

Kindergarten Numeracy Development: Matching and Sorting

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 number, 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 number, 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 number, space and time as used in everyday life.
Understanding Shape and Space				
Matching and sorting	With direct support, sorts and classifies as directed, using an obvious attribute.	With guided support, sorts and classifies using an obvious attribute.	With minimal support, recognizes and describes similarities and differences in order to sort and classify.	Sorts mixed materials on the basis of different attributes; resorts: describes classifications.
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: It is cleanup time, and the children have a mix of materials to put away. They are sorting the materials into their appropriate places in the classroom.



Direct Support

Ali, an ESL Level 1 student, is new to the class. Two other children with the same language background are giving Ali direct support in their own language. They *explain* what each object is, and *show* Ali where it goes. They are also helping Ali learn the names of the objects in English by *explicitly* saying the words as they put each item away. Ali is delighted to join in. He picks up an object and takes it to one of the children, who says its name and *demonstrates* which bin it should go in. They laugh as they chant the word together.



Guided Support

The education assistant (EA) is giving Anna guided support by asking her questions about what she has picked up. She *focuses* Anna's attention on the attribute of a pattern block by asking, "What do we call these kinds of blocks?" and then *cueing* her to match the object to its bin by asking, "Can you find the bin with the other pattern blocks in it?"



Minimal Support

With minimal support from her peers, Marlys is cleaning up the house centre. She decides which fruit needs to go in the refrigerator, and where to put the forks. She tells her friend Cheryl what she is doing, but looks confused when she comes across a slice of pretend pizza. Cheryl *prompts* her by saying, "My auntie puts leftovers in the fridge. Then we have to heat them up again in the microwave." Marlys decides to put the pizza slice in the refrigerator.



Without Support

Without support, Mallika confidently completes a wooden puzzle before putting it away in the puzzle rack. Alexa asks how she is able to finish the puzzle so quickly. Mallika stretches Alexa's thinking by explaining, "You just have to look at the colours AND the shapes. Then you can match them with the edges of the other pieces."



Classrooms should have ample quantities of such materials as counters; interlocking cubes; connecting links; base-ten, attribute, and pattern blocks; tiles; geometric models; rulers; spinners; colored rods; geoboards; balances; fraction pieces; and graph, grid, and dot paper. Simple household objects, such as buttons, dried beans, shells, egg cartons, and milk cartons, also can be used.

