

Friday, March 8, 2019, 8:30-9:45am

Session: 22 **Room: Ruffner 315**
Target Audience: 6 - 8, 9 - 12+
Strand: Supporting the Success of Every Student

How Full is Your Bucket?
Using Stations in the Secondary Math Classroom

Participants will learn about the different models of stations and small groups and explore ways to increase student engagement while decreasing math anxiety. Come learn tips to begin and maintain a structure that promotes 21st century learning and allows for differentiation.

Samantha Baker, Henrico County Public Schools, ssbaker@henrico.k12.va.us
Kaitlin Ray, Henrico County Public Schools, keray@henrico.k12.va.us

In this session, attendees were divided into groups and traveled to various stations together. We discussed ways to arrange classrooms for stations, developing routines and procedures to maximize learning, and establishing a mathematics community where students communicate, take risks, and engage deeply in the mathematics. Next, we identified types of activities to use for stations along with their pros and cons, analyzed the best type of activity to use for a given outcome, and develop ways to organize stations and communicate options to students. Finally, we identified how to group students, determined when to use whole group or small group lessons for instruction, and discussed how to create small group lessons that are fair, but not necessarily equal.

Friday, March 8, 2019, 10:00-11:15am

Session: 47 **Room: Ruffner 315**
Target Audience: 6 - 8, 9 - 12+
Strand: Implementing Equitable Instruction

Geometry with Algeblocks

Use Algeblocks to explore and model perimeter and area of rectangles and composite figures. Then apply your experience and transition to derive the formula for volume and surface area of rectangular prisms.

Casey Castelli, Virginia Tech, caseyc96@vt.edu
Sam Inge, Virginia Tech, samuel2@vt.edu

In this session, I participated in a lesson on using Algeblocks to teach students about perimeter, area, surface area, and volume. This lesson was in an investigative format and the class discussions were led by the students in the room. I observed how the presenters monitored the 'students' in the room and used guided questioning to lead them through the discussions.

Friday, March 8, 2019, 12:30-1:45pm

Session: 68 **Room: Maugans Alumni Center Martinelli**
Target Audience: 6 - 8, 9 - 12+, Teacher Preparation, General Interest
Strand: Implementing Equitable Instruction

Bye Bye Worksheets! We Have Geometry Games to Play!

Geometry class can be tough enough without the weight of the world on a student's shoulders. We may not be able to solve life's problems, but we can make the classroom equitable while increasing student engagement, investment and innovation. Learn tricks and tips to make your students enjoy geometry class via gamification and classroom grouping.

Kandace Jones, Hanover County Public Schools, kljones@hcps.us

I learned a lot about classroom management in this session. This teacher sets up almost all of her activities as group work and each class has various teams within in that work together to earn points throughout the quarters. She had some great ideas about getting rid of phones during class and providing a welcoming environment that I plan on using in my classroom.

Friday, March 8, 2019, 2:00-3:15pm

Session: 86 **Room: Maugans Alumni Center Prince Edward**
Target Audience: 6 - 8
Strand: Supporting the Success of Every Student

MORE FRACTIONS, PLEASE! LET ME GET A PIECE OF THAT!

Do fractions make your students feel like they are falling A-PART? Well today we are going to pick up the PIECES and help you create a foundational understanding of the WHOLE concept. We will unleash strategies to help students better understand how to work with fractions using visuals, vocabulary, and student tested not-so-secret tools and tips.

Paul Mallory, Providence Middle School, paul_mallory@ccpsnet.net
Erica Byrnside, Providence Middle School, erica_byrnside@ccpsnet.net
Mary Catherine Nebel, Providence Middle School, Mary_nebel@ccpsnet.net

In this session I learned about strategies to help students understand fractions, mainly as a part to whole concept. The presenters gave us strategies that did not require any additional materials besides paper or white boards, such as folding a paper to model multiplying fractions.

Friday, March 8, 2019, 3:30-4:30pm

Catalyzing Change in High School Mathematics: Implications for K-16

Catalyzing Change in High School Mathematics: Initiating Critical Conversations was released by NCTM in April 2018. *Catalyzing Change* identifies and addresses critical challenges in high school mathematics to ensure that each and every student has the mathematical experiences necessary for his or her future personal and professional success. This session provides an overview of *Catalyzing Change* and the implications for mathematics teaching and learning across K-16. It will highlight several of the recommendations including broadening the purposes for teaching mathematics; dismantling structural obstacles that stand in the way of mathematics working for each and every student; and implementing equitable instructional practices.



Karen Graham, Ph.D., is a Professor and

Chair of the Department of Mathematics and Statistics at the University of New Hampshire where she is also the director of the department's summer Master of Science for Teachers program. Dr. Graham served as the inaugural director of UNH's Joan and James Leitzel Center for Mathematics, Science and Engineering Education from January 2003 – June 2013. She has served as the principal investigator of many state and federally funded projects and has presented numerous workshops at local, state, regional, and national conferences and currently serves as the Executive Director of the NSF-funded UNH ADVANCE program. Her research interests include the

teaching and learning of calculus and mathematics teacher development. She has served as the president of the New Hampshire Teachers of Mathematics and the Association of Teachers of Mathematics in New England. Dr. Graham served as a member of the Board of Directors of the National Council of Teachers of Mathematics from 2012-2015. She was the chair of NCTM's *Catalyzing Change in High School Mathematics* Task Force and Writing Team which was published in April 2018.

Saturday, March 9, 2019, 8:15-9:30pm

Session: 122

Room: Ruffner 315

*Target Audience: 6 - 8, 9 - 12+, Math Leaders, Teacher Preparation
Strand: Implementing Equitable Instruction*

Hands On Algebra 1: Going Beyond Algebra Tiles

Both young middle school algebra students as well as older high school students have diverse learning needs including tactile manipulation of math models beyond using algebra tiles and lecturing/notes. This session will include two lesson ideas for Algebra 1 concepts including multiple representations of functions and simplifying radicals.

Betsy McLinda, Plaza Middle School, memclind@vbschools.com

Kate Devine, Plaza Middle School, katelyn.devine@vbschools.com

In this session I learned about another online tool to engage the entire class, called Nearpod. In addition, I learned about additional ways to help students learn Algebra I concepts, such as making a large coordinate grid using a large tarp and masking tape to provide a kinesthetic learning experience. I also learned how to give students a visual model for simplifying radical expressions using graph paper.

Saturday, March 9, 2019, 9:45-11:00am

Session: 147

Room: Ruffner 350

*Target Audience: 6 - 8, 9 - 12+, Teacher Preparation, General Interest
Strand: Supporting the Success of Every Student*

ISN: DIY ASAP!

Have you ever wanted to try the ISN (interactive student notebook) with your students or wondered WTH (what the heck) is a foldable? Come join me as I walk through the ins and outs of what is, IMHO (in my honest opinion), the most versatile and accessible teaching tool for learners of all kinds!

Elisabeth Carver, Highland School, ecarver@highlandschool.org

In this session I learned about a very different way of notetaking. Interactive student notebooks provide students a sense of ownership in their notes and allows the teacher to make the notes mainly centered around student thinking. It provides a way for teachers to switch around the note-taking process so that it is less 'telling' by the teacher.