



64<sup>TH</sup> CONFERENCE ON EXCEPTIONAL CHILDREN

**WORKING TOGETHER  
TO ACHIEVE STUDENT SUCCESS**

**What about our students?**

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PUBLIC SCHOOLS OF NORTH CAROLINA  
State Office of Education | Department of Public Instruction

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**Survey**

- Complete the survey and discuss your thoughts at your table.

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**Video**

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## Let's talk about Math

- Students have to know the content.
- Teaching them process (aka "the trick") really lends to memorization. This isn't real life applicable for our students.
- Students must have number sense.

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## Not our students

- Teachers needs to know the content to make adjustments for this population.
- Instruction needs to begin in preschool.
- Think of how you will teach them- tactual, hand over hand, etc.

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## I am not a Math person

- You must understand what you are teaching from a conceptual level.
- ◆ Make it real- This population needs real life application from the beginning.
- ◆ Hands on- use concrete examples,
- ◆ Math all day long- make the connections

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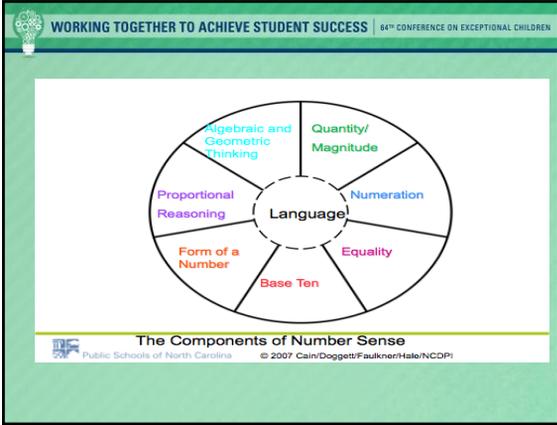
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### Quantity and Magnitude

What does this mean?- We all know what quantity is but do we think about magnitude with this population?

The physical reality of the mathematics that we model with symbols and the number line (how much, how far, how big, how bright, etc.)

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### How do we get started?

- Start small
- Begin with concept of 1
- Then add more
- Work on 1-3 first

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**At your table come up with one activity you can do to teach Quantity and Magnitude**

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**Numeration**

Naming number and connecting with one to one correspondence.

It is the word, symbol, and the visualization.

Thomas says “ that the numeration system allows us to allocate words for numbers---This connection allows for the sense making of quantity”.

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**How do we do this?**

- Take 5 minutes and discuss at your table ways to do this with your students.

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## Equality

- Equality is a mathematical statement of equivalence of two quantities and nothing more.




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## How do I help my students ?

- Think of ways they can tell if things are equal
- Have them fill up jars, containers, and feel the difference
- Different weights- they can feel differences.
- Great way to teach more and less and leads into adding and subtracting.

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## Base Ten

Base ten digits are often used with a decimal separator and includes the start of a fractional point and positive and negative numbers.

- Sign language mimics our language not our number system.

It is a place value system. A number's value or quantity is determined by where it falls in place value.

*Walter S. Sizer Base and Subbase in a Number System*

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### Is this important for this population?

- Think about money.
- Think about as they gain more math skills and number concepts how to help them add larger numbers.

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### Form of a number

- Form of the number can be defined as multiple representations of quantity, ratios, and mathematical information.
- This is an important concept .

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### Proportional Reasoning

- All ratios have a multiplicative relationship between values.
- When two ratios are equal, the multiplicative relationships “within each of the individual ratios are the same”

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- At your table come up with one activity that you could teach about proportions and ratios.

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- A fourth grade class needs five leaves each day to feed its two caterpillars.
- How many leaves would it take to feed twelve caterpillars?





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### Geometric Thinking:

the study of geometric figures (shape and form) and their properties.

- congruence, symmetry, similarity and transformations, spatial measure

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## Activity

- Come up with two different activities that you could use to teach area and perimeter, and how to find x
- Share with your table
- Share with the group

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## Math all day everyday

- Schedules
- Directions
- Choices
- Time
- Group time

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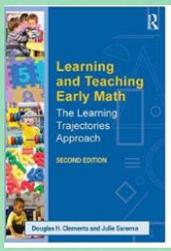
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## DEAF-BLIND INSTITUTE

Materials will be distributed at the DB Institute on  
November 4<sup>th</sup> and November 5<sup>th</sup>.

