



Math Institute 2017:

Enhancing Mathematical Reasoning with Visuals, Manipulatives, and Real-Life Experiences

*K-16 mathematics educators and
pre-service teachers are invited to:*

- Do math together
- Make mathematical connections across grade levels
- Network with fellow K-16 educators
- Obtain a certificate of contact hours, a great lunch, and awesome colleagues to work with!

Free Registration,
coffee, and lunch

November 4, 2017
8:30 am – 3:30 pm

**Pioneer Valley
Performing Arts (PVPA)**
Charter Public School
South Hadley, MA

*Together we can expand and deepen our knowledge of mathematics,
discover the connections in mathematical thinking across grade levels,
and improve math education in Western Massachusetts.*

To register, [CLICK HERE!](#)

Questions? Contact Tara Brandt, WMMP Coordinator, at t.brandt@schoolsofwestfield.org or 413-276-9395

Schedule:

8:30-8:45	Coffee & Connecting
8:45-9:45	Introductions and Math Play
9:45 -10:00	Break/Transition
10:00-12:00	Workshop 1
12:00-12:45	Lunch (provided)/Visioning Break-outs
12:45-2:45	Workshop 2
2:45-3:00	Break/Transition
3:00-3:30	Connections/Conclusions

[REGISTER NOW!](#)



Workshop Offerings:

Strand/SMP:	Workshop Details:
<p>Number Sense & Operations; Measurement & Data</p> <p>SMP # 1, 3, 4</p>	<p>Unlocking the Power of Problem Based Learning <i>Michael Flynn and Sarah Bent, Mount Holyoke College</i></p> <p>Participants will engage in a variety of problem-based learning activities including 3-act math tasks, open-middle problems, and open-ended tasks. We will explore how these tasks can be used to support student learning and for staff development. Participants will learn protocols for creating rich tasks, explore rubrics for task analysis, and learn effective instructional strategies when implementing a problem-based learning approach. Participants will leave with a variety of resources to support teachers including: Links to hundreds of tasks, planning guides, templates, articles, and access to an online repository of problem-based learning resources.</p>
<p>Number Sense and Operations - Fractions; Ratios & Portions; Arithmetic with Polynomials & Rational Expressions</p> <p>SMP # 2</p>	<p>Visual Representations of Fractions and Rational Expressions <i>Claudine Margolis and Erica Foley, Pioneer Valley Performing Arts Charter Public School</i></p> <p>Participants will use visual representations as a way of explaining, exploring, and extending concepts relating to fractions. A guided exploration of rational expressions (starting with fractions) will support participants in discovering representations and methods that support student learning from 3rd through 11th grade.</p>
<p>Geometry; Discrete Mathematics</p> <p>SMP # 2 & 4</p>	<p>Can You Spot It? <i>Brian Jennings and Philip DeOrsey, Westfield State University</i></p> <p>We will run a guided exploration surrounding the game Spot It! There is a nice mathematical connection surrounding the game as they serve as visual representations of projective planes. Participants will see how we can find mathematics in unexpected places and how we can use fun and accessible resources to model complex mathematical ideas (MWM). Further, participants will explore how to create various sizes of Spot It! games and in that process will have to count and decide how many symbols and cards one will need (RAQ).</p>
<p>Number Sense & Operations - Fractions</p> <p>SMP #2</p>	<p>Supporting the Use of Discourse and Visual Representations for Fraction Instruction <i>Polly Wagner, Shutesbury & Erving Elementary Schools; Jan Szymaszek, Smith College Campus School; Deborah Schifter, Education Development Center</i></p> <p>A focus on mathematical argument through students' representations allows teachers to engage their students at multiple levels. In our session, we will present video footage of upper elementary students discussing fractions, focusing on principles that apply to a wide range of content throughout the elementary and middle grades. We will provide protocols and additional resources for participants to use with their colleagues.</p>

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