



RAISE MATH TEST SCORES

**For Pre-K,
Kindergarten, First,
Second and Third
Grades, Special
Education and
Intervention**

TouchMath is a multisensory program that uses its signature TouchPoints to engage students of all abilities and learning styles.

Our award-winning, step-by-step approach covers:

Counting • Addition •
Subtraction • Place Value •
Multiplication • Division •
Time • Money • Fractions •
Story Problems • Shapes •
Sizes • Pre-algebra



TouchMath has been proven to raise math test scores in classrooms around the world for over three decades. Use this intuitive system as a supplement to any curriculum or as a stand-alone program. It's easy to teach and easy to learn!

Experts in the fields of education and psychology — from Piaget and Bruner to Grabert and his peers — encourage the use of the multisensory and sequential learning strategies that are the foundation of the TouchMath Program.

"Treatment and educational programs produce the best outcomes when they teach skills in a series of simple, sequential steps; engage the child's attention in structured activities; build on a child's interests; and reinforce behavior," comments pediatric neurologist Brian Grabert, M.D.

Why Teach Touchmath to Preschoolers?

Imagine having math materials that engage your animated preschoolers and help them stay focused – materials that spark their curiosity and help confidence.

I MATH THEIR WAY ENVIRONMENT

“Don’t tell me the answers. Let me enjoy the wonder of wondering.”

Kim Hix

A Math Their Way environment is a place where children engage in collaborative interactions with other individuals — peers and adults. The activities and experiences are socially, emotionally, physically, and developmentally appropriate for the group of children in the classroom. Emphasis is placed on the learning process rather than quick right answers. Errors are viewed as natural occurrences during any learning process. Children are free to experience, to react, to think and thus to learn, grow and change in “their way”. The teacher determines the children’s needs and provides appropriate classroom activities by observing them at work with the concrete manipulatives. Although the teacher is actively engaged in the classroom activities, he or she is very careful not to impose his or her answers on the child.

The goal of the *Mathematics Their Way* activities is to develop an understanding of and gain insight into mathematical patterns through the use of concrete materials. It is important to surround children with a variety of challenging math experiences which enable children to internalize concepts within the context of real experiences.

Setting the Tone for Questions

“Teaching means creating situations where structure can be discovered.” Jean Piaget

Teachers can “create situations where structure can be discovered” by the statements they make and the questions they pose. Studies show that the average teacher allows less than three seconds for a response before he or she asks another question or tries to clarify the first question. To help remedy this situation, we as teachers can silently count to ten after asking a question before we make another verbal statement. More children participate in the discussion when the teacher allows ample lag time between questions. Allowing the lag time may not be easy at first for the teacher, but can produce excellent dividends in terms of increased participation.

Appropriate Questions

A key factor to creating a supportive, challenging environment lies in the types of questions and statements set forth by the teacher. Teachers can challenge children’s thinking by utilizing divergent questioning. Divergent questions are open-ended and allow many possibilities for responses. Convergent questions, on the other hand, often have one right answer. An example of a divergent question during a graphing lesson might be: “What do you notice about our fruit graph?” From this question, the group can list various true statements about the graph (i.e., There are more oranges than bananas. There are the same amounts of grapes, oranges and bananas. More people brought apples than any other fruit, and so on...). An example of a convergent question is: “Which row has the most fruit?” This question can only have one answer.

Let the discoveries flow from the children. It’s so much more exciting that way. Encourage the children to ask divergent questions of one another. Bob Baratta-Lorton addresses the importance of questions in Issue 1 of the *Mathematics . . . a Way of Thinking Newsletters*. He lists six basic questions and statements that can be used over and over:

What would happen if...?

If you can do it with _____, can you do it with _____?

How many ways can you... or Can you think of a different way?

Do you see a pattern?

Predict....

Find the one(s) that doesn’t (don’t) work. Find the exception.

Once you have learned how to ask relevant and appropriate and substantial questions you have learned how to learn.

This is what we need to teach in our schools.

Students are too often restricted to the process of memorizing (partially and temporarily) somebody else’s answer to somebody else’s questions.

Neil Postman

TEACHING AS A SUBVERSIVE ACTIVITY