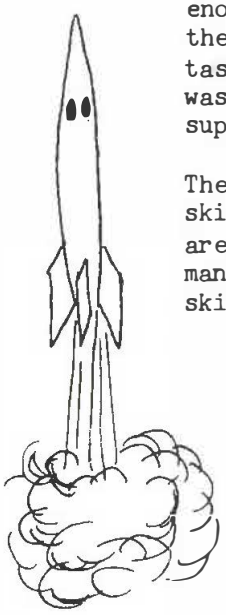
# SUMMARY OF THE NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS POSITION PAPER ON BASIC MATHEMATICAL SKILLS

Mathematics supervisors are concerned that as a result of the "back-to-the-basics" movement, today in many schools there is too much emphasis on computation and not enough stress on other important mathematical skills. To respond to this trend, the National Council of Supervisors of Mathematics (NCSM) set up a twelve-member task force to write a position paper on basic mathematical skills. The position was first written in July, 1976, and later revised on the basis of ideas from supervisors throughout the country.



The position paper urges that we move forward, not "back" to the basics. The skills of yesterday are not the ones that today's students will need when they are adults. They will face a world of change in which they must be able to solve many different kinds of problems. The NCSM position paper lists ten important skill areas that students will need.

Problem Solving: Students should be able to solve problems in situations which are new to them.

Applying Mathematics to Everyday Situations: Students should be able to use mathematics to deal with situations they face daily in an ever-changing world.

Alertness to Reasonableness of Results: Students should learn to check to see that their answers to problems are "in the ball park."

Estimation and Approximation: Students should learn to estimate quantity, length, distance, weight, etc.

Appropriate Computational Skills: Students should be able to use the four basic operations with whole numbers and decimals and they should be able to do computations with simple fractions and percents.

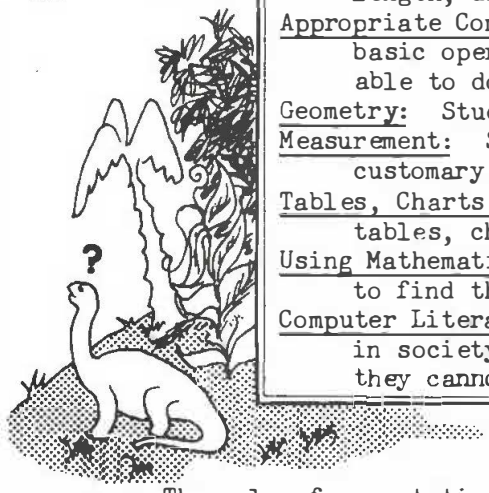
Geometry: Students should know basic properties of simple geometric figures.

Measurement: Students should be able to measure in both the metric and customary systems.

Tables, Charts and Graphs: Students should be able to read and make simple tables, charts and graphs.

Using Mathematics to Predict: Students should know how mathematics is used to find the likelihood of future events.

Computer Literacy: Students should know about the many uses of computers in society and they should be aware of what computers can do and what they cannot do.




The role of computation is put into its proper place. Long computations will usually be done with a calculator, but computation is still important. Mental arithmetic is a valuable skill. Computational skills by themselves are of little use, but when used with other skill areas they give the learner basic mathematical ability. School systems which try to set the same requirements for all students should beware of requirements which either are too difficult or which stress only low-level skills.

Rather than using only a single method such as drill and practice for learning basic mathematical skills, many different methods should be used. Hands-on experiences with physical objects can provide a basis for learning basic mathematical skills. Standardized tests are usually not suitable for measuring individual student progress. Instead, the tests used should be made especially to measure the mathematical skills being taught.

The NCSM position paper sets forth a basis for identifying which basic mathematical skills are important and for determining if students have learned these skills.