

COMMIT: Communities for Mathematics Inquiry in Teaching Network

Teaching Exchange Presenters

MD-DC-VA Section Meeting, Spring 2025

Time: Saturday, April 12 from 1:05pm-2:05pm

Location: Enterprise Center 173 and 174

What

The Teaching Exchange is designed as a venue for faculty presenters to share “good ideas” of things they do in the classroom. The session is set up as “speed networking” where participants will spend ~8 minutes talking to a presenter, and then participants will rotate to a new presenter. After the presentations, there will be a chance for participants to go back to speak further with the presenters. Participants will leave with six new ideas to implement in their own classrooms.

Presenters

Exam Retakes in College Algebra

Rachel Barber

I implemented exam retakes in my College Algebra course for remedial students. The retake policy helped students better understand the concepts, lower test anxiety, gain more confidence, and improve their overall grades. I will share strategies for implementing this and a summary of the students' performance.

Informal Feedback through Interactive Apps

Deepak Bastola

One idea is to have participants join the session through an interactive Shiny app available via QR codes on their smartphones or iPads. The app would prompt teachers with various topics to elaborate on, and then continuously generate an anonymous, sharable, in-app, real-time word clouds or some other representations of the recurring themes and phrases to spark further discussion.

Student Presentations in Proof-based Classes

Beth Claire Branman

Every class, I have some of my students do a short presentation on a problem they worked on in class. While I have seen many instructors do this for lower-level classes, I have pushed it into proof-based classes. I seek to give the students practice speaking in front of an audience. I also want to let them see

each other solve a problem and potentially make mistakes, helping them understand making mistakes in math is okay.

Do and Review Assignments

Jessica Kelly

“Do and Review” assignments are designed to facilitate learning through self-assessed homework assignments. Kristen Mazur (Elon University) and Carolyn Yarnell (California State University–Dominguez Hill) created the original framework for Calculus I courses. I implemented Do and Review assignments in a differential equations course. I will discuss the original framework and its benefits as well as the modifications that I made for my course and the resulting student outcomes.

Card Matching Activities for Calculus and Precalculus

Jacquie Rische

Card match activities for Calculus with Precalculus: One form of active learning activities I like to use in my classes is card matching. I will give some examples of card match activities that I use in Calculus with Precalculus. Included in my handout will be a QR code linking to a google drive folder with the activities for others to download.

Using Complex Numbers as a Transition to Upper Level Math

Bob Sachs

Idea: use complex number topics in transition to upper level math (sometimes “proofs”). The complex numbers are simultaneously weird and familiar to students. The material lends itself to student inquiry and conjecture while respecting the need for proof and care in assumptions and context. Handout will describe some particularly engaging aspects tied to roots of unity, Gaussian integers, and Mobius transformations.

The Euclidean Discus Toss

Matt Morena

This hands-on outdoor activity models the Extended Euclidean Algorithm using a frisbee relay. Teams of students throw and catch frisbees to physically enact finding the greatest common divisor between pairs of integers. The Euclidean Discus Toss reinforces modular arithmetic, builds classroom community, and provides an engaging break from traditional instruction. I’ll demonstrate the activity and discuss customizable variations for different teaching contexts.