

# Early Math Assessment Tool

## Background

A strong foundation in early numeracy is imperative for cumulative learning. Even when children enter kindergarten, there is already a wide spread in mathematics skills that can be exacerbated with time - impacting learning across a variety of subjects.



## Description of the Tool

The Early Math Assessment @ School (EMA@School) is an evidence-based numeracy screener designed to identify students in kindergarten to grade 4 who are underachieving relative to their peers. Early assessment and identification of at-risk students can support effective and efficient targeted intervention enabling greater outcomes for all. As the Province of Alberta's provincial numeracy screening assessment, EMA@School was used with over 50,000 primary students in Alberta. Assessment combined with targeted support enabled 77% of at-risk students meet target scores in most numeracy sub-skills.

## Benefits

- **Grade Specific Numeracy Screening:** between kindergarten to grade 4
- **Enables intervention** early before the skills gap widens through cumulative learning
- **Increases efficiency** of education systems by supporting targeted intervention

## Key Attributes

- **Comparing Numbers Subtask:** Measures how quickly and efficiently students can compare magnitudes.
- **Writing Numbers Subtask:** Assesses students' abilities to translate between verbal number words and arabic numerals (aka transcoding)
- **Numbers on the Number Line Subtask:** Measures understanding of ordinal relations among numbers and proportional reasoning skills.
- **Ordering of Numbers Subtask:** Measures how quickly and efficiently students can judge if number sequences are increasing in order.
- **Number Facts Subtask:** Assesses students' abilities to solve addition and subtraction.

## Applications

- **Early Childhood Education:** K- Grade 4 Numeracy Assessment

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### Seeking:

Non-exclusive Licensees  
Research Partnerships

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