## **Professional Development Toolbox**

Individualizing





- Discuss with teachers the various levels of algebraic function in the classroom. For children who are still developing descriptive vocabulary, suggest providing multiple opportunities for matching in the environment (e.g., memory games, picture bingo, Concentration, etc.).
- Invite teachers to read page 88 of Family Partnerships and Culture. Call special attention to the following sentence: "Children's early mathematical knowledge and skills develop and are strengthened through the math-related experiences they have at home (Benigno and Ellis 2008)." Then pose the following question: How can you learn about—and then expand upon—the mathematical learning experiences children have at home?
- Demonstrate the button-shape activity for teachers working on modifying lessons for children with multiple abilities. The purpose of the activity is to create meaningful pictures from shapes. This can be done as directed in the lesson with buttons or teachers can suggest that some children draw the shapes while other children can trace the buttons or use adaptive technology to pick up and place the buttons. (PCF, Vol. 1, pp. 267, 284; *Inclusion Works!*, p. 41)

- Guide teachers to page 338 in the PCF (Vol. 1). Ask them to read the following bullet point: "Use materials and objects that are relevant and meaningful to the children in your group." Support teachers while they reflect on the current interests of the class and help them to create a list of materials that might be most meaningful and relevant and will enhance mathematical thinking. (PCF, Vol. 1, p. 238; PEL Guide, p. 86)
- Prepare and model the Shape Memory Game (Geometry module handout) in the classroom. Intentionally scaffold with language level, home language cues, and visual cues for various levels of learners in the group. After class, meet with the teachers and reflect on the activity. Ask what went well and what didn't go well. Share processes of planning for different levels of directions and support for different children. (PCF, Vol. 1, pp. 263, 267; *Inclusion Works!*, p. 46).
- Invite teachers to read the last paragraph on page 54 and all of page 55 in *The Integrated Nature of Learning*. Then use a blank piece of paper to create a plan of possibilities chart using the Table 1 image from page 54. Ask teachers to think of an observation of an individual child that comes to mind. What math concepts did they notice during that observation? Based on this observation, how might they start a plan of possibilities? Support the teachers in writing a planning question. Work with the teachers to identify a time to come back together and complete the reflection and planning process. This will help the teachers plan for the whole group and spend time considering individual strengths and next steps. (*The Integrated Nature of Learning*, pp. 54-55)

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