

Keeneyville Elementary School District 20

Mathematics Mission Statements
Program, Curriculum, Instruction, Materials

Mission

The mission of the mathematics program in District 20 is to develop students who value the importance of mathematics. We want our students to be confident, life-long mathematical problem solvers, who can communicate and reason mathematically.

Program

The mathematics program

- provides access for all students to study all the major content areas of mathematics regardless of ability or lack of mastery;
- contains multiple and diverse assessment tools to determine mathematical growth;
- provides an opportunity for all students to learn the skills required to acquire confidence in their ability to problem solve, think critically, and communicate mathematically through various representations;
- ensures that teachers are knowledgeable in mathematics, have adequate resources to support their work, and engage in professional development and self-reflection.

Curriculum

The curriculum in the mathematics program should be focused and concept-driven in order to prepare our students for a future of great and continuous change. The curriculum should focus on the major content areas as listed in the Illinois Learning Standards. These content areas should be taught as an integrated whole, not as isolated lessons. The curriculum should be structured in such a way that while basic computational skills are valued, they do not comprise a dominant portion of the curriculum.

Instruction

With regard to instruction, we in District 20 believe that a mathematically rich program also includes a process for concept development. That is, when a mathematical concept is first presented, the student needs to

- explore the concept informally and formally with mathematical tools;
- record this work using pictures, models or other appropriate representations;
- ultimately record the work using standard symbolic representations.

Students should be given ample time to investigate, predict, discuss and connect ideas and relationships before moving to the next stage in the process. Paper and pencil computation and manipulation of symbols should not take place until the student is comfortable making the transition.

Mathematical Tools

Regarding the use of mathematical tools, we believe that the appropriate use of tools and technology can only enhance a mathematically rich program. Technology is essential in teaching and learning mathematics. Calculators, along with other types of tools and

technology, influence the mathematics taught and enhance student learning. Each mathematical tool that is chosen needs to be used wisely to support understanding.

Summary

By the end of the eighth grade, after a coherent experience across pre-kindergarten through grade eight, students should have a very strong foundation in algebra and geometry, so that they can use these concepts to solve problems with understanding. Students must also be fluent in arithmetic computation which they must use efficiently with accurate methods and understanding. Students should know basic addition, subtraction, multiplication, and division operations. Finally, District 20 students and staff who participate in our program will discover and value the importance of mathematics in their lives.

Adopted November, 2001