



ONTARIO PUBLIC
SCHOOL BOARDS'
ASSOCIATION

Leading Education's Advocates

EFFECTIVE PRACTICES IN ELEMENTARY MATHEMATICS EDUCATION

School Board: Rainbow District School Board

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Name of Program/Initiative/Strategy Mental Math in Rainbow Schools, K to 8

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

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.?

In 2012, Rainbow schools embarked on a journey of building fact fluency in elementary math classrooms through mental math. The goal was to ensure that students enhanced their skill of flexibility with numbers by gaining mental math strategies to support them in their mathematical thinking for ten minutes, each day, in addition to the sixty-minute existing math block. Rainbow teachers, grades one to eight, were provided with one on one support over three days with a math consultant who modelled, co-taught and supported mental math lessons in individual classrooms across Rainbow schools. In 2015, we added to our strategy by adding mental math in kindergarten classrooms. In terms of staffing, it was critical to have the math consultants to provide the direct support in the classroom. We also used portions of Professional Activity Days to engage teachers and administrators in building their own understanding of mental math. In terms of indicators, we have measured the number of mental math strategies (e.g., halving, doubling, friendly numbers) at the beginning of the year and the end of the year. One of the indicators of success are the numbers of mental math strategies students are using during the sixty-minute math block.

What has been the impact on Student Learning?

Students have consistently gained in the number of mental math strategies they are using during their sixty-minute math block. When we measured the students in our CODE Summer Learning Program, each student gained at least one mental math strategy and most students gained at least three during a three-week duration. Teachers share anecdotally that students have a far better understanding of numbers, the use of manipulatives and the ways numbers interact with one another. Students are also becoming more efficient in their mathematical thinking and are using more time to engage deeply in the mathematical thinking during a problem.