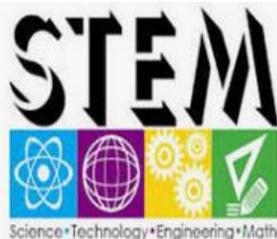


**Greater Cleveland Council of Teachers of Mathematics
Fall Mini-conference:**



Breaking it Down and Enhancing the “M”

John Carroll University, Dolan Center

1 John Carroll Boulevard, University Heights, Ohio 44118

Saturday November 17th, 8:15 AM – 1:00 PM

Learn how to integrate Science, Technology, and Engineering into your Mathematics classrooms and how to emphasize the Mathematics in your colleagues’ Science, Technology, and Engineering classrooms. Select from sessions on coding(scratch, Java and TECHFIT), coding competitions and the new Computer Science Standards, tying GAISE to K-5 and 6-12 science instruction, TI-coding, TI-STEM activities, Robotics, Maker Space, ready-to-use math lessons supporting science concepts, and **MORE** including opportunities to share your ideas with others attending the conference.

See pages 2 and 3 of this flyer for TENTATIVE SCHEDULE with Session Descriptions

Schedule

| | |
|--------------|--|
| 8:15-8:45 | Registration, light breakfast, and networking |
| 8:45-8:55 | Welcome and Announcements |
| 9:05-9:55 | Session 1: Choose from several concurrent sessions |
| 10:05-10:55 | Session 2: Choose from several concurrent sessions |
| 11:05 -12:00 | Session 3: Choose from several concurrent sessions |
| 12:05-1:00 | Session 4: Choose from several concurrent sessions |

Registration Fees

| | Member | Non-Member |
|------------------------------------|--------|------------|
| In-service/Retired Educator | \$25 | \$40 |
| Pre-Service Teacher | \$5 | \$7 |

Non-member rate includes a 1 –year membership to GCCTM

Participants will receive a "Certificate of Participation" for 4 Contact Hours/PDUs for attending this mini-conference. Note: These contact hours may need to be pre-approved by a LPDC.

**If possible register by November 10th
but no later than NOON on November 15th**

by clicking here: [November 17 2018 Registration Form](#)
Or by going to the GCCTM website: <http://mygcctmonline.org/>
and clicking on the “NEXT MEETING” button.

Tentative Schedule-November 17th STEM Mini-Conference

| Session 1: 9:05-9:55 | |
|-------------------------|---|
| Grades/Room | Session Title, Session Description, and Speakers |
| Grades K-6 Computer | <p>Introduction to Scratch Programming and Animation for Elementary Grades: Scratch is a free programming language and online community where children can create interactive stories, games, and animations. This session will step participants through the creation of simple animations across subject matter including math, language arts, and science.</p> <p>Presenter: Linda Seiter, John Carroll University</p> |
| Grades K-12 Tables | <p>Robotics FIRST: “We don’t use children to build robots, we use robots to build children” – Dean Kamen, 2018 World Festival Detroit MI. Learn about FIRST and their impact in our communities. We will discuss the impact of robotics, where and how the Ohio state standards fit and the momentum in Northeast Ohio.</p> <p>Presenter: Karen Plaster, University of Akron</p> |
| Grades 5-8 Computer | <p>TECHFIT: A Perfect Fit for Developing Healthy Minds!: TECHFIT is a STEM program that combines coding, computational thinking and physical fitness. Participants will explore the program’s philosophy, engage in hands-on experiences, and leave with resources and first steps for implementing this program with their students.</p> <p>Presenters: Sara Good, Parma City Schools and Nicole Van Newhouse, Bay Village City Schools</p> |
| Grades 6-12 Computer | <p>GAISE....Now What? See Statistics and Probability Through A Real World Lens: Math standards for statistics and probability in Grades 6-12 are a way to invite students into the work of authentic data collection, analysis and research. Telling a story through data and knowing how to ask a good statistical question are skills that transfer into the world of work and college. This session will focus on strategies for providing real world context to help students develop the ability to formulate “data” questions, select age appropriate statistical methods for analyzing data, make inferences and predictions based on data, and apply basic concepts of probability. This a great entry point for cross-curricular science and social studies activities.</p> <p>Presenter: Char Shryock, Bay Village City Schools</p> |
| Grades 8-12 Tables | <p>Writing Programs with the TI-84 Family: In this session, you will write two programs on your TI graphing calculator. The first program will involve formula calculation and the second will utilize conditional statements to write something a little more fun. If possible, please bring your handheld calculator or SmartView computer emulator to this session.</p> <p>Presenter: Patti Talarczyk, Mentor High School</p> |

| Session 2: 10:05-10:55 | |
|--------------------------|---|
| Grades/Room | Session Title, Session Description, and Speakers |
| Grades K-5 Tables | <p>Framing GAISE In A Real World Lens : Math standards for measurement and data in Grades K-5 are the foundation for the Grades 6-8 statistics and probability standards. This session will focus on strategies for providing real world context to help students develop the ability to formulate “data” questions, select age appropriate statistical methods for analyzing data, make inferences and predictions based on data, and apply basic concepts of probability. This a great entry point for cross-curricular science/social studies or literature based activities.</p> <p>Presenter: Char Shryock, Bay Village City Schools</p> |
| Grades K-12 Tables | <p>Join the Maker Movement: We will explore local Makerspaces and examine what makes a Makerspace. Join the discussion of how to incorporate these spaces into the math classroom and how to connect lessons to math standards in order to inspire our students into 21st Century Learners.</p> <p>Presenters: Valerie Lee Walsh, Stanton Middle School and Karen Plaster, University of Akron</p> |
| Grades 6-8 Computer | <p>Relating Number Sense to the World: Through mathematics using real-world data and hands-on activities, this session connects human population growth (from year 1 C.E.) and the impact of resource availability on our lives. Activities focus on conceptualizing millions and billions of things and people including area and volume, and simulating the impact of supply and demand on a forest.</p> <p>Presenter: Jerry Moreno, John Carroll University</p> |
| Grades 6 -12 Computer | <p>Data Science: This session will introduce learners to the basic concepts in data science and fundamental data science tools. We will give you examples of information visualizations and applied machine learning algorithms.</p> <p>Presenter: Elena Manilich, John Carroll University</p> |
| Grades 9-12 Computer | <p>Grades 9-12 “EdCamp” Sharing Session: This informal session provides participants with the opportunity to ask questions and share ideas/resources about not only STEM education but other areas of interest. Explore and add to GCCTM’s list of resources.</p> <p>Facilitated by- Peter Petto, Lakewood High School</p> |

| Session 3: 11:05-11:55 | |
|---------------------------------|---|
| Grades/Room | Session Title, Session Description, and Speakers |
| Grades K-5 Tables | Elementary Activities from Population Education: Population Education, a program of Population Connection, focuses on human population issues with an emphasis on hands-on learning and balanced discussion of different viewpoints. It introduces students of all ages to how the human race has grown and shaped the world around us. The program has developed age-appropriate curricula to complement students' science and social science instruction about human population trends and their impacts on natural resources, environmental quality and human well-being. They are interdisciplinary and well-suited for a cooperative learning environment. We will be looking at several activities that you can use in the classroom. Presenter: Kristen McGinness, GCCTM Tournament Coordinator |
| Grades 3-12 Tables | Girls Who Code Clubs and other Coding Topics: Coding, or programming, has become a trending topic in the K-12 world in the past few years. Data shows a need for filling programming positions. Females have been underrepresented in the programming field. See how the non-profit organization "Girls Who Code" has been trying to fill that gap and learn about clubs in Northeast Ohio. The presenters were on Ohio's Computer Science Standards writing team and will share updates on those, as well. Presenter: Lynne Pachnowski, University of Akron and Karen Plaster, University of Akron |
| Grades 6-12 Computer | Teach Logical Thinking using Java: Learn how to Augment your Math Class with a series of 3-4 day programming projects using Java. Teachers will be given resources to add 3-4 day lessons to their math classes that teach logical thinking using Fun Projects in Java. Students will not need any special software other than an internet enabled laptop. Presenter: Pat Connor, Saint Ignatius High School / Notre Dame College |
| Grades 9-12 Computer | Beyond Exponential Growth and Decay: This session will focus on more complex recursive relationships that can be modeled or simulated using spreadsheets and/or graphing calculators. Applications explored include the amount of medicine in the bloodstream over time and the spread of disease in a closed system. If possible, please bring your handheld calculator to this session. Presenter: Lynn Aring, GCCTM Vice President |
| Grades 6-8 Computer | Grades 6-8 "EdCamp" Sharing Session: This informal session provides participants with the opportunity to ask questions and share ideas/resources about not only STEM education but other areas of interest. Explore and add to GCCTM's list of resources. Facilitated by- Nicole Janek, Birchwood School of Hawken |

| Session 4: 12:05 - 1:00 | |
|-------------------------|--|
| Grades/Room | Session Title, Session Description, and Speakers |
| Grades K-5 Tables | Framing GAISE In A Real World Lens : Math standards for measurement and data in Grades K-5 are the foundation for the Grades 6-8 statistics and probability standards. This session will focus on strategies for providing real world context to help students develop the ability to formulate "data" questions, select age appropriate statistical methods for analyzing data, make inferences and predictions based on data, and apply basic concepts of probability. This a great entry point for cross-curricular science/social studies or literature based activities. Presenter: Char Shryock, Bay Village City Schools |
| Grades K-5 Computer | Grades K-5 "EdCamp" Sharing Session: This informal session provides participants with the opportunity to ask questions and share ideas/resources about not only STEM education but other areas of interest. Explore and add to GCCTM's list of resources. Facilitated by- |
| Grades 6-8 Tables | Mathematics in Nature: Explore numbers that occur in nature and the mathematical patterns that develop as a result. Several ready-to-use lessons tied to the MS Math Standards will be shared. If possible, please bring a graphing calculator to this session. Presenter: Julia Papcke-Russell, Bay Middle School |
| Grades 6-12 Computer | Teach Logical Thinking using Java: Learn how to Augment your Math Class with a series of 3-4 day programming projects using Java. Teachers will be given resources to add 3-4 day lessons to their math classes that teach logical thinking using Fun Projects in Java. Students will not need any special software other than an internet enabled laptop. Presenter: Pat Connor, Saint Ignatius High School / Notre Dame College |
| Grades 6-12 Computer | STEM Activities from Education.TI.Com: The TI-Website has many ready-to-use STEM lessons for the TI-84 calculators and the TI-Nspire handhelds. Participants will engage in 2-3 of these activities and learn about STEM behind Cool Careers, Hollywood, Sports and NASA. If possible, bring your own TI-Nspire. Presenter: Kimili Gulley, Glenville High School and Mary Beth Hearn, Kenston High School |