

Making Math Happen Every Day

A Practical Guide for Intentional Teaching in Preschool Classrooms

(Aligned with Kentucky Early Childhood Standards and ECERS-3)

Why It Matters

Math isn't just a subject, it's ways of thinking about the world. When teachers intentionally create opportunities for children to explore patterns, compare quantities, and use numbers and counting in authentic experiences, they are helping children build an understanding of mathematical concept in real and relevant ways.

Everyday Math in Play

Math learning is happening all day long. We just have to name it, notice it, and nurture it.

Materials that Invite Math Thinking

- Blocks & manipulatives: Encourage sorting, stacking, patterning, and comparing lengths.
- Dramatic play props: Add menus, play money, measuring cups, and empty food boxes.
- Art materials: Provide shape cutters, rulers, tape measures, and opportunities for symmetry.
- Outdoor play: Use sand, water, and natural materials to measure, fill, and compare.

Teacher Moves that Grow Math Thinking

- Use math language: 'You used three blocks,' 'Which tower is taller?'
- Pose curiosity questions: 'How many will fit?' 'What happens if you add one more?'
- Make it visible: Label shelves by size/shape, graph snack choices, or count transitions.

Kentucky Early Childhood Standards for Mathematics (Preschool)

Number and Numerical Operations

Children demonstrate an understanding of numbers, ways of representing numbers, and relationships among numbers. They begin to count objects, recognize numerals, and use numbers to describe quantity, order, and comparison.

Measurement

Children understand measurable attributes and use tools to compare and describe them. They explore concepts such as big/small, heavy/light, full/empty, and begin to use tools like rulers, measuring cups, or scales in play.

Geometry and Spatial Sense

Children recognize and describe shapes and spatial relationships. They identify and create shapes, notice how shapes fit together, and use position words like under, beside, behind, next to.

Patterns and Relationships

Children recognize, create, and extend patterns. They notice repeated designs, rhythms, and sequences in music, art, movement, and materials.

Daily Math Ideas

Goal: Provide at least *three math-related materials or activities every day*.

1. During Arrival and Transitions

- Count how many children are present or how many are wearing a certain color.
- Use a number chart or attendance board for self-check-in.
- Compare who arrived first, who has the longest name, or which cubby has more items.

2. In Centers

- **Blocks:** Measure towers, compare lengths, count sides of shapes.
- **Dramatic Play:** Add play money, menus, recipes, and measuring cups.
- **Art:** Encourage pattern-making with beads, stamping, or collage.
- **Manipulatives:** Offer sorting trays, shape puzzles, and lacing cards.

3. Outdoors

- Count jumps, tosses, or turns on playground equipment.
- Compare distances (Who rolled their ball farther?).
- Use natural materials for counting, sorting, and patterning (sticks, leaves, rocks).

4. Group Time

- Graph daily weather or snack choices.
- Sing counting songs or fingerplays.
- Play estimation games (“How many steps to the door?”).

5. Teacher Language

- Use words that describe *quantity, size, position, and comparison*:
“You have more than I do.” “Your tower is taller.” “That block is beside the blue one.”