**Duke Energy Power of Math Summit Speakers 2019**

**November 26, 2019**

**Michael Flynn** is the Director of Mathematics Leadership Programs at Mount Holyoke College. He runs the Master of Arts in Mathematics Teaching program, oversees all the programming for the department, and develops new innovative ways to make the work of MLP more accessible to teachers. Mike is the author of Beyond Answers: Exploring Mathematical Practices with Young Children, a book designed for elementary educators, particularly K-2 teachers to help them understand how math practices unfold in the classroom. Prior to his work at Mount Holyoke College, Mike was a second grade teacher. He was Massachusetts Teacher of the year in 2008, a recipient of the 2009 National Education Association /Horace Mann Award for Teaching Excellence, and the 2010 recipient of the Presidential Award for Excellence in Mathematics and Science Teaching.

**Michael Flynn’s Presentations**

**Keynote:**

**Powerful Moments in Math Class: Why Certain Experiences Stand Out and How We Create More of Them**

Why do we remember some learning experiences and forget others completely? As teachers and teacher leaders, we want lessons and learning experiences to leave long-lasting impressions on those with whom we work. When we understand the psychology behind memories and learning, we can use that knowledge to design powerful moments for adults and students alike. According to Chip and Dan Heath in their 2018 book The Power of Moments: Why Certain Experiences Have Extraordinary Impact, memorable positive experiences are dominated by four elements: elevation, insight, pride, and connection.

In this interactive session we will explore each of these elements in depth through a mathematical lens and consider how to implement them in our work with students and/or adult learners. For elevation, we will consider how rich tasks boost sensory appeal, raise the stakes, and break the script for how students see math class. For insight, we will explore the role of visual representations as sense-making tools for complex mathematical ideas. For pride, we will unpack the recognition gap that exists in classrooms so we can better understand the importance of meaningful feedback and recognizing milestone moments in one's mathematical journey. For connection, participants will learn how to orchestrate learning experiences that deepen ties between members of a learning community and build shared meaning and understanding for everyone.

This session is a perfect mash-up between psychology and the teaching and learning of mathematics. Participants will leave with concrete ideas they can implement right away in their settings to create meaningful and memorable mathematical experiences for all learners.

**Harnessing the Power of Structure on the Path Toward Procedural Fluency**

When elementary students have opportunities to explore structure through examining patterns, making and testing conjectures, and creating representation-based arguments, they develop a deeper understanding of the number system and operations. In this session we will consider routines that support students in looking for and making use of structure and how this work contributes to the development of numerical reasoning and procedural fluency.

**Using Problem-Based Learning and Open-Middle Tasks to Meet the Needs of the Range of Learners**

Problem-based learning is a powerful learner-centered approach in which students learn mathematical concepts by working through rich open middle tasks. Rather than provide direct instruction on a particular method that students should use, students are encouraged to approach problems in ways that make sense to them. In this session, we will explore how we can use this approach to support the learning needs of all students in our class while engaging everyone in the same task.

**Christina Tondevold** is an outstanding teacher who is well known for her fun, highly practical and engaging seminars chock-full of the best, new technology resources - including outstanding iPad apps that teachers can use immediately to teach mathematics in their own classrooms. Christina has taught math to students - and their teachers - in grades K-5 and she has been involved in training teachers in current technology that is easy to learn and powerful to use in ways that fully engage students and significantly boost their achievement in mathematics.

Through her work with elementary students, Christina knows that children’s beliefs about their mathematical abilities start early. Her goal is to help young children see themselves as enthusiastic, budding mathematicians, and she knows that the use of today’s abundant, outstanding technology tools and resources can have a very positive effect on students in grades K-5. Connecting our early learner’s informal experiences outside of school with the formal mathematics we teach can be done so much more easily through the use of iPads and other rich, engaging tech resources. Using these exciting new tools, Christina knows it is possible to break the old destructive cycle that it is acceptable to not like mathematics. Christina is the author of *Practical Strategies for Using iPads and Outstanding Apps, Websites and Cutting-Edge Resources to Enhance Your Math Instruction (Grades K-5),*and she is the founder *of Build Math Minds* website and resources*.* Christina currently lives in Idaho.

**Christina Tondevold’s Presentations**

**3 Reasons Why Kids Still Count on Their Fingers (and how we can help them)**

Children have an over-reliance on counting, they lack number sense, and the manipulatives we use in the early grades actually hinder students’ abilities to progress to more advanced addition strategies.  This session will discuss why these three ideas keep kids from being fluent with their addition facts AND what we can do in the classroom to help.

**Stop Teaching Strategies, Start Teaching Sense**

Too often students have been taught multiple strategies but then never use them or get them all confused. This session will investigate how we can help children develop strategies, instead of teaching them, in a manner that makes sense and lays a solid foundation which can be transferred to addition and subtraction of all numbers.

**Zachary Champagne** has been an Assistant in Research at the Learning Systems Institute at Florida State University since 2011. He previously taught for 13 years in elementary schools with a specialization in math and science, and prior to that, earned his Master of Arts in Elementary Education from the University of North Florida. Zachary is very active with local, state, and national organizations as a founding member and Past-President of the Duval Elementary Mathematics Council (DEMC), Past-President of the Florida Mathematics Presidential Awardees Association (FMPAA), and President of the Florida Council of Teachers of Mathematics (FCTM). He is also serving on the Editorial Board of Teaching Children Mathematics, an elementary mathematics journal published by the National Council of Teachers of Mathematics (NCTM).

He is currently interested in learning how young students think about mathematics and how to help them understand that mathematics makes sense. He currently resides in Jacksonville, Florida.

**Zachary Champagne’s Presentations:**

**Learning to Listen Through Rich Mathematical Tasks**

Listening is one of the most important tools in a teacher's toolbox. In this session, we'll explore a variety of rich mathematical tasks that provide authentic opportunities for us to learn to better listen to our students. We'll also view video clips of students solving problems as an exercise in learning to truly listen.

**Who Gets Access? Teaching the Mathematician, Not the Mathematics**

Why do students who have been systematically marginalized have less opportunities to problem solve? Why do we assume that because these students appear to be "behind" in their mathematical thinking that they CAN'T think like mathematicians? Join me as we explore how to change this paradigm and engage all students in rich mathematical experience.

**Craig Davis** has been teaching for 9 years in a small rural school in Johnson County. He received his bachelor's degree in secondary education from Indiana State University. He taught for a year in High School before moving to the middle school where he is currently employed and where his passion is. Besides math, Craig is passionate about digital learning/digital citizenship and wants his students to develop the same passion. His plan is to never leave the classroom setting as kids are what drives him to continually grow as a person and educator.

**Craig Davis’ Presentations:**

**Building Your Digital Toolbox**

Technology can be a great addition to any classroom if used correctly. During this presentation, I will showcase different apps/websites/resources that I use in my classroom daily. While this session is meant more for teacher's that are one-to-one in some capacity, many of the items presented can be adapted for use in a computer lab as well. Attendees should bring a device to curate materials.

**Digital Engagement in Your Classroom**

Did your school recently make the move to a 1:1 environment for students? Perhaps you have devices, but have a fear that maybe you are using them incorrectly. This session is for any teacher who wants to incorporate more technology into their classroom. During this session, I will share various websites/apps that can be used to increase digital engagement in your classroom.