

## Math Webcast #6: Putting it All Together! Viewer's Guide for Math Leaders

Use this guide as a reference and reflection sheet as we put together all of the information from the previous five Webcasts and plan for the future of math instruction for ourselves and our children.

Domain 3 of the Head Start Child Outcomes Framework identifies domain elements and possible indicators that describe long-term learning goals in mathematics for children ages three-to-five years old. The following is an excerpt from the **Head Start Leaders Guide to Positive Child Outcomes**.

### Key Points

#### Important roles for Head Start teaching teams include:

- creating learning experiences and environments to ensure that children "bump into interesting mathematics at every turn" (Greenes 1999, 46);
- investigating with children and observing what they do and say;
- answering children's questions and posing interesting questions and ideas for them to think about;
- providing many opportunities for children to represent problem solutions in a variety of ways; and serving as examples by modeling mathematics communication and investigation.

### Possible Indicators

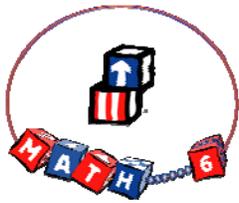
#### Number and Operations

- Demonstrates increasing interest and awareness of numbers and counting as a means for solving problems and determining quantity.
- Begins to associate number concepts, vocabulary, quantities, and written numerals in meaningful ways.
- Develops increasing ability to count in sequence to 10 and beyond.
- Begins to make use of one-to-one correspondence in counting objects and matching groups of objects.
- Begins to use language to compare numbers of objects with terms such as more, less, greater than, fewer, equal to.
- Develops increased abilities to combine, separate and name "how many" concrete objects.

#### Geometry and Spatial Sense

- Begins to recognize, describe, compare, and name common shapes, their parts and attributes.
- Progresses in ability to put together and take apart shapes.
- Begins to be able to determine whether or not two shapes are the same size and shape.





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- Shows growth in matching, sorting, putting in a series, and regrouping objects according to one or two attributes such as color, shape, or size.
- Builds an increasing understanding of directionality, order, and positions of objects, and words such as up, down, over, under, top, bottom, inside, outside, in front, and behind.

### Patterns and Measurement

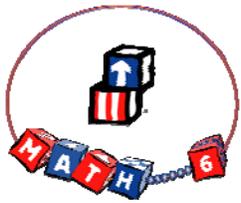
- Enhances abilities to recognize, duplicate, and extend simple patterns using a variety of materials.
- Shows increasing abilities to match, sort, put in a series, and regroup objects according to one or two attributes such as shape or size.
- Begins to make comparisons between several objects based on a single attribute.
- Shows progress in using standard and non-standard measures for length and area of objects.

### Reflections

***We understand that many of you are teaching teachers, teaching students, or teaching both. Please reflect on these questions as they pertain to your role and your students.***

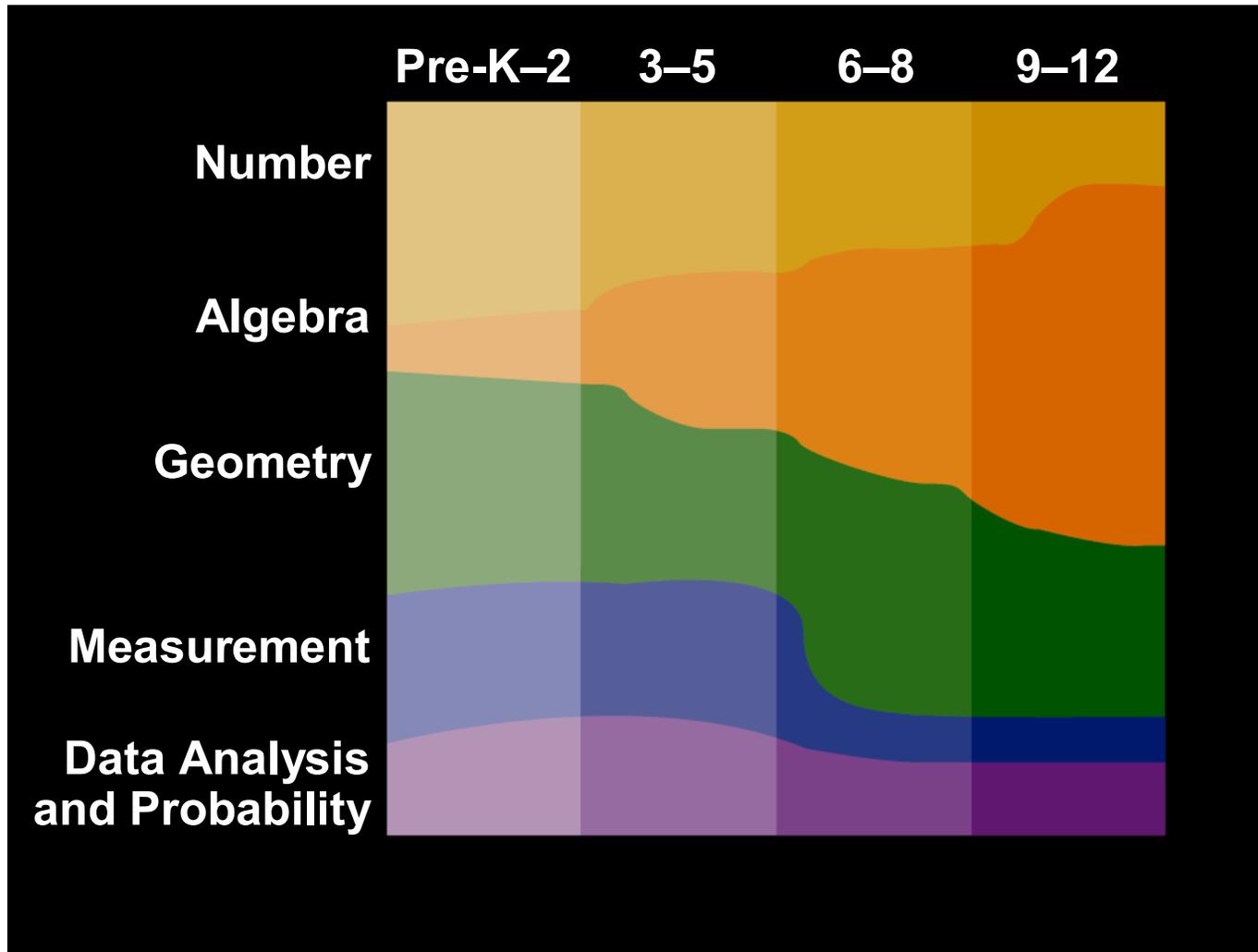
- What topics might you like to see expanded during professional development sessions?
- What other topics would cause you to stretch your planning either because of your lack of background knowledge or the experiences of your teachers or the children?
- What are some other resources, books, songs, etc. teachers can share with their students to illustrate and reinforce domains and or indicators?
- How can the understanding of math concepts inform or act as a precursor to a child's understanding of language, literacy, writing and science?
- What do you feel would be beneficial professional development to help expand your ability to integrate math into other content areas?
- Describe how a teacher can scaffold student's learning about different math concepts.
- What strategies can you suggest to help staff be more intentional and appropriate in working with children in early math?
- As teachers intentionally plan to incorporate learning about math into the daily routines of children, what domains or domain elements from the Child Outcomes Framework (below) do you see as easy to incorporate in lessons or experiences?
- As you examine the Head Start Child Outcomes Framework and the National Council of Teachers of Mathematics (NCTM) Prekindergarten Focal Points what areas pose the most challenges for you?

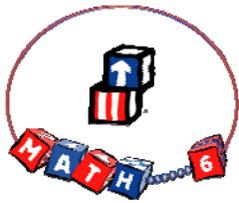




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### NCTM Emphasis Across the Grades





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### Teaching Continuum

- Acknowledge
- Model
- Facilitate
- Support
- Scaffold
- Co-Construct
- Demonstrate
- Direct



Non-Directive

to

Mediating

to

Directive

