Unit 3  Week 3	***Small Groups: Inside/ Outside**** Medium Support	**Math SG2**	**Standards:** MELDS.M.CCC.PS.3 MELDS.M.CCC.PS.4 MELDS.M.CCC.PS.5 MELDS.M.CCC.PS.6

Guiding Math Ideas:

- Quantity (subitizing)
- Representing number relationships with toys, manipulatives and puzzles: Assigning number names to groups

Math Concepts from Unit Learning Progressions:

- Quantity: Seeing groups of numbers automatically up to 5.
- Counting groups of objects and assigning a number name
- Beginning comparison of groups for more or less.

Materials:	***Math Vocabulary:***
• hula hoops or activity hoops • 5 bean bags • masking tape • large die (optional)	• inside- something that lands within the hoop • outside- something that lands in the area around the hoop.

Preparation:

Choose an open area of the classroom. Place the hoop on the floor. A short distance away (adjust for your group), place a line on the floor using masking tape.

Procedure:

Introduce the game Inside or Outside. *We are going to play a game with our hoop and bean bags. It is called Inside or Outside. We are going to throw the bean bags and count how many land **Inside** the Hoop and how many land **Outside** of the Hoop.*

There are only 3 rules. Take turns. Stand behind the line. Throw one bean bag at a time.

Start with 3 bean bags. Have children count them aloud. Count the bean bags often throughout the game as the "set" is handed to each child for her/his turn, to demonstrate that the number of bean bags does not change.

Children throw the bean bags. Ask: *How many are Inside the Hoop? How many are Outside the Hoop?*

As children master this group of 3, increase the number to 5. Have children show with their fingers groups of 1, 2, 3, 4, 5 items as they count. Be sure to end each turn by asking: *How many are there **all together**?* and then count the bean bags.

Sample Comments:

- *Isn't that interesting? You had 2 bean bags inside and 3 outside, and XXX had 1 bean bag inside and 4 outside, but we both counted 5 bean bags in the whole group.*
- *Show me with your fingers how many were inside? How many were outside?*
- *Are there more bean bags inside or outside?*

Problem solve about what to do about bags that land on the hoop.

Strategies to Provoke Math Thinking:

- This activity introduces several key ideas related to quantity: Subitizing (children will be able to automatically see how many are in the group without individually counting each bean bag); Stability of sets- even though the combinations of beanbags Inside and Outside change, the number of items in the entire set does not change; Composition and De-Composition of Number- numbers are made up of smaller number sets (2 and 3 are number sets within 5). These ideas are not simple: Children will need multiple opportunities to practice these ideas over and over.
- Using games with embedded math concepts is a highly effective strategy: Games uses concrete objects, rather than relying on worksheets or symbols; Games are engaging and rewarding for young children; Games can be adjusted for the mastery level of the children who are playing; Games do not have to be highly competitive (as in 1 winner) in order to be effective learning experiences. You can also observe for understanding of Cardinality.

Documentation:

Observing children as they play games, especially those games where children take individual turns, provides clear information about each child's number sense. For example, moving game pieces on a board will reveal information about 1:1 correspondence and number word list order. In this game, observe whether children can subitize and to what number, and whether they are able to understand that the total number of bean bags does not change, regardless of whether the bags are Inside or Outside.

Provocation:

Increase number of bean bags to 6 and roll a die. Children try to get the number on the die inside (or
outside) the hoop. Be sure to observe children's ability to subitize (instantly recognize the number by
the dots on the die).

*Activity adapted from a free activity called the Hoop Game, available at the Erikson Early Math Collaborative. View this game at: *https://earlymath.erikson.edu/the-hoop-game-simple-tossing-game/*