

Mathematics in Vermont

The newsletter for Vermont's Mathematics Educators and supporters

March 2019

In this issue:

EMC² Press Release

Equitable Mathematics
Teaching Practices

Events, Announcements and
Resources

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this newsletter:

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EMC² - 12th Grade Math Course - Press Release from VSAC (February 6, 2019)

FOR IMMEDIATE RELEASE

Four high schools chosen to pilot new math proficiency course
Successful completion of 'EMC²' qualifies students for college-level math courses

WINOOSKI (February 6, 2019) – Four high schools have been chosen to pilot a new, much-anticipated course to strengthen math proficiencies in high school students before they graduate.

Beginning with the 2019-20 academic year, the course, Essential Math for College and Careers, or EMC², will be offered at Green Mountain Union High School, Richford Junior/Senior High School, Springfield High School and Stowe High School.

Vermont Student Assistance Corp., the Vermont State Colleges System and the Vermont Agency of Education have teamed up to create the new math course so that students will leave high school with the math skills to begin college and career training programs. It will eventually be made available to all high schools in Vermont.

VSAC research has shown that students with higher-level math skills are more likely to enroll – and successfully complete – college and career training. Without the requisite math skills, students are far less likely to continue their education and if they do, they are often required to take remedial courses, incurring an extra cost while not earning credit.

“We all want to see our students be successful as they take the next step in their education futures,” said Scott Giles, president and CEO of VSAC. “Being proficient in math removes one of the challenges students face in their college and career transitions after high school.”

The course is being built from a framework of open education source materials collected and used by 13 states who are trying to address similar challenges.

Learn more about this press release on [VSAC's website](#).

EMC² cont.

“In Vermont, we have identified 16 Essential Concepts for EMC², which can easily translate into a local high school’s graduation proficiencies. This project represents an excellent collaborative effort across three state agencies and local education systems, and I’m looking forward to next steps in implementation.” said Heather Bouchey, deputy secretary of the Agency of Education.

Students who successfully complete EMC² can enroll in college-level math courses at any of the Vermont State Colleges and Community College of Vermont without the need for remediation or an Accuplacer test score in math.

“This innovative high school math course builds bridges to continued education after high school by improving students’ math confidence,” said Yasmine Ziesler, chief academic officer at the Vermont State Colleges System. “The course encourages students to explore mathematical tasks and work to explain their thinking and understanding to each other. Student ownership and student voice are essential elements of success in this course and in their education and training after graduation.”

Students who are interested in taking the course should contact their school counselor to learn more about registration requirements. The partnership and curriculum development are funded by VSAC through a federal GEAR UP grant.

Equitable Mathematics Teaching Practices

Last year, NCTM published a book titled *Catalyzing Change in High School Mathematics (2018)*. In addition to addressing concerns about the breadth of the common core state standards in mathematics for high school, and issues concerning student and teacher tracking, there is a section about adding a layer of equity to the mathematical teaching practices first published in *Principles to Actions (2016)*.

Equitable teaching practices are meant for students of all levels. These equitable practices in math can exist in early elementary math classes all the way through high school math classes. I have been working on a document meant to be used by teachers and coaches to assess their proficiency in the math teaching practices and working toward equitable teaching practices.

The [Equitable Mathematics Teaching Practices](#) document has a cover page briefly explaining the set up and purpose of the tool. The practices are designed to function as a proficiency scale for teachers to self-assess their level of implementation of the math teaching practices. Even scoring in the “beginning” column is beneficial for students based on the practice of focus, the teacher can devise a plan for how to improve their practices to add the layer of equity for all learners.

Math teachers are encouraged to pilot the use of the *Equitable Mathematics Teaching Practices* self-assessment and then select a practice of focus for their own continuous improvement. If using the [continuous improvement model from the Vermont Agency of Education](#), a teacher could select a change idea, run a Plan, Do, Study, Act (PDSA) cycle, and reflect on the data to measure for impact. The final column illustrates that when students take on and internalize the behaviors of the equitable mathematical teaching practices students benefit. I hope to finalize this document and upload it onto the Agency of Education website for use by Vermont educators. Feel free to share ways in which the document is being used by teachers and coaches as well as ways to improve.

Events, Announcements, and Resources

Making Sense of Subtraction

Registration is now open for the March "Making Sense of Subtraction" workshops!

[Register online.](#)

Two locations and dates:

- March 28, 2019 - Richmond, VT at the Richmond Congregational Church
- March 29, 2019 - in Castleton, VT in Hoff Hall at Castleton University

Each workshop will run from 8:00 - 3:30.

Making Sense of Subtraction will focus on meaning making for young children as they develop an understanding of subtraction as a part-part-total relationship; its relationship to addition; and the role context has on how we model and visualize subtraction problems.

Contacts: Loree Silvis, Cornerstone Mathematics Consulting, 1519 Notch Road, Bolton, VT 05465 (802) 434-5080; Sandi Stanhope, Primary Mathematics Consulting, 637 Maquam Shore Road, Swanton, VT 05488 (802) 527-7582

McGraw Hill Offers Free Professional Learning to Teachers in VT, NH, and ME

Time: 8:00 – 3:00pm light breakfast and full lunch will be included.

Cost: FREE

Please RSVP to Stefanie Fredette at Stefanie_McGrawHill@comast.net by March 5, 2019 and May 5, 2019 depending on location. Space is limited.

MARCH: Using Formative Data and Math Probes to Differentiate Instruction. Cheryl Tobey is the Keynote Speaker.

March 14, 2019

The Best Western Plus Windjammer Inn, 1076 Williston Road, South Burlington, VT.

MAY: Guided Math Model: Use best mathematics instructional practices and formative assessment data to deliver targeted instruction that builds procedural skills through conceptual understanding in a guided math workshop model. Melanie Alcombright is the Keynote Speaker.

May 15, 2019

The Best Western Plus Windjammer Inn, 1076 Williston Road, South Burlington, VT.

Contact your local McGraw Hill Sales Reps:

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All Learners Conference 2019

Date: April 12, 2019

Location: The Inn at Essex in Essex, VT

Cost: Early Bird Registration through April 1, 2019 is \$225. Regular registration rate is \$250.

- Participants must register to attend.
- Morning refreshments and lunch will be provided.
- Agenda and additional details coming soon!

[Register here.](#)

PNOA Training Workshop

When: April 2, 2019 from 8:00 - 3:30

Where: Richmond Congregational Church in Richmond, Vermont

Grade Levels: K-2

[Register now online!](#)

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Vermont Mathematics Initiative now accepting applications!

The Vermont Mathematics Initiative (VMI) is entering its 20th year and is proud to continue its mission, initiated by Dr. Ken Gross and Dr. Marc Hull in 1999, to provide comprehensive mathematics professional development for teachers, grow and develop mathematics teacher leaders, and most importantly, support Vermont schools, districts and students. The VMI Master's Degree program for the 2019 cohort will commence July 8, 2019 in the Burlington area. Two, week-long courses will take place from July 8-12 and July 15-19, 2019. K-8 teachers interested in joining the 2019 VMI cohort, or those simply looking for more information should contact VMI Director, Judi Laird at jlaird@burkevt.net or (802) 274-0436.

Calling All Vermont High-School Students with an Interest in Math

Any enthusiastic Vermont 9th-11th grader is invited to join the Governor's Institutes of Vermont for their best summer yet! Students will spend a week completely immersed in a topic they love while making friends from all across Vermont who share their interests! Do you know any students who love stargazing, or are passionately curious about the cosmos? Then GIV's Astronomy Institute is the perfect fit! Students will combine art, physics, and math for an exciting adventure into the universe! GIV is also offering a Mathematical Sciences Institute designed just for math lovers. At this week-long festival of math, students will be surrounded by math-enthusiasts like themselves and explore the real-world and theoretical applications of math. Students will take on world-class mathematical challenges and enjoy advanced topic groups taught by renowned mathematicians. GIV is dedicated to being accessible for every Vermonter. Our sliding scale tuition goes as low as \$10, making it affordable for every family! Applications are open now and close throughout March, so visit [Governor's Institutes of Vermont website](#) to apply now, or for more information about each Institute.

Directions for Submissions: If you would like to submit an article, announcement, event, or resource for a future newsletter, please email information to heidi.whipple@vermont.gov. This newsletter will be published bi-monthly (even months). Time sensitive materials will be prioritized but check the dates to see if the bi-monthly publication will delay the sharing of information.

To subscribe, or unsubscribe to the Mathematics in Vermont e-bulletin, write to heidi.whipple@vermont.gov or call (802) 479-1379.

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