Calculators and computing

Handheld calculators are surprisingly new—they have been around for only about 30 years!

Research has shown that thoughtful use of calculators in mathematics both improves how well kids know math and contributes to more positive attitudes about math. Calculators can help young kids learn basic math concepts, such as counting up or down by ones but also by other multiples like 2 or 5. Try it, enter 2 + 2 = = =, and you will see how the calculator provides a visual image to reinforce counting by 2's. Calculators can also be used to learn the basic operations of addition, subtraction, multiplication and division. Not surprisingly, when kids are allowed to use calculators they get more basic calculations correct, and the differences are most dramatic for subtraction, multiplication and division. Students who use calculators are often better problem solvers too. And older kids benefit a great deal from using graphing calculators when they begin learning algebra.

Calculators can be especially helpful when kids are learning a new concept or are exploring problem solutions. Spending less time on calculations allows them to focus on understanding, problem solving strategies, and exploration.

But the research does not support kids always using calculators. It is still important for kids to develop number sense (being able to estimate and have a sense when a calculation is reasonable) and to learn to do computation without a calculator. But the research does not support the idea that kids must completely master basic math facts before they are permitted to use a calculator.

It is best to think of calculators as tools to help kids learn. As with all tools, when they are used well, the job to be done is easier.

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