Where Math Begins to Grow

What your child is actually building — from toddlerhood through Lower Elementary

ORDER *same & different* ▸ **QUANTITY** *feeling amount* ▸ **SYMBOL** *naming the numeral* ▸ **CONCRETE** *the abstract, held in the hand* ▸ **ABSTRACTION** *mind & paper*

TODDLER · AGES 1½–3

The mathematical mind wakes up

No numerals yet — but every shelf is already math.

Same & different
Root of classification. Later, set theory.

SORTING WORK

Bigger & smaller
Size felt in the body — the number line, in hand.

STACKING · NESTING

One-to-one
Match one scoop to one object — counting.

TRANSFERRING WORK

Number language
The rhythm of number in the ear, before print.

SONGS · COUNTING

PRIMARY · AGES 3–6

Math moves through the hands

Nearly every material here is a "materialized abstraction" — the idea made physical.

Quantity as length
Feeling how big ten is, before naming it.

NUMBER RODS

Symbol through touch
Fingers trace the numeral; the muscle learns the shape.

SANDPAPER NUMBERS

Quantity meets symbol
Pairs and leftovers — the child discovers odd and even.

CARDS & COUNTERS

The decimal system, held
1, 10, 100, 1,000 carried in the arms. A thousand is heavy.

GOLDEN BEADS · DECIMAL CARDS

Counting to 99 without gaps
Teens and decades built by hand, symbol and quantity together.

TEEN · TENS BOARDS · BEAD CHAINS

Operations in the hand
Addition, multiplication — done with beads, not paper.

SNAKE GAME · MULT. BEAD BARS

LOWER ELEMENTARY · AGES 6–9

The bridge to abstract math

The child begins, gradually, to put the materials down.

Value by color & position
One bead can mean 1,000 — weight is gone, the idea remains.

BEAD FRAMES

Place value extends
Ten-thousands, millions — the pattern keeps going.

HIERARCHY OF NUMBERS

Multiplication made visible
Every square tells the child what each bead is worth.

CHECKERBOARD

Sharing into groups
Long division becomes a real action, not a mystery algorithm.

TEST TUBE DIVISION

Parts of a whole
Halves, thirds, equivalence — fractions, without the fear.

FRACTION INSETS

Math at Every Stage

"Solid, intentional steps towards abstraction."

Greene Towne Montessori School · gtms.org/parent-education-math