

## Lesson Plan for Collaborative for Math Professional Development (CoMPD)

Lesson Information		
Name: Susan Moore	Lesson Title: How Big is a Foot	
Grade Level: Pre-Kindergarten	Topic: Using a variety of materials to measure items	
VA Early Childhood Foundation Blocks:	Time Frame: Three Days/Three separate groups	
Brief summary: Children will recognize characteristics of length by using		
Preparation		
Mathematics Objective:	<p>The children will be able to:</p> <p>3 (a) Recognize attributes of length by using the terms longer or shorter when comparing two objects</p> <p>(b) Know the correct names for the standard tools used for telling time and temperature; and measuring length, capacity, and weight (clocks, calendars, thermometers, rulers, measuring cups, and scales)</p>	
Language Objectives:	<p>The children will be able to:</p> <p>1 (b) Correctly identify characters, objects, and actions in a picture book, as well as stories read aloud, and begin to comment about each</p> <p>(c) Make predictions about what might happen in a story</p> <p>(d) Use two words to ask and answer questions that include actions</p> <p>(g) Listen attentively to stories in a whole class setting</p> <p>5 (a) Identify the front of a book</p> <p>(b) Identify the location of the title of a book</p> <p>(e) Identify the part of the book that “tells the story”</p> <p>6 (b) Copy or write letters using various materials</p> <p>(d) Print 5-8 letters with a writing tool</p> <p>(f) Use inventive spellings to convey messages or tell a story</p>	
Supplementary materials and technology as appropriate:	<p>Teachers and Children Materials:</p> <ul style="list-style-type: none"> <li>• “How Big is a Foot” by Rolf Myller</li> <li>• Measurement paper</li> <li>• Ruler</li> <li>• Inchworm</li> <li>• Objects to measure for each child: one block, one plastic teddy bear, a glue stick, one unsharpened pencil, and a gummy worm</li> <li>• Construction paper</li> <li>• Crayons, colored pencils, or markers</li> </ul>	
Key Vocabulary:	<ul style="list-style-type: none"> <li>• One more</li> <li>• One less</li> <li>• How many “inches”</li> </ul>	
21 <sup>st</sup> Century Learning and Thinking Skills Used (Check all that apply)	✓ Critical-thinking and problem solving	✓ Collaboration
	✓ Communication	✓ Information and media literacy
	✓ Creativity and innovation	✓ Contextual learning
Motivation and Building Background		
(Focus and engagement link to past learning and student background, introduction, etc.)		
<p><b>Background:</b> One the 100<sup>th</sup> day of school each of my students traced and cut out their footprint. We placed 100 footsteps outside of our door to measure exactly how far “One hundred steps would be.” Because we had just began working on “longer” and “shorter”, I choose to use “How Big is a Foot” to practice these skills.</p>		
<p><b>Motivation:</b></p> <p>Hold up several pictures of different animals footprints and have the children compare their size. Have the children view the front cover of the book. Ask the children to make predictions about what they think the story will be about. Write their ideas on the chart paper. Have them name some objects that are longer and shorter than their own</p>		

footprint.

**Lesson Presentation – Information needed for other teachers to utilize your lesson. How did you present the ideas to students to motivate them to think and connect to the real world? What suggestions do you have for other teachers to model your lesson in their classrooms? What types of interdisciplinary and cross-curricular activities did you use to motivate students and help their understanding of mathematics concepts?**

(Comprehensible input – techniques for making content and concepts clear. Strategies – scaffolding, higher level thinking skills. Interactions. etc. Append documents/files used to present lesson at end of this document or direct teachers to location of files on the Internet.)

Presentation: The teacher will read the story aloud to the children. As the children listen to the story, the teacher will stop on the page where the question is asked, “Why is the bed too small for the queen?” Have the children determine why the bed was too small. Ask the children predict how the other characters in the book might be able to solve the problem. Record their responses.

Once the teacher has finished reading the book, refer back to the prediction chart and have the children determine if they were correct and if their suggestions worked.

### **Practice/Application**

(Append examples of student work or direct teachers to location of files on the Internet. Student names should be blackened out or otherwise omitted.)

Explain to the children that they will be making their own books titled “How Many Inches” books. The children will use an outline of their foot, glue it onto a sheet of construction paper, and draw something smaller or larger beside their own foot. With the teacher’s assistance, they will write a sentence describing if their own foot is “smaller” or “larger” than the object they drew.

Once the children are finished, assemble the pages into a class book. Read and enjoy the class book together. Once the book is read, have the children determine other objects that may be the same length.

Day Two: The children will use nonstandard measurements “pom pom inchworm” to measure specific objects. They will first make a prediction on how long the object is and then measure the object. Discuss if their prediction was a “good prediction”. More advanced children can use a ruler to measure the objects.

### **Review/Assessment**

(How did you assess their understanding of concepts? Include rubric used, if appropriate.)

<b>Content</b>	<b>Mastery</b>	<b>Progressing</b>	<b>Needs Improvement</b>
Did the children come up with reasonable predictions?			
Did the children use various materials when making their predictions?			
Did the children understand that some numbers were reasonable and some were not?			
Did the children count the numbers on the ruler or did they identify the number?			
Did the children place the ruler at the end of the object to determine its length?			
Did the children know how to write the number they measured correctly?			

## Reflection /Teacher notes

(Teacher reflection after lesson implementation - student engagement, modifications you would make, other comments about the lesson in general.)

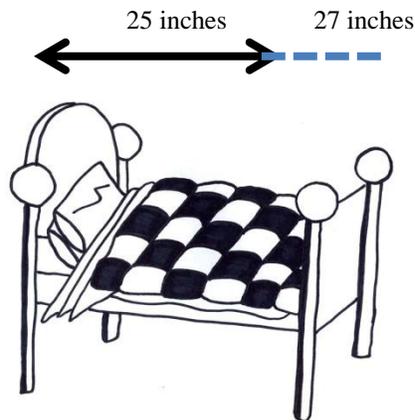
### Extension:

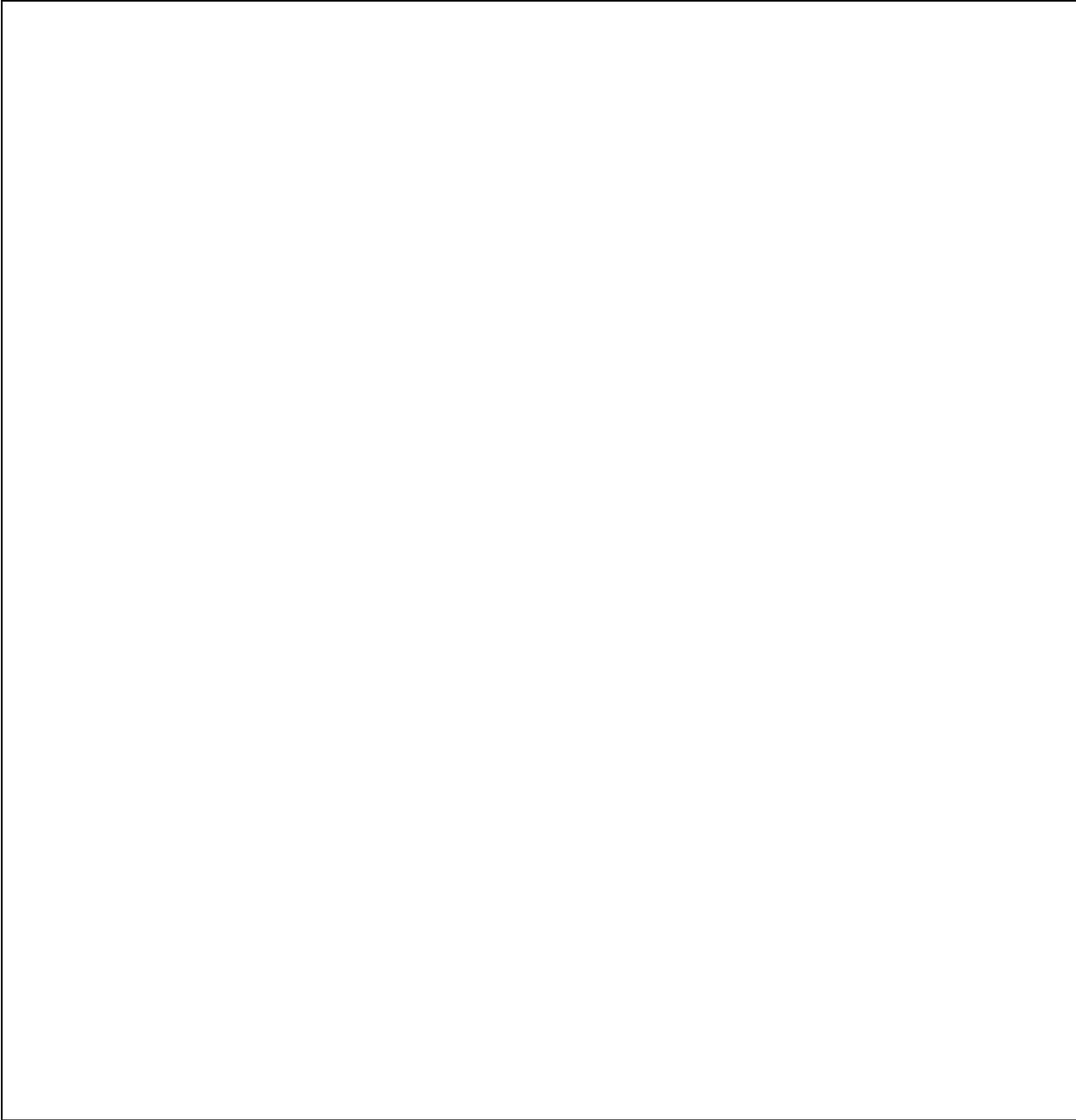
- Using the outline of each child's foot, the children will write their name on their foot and find something in the classroom that is the same size as their foot.
- For higher level children have them write the correct number without highlighting or demonstrating how to write the number.
- For lower level children have a set of numbers for the child cut and paste in the correct box or they may stamp the correct number in the box.

### Reflections:

This was one of the children's favorite activities thus far. I do not know if they enjoyed measuring with nonstandard forms they created themselves or eating the gummy worms. It did not take the children very long to realize that their "pom pom worms" were measuring objects the exact same size as their inchworm standard ruler. When asked to predict the length of each object, the children made very reasonable predictions.

After reading the book and having the children make their predictions I asked them questions that pertained to the concepts "one more inch", "one less inch", and how many "inches" when showing them various objects from the story. Every child was successful when answering a question. For example: "If the Queen's bed was 25 inches, how many more inches would a 27 inch bed be?"





Please add/merge/append supplementary materials, pictures, charts, graphics, etc. needed for other teachers to model this lesson in their classroom.

