

RESEARCH and STANDARDS

Basic Picture Math Level 1 is a comprehensive mathematics program designed for students with special needs. It includes ten units that cover numbers, counting, ordering and comparing, addition, subtraction, measurement, money, shapes and patterns, fractions, and graphing. The units are sequenced to provide a structured and thorough practice in a variety of mathematical concepts.

A unique design feature of *Basic Picture Math* Level 1 is the inclusion of pictures in each activity. The use of pictures provides a real-world context for understanding abstract mathematical concepts. The pictures chosen for the activities represent objects that students are familiar with, such as sporting equipment, clothing, and animals. Research states that, “Teachers are encouraged to give students hands-on experiences connected to the real world ...” (Butler, Miller, Lee, & Pierce, 2001). For example, students measure the length of a pencil and use a graph to find the number of animals at the zoo.

Each unit of *Basic Picture Math* Level 1 contains two pages of Real-World Connections. These practice sheets take the information learned in the unit and use it in an everyday situation. Ultimately, this helps students transfer learning from practice to application.

Basic Picture Math Level 1 is also designed to facilitate the teacher in lesson presentation. “Direct instruction where the teacher provides students a high level of support, structure, and guidance while [students] learn basic mathematics concepts and skills is effective for students with special needs ...” (Miller, Butler, & Lee, 1998). Each activity in *Basic Picture Math* Level 1 has been designed to be as simple and visual as possible to ensure students’ success.

Basic Picture Math Level 1 meets the National Council of Teachers of Mathematics standards in the areas of

- numbers and operations,
- geometry,
- measurement,
- problem solving,
- communication,
- connections, and
- representation.

Butler, F. M., Lee, K., & Pierce, T. (2001). Teaching mathematics to students with mild-to-moderate mental retardation: A review of the literature. *Mental Retardation*, 39(1), 20–31.

Miller, S. P., Butler, F. M., & Lee, K. (1998). Validated practices for teaching mathematics to students with learning disabilities: A review of literature. *Focus on Exceptional Children*, 31, 1–24.

National Council of Teachers of Mathematics. *Standards K-12*. Retrieved September 21, 2005, from <http://illuminations.nctm.org/info/standards.asp>.