ONTARIO PUBLIC SCHOOL BOARDS' ASSOCIATION

Leading Education's Advocates

EFFECTIVE PRACTICES IN ELEMENTARY MATHEMATICS EDUCATION

School Board: Limestone District School Board

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Name of Program/Initiative/Strategy: Collaborative Inquiry, Spiralling Fractions

Description of Program/Initiative/Strategy (max 200 words)

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.?

At Limestone DSB, our elementary math team (curriculum consultant and numeracy facilitator) is currently involved in a Collaborative Inquiry in Mathematics for our EOSDN regional math project looking at how spiralling fractions throughout the school year might increase student engagement, confidence and achievement. (Spiralling is a teaching strategy that provides multiple opportunities for students to be successful throughout the year. We assess, reteach where necessary and, although students may not grasp a concept early on, they will have time to fully understand by the end of the year.) We are working with 20 educators at 9 different schools, within a structure of 3 pods. Two pods have been chosen based on grade (a 3-4 pod and a 4-8 pod), and the other pod consists of teams of classroom teachers and SST/VPs who work collaboratively on this project. Our budget for this project has been supplemented by the EOSDN regional math funds and involved 3.5 days of co-plan/co-teach in classrooms in addition to a full day of mathematics instruction from a Provincial Mathematics Lead, Shelley Yearley. Our indicators of success include: greater teacher and student fluency in their understanding and representation of fractions, students applying their understanding of fractions to other strands in math, an increase in student engagement, and achievement. Additionally, we will see the spread of this learning to other teachers within the participating schools – and beyond!

What has been the impact on Student Learning? (max 200 words)

To date, teachers have reported an increase in student engagement, confidence and ability when working with fractions. Through their ongoing assessment tasks, they are seeing a wider variety of representations of fractions (i.e. more number lines, sets and less use of the circle), a deeper understanding of unit fractions, and a greater understanding of the importance of knowing "the whole." Teachers themselves are understanding the importance of using number lines, using correct fractional language and the importance of counting by unit fractions.

Within the participating schools, the learning from this project has spread to other classrooms. We have had some project educators involve a colleague in their co-plan/teach sessions. As well, in multiple sites the entire junior division will be learning more about spiralling fractions and taking a closer look at the continuum of expectations across the curriculum. We believe we will see a continued increase next year on student confidence and achievement when working with fractions.