



ONTARIO PUBLIC
SCHOOL BOARDS'
ASSOCIATION

Leading Education's Advocates

EFFECTIVE PRACTICES IN ELEMENTARY MATHEMATICS EDUCATION

School Board _____ Hastings and Prince Edward District School Board _____

Contact Person and Email Address _____ Cathy Portt cportt@hpedsb.on.ca _____

Name of Program/Initiative/Strategy _____ Early Numeracy Screening Tool _____

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

_____ [Introductory Information for Early Numeracy Screening Tool](#)

_____ [Early Numeracy Screening Tool - Draft](#)

_____ [Early Numeracy Educator Support Document](#)

_____ [Early Numeracy Educator Google Folder](#)

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.?

Early Numeracy Screening Tool and Support Document - Building Understanding of Early Numeracy Concepts

The intention of the Early Numeracy Screening Tool is to provide an assessment tool that is based on Kindergarten Program expectations and current early numeracy research in order to support educators in understanding their students' strengths and next steps. It is expected that the information collected through administering the assessment will be used to support instructional and assessment decisions for students. Administrators, JK/SK teachers (including the combined SK/1) and early childhood educators from all elementary schools attended a full day professional learning opportunity at the Education Centre to deepen understanding of the development of number sense in early learners, the Early Numeracy Screening Tool and accompanying Support Document. In addition to this learning, schools received one day release for teams to work with their Learning Partner to deepen knowledge of their learners through co analysis of the Early Numeracy Screening Tool and student observations, and, based on analysis, respond to student and educator needs and

plan forward to support learning. Learning partners continue to work with classroom educators to reflect upon evidence of student learning in order to inform instruction in numeracy. An additional half-day release for Kindergarten Teams was provided to reflect on student learning and instructional and assessment strategies.

Kindergarten educators are provided access to a Early Numeracy Educator Google Folder containing the Introductory Information document, Early Numeracy Screening Tool, Black line Masters and Appendices, Early Numeracy Screening Tool Support Document, resources from the Professional Development Days, Screening Tool Recording Spreadsheet, and Pedagogical Documentation Revisited Monograph. Educator teams also received hard copies of all the documents .

Monitoring strategies included educator surveys (initial and final), class recording sheets (diagnostic and post), teacher reflections and monitoring questions based on educator learning, student learning, and next steps.

What has been the impact on Student Learning?

Student learning as reported by educators:

- Improved and deeper understanding of early numeracy concepts and skills
- Confidence with risk taking and math strategies - growth mindset
- Increased mathematical language/vocabulary
- Improved communication skills to explain mathematical thinking - verbalizing
- Using manipulatives to construct understanding of number concepts
- Using manipulatives to represent their thinking
- Transferring understanding of number concepts and skills across manipulatives and strands
- Demonstrating a variety of strategies
- Surprised teachers with what they were able to do

Educator learning: (led to student learning)

- Improved and deeper understanding of early numeracy concepts and skills
- Know where students are and where to take them next (i.e., based on student assets and challenges)
- Confidence in teaching math and taking risks - growth mindset
- Better able to notice and name the math
- Using observations and conversations -what are students saying and doing? What are the mathematical behaviours? - documenting student thinking
- Questioning - How do you know? To prompt and extend student thinking
- Understanding the importance of manipulatives as tools for students to develop understanding (i.e., number lines, 5 and 10 frames, rekenreks, counters, dot plates)
- Understanding the importance of manipulative for students to demonstrate their thinking and understanding
- Integrating mathematics through the day and embedding into play based centres/learning
- Providing students time and opportunity to talk about their math thinking (i.e., Number talks, collaborative tasks, sharing ideas/strategies)
- Became more focussed and precise with planning for instruction and assessment

