

Why is my child using a calculator in elementary?

The new mathematics curriculum expects students to be using a calculator, even in elementary school! Calculators can contribute to the learning of mathematics; however, many of us may have fears about our children using calculators. Here are some myths about calculator use.

Myth: If my child uses a calculator, he won't learn the "basics".

The curriculum expects students to demonstrate basic fact mastery (+ - x \square) and personal strategies, including mental mathematics, throughout elementary school. Research indicates that the availability of calculators has no negative effects on learning basic facts. If students only use calculators to provide answers to computations, rather than using the answer to think, reason or solve problems, the calculator is not a useful mathematical tool. Students must learn when it is useful to use a calculator and when it is more useful to use mental mathematics!

The calculator can be used as a practice tool for students working on basic facts. If a child is practicing the multiples of 8, the child can enter 8×3 and delay pressing the $=$. The child can answer the fact before pressing $=$ to check if the answer was correct.

Myth: If my child uses a calculator, he will become dependent on it.

When children are involved in tedious pencil and paper calculations, almost no mathematical thinking is necessary; students simply follow procedures. When children are solving problems and using calculators, they are using their mental power in more important ways - reasoning, conjecturing, and testing ideas. In realistic problems, the numbers are not always easy numbers to work with. Students who understand the operations (+ - x \square) can use calculators as a computational tool so that they can focus on developing understanding and critical thinking. Often, students lose focus on the problem on which they are working when having to complete lengthy computations using pencil. Students still need to know if the answer a calculator provides is reasonable.

*An activity for students that involves reasoning and testing ideas with a calculator: **What number multiplied by itself will equal 62?***

Calculators will not always be used in the mathematics class. It is the discretion and wisdom of the teacher to determine when and how students should use calculators. The Alberta mathematics curriculum indicates that "there is to be a balance among mental mathematics and estimation, paper and pencil exercises, and the use of technology, including calculators and computers. Concepts should be introduced using manipulatives and be developed concretely, pictorially and symbolically." Calculators can enhance learning!

Alberta Education Implementation Schedule	2008-2009	2009-2010	2010-2011
Provincial	Grades K, 1, 4, 7	Grades 2, 5, 8	Grades 3, 6, 9, 10
Optional	Grades 2, 5, 8	Grades 3, 6, 9	

This newsletter article is produced by the Alberta Regional Professional Development Consortia as a result of a grant from Alberta Education to support implementation of mathematics.