

K-12 Mathematics



in the Richmond School District June 2019

BC's Redesigned Curriculum

The 2018-2019 school year marked the third year of full use of BC's K-9 mathematics curriculum. New aspects of the mathematics curriculum include a focus on the processes of mathematics through the curricular competencies, contextualizing mathematical experiences in place, community and culture, planning with mathematical big ideas in mind, financial literacy and an enhanced focus on computational fluency.

The **K-9 Mathematics** curriculum framework can be found on the BC Ministry of Education website here:

<https://curriculum.gov.bc.ca/curriculum/mathematics>

Grade 10 Mathematics courses (Workplace Mathematics 10; Foundations of Mathematics and Pre-Calculus 10) began full implementation in September 2018. The curriculum framework for these courses including big ideas, curricular competencies and curricular content can be found here:

<https://curriculum.gov.bc.ca/curriculum/mathematics/10/courses>

Grades 11 and 12 Mathematics courses will be implemented in September 2019. The curriculum frameworks for the new Grades 11 and 12 courses can be found here:

Grade 11

Computer Science 11

Pre-Calculus 11

Foundations of Mathematics 11

Workplace Mathematics 11

History of Mathematics 11

<https://curriculum.gov.bc.ca/curriculum/mathematics/11/courses>

Grade 12

Apprenticeship Mathematics 12

Geometry 12

Calculus 12

Pre-Calculus 12

Computer Science 12

Statistics 12

Foundations of Mathematics 12

<https://curriculum.gov.bc.ca/curriculum/mathematics/12/courses>

In the Richmond School District...

Math Mentor Teachers

We have four Richmond teachers serving as math mentor teachers in our district. They are available to facilitate professional learning experiences, to meet and plan with teachers or for teachers to visit their classrooms. Please contact them via email – Michelle Hikida (primary-Diefenbaker), Gillian Ewart (intermediate-McNeely), Weily Lin (secondary-SLSS) and retired secondary teacher Fred Harwood who has been graciously supporting elementary math clubs in our district and TIOC-ing (fharwood@sd38.bc.ca).

Richmond District Conference

At this year's District Conference on February 15 2019 there were opportunities for K-12 teachers of mathematics attend sessions on mathematics teaching and learning. Resources from the presentations are in a folder in the Documents section of the math site on the district portal.

Graduation Numeracy Assessment

Secondary school students took part in BC Graduation Numeracy Assessment (GNA) during the 2018-19 school year. Passing the assessment (receiving a score of 1 or higher on a scale from 0-4) is part of the new BC graduation requirements. The assessment is not connected to a specific mathematics course and assesses students' numeracy – the ability to apply mathematics in contextual situations. Information for teachers, students and families and sample assessment questions can be found here:

<https://curriculum.gov.bc.ca/assessment/numeracy-assessment>

This spring, in collaboration with Shaheen Musani, we hosted a GNA working group with secondary mathematics teachers to co-create a support document for secondary schools and create and curate numeracy tasks to be used in Richmond schools.

Elementary Math Focus Afternoon

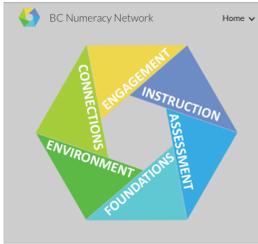
This year, Richmond hosted an elementary math focus afternoon on January 28 2019 at Bridge Elementary. Staffs from six schools with a math focus or a professional interest in mathematics came together to share school-based projects and attend sessions facilitated by Richmond teachers. Resources from the afternoon are in a folder in the Documents section of the math site on the district portal.



Education Committee Presentation

On April 29 2019, I was joined by four teams of teachers and students from Tomsett, Grauer, Cook and Anderson to share an overview of how the new mathematics curriculum is being enacted in our elementary schools to the Richmond Board of Education's Education Committee.

BC Numeracy Network

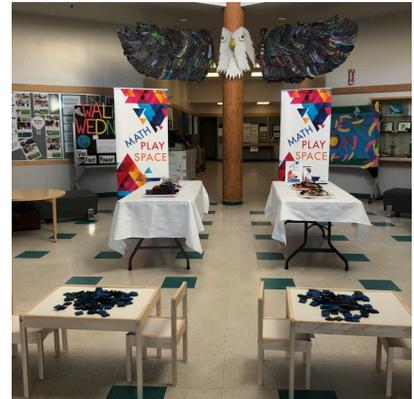


Many school-based professional collaborative inquiry projects in mathematics this year were focused on ideas on inclusive instructional routines, balanced numeracy, guided math and math/story/language connections. The BC Numeracy Network website was created by a group of BC educators to support the redesigned mathematics curriculum and is used as a resource for many of our school and district-based projects. The website hosts resources for K-12 teachers of

mathematics: bcnumeracynetwork.ca

Math Play Space

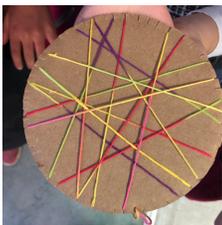
This spring we launched a community engagement project called Math Play Space. This “pop-up” event can be booked for school, district and community events with the goal of engaging families and community members in doing mathematics together and learning about the BC mathematics curriculum. A web page with more information can be found here: <http://bit.ly/sd38math>



K-5 Reggio-Inspired Mathematics Project

Richmond is one of ten districts participating in a BCAMT-supported cross-district collaborative professional inquiry project looking at how Reggio-inspired principles and practices can enhance the teaching and learning of mathematics. Teachers involved in this project meet with colleagues at both the district and cross-district level.

The Studio at Grauer Elementary



To support the big ideas of the BC mathematics curriculum and to consider flexible learning environments, Marie Thom and Janice set up a classroom at Grauer Elementary in January 2017 and it has continued to grow in its scope. K-7 classes from Grauer as well as other Richmond schools (on math field trips) visit the math studio to engage in thinking about the big ideas in mathematics through materials and projects.



Teachers from Richmond and other districts also visit The Studio to engage in professional learning and planning. This school year, we also hosted an afterschool Studio Series for teachers to work with materials and make connections to mathematics teaching and learning.

“International” Math Events

This year, Richmond schools and classes participated in three events that are celebrated around the world. On November 1 and May 23, classes experiences mathematics outdoors during Outdoor Classroom Day, Pi Day was celebrated on March 14 (3.14) and World Tessellation Day was celebrated on June 17, including a pop-up Math Play Space at Brighthouse Public Library.

Afterschool Big Mathematics Ideas Professional Learning Series

This year we hosted three afterschool series for K-2, 3-5 and 6-9 teachers. These afterschool series look at the big mathematical ideas specifically focusing on foundational concepts and developing computational fluency. Woven into these sessions are key aspects of the redesigned curriculum framework in mathematics including inclusive teaching and learning practices, formative assessment and the core and curricular competencies.

Box Cars Math Games Workshops

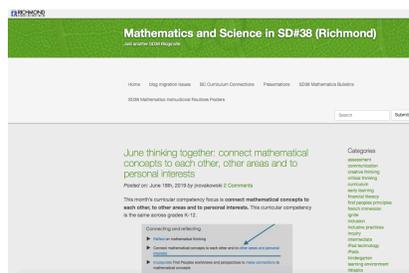
On January 16 2019 we hosted Jane and John Felling of Box Cars and One-Eyed Jacks for two math games workshops, one for Grades 2-5 teachers and a second for Grades 6-9 teachers. The DRC has purchased kits of dice and games books to be borrowed.

Richmond School District K-12 Mathematics Blog

A district blog is maintained to share what is happening in the areas of mathematics and other curriculum projects in the Richmond School District. The blog address is:

<http://blogs.sd38.bc.ca/sd38mathandscience/>

This year's **Thinking Together Blog Series** has focused on the K-12 curricular competencies in the BC Mathematics curriculum. Each month I have posted a blog post intended to provoke professional discussions and learning around mathematics teaching and learning through the lens of our BC curriculum framework. Each post includes information, links to resources and questions to inspire professional discussions and either personal or collaborative inquiry. These posts can form the basis of a professional learning experience as a school team/PLC or as a whole staff.



If you have anything you would like to submit to be posted on the blog, please email information and photos to Janice at jnovakowski@sd38.bc.ca

Richmond School District Mathematics Site on the Portal

The district's mathematics site on the portal can be found in the curricular areas section of Learn38. Information about upcoming events, featured stories, curriculum documents, information and links to instructional resources are posted here.

<https://portal.sd38.bc.ca/learn38/mathematics/Pages/default.aspx>



A new addition to the portal's mathematics site is the Instructional Routines posters in English and French to support teachers with pedagogy, planning and connections to the curricular competencies within the BC mathematics curriculum. The posters can be downloaded and printed on 11x17 sized paper. They are found in folders in the Documents section of the math site. Thank you to Carrie Bourne for translating the posters to French.

A bulletin with professional learning opportunities in mathematics for 2019-20 will be posted in September!



compiled by jnovakowski/june2019