



Champlain Valley Educator Development Center

Collaborative Professional Learning to Support Vermont Schools

Evidence-Based Interventions and Brain Research in Math Instruction

Effective Scaffolds and Becoming Responsive and Adaptive Experts in Math Instruction in Grades 2-6

Kateri Thunder, Ph.D.



Target Audience: Math and Interventionist Educators, EST, MTSS, Data or Leadership Teams, Special Educators

October 16, 2024

Brain-Based Math Instruction: Addressing Opportunities to Learn Math and Removing Barriers (Grades 2-8) *expands to 8th grade for this day only.*

In every teaching and learning context, there are nine cognitive challenges that can create barriers to deep and rich learning. These choke points and pitfalls can occur throughout the brain's learning process. Using the Chew & Cerbin's (2021) framework, we can identify and respond to cognitive challenges in math so that we can ensure equitable access and opportunity to learning at the highest levels of mathematics for every student. (more detail on our registration page)

October 17, 2024

Effective Math Intervention & Scaffolds, Grades 2-6

Every learner deserves access and opportunity to learn deep mathematics. But how do we support learners who struggle, who hold misconceptions and have gaps in their knowledge and skills, or who need accommodations that align with their diverse needs? In this institute, we will experience and examine three specific instructional strategies for effective intervention: CRA (concrete-representational-abstract), math routines, and metacognitive thinking. Then we will also unpack a variety of accommodations and fading scaffolds that match diverse learner needs with the just right accommodation at the just right time. (more detail on our registration page)

Intersession Cohort Information on page 2 of this flyer.

Kateri Thunder, Ph.D. is an educator, researcher, author, and coach who collaborates with learners and educators from school divisions around the world to translate research into practice. Kateri has served as an inclusive, early childhood educator, an Upward Bound educator, a mathematics specialist, an assistant professor of mathematics education at James Madison University, and Site Director for the Central Virginia Writing Project. Kateri researches, writes, and presents on equity and access in education and the intersection of literacy and mathematics for teaching and learning. She has partnered with thousands of educators to catalyze change in their classrooms and schools. Kateri is a best-selling author, along with John Hattie, John Almarode, Doug Fisher, and Nancy Frey, for Corwin's *Teaching Mathematics in the Visible Learning Classroom Series*, *The Success Criteria Playbook*, and *The Mathematics Playbook*.

Institutes

October 16, 2024
October 17, 2024
May 20, 2025

Hours:

9 -3:30 pm
(includes breakfast and lunch)

Location:

Hampton Conference Center
Colchester, VT

Interventionist Cohorts Monthly

Nov. 14 2 – 2:45
Dec. 19 2 – 2:45
Jan. 16 2 – 2:45
Feb. 6 2 – 2:45
Mar. 6 2 – 2:45
Apr. 17 2 – 2:45

Cost:

CVEDC Members:
Day 1 only: \$275.
Institute – 3 days: \$750
Institute & Cohort: \$1500

Non-Members:

Day 1 only: \$300
Institute – 3 days: \$850
Institute & Cohort: \$1650

To Register: www.cvedcvt.org

Questions? info@cvedcvt.org

Or call: 802-497-1642



Are you a CVEDC Member?
All public schools in Addison, Chittenden, Grand Isle and Franklin Counties as well as Montpelier are members.



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Cohort Participation

These are monthly asynchronous 1 hr. modules followed by 45 minute live/virtual follow-up with Dr. Thunder a few weeks later. The live session will be recorded for those who need to watch it at a different time.

Follow-Up Virtual Sessions

Each live session is 2:00 – 2:45 pm

The What and How of Effective Math Intervention Scaffolds - Grades 2-6 A Deep Dive into....	We are learning about the what and how of effective math intervention and scaffolds. We'll know we've learned this when we can: Explain what works and doesn't work for effective differentiated Tier 1 instruction, Tier 2 intervention, and Tier 3 Intensive intervention focused on:	Asynchronous monthly modules and virtual /live follow-ups 2 - 2:45 pm once a month via zoom
....Counting	Describe the principles of counting for whole and rational numbers	November 14
...Subitizing	Describe the significance of perceptual and conceptual subitizing for whole and rational numbers	December 19
...Procedural Fluency	Describe the four components of procedural fluency and the importance of transfer and retrieval practice	January 16
...Conceptual Understanding	Describe the big ideas of priority or power standards with vertical significance	February 6
...Strategic Competence with Whole Numbers	Describe the progression of strategies operations with whole number and the importance of meta-cognition and feedback	March 6
...Strategic Competence with Fractions, Decimals and Percentages	Describe the progression of strategies operations with rational numbers (fractions, decimals and percentages) and the importance of meta-cognition and feedback	April 17

May 20, 2025 Becoming Responsive and Adaptive Experts

Our most important role in effective math teaching, learning, and intervention is to become a responsive and adaptive expert educator. In order to make intentional decisions, prioritize, pivot, and translate research into practice, we need to make sense of the essential and nonessential characteristics of effective math teaching, learning, and intervention. Then, we can adapt brain and math research to our contexts and learners. In this institute, we will synthesize our learning to translate research into practice within our local contexts. (more information on registration page)

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