



ONTARIO PUBLIC  
SCHOOL BOARDS'  
ASSOCIATION

Leading Education's Advocates

## EFFECTIVE PRACTICES IN ELEMENTARY MATHEMATICS EDUCATION

**School Board:** District School Board of Niagara

**Contact Person and Email Address:** John Dickson [John.Dickson@dsbn.org](mailto:John.Dickson@dsbn.org)

**Name of Program/Initiative/Strategy:** Mathematics – Mathematics for Teaching Knowledge

**Hyperlinks to Documents or Website(s) Describing this Program/Initiative/Strategy**

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### Description of Program/Initiative/Strategy

The focus is on exemplary mathematics practices that excite, engage and increase student confidence and achievement. In the brief description please provide answers to the following questions: Where the program/initiative/strategy is delivered (school/board locations)? Who is responsible for delivering and monitoring the program/initiative/strategy? Who is the target audience? Are there any community partnerships involved? Are there any staffing or budget implications? Are there any special resources required? What are your indicators of success, etc.?

- A. Offering Mathematics AQ Courses free of charge (P/J and Gr. 7/8 - in partnership with Brock University). Courses delivered by DSBN Instructional Coaches and Math Consultant at the DSBN Central Office. Target Audience: K-8 contract, occasional teachers and administrators. Monitored by system principal, school-based principals, and superintendents. Budget implications: \$90, 000/year allocated to this initiative from the Board budget. Indicators of success: 550 registrants to date (2 year period); observational evidence of teacher transference of learning as reflected in classroom practice; inquiry component of course includes providing evidence of student learning and teacher reflection.
- B. Professional Learning Models (CIL-M & Centrally Offered Sessions): Delivered in schools/classroom/central office site. SOs, principals, consultant and instructional coaches (ICs) responsible for delivering and monitoring. Target audience: K- 8 teachers of mathematics, as determined by school-based data and need – emphasis on gr. 4-6. Budget implications: secondment time for teachers to work with ICs; cost for 34 instructional coaches. Resources: Van de Walle and Small books. Evidence of Success: Change in teacher practice and improved outcomes for students as measured by classroom based assessments.
- C. Scope & Sequence/Newsletters Schools are following a centrally determined Scope & Sequence. Monthly math newsletters are released with highlights of important mathematics content and teaching ideas connected to the scope and sequence topics. Indicators of success include the implementation of research-based effective lessons, as well as the feedback from all stakeholders.

**What has been the impact on Student Learning?**

- A. Mathematics AQ – Students are being impacted positively in relation to the inquiry that the teacher chooses to examine in the course (e.g., using strings, growth mindset, fractions using number lines, etc.)
- B. Professional Learning Models – Students are being impacted positively as the lessons in their classrooms are well planned out and delivered and make use of their thinking to share with others and they gain understanding from each other during lesson consolidation and confidence as it is their solutions that are guiding the learning.
- C. Scope & Sequence/Newsletters – Students are being impacted positively as they are having experiences that have been researched to be effective. Students who move during the year will not miss out on different strands as they change between schools.
- D. Instructional Coaches – Students are being impacted positively as they are having a second teacher in the room at different times to support their regular classroom teacher as well as the students. More student ideas are being heard and connected.
- E. DreamBox – Students are being impacted positively as they deepen their understanding of key mathematical concepts when they progress through the various levels and receive “just in time” targeted feedback.