



Focus on Numeracy – *Emergent Counting*

A KCM Publication for Preschool & Primary Grades Teachers and Families

ISSUE 1

Things to try

Practice saying number words forward *and backward* in the range 1–10. Have the child start at different numbers other than 1 or 10. Ask a child what comes before various numbers and what comes after. Extend beyond 10 as the child is ready.

Show a child written numerals 1–10 and ask him/her to say the number word for each symbol. Say the correct number word if the child does not know.

Show a child an uncovered collection of items (repeat using 3, 7, 12, 16, 18, ...).

- Ask the child to tell how many there are.
- Notice if the child attempts to say number words while touching the objects rather than just making a guess.
- After the child answers, ask again, “So how many is that?” to see if the child understands that the last word tells the amount in the collection (cardinality) rather than the word of the last item only (ordinality). If the child recounts to answer, they may not have yet developed the idea that each number word enumerates the entire group.

Ask a child to show quantities on his/her fingers. Notice if the child builds the quantity from one or is able to show the fingers simultaneously. Show quantities on your fingers and ask the child to tell how many.

What is Emergent Counting?

According to Bob Wright, Math Recovery developer, a child is at the emergent counting stage if s/he is beginning to think about number and attempting to determine the quantity of objects. This child needs practice saying the number words to ten forward and backward; saying the number words for written numerals 1-10; and counting small collections of objects.

Resources

- JAVA applets for early numeracy from the Freudenthal Institute, designed for non-readers (and easy to use even if you don't speak Dutch) http://www.fi.uu.nl/toepassing/00203/toepassing_rekenweb.html
- Printable 5 frames to use as quantitative flash cards <http://kymath.org/resources/docs/2008/Five%20Frame%20Flash%20Cards.doc>
- Wright, Martland, Stafford, Stanger. (2007). *Teaching Number; Advancing children's skills and strategies, 2nd edition*. Paul Chapman Publishing: <http://mathrecovery.org>

Upcoming issues of *Focus on Numeracy* will follow the KCM Mathematics Intervention Teacher Collegial Professional Learning Framework, *Journey to Numeracy for All*, based upon a child's numeracy development, as drawn from the Math Recovery teacher growth program developed by Bob Wright. To facilitate student progress teachers and families are encouraged to provide opportunities for children to experience all the aspects of number: number words, written symbols, and quantity.

September – *Emergent counting*

October – *Perceptual counting*

November – *Structuring to five and ten*

December – *Figurative counting*

January – *Structuring to twenty*

February – *Tens and ones*

March – *Advanced addition and subtraction*

April – *Early multiplication and division*



The goal of the Kentucky statewide mathematics diagnostic intervention program is to expand the capacity of teachers to diagnose student need and to adjust instruction accordingly. More specifically, the program provides high quality training and sustained support for job-embedded professional teacher growth in:

- Understanding the **complexities** of mathematical concepts from the earliest grade levels.
- Awareness of and ability to support the **natural progression** of mathematical development.
- Ability to **pinpoint student need/readiness** for learning mathematics using diagnostic/formative assessments that show what a child can do (**an asset model**) and what instruction is needed for advancing his/her thinking.
- Building a strong mathematical foundation and flexible advanced mental **computation skills** by facilitating students' opportunities for deep thinking, both silently and aloud, in order to **make sense of mathematics**.

<http://kentuckymathematics.org>

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