KENTUCKY CENTER FOR MATHEMATICS

Focus on Numeracy—*Perceptual Counting*

A KCM Publication for Preschool & Primary Grades Teachers and Families ISSUE 2

Things to try

Alternate with the child saying number words 1—20, forward *and backward*, sometimes starting at 1 and sometimes starting at other numbers. Ask the child what comes before a given number and what comes after.

Naming written numerals in the teens can be especially problematic because the pattern is backward and the words do not necessarily match the symbols. Play "Numbers Go Home" in which the child draws a numeral card, says the name of the numeral, and tries to find the correct position by matching the drawn card to exposed or hidden numerals placed in sequence before beginning (see "Resources" for making a numeral track).

Play "Bunny Ears" by asking the child to put a hand on his/her head and showing fingers for 1 through 5. Then ask the child to use two hands on his/her head to make numbers to 10. See if s/he can show the numbers 2 through 8 in different ways using two hands. Flash your own bunny ears and see if a child can tell how many. Tell a child to put 5 on one bunny ear and put some more on the other to make sums of 6 through 10.

Give the child some counters, such as beans, Cherrios, toys, etc. (approximately 10 and 20 pieces) and take a few (1 to 3 or so) in your hand. Ask the child how many s/he has and then flash your quantity and tell how many you have (but conceal while the child thinks). Ask the child how many there are altogether.

What is Perceptual Counting?

According to Bob Wright, Math Recovery developer, "the child at the perceptual stage is able to count a collection of counters" (Wright, et. al., p. 110). This child needs practice saying the number words to 20 and beyond, both forward *and backward*; saying the number words for written numerals 1-20; counting two separate collections and adding quantities that are screened or flashed.

Resources

- See the online activities for early numeracy from *Count Me in Too*, the Australian version of *Math Recovery Add+Vantage* for the classroom. http://www.curriculumsupport.education.nsw.gov.au/countmein/children.htm
- Make a numeral track (and/or numeral cards) with doors that open and close over the numerals http://kymath.org/resources/docs/2008/numeraltrack%201-120.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**.

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