Learning Guide

Mathematics Programs of Study

What does a school staff need to know about number facts and the Alberta Mathematics Programs of Study?

This learning guide is designed for use by instructional leaders and learning communities or as a self-paced study to explore the clarifications to Alberta K-9 Mathematics Program of Studies.

This learning guide is intended for use after viewing the Alberta Education webinar, Clarifications to Alberta K-9 Mathematics Programs of Study.

Teachers need to understand provincial expectations regarding teaching number facts and strategies so they can ensure this is part of their instructional planning and that they are providing their students with optimal learning opportunities. This understanding will also help them communicate more accurately with parents who might be concerned about the mathematics program. The clarification to the programs of study was designed to clearly communicate the expectations of the mathematics curriculum to stakeholders, especially teachers, parents and curriculum leaders. The focus of the clarification was the expectations for all learners around basic math facts and strategies for performing calculations and solving problems.

Key understandings:

- This webinar clarifies that in Alberta students are expected to:
  - recall, understand and apply number facts
  - investigate a number of strategies and become proficient in at least one
  - memorization of facts is a goal not a process
- Content of the programs of study is *what* students are expected to know and be able to do. The educator determines *how* students will learn the identified outcomes.
- Alberta K-9 Mathematics Achievement Indicators support document provides examples of evidence to determine whether student has achieved given specific outcome.
- Teachers may use any number of the indicators or choose to use other indicators as evidence of specific learning.
- The program does not prescribe specific strategies. The goal is that students will investigate a variety of strategies and become proficient in at least one appropriate and efficient strategy that they understand.
- Number sense is an intuition about numbers that involves fluency and flexibility with numbers that goes beyond counting, memorizing facts and the rote use of algorithms. Number sense can be developed through the use of rich tasks that connect to students' real-life experiences.

Questions for discussion:

- How can teachers use this clarification of expectations? How can school leaders use this information?
- What are the consequences of **not** communicating to parents the clarifications to the programs of study? How can that dialogue take place? Who should be responsible for initiating that dialogue?

For more information:

Mathematics Kindergarten to Grade 9 Programs of Study (Alberta Education)

Alberta K-9 Mathematics Achievement Indicators (Alberta Education)

12 Step Program for Success with Dr. Marian Small (ERLC)

Administrator Guide to Support Mathematics Implementation (ERLC)

Fact Sheet for Parents: Clarification of Expectations Regarding Basic Number Facts and Strategies (Alberta Education)

Learn more about essential conditions that support implementation planning for new educational policies and initiatives at http://www.essentialconditions.ca

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