

Math Opportunities • Valuable Experiences • Innovative Teaching
MOVE IT with manipulatives! MOVE IT through the curriculum! MOVE IT in the 21st century!

WORKSHOPS



BIG REWARDS!



FILLS GAPS, ENRICHES, ACCELERATES

any

Grade K-6 Mathematics Program

MOVE IT Math™ consists of three professional development programs for elementary school teachers of math, each requiring 12 hours of instruction: ALL KIDS CAN LEARN ARITHMETIC, ENRICHMENT & ACCELERATION, and ADVANCED TOPICS. Instruction is hands-on, teacher/kid friendly, and focused on UNDERSTANDING. Lessons used with teachers may be used with students with very little modification.

BOOSTS Grades, INCREASES Test Scores, IMPROVES Attitudes

MOVE IT Math™ ...

- Elevates scores on standardized exams.
- Enables low-achievers to meet grade level expectations.
- Decreases the number of students needing special assistance in mathematics.
- Accelerates the mathematical growth of *ALL* children.
- Improves attitudes toward mathematics.

MOVE IT Math™ meets children on their terms — *success* — not on what curriculum guides and textbooks say they ought to know, and is energized by the children themselves, resulting in amazing achievements:

- Rapid understanding of base and place value.
- Ability to solve algebraic equations as early as kindergarten.
- Mastery of addition and subtraction of whole numbers in grade 1 and the same for multiplication and division by grade 3.
- Competence with fractions by grade 5 or 6.

MOVE IT Math™ centers on children's strengths (like figuring things out) instead of weaknesses (like forgetting) and thereby fits the curriculum to them instead of the reverse. It seeks a balance between skills (can do), concepts (understanding), and problem solving (empowerment) and teaches *well* five essential skills, concepts, and ways of thinking that make sense out of *huge* amounts of mathematics and fuel true problem solving.

MOVE IT Math™ is holistic and developmentally rich, super charging the arbitrary and fragmented nature of *every* textbook-based elementary school math program (like little numbers for little kids in grades 1-3, withholding multiplication and division until the end of grade 3, and no algebra until kids are “big enough to stand pain”) and avoiding the deprivation that occurs when children “don't get it” and are made to repeat the same topics year after year. Important goals are self-confidence and self-esteem.

Cost of instruction for each program:

- Texas: \$2,400 plus expenses: travel, lodging and per diem.
- Nationwide: \$3,200 plus expenses: travel, lodging and per diem.

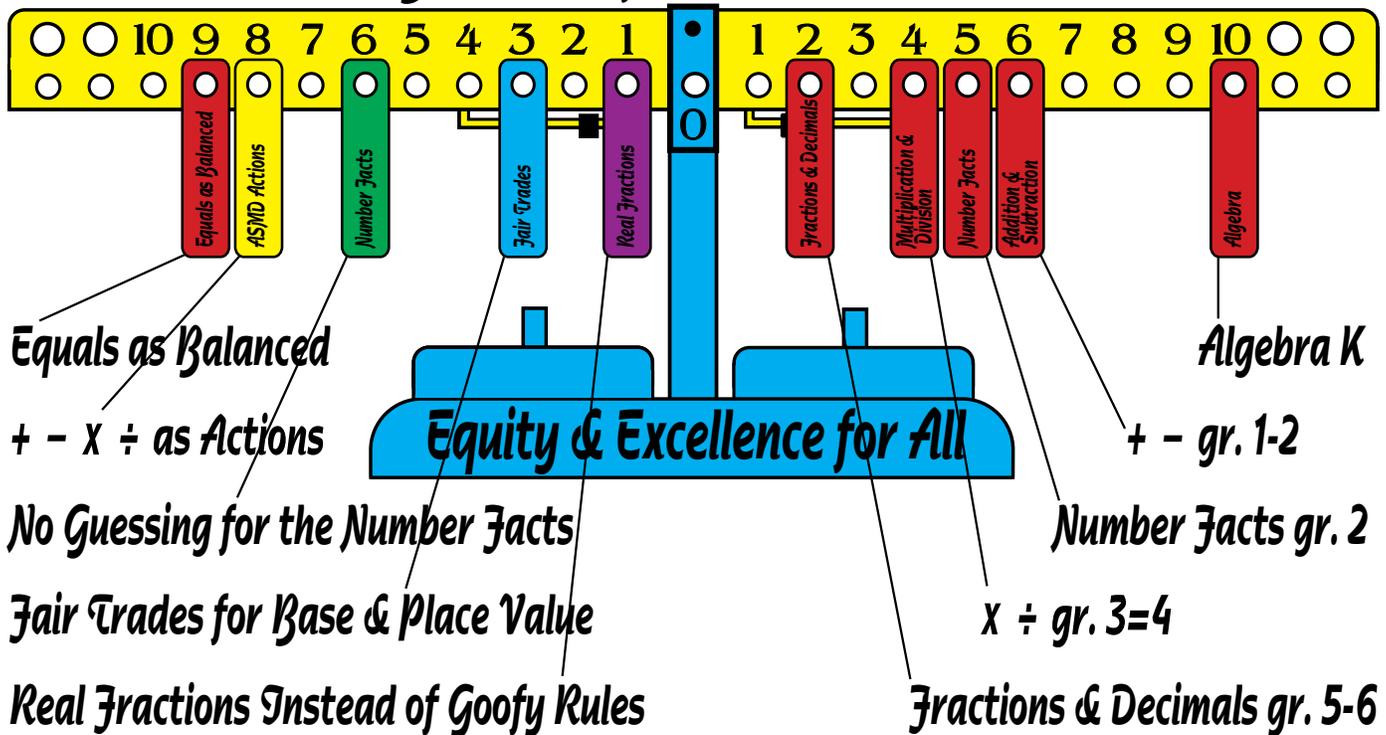
Instruction limited to 30 participants. Laptops and Internet access preferred.

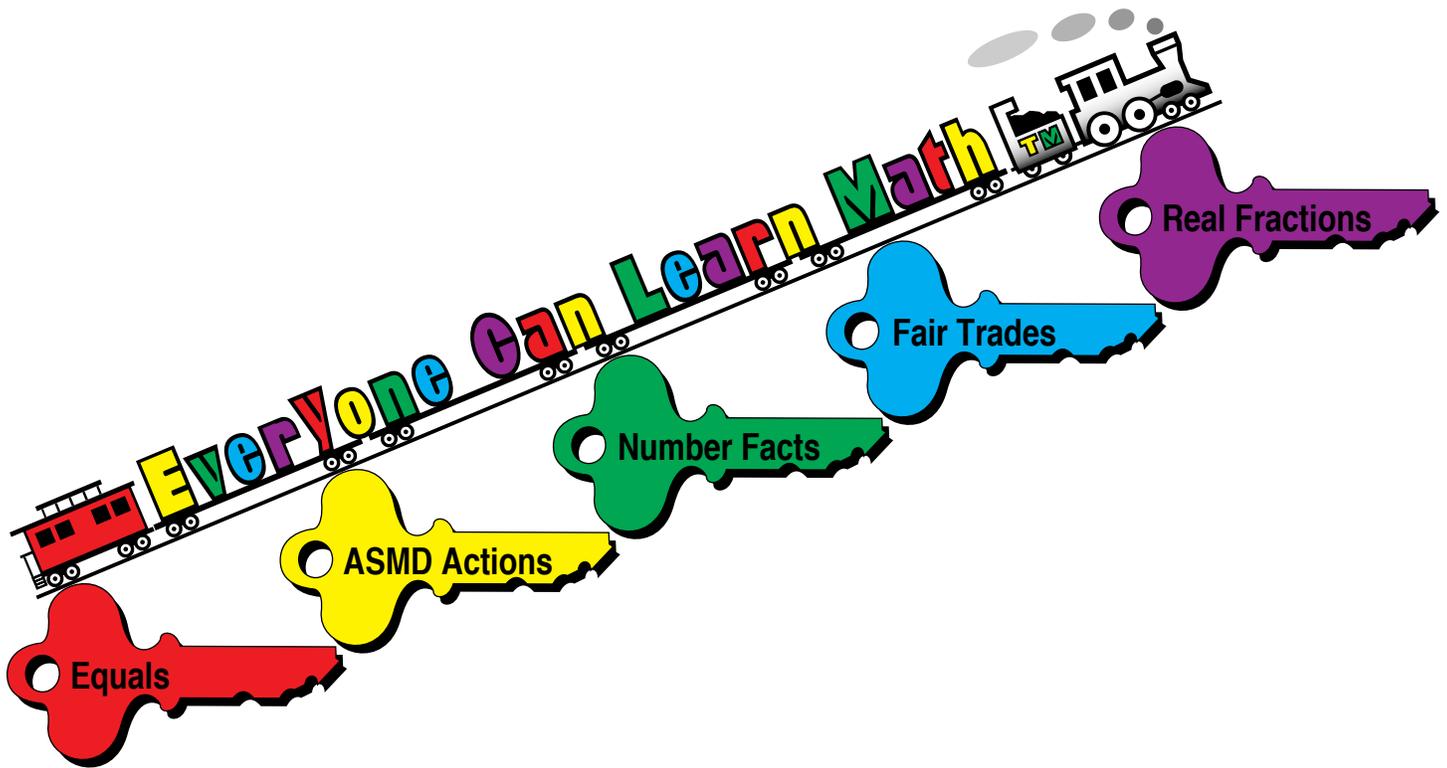
Contact MOVE IT Math™ at mim6425@aol.com.

EVERYONE CAN LEARN MATH, Grades K-6

- Sensory representations of equals and not equal
- Algebra using a math balance to introduce variables with equations like $A + 5 = 13$
- Arithmetic word problems in terms of familiar, everyday events
- Big number (Monster Math!) problems
- Counting strategies for figuring out the number facts to end guessing
- Low-stress alternative algorithms for whole numbers
- Fair Trades to understand base ten arithmetic, time, money, measurement, and fractions
- Hands-on fractions

Balanced for Acceleration

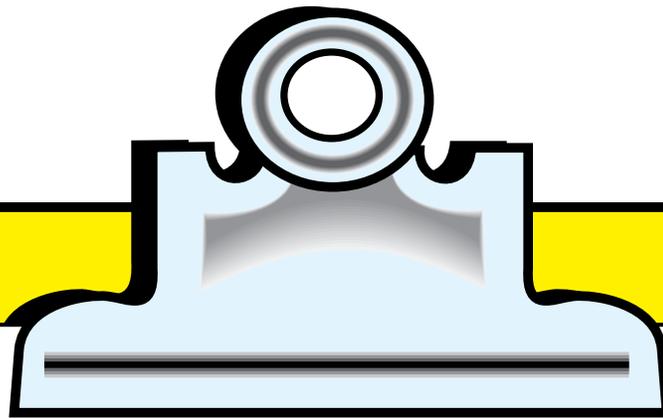




Sensible

The five MOVE IT Math™ keys are taught in ways that communicate to children and are inseparable from the lessons used to teach them.

- “Equals” as “balanced” or “is the same as” is taught with a math balance so students acquire a literal feel for both sides of a number sentence or algebraic equation being equal or “balanced.”
- The operations of addition, subtraction, multiplication, and division are taught as *actions* using four characters who depict the actions in everyday activities: Motley Crab Adder who “just” combines, like puts groceries in a shopping basket; Tractor subtracter who “just” separates, like sweeps the floor; Sir Crab Multiplier who combines “neatly” (by 2s, 3s, 4s, ...), like makes a beaded belt; and Collider Divider who separates “neatly” (into 2s, 3s, 4s, ...), like picks teams.
- The number facts are taught as problems to be figured out: “If you know it, write it down. If you don’t, or aren’t sure, figure it out. NO GUESSING!” The counting skills for figuring them out are taught with songs, stories, and games.
- Making fair trades is taught with base two, base three, and base ten blocks called “lands” where, in Two Land (base two), for example, two identical blocks make the next bigger block and may be traded for it or vice versa. Trading with blocks is then extended to trading with colored counters. The goal is to learn when and how to make an exchange in any land as required in daily living with time, money, and measurement as well as in base 10 arithmetic.
- Fractions are taught with real fractions: fraction “pies” or “cakes”—large circular regions cut into halves, thirds, fourths, fifths, sixths, eighths, ninths, tenths, twelfths, fifteenths, and sixteenths.



INNOVATIVE FEATURES

Math as a language to be learned when children naturally acquire language: **WHEN THEY ARE VERY YOUNG.**

Five all-encompassing concepts, skill sets, and ways of thinking that undergird **ALL** of basic math.

Math in everyday events like putting toys away and eating a sandwich.

Who's smart? Whose math? teaching philosophy that promotes figuring things out and owning what is learned.

Hands-on guided discovery lessons that reveal the structure and "rules" of math.

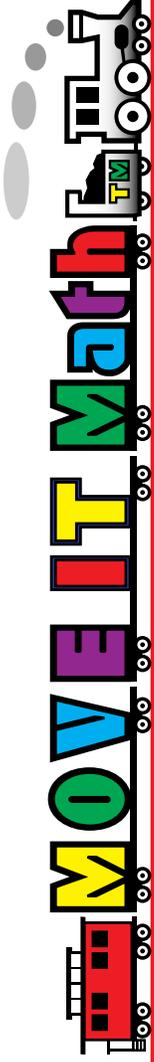
Addition, subtraction, multiplication, division, fractions, and **ALGEBRA** beginning in **KINDERGARTEN.**

Success based on understanding, not memorization.

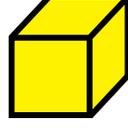
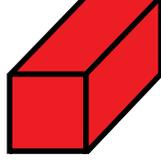
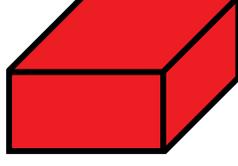
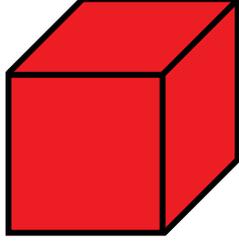
Mastery of whole number arithmetic by grade 3.

Effective with virtually **ALL** children.

FUN, for teachers, too!



Fair Trades Up & Down



For Districts, elevated test scores that meet or better local, district, and state standards.

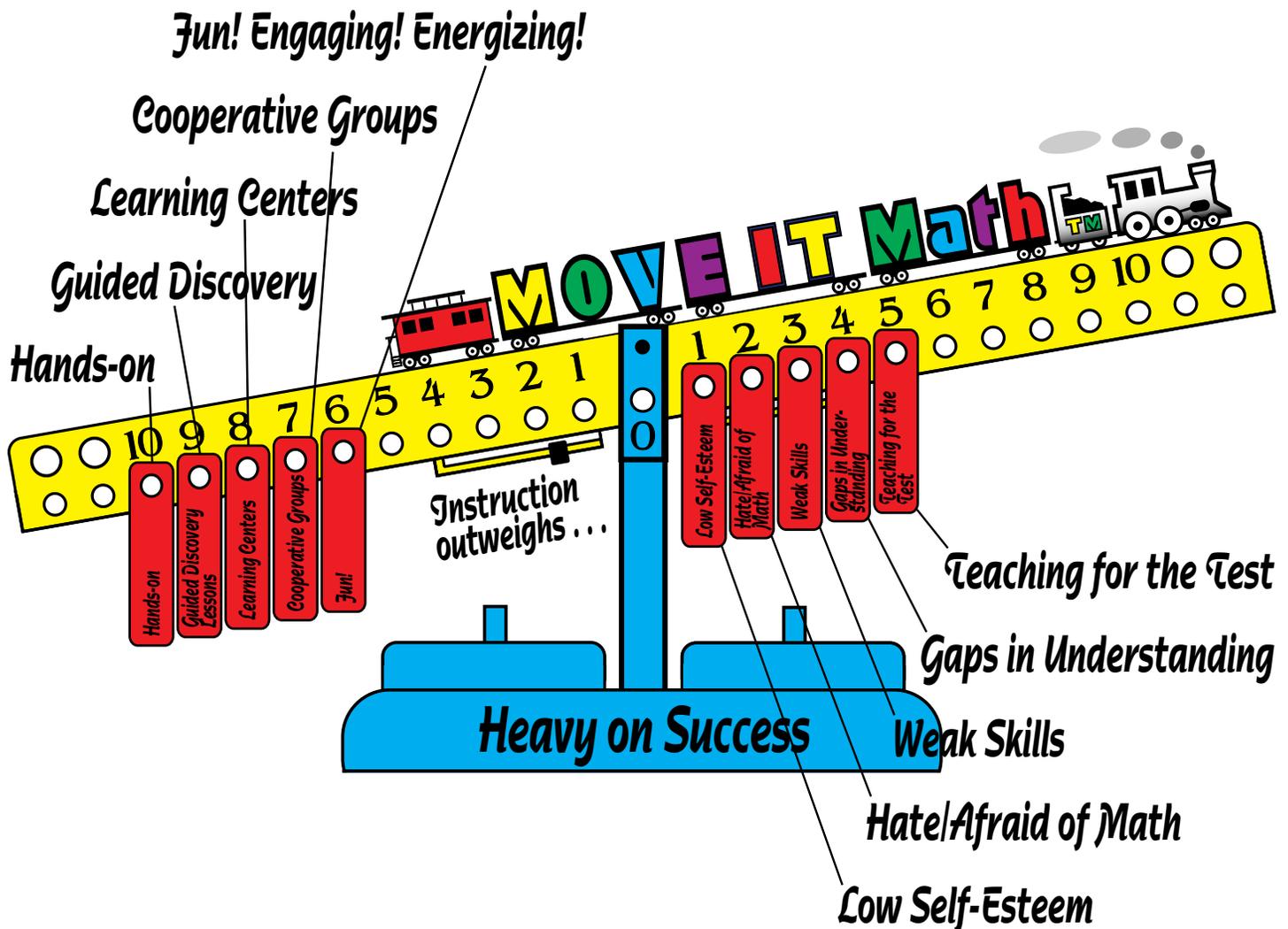
For Schools, higher pass rate, less discipline problems, pleased parents, satisfied community.

*For Teachers, satisfaction from universal **SUCCESS** in an all-school commitment to end failure in math.*

For Students, greater understanding, better grades, improved attitude, boost in self-esteem.

ENRICHMENT & ACCELERATION, Grades K-6

- Fraction, decimal, percent equivalences with games and activities
- Positive/negative numbers with two-colored counters
- Adding and subtracting polynomials and factoring trinomials with algebra tiles
- Euler's formula for vertices, faces, and edges
- Traceability
- Area, perimeter, square roots, and the Pythagorean Theorem with square geoboards
- Degrees and geometry of the circle with circular geoboards
- Congruence and similarity
- Line, rotational and slide symmetry
- Metric system
- Problem solving strategies:
 - Pattern recognition
 - Simplification and reduction
 - Experimentation and simulation
 - Guess and test
 - Logical deduction
 - Organized listing
 - Working backward
 - PEEK AROUND



CHANGING!!!

○ EXPECTATIONS

- Mathematics a pump, not a filter.
- Equity as well as excellence.

○ FUNDAMENTALS

- Key skills, concepts and processes, not just “being in compliance” and getting students ready for “the next test.”
- An “I can do it” attitude based on success.

○ SUCCESS

- Broad based criteria for success, like success in algebra as early as kindergarten.
- New criteria for success, like not “the” way to add, subtract, multiply and divide, but ways to do so.

○ EMPHASIS

- Internalization rather than memorization: knowing you know, not hoping you know.
- Understanding rather than speed and accuracy.

○ SYSTEM

- Long range goals and planning instead of crisis management.
- Vertical (between grade) alignment of the curriculum instead of horizontal (within grade) alignment.

W O R K S H O P

R U L E S

○ KEEP AN OPEN MIND.

○ WATCH FOR "THE SIGNAL"

○ LISTEN CAREFULLY.

○ THINK! THINK! THINK!

○ BE A HERO!!!