

Welcome Fellows to the TIMES Workshop!

Raleigh, NC

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Project Staff Introductions

Virginia Tech

Estrella Johnson
Rachel Keller

Florida State

Christy Andrews-Larsen
Muhammad Haider

North Carolina State

Karen Keene
William Hall
Nick Fortune



New TIMES Facilitators

- Dr. Valerie Peterson - University of Portland (IOLA)
- Dr. Justin Dunmyre - Frostburg State University (IODE)
- Dr. Milos Savic - University of Oklahoma (IOAA)



Getting To Know You

- The Axes Activity
 - Groups of 4 (project staff has to play too)
 - Determine two axes such that each person fits into one of the quadrants. Please use characteristics or experiences that are personal
 - Example– One axis could be ‘Traveled Internationally’ and the other could be ‘Likes Seafood.’ Then each person would have to be + or – in right ways to fit
 - SHARE
- Repeat with a new group and axes must be connected to your mathematics learning or teaching experience
 - SHARE



Goals for workshop

Fellows will:

- Develop an understanding of the intent of the curriculum and of Inquiry-Oriented (IO) instruction
- Develop a shared vision of instruction and learning goals
- Develop an understanding of the curriculum resources
- Learn some new mathematics and some “students’ mathematics”
- Learn some pedagogical strategies for IO instruction
- Become part of the TIMES community and get ready for teaching IOXX and being a part of the online workgroups



Agenda and Logistics

- Binder introduction
- Briefly go through the agenda in the binder
- Logistics- Will/Nick and Food
 - Sign up for dinner option
- Logistics- Computers/wifi, etc.
- Sign IRB
- Others?



Mystery Table Task

Let's do some math!

Mystery Table Task

This task is used in the Inquiry-Oriented Abstract Algebra (IOAA) materials to launch the “reinvention phase” of the isomorphism concept.



Dive into Some Math

You have all been given two operation tables

- 1) D_6 – the symmetries of an equilateral triangle (the dihedral group of order 6)
- 2) The “Mystery Table”

Your job is to decide if these are actually the same groups, just with different names.

How it Went in Class



Reflecting on Video

- List 2 or 3 things you notice in the video.

4 Components of Inquiry Oriented Instruction

- Generating Student Reasoning
- Building on Student Reasoning
- Developing a Shared Understanding
- Connecting to mathematically standard language and notation

4 Components of Inquiry Oriented Instruction

- Generating Student Reasoning
 - Facilitating student engagement in meaningful tasks and mathematical activity related to an important mathematical point
 - Eliciting student reasoning and contributions
 - Actively inquiring into student thinking

4 Components of Inquiry Oriented Instruction

- Building on Student Reasoning
 - Being responsive to student contributions and use student contributions to inform the lesson
 - Guiding and managing the development of the mathematical agenda

4 Components of Inquiry Oriented Instruction

- Developing a Shared Understanding
 - Engage students in one another's thinking

4 Components of Inquiry Oriented Instruction

- Connecting to Standard Mathematical Language and Notation
 - Teachers introduce language and notation when appropriate
 - Teachers support formalizing of student ideas/contributions

James's Video

Another Video of the Mystery Table Task

As you watch - keep notes about the four components

What did you notice?



4 Instructional Components

Component	Evidence
Generating Student Reasoning	
Building on Student Reasoning	
Developing a Shared Understanding	
Connecting to Language and Notation	

Breakout Sessions!