

Subject Area: Mathematics

Grade Level(s): Early Elementary

Title of Instructional Method, Strategy, or Approach: Touch Math

Touch Math is a multisensory teaching approach that utilizes manipulation to stimulate memorization. It has been called a mental manipulative.

Touch Math follows sequential learning strategies advocated by eminent learning theorists such as Jean Piaget and Jerome Bruner. 56 math kits, workbooks and teaching aids, and the integrated curriculum have been evolving since 1975.

Students relate with numbers on paper by seeing, saying, hearing, and touching numbers as they arrive at the right answers, without guessing. They learn math facts by using auditory reinforcement, flashcards, and timed tests. TouchMath has been developed for use by teachers, homeschoolers and parents committed to helping their children. There are workbooks for most grade levels, as well as comprehensive programs to teach counting, addition, subtraction, multiplication, division, story problems, time, money and fractions.

TouchMath has remarkable scope and flexibility in today's demanding classroom setting:

- Accelerate math comprehension among children as early as age 4 to 5
- Build a firm foundation and speed up learning in kindergarten through 3rd grade
- Remediate learning problems in any regular grade level classroom
- Use in special education with students who have mild to severe learning disabilities
- Facilitate comprehension among students who have autistic spectrum disorders
- Support remedial math instruction in high school and adult education classes









The TouchMath method simplifies and clarifies all areas of computation, develops left/ right directionality, reduces number reversals, reinforces number values, eliminates guesswork, and helps to develop positive self-image. This teaching strategy supplements any textbook series and complements the manipulative approach.

References in APA format:

1. Scott, K. (1993). Multisensory mathematics for children with mild disabilities. *Exceptionality*, 4(2), 97-111.
2. Simon, R., & Hanrahan, James. (2004). An evaluation of the touch math method for teaching addition to students with learning disabilities in mathematics. *European Journal of Special Needs Education*, 19, 191-209.
3. Unknown Author. (2000). About touch math: touchmath is the leading multisensory teaching approach that bridges manipulation and memorization. Retrieved August 27, 2007, from Touchmath Website:
<http://www.touchmath.com/index.cfm?fuseaction=about.welcome>

“How-To” Information – What will make this work in the classroom? What would a teacher need to know to implement this Instructional Method, Strategy, or Approach?

Touch math is an idea of creating points on the actual numbers so that children are able to see the number and feel/touch the points while counting. The way that Touch Math is set up goes as follow:

-  The one is touched at the top while counting: "One."
-  The two is touched at the beginning and the end of the numeral while counting: "One, two."
-  The three is touched at the beginning, middle and end of the numeral while counting: "One, two, three."
-  The four is touched and counted from top to bottom on the down strokes while counting: "One, two, three, four."
-  The five is touched and counted in the sequential order pictured: "One, two, three, four, five." Memory Cue: To help in remembering the fourth TouchPoint, it may be referred to as the "belly button."
-  The six begins the use of dots with circles. The encircled dots should be touched and counted twice, whenever they appear. Six is touched and counted from top to bottom: "One-two, three-four, five-six." Memory Cue: Touch at the top, middle, bottom.
-  The seven is also touched and counted top, middle, bottom: "One-two, three-four, five-six," followed by the single dot: "seven." Memory Cue: The single TouchPoint can be thought of as the nose. Teachers sometimes tell young or remedial students to go back and "touch him on the nose" to help them remember the final TouchPoint.
-  The eight is touched and counted from left to right: "One-two, three-four, five-six, seven-eight." Memory Cue: Tell the young or remedial students that the eight looks like a robot. Count his eyes first, then his arms.
-  The nine is touched and counted from top to bottom: "One-two, three-four, five-six, seven-eight," followed by the single dot: "nine." Memory Cue: Tell the young or remedial student that the nine is the tallest number and the only number with a "hat". They should begin counting at the hat and continue straight down the body. Again, the single TouchPoint can be thought of as the nose.

(Found at: <http://www.touchmath.com>)

How will this method work in the classroom:

In order to implement this idea in the class the teacher should provide the students with a lesson involving where each point goes on the number. In order to do this the students would be creating the touch point numbers while they follow the instruction and demonstration of the teacher. In order for this to work in the classroom the teacher must make sure that the student understands why the points are on the numbers.

After the student learns that the points on the numbers are there to help them count, the teacher can begin to give the students examples on the board as they follow along on their touch math. For example the teacher could use the problem

$$2 + 3 = 5$$

The teacher would then instruct the children to find the number 2 and count the points on it; then the teacher would instruct the students to find the number three and continue their counting.

As this lesson continues with multiple examples the students will eventually be able to eliminate the dots on the numbers by taking a problem such as $6 + 3$ the student will say the number six and count the points on the number 3 by touching them.

Implications for Practice/Other Considerations:

What teachers need to know to implement this method:

- Where to place the dots on the numbers
- How to perform Touch Math themselves

Implications for practice:

Pros-

- Touch Math benefits all types of learners including visual, auditory, kinesthetic, and spatial learners.
- The product is reproducible meaning it can be used over and over again
- Touch math is very easy to instruct

Cons-

- Can only be used for one subject area
- You must buy it
- The instructor must teach the dot positions before anything else

EIU Candidate Names: Brittany Chesna, Kristin Erdmann, Vicky Hagen, Heather Janik, Amanda Moxley, Erin Shemoski