

## THE CULTURE OF MATHEMATICS

From *Mathematical Power: Lessons From A Classroom*  
by Ruth Parker (Heinemann Press, 1993)

In Schools

As a Discipline

Mathematics is neat and concise. It is about memorizing correct procedures or algorithms for solving well-defined problems.	Mathematics is messy. It involves a search for sense and order from complex, ill-defined situations.
Speed or getting answers quickly is important and emphasized.	Persistence and flexibility are essential to mathematical pursuits. Mathematicians often spend years of their lifetime trying to solve a single problem.
Right answers are emphasized. Answers are validated by the teacher or answer book.	There is no answer book. Often there are no best answers nor even a guarantee that an answer will be found. Problem resolution involves judgment calls. Justification of one's ideas and communication of one's findings are essential to mathematical endeavors.
Arithmetic and abstract manipulation of symbols form the core of the curriculum.	Important ideas and the interrelatedness of those ideas from diverse mathematical domains of geometry, patterns and functions, logic, number, measurement, probability, and data collection and analysis form the core of mathematics.
Calculators are to be used once basic skills are mastered. Computers and other technology are useful primarily for drill but also for enrichment.	Tools (e.g., manipulatives, computers, calculators) are continuously available and used to examine and represent ideas and/or extend thinking. Tedious computations are done by machines and thinking and reasoning by people.
Math is done in isolation, working quietly from a textbook or worksheet.	Math is used to make sense of information, events, and situations in the world. It is a collaborative endeavor with mathematicians and others working together, communicating their ideas and building on one another's ideas and experiences.