

Teaching goes back to basics

North York math teacher Charles Ledger has taken a lot of heat from critics for the radical way he teaches math.

In an era in which "memorization is bad, creativity is good," Ledger has staked his career on the drill.

"People say, 'We've got calculators and computers, why do we need to do this?' Drill is controversial, but it is important for kids to have to work with numbers in their heads."

The reason is simple, says Ledger. The answer's no good if you don't know how you got it.

"If students know their numbers, in algebra it all falls into place. It's doing drills, doing the course work, which backs up number theory, sines, order of operations, brackets, proving numbers."

The reality about learning math, says Ledger, is "some things have to be memorized. Our Grade 7 students can do all the perfect squares all the way up to 60. It's all there in their heads."

Ledger devised and used his "Spirit of Math" program at Zion Heights Public School, which boasts an astonishing record: seven times in nine years it has won the national math competition, the Pascal Contest, involving 1,400 schools.

What's more, these students have won first place in the North York board's own Gauss Contest every year since 1983.

Ledger, who was a missionary in Africa before becoming a teacher, says he begins each day with 80 questions to be completed in 10 minutes. Students work together in teams on the problem of the day.

"None of the schools using computers for teaching math come close to our success. But the real clue to this whole thing is to get the kids working together early."

Although Ledger retired from teaching, he has been hired back by the North York board

as a consultant to bring the program into more schools.