

Guided Observation

Teacher observes preschool children, listens to, and builds on their natural interest in mathematics and their intuitive and informal mathematical knowledge FOR EXAMPLE:

Teacher observes and listens to children's spontaneous counting and questions that encourage purposeful counting in children's every day interactions. (PCF, pp. 244-245)

Teacher observes and listens to preschool children's measurement concepts such as weight, height, length, and capacity, in everyday play and routines. (PCF, p. 275)

Teacher encourages inquiry and exploration to foster problem solving and mathematical reasoning

FOR EXAMPLE:

☐ Teacher promotes the use of comparison terms (e.g., more, same as, fewer, or less) through everyday interactions. (PCF, p. 254)

Teacher uses children's interest to



introduce mathematical reasoning and problem solving opportunities. (ECERS, p. 37, PCF, 275)

Teacher creates opportunities to use reasoning strategies using number and geometric shapes. (Prekindergarten Learning & Development Guidelines, p. 114)
Teacher encourages children to explore and ask questions that foster problem solving and mathematical reasoning. (PCF, p. 234.)

□ Teacher poses meaningful questions that challenge preschool children's thinking in mathematical reasoning. (PCF, p. 292) *Guided Observation continued on next page*

Guided Observation continued

Teacher uses everyday activities as natural vehicles for developing preschool children's mathematical knowledge

FOR EXAMPLE:

Teacher fosters one-to-one correspondence within the context of daily routines, such as having children put one paint brush in each paint cup. (PCF, p. 245)
Teacher encourages counting, addition, and subtraction during everyday interactions and routines, such as when setting the table for meals. (PCF, pp. 244, 254)

Teacher provides opportunities to promote measurement concepts in the environment, such as estimating which rock is heavier. (PCF, pp. 274, 276, 278)
Teacher identifies and utilizes opportunities for sorting and classifying in everyday routines, such as sorting blocks during clean-up time. (PCF, p. 261)

Teacher introduces mathematical concepts through intentionally planned experiences

FOR EXAMPLE:

Teacher plans group activities focused on counting, such as counting children at group time. (PCF, p. 247)

Teacher plans and provides small-group activities that include standard and nonstandard measurement. (PCF, p. 277)

Teacher plans literature, songs, art, and games to introduce preschool children

to the concepts of counting,

measurement, spatial sense, patterns. (PCF, pp. 255, 268, 277, 287)



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Teacher provides a mathematically rich environment

FOR EXAMPLE:

Teacher integrates numerals into different areas of the classroom, such as putting up signs for how many children can use each interest area. (PCF, p. 249)

There are interest areas to facilitate classification. (PCF, p. 261)

There are many objects to count, such as small sets of objects. (PCF, p. 246)

There are materials and objects for sorting in the environment, such as baskets of shells or nuts and bolts. (PCF, p. 261)

There is an area for sand and water play with a variety of toys to use for measuring and pouring. (ECERS, p. 46)

There are materials that encourage preschool children to explore and manipulate shapes in space, such as various shaped cookie cutters. (PCF, p. 284)

There are materials and equipment to promote spatial sense, such as large packing boxes. (PCF, p. 286)

There are books, games, and other learning materials with mathematical themes. (PCF, pp. 247, 284)

There are materials for children to record and document what they have measured. (PCF, p. 278)

Teacher provides an environment rich in mathematic language

FOR EXAMPLE:

□ Teacher discusses numerals in print in a meaningful context; for example, telling children that the numerals on the traffic sign tell people how fast they can drive. (PCF p. 249)

□ Teacher refers to shapes and encourage the use of shape names, comparing, and describing shapes in everyday interactions. (PCF, p. 283)

Teacher uses spatial words, pointing out spatial relationships and expanding on preschool children's words. (PCF, p. 287)

Teacher talks with children about sorting and classifying, helping them label the groups and verbalize the criteria for sorting.(PCF, p. 262)

 \Box Teacher helps children describe patterns and use descriptive words. (PCF, p. 267)

Teacher talks with children about shapes and their attributes. (PCF, p. 283)

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Teacher supports English language learners as they develop mathematical knowledge FOR EXAMPLE:

Teacher observes children rehearsing the second language by repeating what other speakers say and by playing with the sounds of the new language. (PEL, p.48)
Teacher includes preschool children's home language in counting activities, whenever possible. (PCF, p. 244)
Teacher asks children and their parents to share culturally relevant and teachable rhymes in their native languages with the class. (PEL, p. 85)

Teacher uses objects familiar to children, such as

buttons or beads, to count or make patterns. (PEL, p. 86)

Teacher plans math oriented games, such as concentration or picture bingo, to increase repetition. (PEL, p. 86)

Teacher establishes partnerships with families in supporting children's learning in mathematics

FOR EXAMPLE:

☐ Teacher communicates with parents about the importance of talking to children about mathematical concepts at home, such as shapes, spatial words, measurement, numbers, sorting and patterning. Teacher gives parents practical examples of how they can talk about mathematics outside of school. (PCF, pp. 257, 269, 279, 280, 289)

Support the individual child

FOR EXAMPLE:

- Teacher considers adaptations for children with special needs. (PCF, p. 246)
- Teacher plans for children at different levels. (PCF, p. 267)
- Teacher uses adaptive materials, such as blocks with fabric hook-and-loop closures, that allow the child to successfully stack. (Inclusion Works! p. 41)