

Unit Objectives:

- Encourage ongoing “math talk”
- CONCEPT REINFORCEMENT - Build competence in understanding of prior content (more/less, same/different, 2D shape recognition)
- CONCEPT DEVELOPMENT - Introduce and reiterate concepts related to measurable attributes

To do so, please complete the following:

What	When
Incorporate math talk into classroom routines. Video - What is Math Talk? Video - Promoting Math Talk	Daily
Repeat a Math fluency activity daily, as part of your circle time routine. This can be as simple as counting how many friends are present today or introducing a counting song. Suggestions include: <ul style="list-style-type: none"> • Select one of these Math Fingerplays and Chants • Play Body Count – an On the Go Math game 	Daily
Each day, offer a “Concept Development” Math center to introduce and reiterate “measurable attributes”; select from the options on page 2. It is recommended that you offer a center for at least 2-3 days before changing the materials.	Daily
Weekly, offer a “Concept Reinforcement” Math center that builds competence in understanding “same and different” (Unit 1), “2D shape recognition” (Unit 2) and/or “more and less” (Unit 3); select from the options on page 3. Note that concept reinforcement is IN ADDITION TO concept development (measurable attributes) as it is intended to assist friends who may need support or are new to the classroom.	Weekly (offer for 2 days)

Please Note:

As long as the guidelines above are respected AND all of the activities on the following pages are offered at least once during Unit 4, timing and pacing decisions (which centers to offer on which days, how many days to offer them, and time of day) are at teachers’ discretion and should be based on children’s needs and interests.

Many teachers find that it works well to offer only “Concept Development” centers on Monday, Tuesday, and Wednesday, then add in a “Concept Reinforcement” center on Thursdays and Fridays. You might also find it helpful to offer an “anytime” Math center once weekly (see Unit 1 Guide for ideas), to continue to promote math talk and to help you assess children’s comfort level/familiarity with the classroom materials.

Concept Development: Measurable Attributes

Please offer one of these “Concept Development” Math centers daily; it is recommended that you offer a center for 2-3 days before changing the materials. Note that “Concept Development” Math centers are offered IN ADDITION TO “Concept Reinforcement” Math centers, which are offered 1-2 days per week (see page 3).

Measurable Attributes – Length

Explore the concept of length by creating a center where children make snakes from playdough and identify them as long or short.

Extend this activity by providing pipe cleaners of varying length and challenging children to make their snakes as long as/as short as the each pipe cleaner.



Measurable Attributes – Books as a Unit of Measure

Explore the concept of measurement in general by creating a center where children use books as their unit of measure. Examples include:

- Comparing books to determine which is heavier
- Sorting books by size
- Stacking books to be “as tall as _____”
- Lining up books to be “as long as _____”
- “How many books will fill this (hula hoop)?”



Measurable Attributes – Height and Length

Encourage children to explore the concepts of height and length by creating a center where children measure themselves and their friends with blocks.

Be sure to provide a clipboard and writing tools to document “I am ___ blocks tall”; encourage children to use tablets to document their work with photos, too.



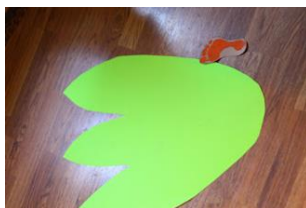
Measurable Attributes – Using Quantity

Explore the concept of quantity by creating a center where children determine how many/how much of a material is necessary to completely fill an object, as in the example at right.



Measurable Attributes – Dinosaur Feet as a Unit of Measure

Visit [this link](#) for more details about using dinosaur feet as a unit of measure!



Measurable Attributes - Estimation

Estimate how many cubes you’ll need to measure a toy animal, then compare your actual measurement. An optional recording sheet is available [here](#).



Additional Activities Related to Measurable Attributes:

- Weight – Use a balance scale to compare the weights of classroom materials, encouraging discussion of heavier and lighter.
- Height – Use your Doodle Bugs! growth charts to record children’s current heights. Cut a piece of yarn to size for each child and add the yarn to his/her portfolio with the height and date noted.

Concept Reinforcement: Same and Different (Unit 1); 2D Shape Recognition (Unit 2); More/Less (Unit 3)

Please offer one of these “Concept Reinforcement” Math centers weekly, for 1-2 days.

Note that “Concept Reinforcement” centers are IN ADDITION TO “Concept Development” Math centers, which are offered daily (see page 2).

Same and Different - Sorting Dinosaur Bones

Fill a sensory bin or container of your choice with salt-dough dinosaur bones, buried in dirt, rice, or sand. Challenge preschoolers to find all of the bones and sort them by size; it is helpful to provide a mat or container indicating SMALL, MEDIUM, and LARGE for sorting. Sorting extends their understanding of same and different! [Visit this link](#) for inspiration!



More and Less – Animal Sorting Graph

Sort animal figurines into two categories, discussing what you know about each animal's natural habitat, special characteristics, etc. that make them a good candidate for that particular group. Use the graphs to promote discussion of more/less. If you opt to use images rather than figurines, this would make a fantastic bulletin board display (a great example of “What We’re Learning”).



Same and Different –Duplo Challenge

In advance, build several very basic structures from Duplos or other classroom blocks. Use a tablet to capture a photo of each structure (create an album on your tablet so children can easily view the pictures one at a time). Provide each child with an image and challenge him to create a structure that is exactly the same.



Shape Recognition – Fishing for Shapes

Use construction paper to make several fish of varying colors and sizes. Add simple shapes (you may want to laminate for durability) and attach a paper clip to each fish. Create a fishing pole from classroom materials (a pencil or dowel with some yarn and a magnet will work). Preschoolers use the pole to catch fish, then sort them by shape, color, and/or size.



Additional Activities to Reinforce Skills (click links to view explanations)

- Create a fun, [Open-Ended Playdough Math](#) center.
- Offer [Valentine Activity Trays](#) (try the pom-pom sort and number match)
- Read and extend [Ten Apples Up on Top](#).
- Create a graph of your favorite Seuss stories to compare more/less.
- Create a [giant block puzzle](#) to promote shape recognition.