HANDOUT 10

COG: MATH 4: Measurement

Child shows an increasing understanding of measurable properties such as size, length, weight, and capacity (volume), and how to quantify those properties

Mark the latest developmental level the child has mastered:

Building			Integrating		
Earlier ⬭	Middle ⬭	Later ⬭	Earlier ⬭	Middle ⬭	Later ⬭
Shows understanding of some measurable properties (e.g., size, length, weight, capacity) or uses words (e.g., "big," "heavy") to describe some measurable properties	**Identifies differences in size, length, weight, or capacity between two objects, using comparative words (e.g., "bigger," "smaller") or showing understanding of comparative words**	**Orders three or more objects by directly comparing them using a measurable property (e.g., size, length, weight, capacity)**	**Explores the properties of objects (e.g., size, length, weight, capacity) through either the use of measurement tools with standard units (e.g., ruler, scale) or the use of nonstandard units (e.g., footsteps, blocks)**	**Measures objects (e.g., length, area, volume), using multiple units and counting the number of units, but not always accurately, and may not recognize the need for equal-size units**	**Measures objects (e.g., length, area, volume), using equal-size units, and counting the number of units, avoiding gaps or overlaps between units**
Possible Examples					
▸ Gestures to indicate how big the family dog is, when asked. ▸ Communicates, "This pumpkin is so heavy." ▸ Communicates, "My braid goes down my back. It's long."	▸ Communicates, "This one is longer," when placing interlocking cubes side by side to check which is longer. ▸ Chooses the bigger of two buckets when asked to bring the one that will hold more water. ▸ Communicates, "Mine is taller," when building a block tower next to a peer's block tower.	▸ Arranges several leaves by size while working on a fall leaf project. ▸ Lines up several objects from smallest to largest in the science area. ▸ Arranges five shapes on an electronic tablet from small to large by touching and dragging. ▸ Puts four different objects on a balance scale, then lines them up from lightest to heaviest.	▸ Fills a measuring cup twice to add two cups of oatmeal during a cooking activity. ▸ Uses a balance scale to find out which of two fruits is heavier. ▸ Uses footsteps to measure the length of a rug and communicates, "This rug is 10 steps long!"	▸ Lays cubes of different sizes in a line along a table to measure how long the table is. ▸ Places same-size blocks along the edge of the rug, with some gaps between blocks, when using the blocks to measure the length of the rug. ▸ Determines how many sticks are needed to measure the bridge by placing sticks from one end of the bridge to the other end, with some overlap between sticks, then counting the number of sticks. ▸ Covers the area of a tray with rows of square tiles, with some gaps between tiles, and counts the number of tiles.	▸ Measures how far his friend jumped by placing same-sized rulers end- to-end, counting them, and communicating, "You jumped two rulers." ▸ Communicates, "You need more of the one-inch cubes because they are smaller," after measuring the length of a table twice – first, with one-inch cubes, and then with nine-inch cubes – end-to-end with no gaps between cubes. ▸ Covers a rectangular space with rows of equal- sized tiles, placed with no gaps or overlaps, and counts the number of tiles. ▸ Fills up two boxes with same-sized cubes placed next to each other and stacked to the top of each box, and communicates, "The small box has 12 cubes and the large box has 18 cubes."

⬭ **Child is emerging to the next developmental level**
⬭ **Unable to rate this measure due to extended absence**