

**Live From the Classroom**  
**PCTM Professional Development Day for K-12 Classroom Teachers**  
**In Partnership with ATMOPAV and EPCTM**  
**Date: Saturday, September 30, 2023**  
**Location: PaTTAN East, 333 Technology Drive, Malvern, PA 19355**

**7:30-8:10 AM:** Registration and Continental Breakfast (Lobby and Cafeteria), Visit Vendors

**8:10-9:10 AM:** Keynote Speaker, Ralph Pantozzi (ELM)

**Meet, Play, Make, Move**

Play is recreation and re-creation. Play is structured and yet freeing. Play and movement helps us re-move negative emotions. Play brings us together in community. We'll learn how a little productive commotion in math class helps students form connections, embrace missteps, and experience the joys of surprise, puzzlement, curiosity, and escape. We'll do the same as we think about aspects of teaching, learning, and collaboration that go beyond the play-ground of math.

Session & Location	Elm	Cypress	Magnolia	Balsam
<b>Sessions 1</b> <b>9:20-10:20 AM</b>	<b>Cooperative Learning Techniques in the Classroom (K-12)</b> <b>Marian Avery</b> Cooperative Learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Cooperative Learning activities engage students in challenging and intentional instruction that ensures success for all students. Hands-on workshop activities will include Colored Co-op Cards, Inside-Outside Circle, Pairs Check, Round Robin, Think-Pair-Share, and more.	<b>Encourage Investigation and Conversation with the Desmos Graphing Calculator (7-12)</b> <b>Bob Lochel - Desmos</b> Take part in Algebra Investigations from a learner's perspective using the blank slate of the Desmos Calculator. We'll deconstruct the teacher moves which support student investigation and learning. No experience with using the Desmos Calculator is needed and you'll leave with new moves to share.	<b>Convince Me That (K-12)</b> <b>Dan Kaufmann</b> During this session, participants will engage in the math routine Convince Me That. We will discuss how this routine can be implemented in the classroom to develop student justification skills and at the same time build their math confidence.	<b>ACE your Class: Activities, Coding, and Engagement in the High School Classroom (9-12)</b> <b>Lauren Carr</b> This ACE session will work with the participants to incorporate Activities that can be utilized at the High School level. Introduce coding, problem solving skills, authentic assessments, and keep the students (and families) engaged in active learning.

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<b>Sessions 2</b> <b>10:30-11:30 AM</b>	<b>Designing Breakout Activities for the Math Classroom (6-12)</b> <b>Kelly Brent/Shannon Wenger</b> This session focuses on how to plan your own breakout activities tailored to the content and students of your classroom. We will also share various puzzles that can be used when creating your own activities as well as other helpful resources.	<b>Visualizing Data with CODAP (9-12)</b> <b>Leigh Nataro – Desmos</b> What is the relationship between height and speed on a roller coaster? How much faster do steel roller coasters go than wooden roller coasters? Discover the answer to these questions and others with the Common Online Data Analysis Platform (CODAP). A laptop computer is recommended to get the most out of this session.	<b>Activities for Tackling “Yucky” Math Topics (7-12)</b> <b>Bob Lochel</b> Participate in games and activities designed to help students build and generate conversation for traditionally stale math topics. We’ll make compound inequalities competitive with a dice game and participate in a lively shared-work task featuring rational expressions.	<b>ACE your Class: Activities, Coding, and Engagement in the Elementary Classroom (K-6)</b> <b>Lauren Carr</b> This ACE session will work with the participants to incorporate Activities that can be utilized at the Elementary level. Introduce coding, problem solving skills, authentic assessments, and keep the students (and families) engaged in active learning.

**11:30 AM - 12:10 PM:** Lunch and Collaborative Discussions (Cafeteria)

**12:20-12:50 PM:** Annual Business Meetings/Visit Vendors

- Cypress: ATMOPAV
- Magnolia: EPCTM
- Lobby: Visit Vendors

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<b>Sessions 3</b> <b>1:00-2:00 PM</b>	<b>Engaging Activities that Check for Understanding (6-12)</b> <b>Kelly Brent/Shannon Wenger</b> These activities involve the WHOLE CLASS and require students to think and engage. The activities are ones that can be used for many mathematics concepts but the presentation uses topics spanning from middle school through Calculus. The activities are tried and true, used by the presenters for years with great success.	<b>The Updated Desmos Geometry Tool (7-10)</b> <b>Leigh Nataro – Desmos</b> What type of quadrilateral is formed when you connect the midpoints of the sides of a given quadrilateral? Come explore the new and improved Desmos Geometry tool to answer this question and several other questions. A laptop computer is recommended to get the most out of this session.	<b>Flexible Math Games to Build Fact Fluency (K-6)</b> <b>Dan Kaufmann</b> During this session, attendees will explore a variety of math games that build towards fluency. The strategy-based games will have simple rules and are flexible enough to be used throughout the entire year. After exploring each game, we will discuss classroom implementation and best practices when developing fact fluency.	<b>ACE your Class: Activities, Coding, and Engagement in the Middle School Classroom (6-9)</b> <b>Lauren Carr</b> This ACE session will work with the participants to incorporate Activities that can be utilized at the Middle School level. Introduce coding, problem solving skills, authentic assessments, and keep the students (and families) engaged in active learning.

**2:10-2:30 PM:** Closing Session and Door Prizes **(ELM)** Must be present to win door prizes.