


**MATH-ESE 2D**  
**Show Me the Math!**



Improving Student Comprehension of Mathematics:  
Representations Using Technology

NO CHILD LEFT BEHIND ACT OF 2001  
Title II, Part A  
Oklahoma State Grant Program  
Oklahoma Panhandle State University  
Goodwell, OK  
May 29-June 2 & 9, 2007

Introductions

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Shawna Lyle  
Janna Peterson  
Dave O'Sullivan  
Jerry Mihelic  
Nancy Roberts  
Elaina Stewart  
Bonnie Miller  
Maggie Cline

Background

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Informal research shows:

1. Students do not possess the language skills to understand the written math problems.
2. Students do not possess the skills necessary to interpret and comprehend math problems that incorporate charts, graphs, and tables.
3. Math instructors rate their own technology skills in mathematics as low to moderate.

Focus

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This 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.



Objectives

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Seminar participants will

- develop higher-level knowledge of math content in constructing and interpreting various mathematical representations,
- develop presentations using technology to communicate mathematical representations in their classrooms that they will share with peers.

Objectives (continued)

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- create assessment instruments to measure student achievement in the areas of math dealing with mathematical representations, and
- analyze student achievement data and increase their reflective practices to improve instructional strategies.

## Objectives (continued)

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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.

## Benefits of Workshop

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*(What's in it for ME?)*

- Ready to use Lesson Plans
- Training in making charts, graphs, and tables
- Training with specialized software
- Supply and Resource Information
- Exposure to and Practice Teaching with Technology
- Books, Software, Supplies
- Stipend!
- Laptop!!

## Important Information

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- Lunch
- Breaks
- Bathrooms
- Copies
- Printer
- Lap Tops
- Stipends

## Requirements

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1. Attendance
2. Daily Evaluations and Reflections
3. Creation of Two Lesson Plans
4. Creation of Pre/Post-Test to be Used in Your Classroom with Your Students
5. Presentation of One Lesson Plan Utilizing Self-Created Technology, Pre/Post-Test Results, and Reflection
6. Submission of Second Lesson Plan (no Pre/Post Test Requirement)

## Schedule

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- Tuesday through Friday (May 29-June 1)—9:00am-5:00pm
- Saturdays (June 2 and June 9)—9:00am-4:00pm
- Follow up days—November 17 and September 22—9:00am-4:00pm

## Detailed Schedule

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- Today (Tuesday, May 29)**
  - Concept Map Pre-Test
  - Orientation
  - Technology Pre-Test
  - Literacy Discussion
  - Round-table Discussions

## Detailed Schedule

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### Wednesday-Friday (May 30-June 1)

#### Specialized Training

- Microsoft Word and Geometry Sketch Pad
- Microsoft Excel
- Fathom

#### •Cohort Groups

- Graph Club
- Graph Master

#### •Round-Table Discussions, Evaluations, and Reflections

## Detailed Schedule

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### Saturday, June 2

- SmartBoard
- PowerPoint
- Pre/Post-Test and Lesson Plan Creation
- Technology Post-Test

## Detailed Schedule

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### Saturday, June 9

- Presentation of Planned Lesson Plans, Technology to be Used and Pre/Post-Tests

## Detailed Schedule

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### Follow-Up Dates (November 17 and September 22)

- Presentation of Lesson Plans Taught, Pre/Post-Test Results, Reflection
- Submission of Second Lesson Plan with Technology Details and Reflection (no Pre/Post-Test Requirement)
- September 22—Concept Map Post Test
- September 22—Final Evaluations

## Contact Information

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For submission of Lesson Plans, Web Sites, and Other Information

[rwstewart@opsu.edu](mailto:rwstewart@opsu.edu)

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