WVCTM
Draft Conference Program
March 14 - 15, 2025
Stonewall Jackson Resort

Friday 8:30

Session - 1 | Room - U - Ballroom Whole | All Grades

Welcome and Keynote Address

Presented by Tracy Zager () and Jami Packer(WVCTM)

Friday 10:15

Session - 2 | Room - STEAM Bus | Grades K-5

The STEAM Machine

Presented by Jamie Knight (Marion County Schools) and Kaitlyn Knight(North Marion High School)

Participants will be invited aboard the Marion County Schools STEAM Machine(a Mobile Science Classroom) to get hands on experience with some of the lessons I give to teachers in Marion County Schools to blend Science, Technology, Engineering, Art and Mathematics into the classroom. Lesson plans and activities will be provided to take back with you. The STEAM Machine can fit about 15 people per session.

Friday 10:15
Session - 3 | Room - U - Ballroom 2 | Grades K-5

Math that Moves You!

Presented by Joshua Grant (West Virginia Department of Education)

Participants in this session will explore the connection between physical activity and learning through a variety of standards based physically active Math activities. This is an active session be prepared to move and have fun!

Friday 10:15
Session - 4 | Room - L - Pecan | Grades K-8

Thinking Math and The Four Operations

Presented by Gregory Merritt (Wood County Schools)

Using the excellent PD opportunity, AFTs Thinking Math, we will examine the basic operations (whole numbers and rational numbers) and how we can best help our students understand math processes and concepts.

Friday 10:15
Session - 5 | Room - L - Kanawha | Grades K-8

Using Questions to Promote Student Thinking

Presented by Amanda Cosner (Monongalia County Schools)

During this session, we will consider how to use questioning strategies to promote student thinking and engagement.

Friday 10:15
Session - 6 Room - U - Birch Grades 3-5

Fractions: Can Lego do that?

Presented by Sara Dailey (Ice Mountain Elementary School)

Attendees will explore fractions using Lego bricks as hands-on manipulatives. Various concepts of fractional thinking will be modeled and discussed.

Friday 10:15
Session - 7 Room - L - Maple Grades 3-5

Math Made Clear: Scaffolds to Strengthen Understanding and Engagement

Presented by Christina Colombo (Carnegie Learning)

Instructional scaffolds are vital for supporting the diverse needs of students in todayâ€™s classrooms, enabling all learners to connect with and succeed in math. In this interactive session, K-5 teachers will discover practical scaffolding strategies that empower struggling learners and challenge advanced students. Participants will engage in hands-on exploration of techniques and leave with ready-to-use ideas for their math lessons.

Friday 10:15
Session - 8 Room - U - Ballroom 1 Grades K-12

Keynote Breakout Session

Presented by Tracy Zager ()

Friday 10:15
Session - 9 Room - U - Tygart Grades 6-8

Cooperative Learning in the Middle School Classroom.

Presented by Amy Lambert (Elkins Middle School/Randolph county)

This is not group work! When you think about group work you usually think of 1 person in the group doing all of the work. This session will give teachers ideas of how to turn group work, worksheets, lectures, individual work into engaging, cooperative work were All students are participating.

Friday 10:15
Session - 10 Room - L - Greenbrier Grades 3-12

Sparking Real-World Solutions: Design Thinking in Your Classroom

Presented by Jason Gibbs (June Harless Center at Marshall University)

Explore how applying a transdisciplinary design thinking framework makes learning more active and engaging by creating a culture of problem finding and solving. Discover strategies to promote deeper learning where students think critically, creatively, and empathetically; ultimately preparing them to tackle real-world challenges with innovative solutions. Empower your students to realize they can make an immediate impact in their community and ultimately

leave their world a little better than th

Friday 10:15
Session - 11 Room - U - Bluestone Grades 6-12

Venues: Paper, Device, Vertical, Horizontal, Non-Permanent. Which is Best?

Presented by Kathy Williams (CPM Educational Program) and Theresa Reilly(CPM Educational Program)

Incorporating the â€œwhereâ€• into math instruction, as well as the â€œwhatâ€• and â€œhow,â€• broadens the scope of learning environments beyond traditional paper-and-pencil methods. In this session, we will consider different venues for learning, such as digital devices, vertical non-permanent surfaces, and non-traditional manipulatives. This experience will empower educators to leverage various tools and settings to enhance student engagement, status, equity, and understanding of mathematical concepts.

Friday 10:15
Session - 12 Room - L - Potomac Grades 6-12

The Power of Questions: Strategies to Elevate Math Learning for All

Presented by Sarah Gooch (Albemarle County Public Schools (Virginia))

Whatâ€™s the easiest way to transform your math class to elevate learning for all students? Change your questions! By making small but purposeful adjustments to our questions, we can create a more inclusive environment that invites all students into the learning process. These powerful questions deepen understanding, promote engagement, and help build students identities as capable contributors to classroom discourse and valued members of a math community.

Friday 10:15
Session - 13 Room - U - Sutton Grades 9-12

Paycheck Scavenger Hunt

Presented by Michael Houston (Riverside High School) and Lindsay Gold()

Get your students up and moving in this financial literacy activity. By the end of the session, your students will be able to read a paycheck, calculate percentages, and distinguish between gross pay and net pay.

Friday 10:15
Session - 14 Room - U - Summersville Grades 9-College

WVU Math Pathways to Success

Presented by Lori Ogden (West Virginia University) and Sarah Snyder(West Virginia University)

In this session, youll learn how to effectively navigate the ALEKS Placement Exam, equip your students with expert prep strategies, and introduce them to the benefits of Dual Enrollment Courses. Well also explore the various opportunities available through the HS ACCESS program, helping you support your students in their academic journey and give them a head start in their college education.

Friday 10:15

Session - 15 Room - L - Gauley Grades 9-College

Mathematics Head over Heels: Inverting the Classroom

Presented by Adam Fletcher (Bethany College)

In this session, we will â€œspring intoâ€• the world of the inverted (or â€œflippedâ€•) classroom. We will explore both the â€œApril showersâ€• and the â€œMay flowersâ€• of teaching and learning in this style for several college mathematics courses for majors and minors.

Friday 11:15

Session - 17 Room - U - Ballroom Whole All Grades

Poster Presentations and Vendor Interactions: Session 1

Please use this time to visit our poster presentations and stop by the vendor booths.

Friday 12:45

Session - 19 Room - L - Maple All Grades

Give Your Friends Some Challenging Problems

Presented by George Norton (Retired)

Do you have any favorite math problems that you would like to share? Or would you just like the opportunity to work on math problems with others? This is your chance to bring them in and present them to everyone in the session. These can be any level, and everyone is welcome to attend, whether or not you have any problems to present!

Friday 12:00

Session - 20 Room - U - Ballroom Whole All Grades

Poster Presentations and Vendor Interactions: Session 2

Please use this time to visit our poster presentations and stop by the vendor booths.

Friday 12:45

Session - 21 Room - L - Greenbrier Grades K-2

Student Centered Small Group Learning in the K-2 Classroom

Presented by Karlee Forren (Beckley Elementary School)

How to implement math small groups into the elementary classroom to increase student engagement and foster a sense of responsibility. This presentation will walk you through how to use 10-15 minute group rotations to change the way your students view math. These rotations are designed to get the students moving and collaborating with their peers while working on power standards, essential content skills, and daily fluency practice.

Friday 12:45
Session - 22 Room - L - Potomac Grades K-2

Grow a Garden of Games

Presented by Mary Ritz (New Martinsville School/Wetzel County Schools)

Explore games that will reinforce k-2 math concepts and build critical thinking skills. You can take a list of activities back to school to share with your team. Feel free to bring an idea to share!

Friday 12:45
Session - 23 Room - U - Ballroom 1 Grades K-5

All the Little Things

Presented by Christa Miller (Warwood Elementary) and Heather Puglisi(Warwood Elementary)

Finding the time to effectively teach math can be challenging. However, simple tasks and routines can be incorporated into the elementary classroom to meaningfully enhance math instruction. These routines have multiple entry points that help make math accessible to all. This session will give an overview of several tasks and activities that are natural, relevant, and impactful. Itâ€™s all the little things that are done throughout each day that add up to make math lovable and achievable.

Friday 12:45
Session - 24 Room - STEAM Bus Grades K-5

The STEAM Machine

Presented by Jamie Knight () and Kaitlyn Knight()

Participants will be invited aboard the Marion County Schools STEAM Machine(a Mobile Science Classroom) to get hands on experience with some of the lessons I give to teachers in Marion County Schools to blend Science, Technology, Engineering, Art and Mathematics into the classroom. Lesson plans and activities will be provided to take back with you. The STEAM Machine can fit about 15 people per session.

Friday 12:45
Session - 25 Room - U - Ballroom 2 Grades 3-5

Manipulatives Make Math Meaningful

Presented by Stephanie DeRose (Mountain State Educational Services Cooperative) and Ashlee Reed(Mountain State Educational Services Cooperative)

Students learn best when they can get their hands on math. Manipulatives are one of the ways we can help our children actually see what is taking place when they â€œdo math.â€• Participants in this session will explore a multitude of manipulatives, probably already on their classroom shelves, that can be utilized in the upper elementary grades and how they can be used in a variety of ways. We will also deepen our own understanding of how the use of manipulatives can best serve our students.

Friday 12:45
Session - 26 Room - L - Pecan Grades K-12

Building Number Sense with Esti-Mysteries

Presented by Nancy Mittan (South Middle School)

Looking for an engaging, low-prep way to boost your studentsâ€™ math vocabulary and number sense? Dive into the world of Esti-Mysteries by Steve Wyborneyâ€“an activity that

excites students while building essential math skills. During this session, youâ€™ll experience an Esti-Mystery firsthand and walk away with everything you need to bring this math class favorite to your own classroom!

Friday 12:45
Session - 27 Room - U - Bluestone Grades 6-8

Using Algebra Tiles to Build Understanding of Expressions and Equations

Presented by Theresa Reilly (CPM Educational Program) and Kathy Williams(CPM Educational Program)

Learn how to use algebra tiles to make algebra into a concrete, visual experience for your students. You will have a chance to explore the use of algebra tiles to create expressions for area and perimeter, combine like terms, evaluate expressions, write equations, and solve equations. |

Friday 12:45
Session - 28 Room - U - Sutton Grades 3-12

Spring into Action with Math Vocabulary

Presented by Sophie Youngs (Kami)

Energize your math vocabulary instruction this spring! Explore engaging Eduprotocols like Fast & Curious, Word Splash, and Iron Chef to deepen student understanding. Experience low-tech, no-tech (Sketch & Tell with movement and discussion!) strategies ready for classroom use.

Friday 12:45
Session - 29 Room - L - Kanawha Grades 6-12

Math in Motion

Presented by Michelle Grooms (Texas Instruments)

Explore math concepts using pre-made programs to explore topics like Intersection of Lines, System of Equations, Angle Measurements, Distance Rate & Time and more. Students will be excited by this engaging way to bring these topics to life. In this session youll play with robotic vehicles to explore math and put it in motion! This a math session dont let the robots scare you!

Friday 12:45
Session - 30 Room - U - Birch Grades 6-12

Game On! Engaging Students with Game-Based Learning

Presented by Joseph Caguimbaga (Washington High School)

In this interactive seminar, participants will explore effective game-based learning strategies designed to engage and motivate students. Through activities like Ultimate Castle Attack and the 100 Square Challenge, teachers will experience firsthand how games can foster teamwork, critical thinking, and quick problem-solving. Attendees will leave with practical tools to incorporate games into their classrooms and enhance student engagement.

Friday 12:45
Session - 31 Room - U - Tygart Grades 6-12

Technology My Students Taught Me

Presented by Dave Kennedy (Shippensburg University of PA) and Becca Halvorson(Shippensburg University of PA)

As a college methods instructor I was familiar with Geogebra and Desmos Classroom, but my student teachers have taken them to new heights to promote student exploration! After a quick introduction to the free site Geogebra weâ€™ll show some activities that allow for discovery of geometric ideas. Desmos Classroom is a whole curriculum full of opportunities for students to explore and build conceptual understanding. Come see some engaging examples!

Friday 12:45
Session - 32 Room - L - Gauley Grades 9-12

DeltaMath-Basics, Schoology Integration and Differentiation.

Presented by Eric Miller (Keyser High School)

This session will begin with the basics of using DeltaMath Integral. Participants will be shown how to create daily assignments and tests. For those who use Schoology, participiants will be shown how to integrate DeltaMath lessons into schoology and have them graded automatically. Finally we will discuss advantages of using DeltaMath to differentiate instruction to classes of lower ability students compared to using a traditional textbook.

Friday 12:45
Session - 33 Room - U - Summersville Grades 9-College

Cultivating Confidence: Overcoming Challenges in College Math

Presented by Mary Crytzer (Mountwest Community & Technical College) and Kelli Hall(Mountwest Community & Technical College)

This presentation explores how to prepare students for college-level math and support them as they navigate their courses. Presented by two college professors with over 30 years of combined teaching experience, it offers practical strategies for addressing challenges. Participants will learn about key academic and study skills, including time management, critical thinking, and test anxiety. Designed for both college and high school educators, it provides tools to cultivate student success.

Friday 1:45

Session - 34 Room - U - Ballroom Whole All Grades

WVCTM Business Meeting and WVDE State Math Presentation

Presented by Jami Packer ()

Please join us for our annual business meeting and State of the State update from WVDE.

Friday 2:45

Session - 35 Room - STEAM Bus Grades K-5

The STEAM Machine

Presented by Jamie Knight () and Kaitlyn Knight()

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Marion County Schools to blend Science, Technology, Engineering, Art and Mathematics into the classroom. Lesson plans and activities will be provided to take back with you. The STEAM Machine can fit about 15 people per session.

Friday 2:45
Session - 36 Room - L - Pecan Grades K-8

How to get your students buzzing about math!

Presented by Marissa Schomaker (Berlin Mckinney) and Brittany Blankenship(Berlin Mckinney)

Get ready for a math session like no other! In this energetic lesson, well turn math into a hands-on adventure where students are moving, problem-solving, and collaborating. Each activity is desined to reinforce key concepts while keeping the fun high and energy even higher!

Friday 2:45
Session - 37 Room - U - Summersville Grades K-8

Game On! Use Plinko & Interactive Games to Teach Data Collection & Analysis

Presented by Elizabeth Douglas (Elkins Middle School)

Engage your k-8 students in hands-on learning with interactive games like Plinko! This session demonstrates how simple, fun games can become powerful tools for teaching data collection, organization, and analysis. Participants will explore how to use Plinko to generate data sets, guide students in identifying patterns, and create graphical representations. Weâ€™ll discuss strategies for scaffolding these activities to meet learning needs and encourage collaborative problem-solving.

Friday 2:45
Session - 38 Room - L - Kanawha Grades 3-5

Multiplication Connection Strategies

Presented by Jennifer Wooten (Logan Elementary School)

In this session, I will present a daily review sheet that builds all West Virginia Math Standard strategies for Multiplication and Division.This sheet is used daily beginning in October. I begin each class with a multiplication expression; for example 5 X 3. The students will complete the strategy boxes. Strategies continue to accumulate as instruction introduces them. Strategies: equal groups, arrays, repeated addition/skip count, Commutative/DistributiveProp., Number Bonds, and Tape Diagrams.

Friday 2:45
Session - 39 Room - U - Sutton Grades 3-12

Spring into Blunder Busters: Growing from Mistakes

Presented by Sophie Youngs (Kami)

This spring, cultivate a growth mindset with Blunder Busters! This collaborative strategy uses intentional mistakes to deepen understanding. Participants will engage in a fun activity, learning how to turn errors into learning opportunities.

Friday 2:45

Session - 40 Room - U - Birch Grades 6-12

How to integrate the Mathematical Habits of Mind into your classroom.

Presented by Hope Wright (Morgantown High School)

Ever wonder how you can do more with the West Virginia Mathematical Habits of Mind? With my quarterly plan, you can make small changes in your classroom so that you AND your students can become more familiar and accustomed to MHM.

Friday 2:45
Session - 41 Room - U - Bluestone Grades 6-12

From Data to Action: Leveraging Paperless Exit Tickets to Drive Instruction

Presented by Barbara Zingg (Washington High School)

Are you tired of dealing with exit tickets? Poring over them looking for trends and content that you need to re-teach? Are you struggling to manage all of your students accommodations? There are options that will make you more efficient at meeting every students needs and getting the feedback that you need in real time to drive instruction. Create your own assessments, exit tickets, lessons and interactive videos or use others from the robust question bank or AI. Translations and much more.

Friday 2:45
Session - 42 Room - L - Potomac Grades 6-12

Debate Cards

Presented by Kerri Crews (Wheeling Park High School) and Jack Kaniecki(Wheeling Park High School)

Sometimes Math doesnt have to be so cut and dry. Learn how to engage your students in mathematical debates using Debate Cards. Using resources from Chris Luzniak,the creator of the Debate Math Podcast, students are given a problem with 2 different solution strategies and must defend the strategy they prefer.

Friday 2:45
Session - 43 Room - U - Tygart Grades 9-12

Navigating the New Digital SAT: Strategies for Success using Technology

Presented by Michael Houston (Riverside High School) and Lindsay Gold(The University of Dayton)

During the session, youll participate in SAT focused mini lessons to incorporate into any math classroom. Youll explore the structure and design of the New Digital SAT. Lastly, well cover test taking strategies to share with students to help them succeed on the SAT exam.

Friday 2:45
Session - 44 Room - L - Greenbrier Grades 9-12

Math INSIDE the Box

Presented by Sarah McGivern (Washington High School)

Area model multiplication and division is not just for grade school! I use the area model for everything from distribution to factoring to an alternative to polynomial long division! Using a tool students are familiar with makes higher level math accessible to more students.

Friday 2:45
Session - 45 Room - L - Maple Grades 6-College

Building Autonomy in Math: Low-Risk Activities for Student Success

Presented by Geoffrey Foster (West Virginia University)

Autonomy within higher education is a key understanding for students to master the topics we are doing. To achieve autonomy within the classroom I have designed activities for students to work on that are low risk for the students to apply their knowledge that they learned in the classroom setting. This presentation will share various activities that have been implemented to help students work toward mathematical autonomy and can easily be adapted to middle and high school math classrooms.

Friday 2:45
Session - 46 Room - L - Gauley Grades 9-College

All Tens.

Presented by Lesa Nida (Barboursville Middle School) and Meredith Withrow(Barboursville Middle School)

This comes from a website using arithmetic operations on 4 numbers, using each number only once, to find solutions 1 - 10. |We use this as our warm-up each day.

Friday 3:30

Session - 47 Room - U - Birch All Grades

Building Community For West Virginia Math Leadership: Roundtable Discussion

Presented by Sarah Hampton (Greenbrier County Schools) and Kristen Oxley(Kanawha County Schools)

Are you a math coach or coordinator and feel a bit lonely in your role or a math department chair or teacher leader who wants more community? Join a small crew of district math coordinators and coaches to participate in an interactive discussion around how to better connect around shared struggles and best practice in supporting teachers. Math district leaders from Greenbrier, Kanawha, Cabell and Pocahontas counties will facilitate, joined by NCSM representatives.

Friday 3:30
Session - 48 Room - L - Pecan Grades K-5

Represent it Your Way with CRA: Implementing CRA InstructionÂ

Presented by Emily Donathan (Mountain State ESC) and Danielle Pulliam(Mountain State ESC)

Students develop deep understanding of math when they are able to represent their thinking concretely, representationally, and abstractly. Participants in this session will learn the stages of the CRA pathway and understand why students gain a more tangible understanding of math while moving fluidly through the stages. Opportunities will be given to practice identifying and using all stages of the CRA pathway throughÂ various activities that translate easily to small and whole group instruction.

Friday 3:30

Session - 49 Room - L - Greenbrier Grades K-5

Exploring Equality

Presented by Susan Barrett (Nicholas County Schools (Retired))

Come learn a variety of ways to help your students gain a deeper understanding of the meaning of the equal sign. These hands-on activities build mental math muscles and improve reasoning skills.

Friday 3:30
Session - 50 Room - STEAM Bus Grades K-5

The STEAM Machine

Presented by Kaitlyn Knight () and Knight Jamie()

Participants will be invited aboard the Marion County Schools STEAM Machine(a Mobile Science Classroom) to get hands on experience with some of the lessons I give to teachers in Marion County Schools to blend Science, Technology, Engineering, Art and Mathematics into the classroom. Lesson plans and activities will be provided to take back with you. The STEAM Machine can fit about 15 people per session.

Friday 3:30
Session - 51 Room - U - Tygart Grades 3-5

Using Coding and SEL to Teach Mathematics in the Elementary Classroom

Presented by Lindsay Gold (University of Dayton) and Michael Houston(Riverside High School)

STEAM is for ALL students! This session examines how educators can use technology and coding strategies that support Social-Emotional Learning to teach measurement and geometry concepts in the elementary classroom. Participants will learn basic coding techniques that will enhance studentsâ€™ exploration of mathematics while fostering an inclusive atmosphere.

Friday 3:30
Session - 52 Room - U - Sutton Grades 3-5

Math Meeting and Beyond!

Presented by Sharon Jones (Greenbrier County Board of Education) and Sophie Youngs(kami)

Building on the math meetings held in grades K-2, we will extend this practice to grades 3-5. These sessions will focus on reviewing foundational skills, introducing new concepts, and maintaining student engagement. This approach aims to address learning gaps, strengthen fluency, and promote deeper conceptual understanding.

Friday 3:30
Session - 53 Room - U - Bluestone Grades 6-8

Using Problem Solving to Build Deep Understanding of Fraction Division

Presented by Thomas Klein (Marshall University)

Ours is to reason why we invert and multiply when we divide a fraction by a fraction. In this session, we will use different methods to solve â€œhow many in each (one) groupâ€• story problems that contain fractions. With each method, the numerator and denominator of the

divisor can be used to solve these problems in interesting ways that relate to the common algorithm for division of fractions.

Friday 3:30
Session - 54 Room - L - Potomac Grades 3-8

Making Data Matter Through Movement

Presented by Joshua Grant (West Virginia Department of Education) and Tim Flatley(West Virginia Department of Education)

Participants in this session will explore the connection between physical activity and academic performance through standards- based activities. Participants will discover the impact of using authentic student data to make Math connections. This is an active session be prepared to move and have fun!

Friday 3:30
Session - 55 Room - L - Maple Grades 6-12

Mixing It Up!: How Differentiation Sparks Success for Every Learner!

Presented by Renee Warner (Carnegie Learning, Inc.)

Lets break down the walls of traditional teaching. Join me in discovering how to mix it up with differentiation strategies that resonate with every learner, creating a vibrant path to success for all.

Friday 3:30
Session - 56 Room - L - Kanawha Grades 9-12

Inquiry based teaching

Presented by Jennifer McIntosh (Parkersburg South High School)

Learn how to use inquiry based lessons to help make the student be a learner instead of a passive listener. Using MathMedic materials come learn how to engage students and really get learning done in the classroom.

Friday 3:30
Session - 57 Room - L - Gauley Grades 6-College

Lilacs, Daffodils, & other Odes to Spring: Weaving Mathematics into Poetry

Presented by Adam Fletcher (Bethany College)

Mathematics is a wonderful language we can use to explain and express the world in which we live. But then, again, say our friends in the world of literacy, we can explain and express our world in poetic form. In this session, weâ€™ll discover some of the ways that those two languages connect to the benefit of both.

Friday 3:30
Session - 58 Room - U - Summersville Grades 3-K

Thinking Math and the Handshake Problem

Presented by Gregory Merritt (Wood County Schools) and Mark Purcell(Wood County Schools)

Participants will experience how a good problem can be taken to the next level, and to the

next, and to the next. This workshop will unveil a 3-d product that is the culmination of a lesson that starts at the elementary level and ends at the highest levels of math. Thinking, creativity, and hard work pays off in a high-quality learning experience.

Saturday 8:15

Session - 59 Room - L - Pecan Grades K-8

The StAltion Operation 2.0

Presented by Steven Brown (Berlin McKinney Elementary School) and Taylor Paynter(Wyoming County Public Schools)

The Station Operation is back and ready to amplify your station creation process! This years session will offer attendees a newer, more technological approach to designing stations that engage and meet learners individual needs. Through the power of AI, we will explore teaching tools through an innovative lens that focuses on differentiation and time efficiency. Be prepared to SPRING into stations and watch your students bloom!||Bring a computer or tablet so you can explore with us!

Saturday 8:15
Session - 60 Room - U - Ballroom 1 Grades K-8

If They Cant Read It, They Cant Calculate It!

Presented by Kelli Arthur (Wayne County Schools) and Tonji Bowen(Wayne County Schools)

Math language is a crucial component of math education. Students who can comprehend math language are able to better articulate their thought process and connect mathematical concepts, leading to a deeper conceptual understanding of math rather than memorizing procedures. In this session, participants will learn Science of Reading strategies that will help improve math language comprehension, Math Language Routines, a deeper understanding of MHM 2 and 6, and engaging math vocabulary activities.

Saturday 8:15
Session - 61 Room - U - Summersville Grades 3-5

Space is the Place, for Place Value!

Presented by Joshua Revels (NASA IV&V Education Resource Center) and Keirsten Stout(Fairmont State University)

Engage in a cross-curricular space themed place value exercises for 4th and 5th grade content standards utilizing resources from the NASA IV&V Education Resource Center. Come learn about the Loan & Learn Program. Completion of this workshop results in certification to borrow the Sphero BOLT kit from NASA IV&V ERC for educational use.

Saturday 8:15
Session - 62 Room - U - Ballroom 2 Grades 6-12

Some Assembly Required: Student Generated Practice Problems

Presented by Jessica Thomas (Bluefield High School)

Participants will experience a low-prep, low materials method for repeated practice of any topic. In this activity, students help to create each problem and then collaborate with a partner to solve and check each problem. This is suitable for any grade level and almost any topic.

Participants will have time to create a personalized version of the activity for immediate use in their classroom.

Saturday 8:15
Session - 63 Room - L - Kanawha Grades 3-8

Building (no - really!) deep understanding of division

Presented by Brian Smith (Marlinton Elementary School) and Joanna Burt-Kinderman(Pocahontas County Schools)

Join Brian, 4th grade teacher and Joanna, K-12 coach to experience a sense-making division progression using the â€œhookâ€• of building tiled hallways. Participants will experience a concrete - representational - abstract progression of division standards from 3rd - 6th grade and return home with lesson plans, differentiation strategies and a template to use across grade bands. Brian and Joanna have seen big gains in kiddos really understanding division using this approach. Hope youâ€™ll join us!

Saturday 8:15
Session - 64 Room - U - Birch Grades 6-12

Progress Monitoring

Presented by Rachel Eades (West Virginia Department of Education)

Participants will learn how enlisting students in a year-long self-reflective process that includes setting goals and creating action steps, along with brief benchmark tests and graphing/data-tracking, empowers students toward accepting responsibility for their own learning and increasing achievement.

Saturday 8:15
Session - 65 Room - L - Potomac Grades 6-12

Measure What You Treasure

Presented by Jennifer Nail-Cook (Pocahontas County High School)

Ask yourself; whatâ€™s happening in the perfect math classroom? In completing this practice with myself and many other teachers over several years, what I notice is we donâ€™t often reference our content standards, but we do discuss the Mathematical Habits of Mind. If these are the things that we value in our classrooms, how can we assess a studentâ€™s understanding and mastery of these practices? In this session we will share, brainstorm, and discuss how to make this come alive in our classrooms.

Saturday 8:15
Session - 66 Room - U - Sutton Grades 6-12

Notice and Wonder: Supporting Student Problem Solving and Discussion

Presented by Tyson Ewing (Carnegie Learning)

This session aims to familiarize teachers with the formative strategy *Notice and Wonder* while providing practical examples and application opportunities with students. This approach encourages students to analyze problems or figures before attempting to solve. By fostering accessibility to the content for all learners, it promotes an academically safe environment where students can freely share observations and ideas without the pressure of immediately solving or answering a problem.

Saturday 8:15
Session - 67 Room - L - Maple Grades 9-12

Algebra Tiles: Multiplying Polynomials â†" Factoring â†"Completing the Square

Presented by Theresa Reilly (CPM Educational Program) and Kathy Williams(CPM Educational Program)

Manipulatives in a secondary math classroom? Youll see how successful it can be. Build on studentsâ€™ understanding of an area model for multiplication from lower grades by using algebra tiles to multiply polynomials, factor, and complete the square. Algebra tiles increase conceptual understanding that leads to proficiency once students no longer need the tiles. Additionally, the tiles provide students with a tactile engaging experience.

Saturday 8:15
Session - 68 Room - L - Greenbrier Grades 9-12

How to Incorporate SAT Prep into Your Classroom.

Presented by Laura Jarrett (Musselman High School)

This session will focus on ways the speaker incorporates SAT level curriculum aligned questions into her everyday or every week instruction. She will also model ways to use DESMOS to Avoid the Algebra on tough or layered problems (even though we all love the steps of Algebra problem solving). She will share resources, ready-to-use Schoology assessment questions for bellringers and practice and talk about exploring this math with games, vertical boards, and other collaborative efforts.

Saturday 8:15
Session - 69 Room - U - Bluestone Grades 9-12

Math Matters in Blood Spatter

Presented by Jason Gibbs (June Harless Center at Marshall University)

Engage in a hands-on blood spatter analysis lab, where participants apply mathematical concepts to real-world forensic scenarios, showcasing the practical relevance of mathematical skills. Using trigonometric principles, participants explore the relationships between angles, distances, and heights to recreate the three-dimensional path of blood droplets as they experience how|forensic scientists calculate impact angles, origin points, and trajectories as they analyze and reconstruct events.

Saturday 8:15
Session - 70 Room - L - Gauley Grades 6-College

The Mathematics Behind Voting

Presented by Dennine LaRue (Retired from Fairmont State University)

The Mathematics of Social Choice explains methods by which a group of people make choices about actions which affect the entire group and where the group members may not all have the same opinion about that action. We will discuss the math history of social choice which begins in the 1200s. Various voting procedures will be explored via a group project. Pros and cons to each procedure will be presented. Theorems of Social Choice and the manipulability of voting systems will be mentioned.

Saturday 8:15

Session - 71 Room - U - Tygart Grades 9-College

Creating a Motivated Math Classroom through Centering Belongingness

Presented by Josh Karr (West Virginia University) and Lori Ogden(West Virginia University)

Within this presentation we will illustrate how a focus on increasing feelings of â€˜belongingnessâ€™ (i.e., frequent, pleasant interactions with the sense that others are concerned about who they are and for their well-being) within math courses can support students in various aspects of their learning of rigorous mathematics. We will share elements of course design and pedagogical approaches and how they have affected students within our intro algebra courses.

Saturday 9:30

Session - 72 Room - L - Greenbrier Grades K-2

Coding in the Kindergarten Classroom

Presented by Kara Shuff (New River Primary) and Courtney Vargo(Oak Hill Middle School)

Educators will explore innovative ways to teach kindergarten math standards using interactive tools like robot mice and Bee-Bots. The session begins with an introduction to the technology, demonstrating how these programmable robots can be used to enhance math learning through hands-on activities. Educators will learn how to integrate coding and basic robotics into lessons that cover foundational math concepts such as counting, sequencing, spatial awareness, and problem-solving.

Saturday 9:30
Session - 73 Room - U - Tygart Grades K-2

Spring Into Fluency with Games.

Presented by Melanie Meck (Hampshire County Schools) and Miranda Keplinger(Ice Mountain Elementary)

Games are lots of fun for our littles and they also provide lots of learning and practice of the very important foundational skills.Â Join us as we play some games, share ideas, and discuss ways they can be utilized in whole group, small group stations, and for parent involvement sessions.

Saturday 9:30
Session - 74 Room - U - Bluestone Grades K-5

Math Reps Energize K-3!

Presented by Sharon Jones (Greenbrier County Schools) and Sophie Youngs(Kami)

Spring into action with engaging Math Reps for K-3 students! Explore various quick, collaborative activities to reinforce essential math concepts and skills. Experience low-tech and no-tech versions of this EduProtocol ready for your classroom.

Saturday 9:30
Session - 75 Room - L - Pecan Grades K-8

Learning Through Play

Presented by Jenna Cook (West Liberty University)

For the first several years of their lives, children learn mathematics in play through rhythm, stacking, sorting, finding patterns, and testing limits. The extensive work of Dan Finkel suggests that play should not stop when children go to school, rather, that play has the power to break down the walls that students put up when math no longer feels accessible to them. In this session, well play some of Dans award-winning games, explore rich tasks, and discuss how to immediately integrate them.

Saturday 9:30
Session - 76 Room - L - Kanawha Grades 3-5

Get Ready to Roll With Fractions Using Sphero

Presented by Brenda Adkins (Roosevelt Elementary) and Jessica Porter(Ashton Elementary)

Go bowling with Sphero, a programmable robot. Learn how to program your robot, and then use your program to go bowling. You will write the number of pins you knock down as a fraction. Your second roll will be added to your first roll. It is a fun way to learn how to write and interpret fractions, and add fractions with like denominators. This activity can also be used to learn decimals.

Saturday 9:30
Session - 77 Room - U - Summersville Grades K-12

A $10,000 Award for Classroom Teachers!

Presented by Sarah Snyder (West Virginia University) and Cindy Burke(Wheeling University)

Join past applicants and awardees in a discussion about the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) and the application process. Why apply? Recipients of the PAEMST Award receive the following: a certificate signed by the President of the United States; a paid trip to Washington, DC to attend recognition events and professional development opportunities; a $10,000 Award; and an opportunity to build lasting partnerships with colleagues across the nation.

Saturday 9:30
Session - 78 Room - U - Ballroom 2 Grades 3-8

Using Test Authoring in the Mathematics Classroom

Presented by Michelle Weekley (Tyler Consolidated Middle School) and Joseph Mastracci(West Virginia Department of Education)

Test Authoring is a free formative assessment tool the West Virginia Department of Education providesÂ for teachers of grades three through eight. The session will show participants the basic features of Test Authoring as well as how Test Authoring is being used to help inform instructional decisions in the mathematics classroom.

Saturday 9:30
Session - 79 Room - L - Maple Grades 6-8

Launch into Learning: Getting Engaged from the Get-Go

Presented by Kathy Williams (CPM Educational Program) and Theresa Reilly(CPM Educational Program)

Launches come in various forms, serve multiple purposes, and are designed to prime studentsâ€™ brains for learning and ensure equitable access to the math content. A Launch

might be a direct lead into the lessonâ€™s content, build studentsâ€™ capacity to make sense of numbers, interpret data, engage in respectful discussion, or communicate mathematically. Experience a Math Chat, Dot Talk, Which One is Unique, Notice and Wonder routine, & Data Chat, as these Launches can prepare students for learning.

Saturday 9:30
Session - 80 Room - L - Gauley Grades 3-12

Math Sprouts: Cultivating Engagement through Generative Problem Solving

Presented by Kyle Berry (Barboursville Middle School)

Transform your math classroom into a dynamic garden with Math Sprouts. This strategy empowers students to create their own sprout problems from a given seed problem, fostering creativity, collaboration, and deeper understanding. Explore how this approach can be used across various math topics, encouraging students to engage with peer problems and share diverse solutions.

Saturday 9:30
Session - 81 Room - U - Birch Grades 6-12

N.C.T.M.: New Cheating in Teaching Mathematics

Presented by Autumn Chandler (Shippenburg University of PA) and Makenzie Harris(Shippenburg University of PA)

Your students have access to free technology that can answer almost any math homework question --- including showing all the work --- just by typing it in, or even just taking a picture of it. What does this mean for our teaching? How can teachers use these technologies in positive ways? Preservice teachers will demonstrate how Symbolab, Google, Photomath (and others like it) and ChatGPT can solve problems, make worksheets and tests, and more!

Saturday 9:30
Session - 82 Room - L - Potomac Grades 6-12

Discovering Angle Measures using Fraction Circles and Exploragons

Presented by Mark Baetz (EAI Education)

Participants will receive sets of Fraction Circles and Exploragons to develop angle concepts related to polygons and circles. After a brief review of the pieces, attendees will work through how students can use these manipulatives to develop formulas regarding interior and exterior angle sums for polygons along with the relationships between central, inscribed, interior, and exterior angles of a circle and their corresponding intercepted arcs

Saturday 9:30
Session - 83 Room - U - Sutton Grades 6-College

Notes & Numbers: Enhancing Math Understanding through Music

Presented by Morgan Blanks (West Virginia University)

Many students find fractions challenging, but music can provide an engaging path to understanding. In this presentation, discover innovative lesson ideas that blend music and the history of math to make fractions more accessible and fun. Weâ€™ll explore hands-on activities that help students connect musical intervals to fraction concepts.

Saturday 9:30
Session - 84 Room - U - Ballroom 1 Grades 9-College

Exploring Newtons Method using Problem-Based Learning

Presented by Bishnu Sedai (Fairmont State University)

Newtons Method is an iterative approach for approximating solutions to equations, mainly for finding roots of real-valued functions. Itâ€™s effective for non-linear equations that lack direct solutions. In classrooms, Newtons Method can be taught using problem-based learning, enhancing students grasp of calculus and numerical methods. This session will present examples, address common challenges, and provide strategies to make Newtons Method accessible and engaging for learners.

Saturday 10:30

Session - 85 Room - U - Summersville All Grades

Tips and Tricks for Completing a Competitive Presidential Award Application

Presented by Cindy Burke (Wheeling University) and Sarah Snyder(West Virginia University)

Join us to discuss ideas for completing a competitive application for the Presidential Awards for Mathematics and Science Teaching (PAEMST). We will explore the written portions of the application â€“ prompts for the Five Dimensions of Outstanding Teaching, the lesson plan for the class featured in the video, and ideas for supplemental materials to support and strengthen the application. We will explore opportunities for using the video to provide evidence of content knowledge and teaching skills.

Saturday 10:30
Session - 86 Room - U - Bluestone Grades K-5

Math Strategies: MADE Easy, 3 Es, WAM!

Presented by Sharon Jones (Greenbrier County Schools) and Sophie Youngs(Kami)

Energize your elementary math instruction this spring! Explore Math MADE Easy for problem-solving, the 3 Es for math discussions, and WAM! to foster purposeful math writing. Gain practical strategies for immediate classroom use. Leave with templates to use tomorrow.

Saturday 10:30
Session - 87 Room - U - Ballroom 1 Grades K-5

From Counting to Critical Thinking: Empowering Students in Number Sense

Presented by Amber Myers (West Virginia Department of Education) and Casey Whitlow(Mountain State ESC)

This session introduces high-impact methods to develop number sense using tasks with a low-floor, high-ceiling design, ensuring accessibility for all students while allowing for deeper exploration. Emphasis is placed on enhancing rigor by fostering mathematical discourse, encouraging students to articulate their thoughts, challenge ideas, and deepen understanding through collaboration. Discover how to turn simple counting into a foundation for critical mathematical thinking.

Saturday 10:30
Session - 88 Room - U - Birch Grades K-5

Strategies to Utilize Standards When Providing Just in Time Supports

Presented by Kathryn Alam (Mountain State Educational Services Cooperative) and Deanna Marsh(Mountain State Educational Services Cooperative)

Educators having a solid knowledge of what standards are asking our students to be able to do is vital for student development of mastery. In this session, participants will examine standards by creating learning targets to help identify specific deficiencies. Once these are identified, just in time supports can be designed to move towards mastery. Participants will leave with a strategy and resource to deepen their own understanding of standards for the purpose of improving instruction.

Saturday 10:30
Session - 89 Room - L - Maple Grades K-8

Fostering Mathematical Habits of Mind: Engaging Learners with Active Partic

Presented by Dana Stoll (Brooke Middle School)

In this engaging session, discover how the Mathematical Habits of Mind can be brought into the classroom. This session examines how a 5th grade teacher incorporates the 8 Habits into her daily lessons and will equip you with innovative approaches that can transform your classroom into a persevering and problem-solving environment. Learn practical strategies to encourage students to recognize the Habits of Mind

Saturday 10:30
Session - 90 Room - U - Tygart Grades K-8

Building Thinking Classrooms Engaging students in a thin-sliced lesson

Presented by Rachel Yates (Mill Creek Intermediate)

In this interactive session, we will explore strategies for maintaining high levels of student engagement during a thin-sliced lessonâ€"one that targets a narrow but important concept in mathematics or problem-solving. Using principles from Building Thinking Classrooms by Peter Liljedahl, we will dive into how to structure and facilitate lessons that encourage sustained student focus, collaboration, and critical thinking.

Saturday 10:30
Session - 91 Room - L - Kanawha Grades 3-5

The Fundamental Math Components and The Mathematical Habits of Mind

Presented by Janna Hamrick (Rock Branch Elementary School) and Michelle Eisel(Hometown Elementary School)

In this session we will share on our experience with fundamental components to make a math lesson successful. These have led to grade level mastery for our students. When applying these components daily our students are successful in math and have an excellent understanding how to apply and know the why behind the math skills. These components are fundamental to our new initiative of the Mathematical Habits of Mind. We will share how these habits correlate with these fundamental components.

Saturday 10:30
Session - 92 Room - L - Gauley Grades 3-5

Surgery on Numbers

Presented by Elizabeth Wood (Ronceverte Elementary School) and Jessica Bailey(Ronceverte Elementary School)

Transform your classroom into a LIVE surgical suit! Students and teachers alike will be immersed in this medical simulation to dig deeper in to numbers. This session will help teach 3rd- 5th grade teachers news and exciting methods for teaching multiplication, division, and fractions in a fun and engaging way!

Saturday 10:30
Session - 93 Room - U - Sutton Grades 6-8

Teirs of Joy in a Middle School Math

Presented by Jessica Theys (Wirt County Middle School)

Explore various strategies for effectively implementing a Multi-Tier Support System in a middle school math classroom. This approach allows for just-in-time learning supports for students helping them find small successes which lead to increased confidence and grade level achievement!

Saturday 10:30
Session - 94 Room - L - Potomac Grades 6-12

Math Matters: Effective Strategies to Boost Student Discussion

Presented by Sara Porter (Musselman High School, Berkeley County)

Do you struggle with students participation in class discussions? I will present 10 minute or less change ideas that will make an impactful change in your classroom. I struggled as a new teacher getting students to talk about content in class. I tried some bellringers to force/encourage class discussion. I will present about Notice/Wonders, My Favorite No, Vocabulary Taboo, and more. I have student data that shows students talking in class about math has grown from 27% to 57% in my classroom.

Saturday 10:30
Session - 95 Room - L - Greenbrier Grades 6-12

Making Every Second Count: Strategies to Maximize Learning

Presented by Kelly Murray (Preston County Schools) and Jodi Myers(Preston County Schools)

When working with teachers, one of the number one phrases we always here is there isnt enough time. While we know teaching math in 45 minutes or less can be struggle, we invite you to join us as we model and discuss multiple strategies to help you create an efficient, engaging, and effective math block.

Saturday 10:30
Session - 96 Room - U - Ballroom 2 Grades 6-12

West Virginia Math Games

Presented by Cody Hood (West Virginia University) and Erin Goodykoontz(West Virginia University)

This project aimed to implement WV Math Games in rural middle schools for student enrichment in mathematics. These events supplemented classroom learning by introducing approaches to math concepts through games, encouraging engagement and self-discovery.

Targeting middle schools in rural West Virginia, the program reached students in Doddridge and Tyler counties, with plans for future expansion. The games focused on grade-level content to deepen understanding in a fun, interactive way.

Saturday 10:30
Session - 97 Room - L - Pecan Grades 6-12

Stations With Older Students - What I Learned From My Elementary Colleagues

Presented by Michelle Weekley (Tyler Consolidated Middle School)

Learn some strategies and tips for implementing stations in a middle or high school math classroom. It is not as intimidating as you think and its fun!

Saturday 11:30

Session - 98 Room - U - Birch Grades K-5

Launch & Learn: Building Number Sense

Presented by Elizabeth Crawford (Marshall University-June Harless Center) and Tarabeth Heineman(Marshall University-June Harless Center)

In this session, well explore how to use the first 5-15 minutes of your math block to engage students with purposeful number sense routines. These routines help build flexibility with numbers, deepen understanding of operations, and promote meaningful discourse. Consistent exposure to these routines fosters a positive learning environment, supports student agency, and bridges prior learning with new concepts

Saturday 11:30
Session - 99 Room - L - Potomac Grades K-12

I need a reminder for next year!

Presented by Hope Wright (Morgantown High School)

Not ready to practice what you learned at WVCTM, yet? Come to this closing session to journal about your sessions, make a plan in your planner or the provided paper calender, and/or sign up for reminders and a WVCTM Google Drive folder with materials provided by your presenter.

Saturday 11:30
Session - 100 Room - U - Summersville Grades 6-8

Making Meaning of Math Lab

Presented by Rachel McComb (Marlinton Middle School)

A presentation of the Financial Math, project-based learning project I created/modified and use for Math lab in the middle school setting. The purpose of this project is to make math more meaningful to students and to show the connection between adult life and math. I will share the project and other free resources I make use of in lab class.

Saturday 11:30
Session - 101 Room - L - Pecan Grades 3-12

The High Flyers

Presented by Rebekah Stump (Bruceton)

So often we see students come into our class who are 2-3 grade levels behind, but what about those students who are on or above grade level? In this session, we will discover how to implement small-group instruction with students who are high-flyers

Saturday 11:30
Session - 102 Room - L - Maple Grades 3-12

Bloom Student Engagement: Using Interactive Bulletin Boards

Presented by Jeremy Anne Knight (Jefferson County Schools)

Classroom and Hallway bulletin boards dont have to be static pieces of art and information. Get your students actively thinking about math as they travel around the school and enter your classroom. By using routines like Which One Doesnt Belong, Would You Rather, Brainteasers and others, along with pouches and clothespins make boards that students look forward to every week!

Saturday 11:30
Session - 103 Room - U - Bluestone Grades 3-12

Conquer Word Problems with a Math Quest

Presented by Sophie Youngs (Kami)

Embark on a Math Quest this spring! Learn how this structured template guides students through word problems, then transition to collaborative problem-solving with the Cyber Sandwich Eduprotocol. Enhance critical thinking and deepen understanding.

Saturday 11:30
Session - 104 Room - U - Sutton Grades 9-12

The Path to SAT-isfaction!

Presented by Ellen Holt (Summers County Comprehensive High School)

I will be sharing tips and strategies I have used that have had some success in preparing my students for the SAT. Attendees will be given a link to all materials that I have for SAT prep. Feel free to share tips and resources you yourself have as well! All of us > any of us!

Saturday 11:30
Session - 105 Room - U - Tygart Grades 6-College

Dont let ONE sneak up on YOU!!

Presented by Julie Brown (Green Bank Elementary Middle Schoool)

Help your students with simplifying fractions of all sizes by finding the Sneaky One These sneaky ones come in all kinds of forms so be careful not to let one sneak up on you! Be prepared to work a few problems!!

Friday 11:15

Session - 500 Room - L - Restaurant All Grades

FIRST LUNCH

choose only one lunch

Friday 12:00

Session - 501 | Room - L - Restaurant | All Grades

SECOND LUNCH

choose only one lunch