups and given training in SMART Board use and PowerPoint creation and use	Participants will present their lesson plans/projects to entire group HMH 127
Basic Skills Training Using Laptops  for all participants W. Stewart, et al. HMH 127	<b>Working With Excel</b>  Primary (K-4) Dave O’Sullivan HMH 109	<b>Working With Excel</b>  Middle (5-8) Dave O’Sullivan HMH 109	<b>Working With Excel</b>  Secondary (9-12) Dave O’Sullivan HMH 109	<b>SmartBoard Training</b>  Nancy Roberts HMH 109	<b>PowerPoint Training</b>  Elaina Stewart HMH 108
Pre-test for all participants Peterson & Lyle HMH 127	<b>Using Specialized Mathematical Software for Graphing and Geometry</b>  Middle (5-8) Shawna Lyle HMH 108	<b>Using Specialized Mathematical Software for Graphing and Geometry</b>  Secondary (9-12) Shawna Lyle HMH 108	<b>Using Specialized Mathematical Software for Graphing and Geometry</b>  Primary (K-4) Shawna Lyle HMH 108	Primary 9-10am	Secondary 9-10am
				Secondary 10-11am	Middle 10-11am
				Middle 11-Noon	Primary 11-Noon
	<b>Using Specialized Software for Statistical Data.</b>  Secondary (9-12) Jana Peterson HMH 207	<b>Using Specialized Software for Statistical Data.</b>  Primary (K-4) Jana Peterson HMH 207	<b>Using Specialized Software for Statistical Data</b>  Middle (5-8) Jana Peterson HMH 207	During their “free” period, participants may attend other training or practice their skills in the Education computer lab, HMH 119 or on their laptops	
Lunch					
Specialists Lectures:  Vocabulary, Comprehension, etc.  for all participants Mihelic HMH 127	Working in cohort groups on projects  and individual training  Groups will stay in same room as their morning training			Discussion and training about the creation of the participants’ pre-post test for their students.  W. Stewart, et al HMH 127	Continuation of presentations HMH 127
	Roundtable Discussion centered  on their training and projects  HMH 127				
Roundtable Discussion: Using Technology including survey of current usage HMH 127				Participants will be working on their individual lesson plans and presentations as well as their pre-post test	
Journal Entries and Daily Evaluations					Post Test and Final Evaluation