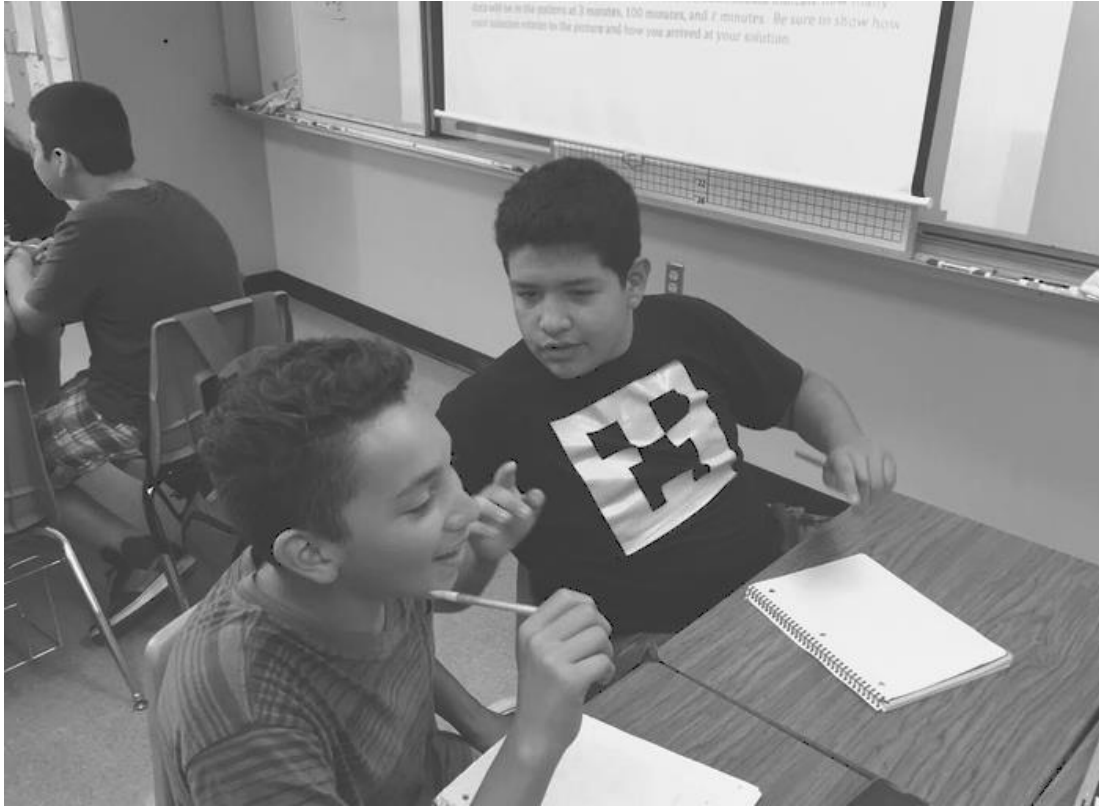


The 66th Annual Western Illinois University Mathematics Teachers' Conference



Common Core Mathematics:
Communicating Ideas
and Constructing Arguments
Friday, April 28, 2017

Schedule

- 8:00 – 8:30** **Registration** – Morgan Hall 101A
- 8:30 – 9:00** **Keynote Address** – Morgan Hall 101A
Melissa Colonis
From the Family Farm to the White House
- 9:45 – 11:40** **Breakout Sessions**
Horrabin Hall 26, 44, 82, 83
See pages 4-6 for titles and abstracts
- 11:45 – 12:30** **Lunch** – Horrabin Hall Gymnasium
- 12:35 – 1:50** **Workshops** – Horrabin Hall 44, 83, 111
and Morgan Hall 102
See page 7 for titles and abstracts
- 2:00 – 2:50** **Closing Address** – Morgan Hall 101A
Adam Poetzel
When Am I Ever Gonna Use This?

Comments on the conference? Go to the conference website and following the link: www.wiu.edu/cas/math/teachers_conference/

Keynote and Closing Speakers

Melissa Colonis

8:30 – 9:30

From the Family Farm to the White House Morgan Hall 101A

In this keynote address, I will describe the Vygotsky Space and how it models mathematical learning through classroom discourse. Applications to both teacher pedagogy and student learning of mathematics will be discussed. Interwoven in the presentation will be the story of my personal journey to becoming a mathematics teacher and how that impacts my own pedagogical approach.

Adam Poetzel

2:00 – 2:50

When Am I Ever Gonna Use This? Morgan Hall 101A

Does that question sound familiar? If you are a math teacher, then you have probably heard this question countless times throughout your career. Will students use the math they learn in their real lives? Why should they invest time and energy in learning mathematics that they might never use? During this talk, we will participate in some reflection and laughter as we role-play a slew of serious and humorous responses to this million-dollar question.

9:45 – 10:25 : Morning Breakout Session #1 – Horrabin Hall

Grades 4 – 6

Horrabin Hall 26

Taik Kim

Developing Fraction Concepts and Thinking Skills

This session will provide information on how teachers can improve children's conceptual understanding of fractions. The speaker will present a variety of strategies and innovative ways to teach fractions.

Grades K – 9

Horrabin Hall 44

Michelle Schwartze

Preparing Teachers for Common Core Math

Is Common Core mathematics being addressed with preservice teachers in a way that is preparing them to incorporate these standards within their future classrooms? This presentation will share results from a study that explored this idea; see how one university is trying to incorporate the Common Core standards within their math methods courses.

Grades 7 – 12

Horrabin Hall 82

Sean Genovese

The Shadow of the Slope

A single diagram to be shared with students, as class discussion and notes, shows the connections between: Ratio and Proportion, Slope, Pythagorean Theorem, Indirect Measurement, Dilation, and possibly other related concepts. Mathematical Practices include: Making Use of Structure, Repeated Reasoning and Modeling with Mathematics.

Grades 9 – 12

Horrabin Hall 83

Melissa Colonis

Frustrated With Trying to Differentiate? Try Cloning Yourself!

Technology can be an effective tool to not only meet the individual learning needs of students, but to also encouraging student engagement in the classroom. In this session, participants will learn how using a modified flipped approach to teaching mathematics can free the teacher to differentiate instruction in the classroom, foster student-student and student-teacher communication, and empower students to learn at a comfortable pace.

10:30 – 11:05 : Morning Breakout Session #2 – Horrabin Hall

Grades K – 6

Horrabin Hall 26

Jamie Fetty Ward and Jacque Holke

Getting Started with Guided Math

Are you struggling to meet the needs of your students with exceptional strengths or difficulties in mathematics? Learn to flexibly group and differentiate your math instruction so all students grow. Get your students talking constructively with you and each other about math and exploring your grade level standards in new ways.

Grades 4 – 6

Horrabin Hall 44

Mary Jo Sarff and Cara Green

Understanding our State Standards and How to Transform Tasks from Simple to Rigorous

In this presentation, participants will work on developing engaging and rigorous tasks from their state standards. Once standards have been reviewed and clarified through discussion attendees will be given simple problems to convert into meaningful tasks. We will facilitate this by demonstrating a model of ways to transform a task by providing a variety of tools based on math solutions references.

Grades 10 – 12

Horrabin Hall 82

Valerie Thomas

Putting the M in STEM to Drive Learning

STEM units engage learners to reason, problem-solve, and think critically across disciplines. Learn the basics of creating and implementing integrated STEM units that are relevant to students. Two classroom-tested STEM units will be presented, along with successes and challenges of these units to help teachers in their classrooms.

Grades 7 – 12

Horrabin Hall 83

Marissa Walczak

Thinking Mathematically from Minute One

Engage students in the first few minutes of class with activities that push students to think mathematically about everyday situations with no risk and participate in productive math discourse. All activities promote the CCSS Math Practice Standards, use technology, support student ownership, and can be applied to your classroom tomorrow!

11:05 – 11:40 : Morning Breakout Session #3 – Horrabin Hall

Grades K – 6

Horrabin Hall 26

Glory Jurich-Sarna

Using Math Literature to Enhance Instruction

This presentation will use math literature as a springboard to problem solving, teaching conceptual knowledge, making guided math centers, and balancing any math program.

Grades 4 – 6

Horrabin Hall 44

Eunmi Joung

Developing Students' Mental Computation Strategies for Multiplication and Division

Compared with a variety of mental computations for whole numbers, students usually have difficulty in solving multiplication and division problems mentally. In this presentation, the strategies that enable students to understand not only the 'how' of multiplication and division but the 'why' will be discussed. Useful handouts will be provided.

Grades 4 – 12

Horrabin Hall 82

Craig Cullen

The Roles of Technology in Mathematics Education: An Introduction to Geogebra

Keeping up with technology is a daunting task. To manage this task, we need to focus and be selective when determining which technologies are worth our time. With these challenges in mind, we will discuss uses of the free and versatile software Geogebra. In this workshop we will provide an introduction to using Geogebra and discuss effective uses.

Grades 6 – 12

Horrabin Hall 83

Jerry Becker

Taking It to the Limit

We look at a problem and determine the answer, and different ways of getting the answer. Once we have the answer, then mathematics begins and we will see an interesting result emerge. Attendees will receive a useful handout for this problem, and for other problems, as well.

12:35 – 1:50 : Workshops – Horrabin Hall and Morgan Hall

Grades K – 6

Horrabin Hall 111

George Reese

Coding in the Elementary Mathematics Classroom

Children as young as kindergarteners are using computers to program. Come see how they are doing this in their elementary school math classes. We will share a second-grade lesson on polygons and learn some Scratch coding.

Grades 6 – 12

Horrabin Hall 44

Adam Poetzel

Using Desmos Activity Builder Lessons in the Classroom

Activity Builder is an amazing, flexible, and free technology tool used to create Desmos-based learning activities for classroom use. Learn how to access and use a growing library of engaging lessons shared by Desmos and other teachers. Better yet, learn how to create your own!

Grades 10 – 12

Morgan Hall 102

Joseph Illichman

Teaching Statistics Using Technology

In our school, we have created an elective statistics class for Seniors that is centered around using technology, specifically Microsoft Excel, or Google Sheets, to show students the importance of Statistics in their everyday lives by completing projects that are centered around the same statistical concepts. They collect and analyze their own data, interact with their peers throughout projects, and become proficient in Microsoft Excel as the course progresses. In this presentation, I will share with the audience the variety of projects we have created along with examples, how to help the students progressively get better with Excel, and my website which will contain all the projects we do throughout the school year.

Grades K – 12

Horrabin Hall 83

Jennie Winters

Assessing Student Growth

This session will address how to use formative and summative assessment strategies that align to the rigor of standards. Sample assessment resources that can be used to monitor student growth in terms of complexity will be discussed. Participants will leave with an understanding of how to establish a balanced system of assessments for the standards in their own schools.

Closing Talk in Morgan Hall 101A from 2-2:50