

Kindergarten Numeracy Development: Connecting Number to Everyday Situations

Developmental aspects	Emerging With direct support... 	Developing With guided support... 	Applying With minimal support... 	Extending 
The Child	With direct support, and teacher modeling, may participate and may attempt to make sense of mathematical experiences.	With guided support, demonstrates a willingness to explore mathematical ideas while participating in problem solving experiences. Is beginning to show an awareness of numbers, space and time used in everyday life.	With minimal support, demonstrates interest in and a willingness to explore mathematical ideas while purposefully participating in problem solving experiences. Communicates an awareness of how numbers, space, and time are used in everyday life.	Shows interest and curiosity while purposefully exploring mathematical problem solving experiences. Perseveres. Makes and explains connections to numbers, space and time as used in everyday life.
Understanding Number				
Connecting number to everyday situations	With direct support, may recognize the use of number in everyday situations.	With guided support, connects number to everyday situations. (e.g. birthdays, time, temperature, etc.)	With minimal support, connects number to everyday situations. (e.g. attendance)	Spontaneously connects number to everyday situations.
The Support/Scaffolding*	The Model: showing, instructing, explaining, directing, making explicit, demonstrating, giving examples	The Coach: structuring, sequencing, focusing, cueing, guiding, organizing, supporting	The Advisor: suggesting, reminding, prompting, monitoring, asking for elaboration	The Mentor: extending, stretching, wondering aloud, exploring, "what if-ing"
*a variety of supports (teachers, peers, environmental, etc.) can be provided at any stage of development				

Scenario: The class is going to have fresh fruit salad for snack. The teacher has found a simple recipe with pictures and a few words, and has laid out the supplies. The directions are organized into steps, and each step has a number. Some children are going to prepare the fruit by following the recipe, while others are getting the bowls, spoons and place mats ready so everyone can have some fruit salad. The rest of the children are engaged at other centres in the classroom.



Direct Support

Aja wants to help make the fruit salad. She is looking at the recipe and putting her finger on each of the numerals, one at a time. Giving her direct support, the teacher explains that the numerals help people know what steps they need to take, starting with 1 and going 1, 2, 3, 4 in order, like counting. She *directs* Aja's attention to the box with the numeral 1, and *shows* her the words that go with the first step. Solomon adds support by *explaining* the pictures: "It shows that first we have to cut the bananas and the apples. And something else about another fruit that's round." The teacher *shows* them a tangerine, and *explains* the words, "Peel tangerine." She *instructs* the helpers to gather the fruits so they can begin step 1 and then *follow the sequence* in the numbered boxes.



Guided Support

Four children are helping prepare the fruit. The teacher gives guided support by *structuring* their activities to include counting and matching. They count three bananas, three apples and four tangerines. The teacher *cues* them to find out how many fruits they have all together so they can divide them among the group. They count ten pieces of fruit. Then the teacher *guides* them to think about how to divide up the fruits so each person has some to cut up. They decide to distribute the fruits by giving them out to each helper one at a time, using one-to-one matching. There are two fruits left over. The teacher offers to be a helper and takes the two extra fruits to prepare. She *focuses* the students on their discovery that when there are five people and ten fruits, each person gets two.



Minimal Support

Trina and Alannah are finding spoons for everyone. They decide to look on the sign-in sheet and count the number of people who came to school this morning. The educational assistant notices that two children have put their names on the same line of the sign-in sheet. He offers minimal support by *reminding* the girls to count the number of names rather than the number of lines that have writing on them.



Without Support

Another group of children is wiping the tables and putting out each child's handmade place mat. Without support, Arthur suggests that they count the place mats to find out how many bowls they will need. His friend Jackson *extends his thinking* by asking, "What if somebody is away? We might not need that many bowls." The two boys decide to count the children that are present to see if the total is the same as the number of place mats. Trevor *stretches their thinking further* by suggesting that they give bowls to the teacher and EA as well.



An important characteristic of numerate children is an inclination to draw upon their mathematical knowledge and apply it in new contexts.