We know a lot about how young children learn. We know that children ages eight and under construct knowledge through hands-on exploration of materials and by interacting with people. We also know that children learn best when their physical needs are met and they feel psychologically safe and secure.

Children need time to think and to manipulate materials for deep learning to occur. Play and other experiences in which children engage in active learning promote development in all domains. When adults scaffold learning experiences to fit individual developmental levels, children’s learning improves (Berk & Winsler 1995; Copple & Bredekamp 2006; Epstein 2007).

We know a lot about teaching. Children need both child-guided and adult-guided experiences for optimal learning (Epstein 2007). An integrated curriculum helps children make connections between content areas, build on their previous learning, and strengthen their understanding of concepts (Copple & Bredekamp 2006). Strong relationships between adults and children enhance learning through purposeful and frequent interactions such as conversations, giving information, or modeling an activity.

Learning centers

A kindergarten (and former first grade) teacher, Lynn Heffley, notes that young children need to be encouraged and taught to inquire, investigate, explore, and to record their learning (pers. comm). Learning will not occur unless the teacher is knowledgeable, caring, supportive—and intentional in planning lessons and activities and selecting strategies that promote learning and support the growth of the whole child.

Learning centers are distinct interest areas in a classroom that offer various materials and opportunities for hands-on learning at individually appropriate levels (Copple & Bredekamp 2006; Epstein 2007). Some kindergarten classrooms have a few learning centers, but many others offer only teacher-directed activities. Children cannot explore the center materials freely, but must complete set activities often within a specified time frame. Since primary grade teachers now must devote much of their time to addressing specific curriculum content,
many feel like they and their students have less time than ever for what is often viewed as playtime. Today, it is rare to see elementary school classrooms with a plethora of materials that children can use in multiple ways depending on their individual learning styles, needs, and interests.

Teachers often say they don’t have enough time to establish and maintain centers. Many believe that centers use valuable time and prevent them from covering specific content learning required by standards. They also hold the misconception that play and work in centers interferes with the teacher’s assessment of children and the documenting of learning needed so that children can do well on tests. When shown that centers are effective teaching and learning approaches for elementary school-age children, teachers will intentionally develop and integrate hands-on exploratory child- and adult-guided learning experiences. “Centers and Activities Supporting the Algebraic Concept of Patterns in Grade 2” gives an example of how centers can help teachers address specific content through multiple engaging activities that allow individual children at different development levels to experience learning in different ways.

### Centres and Activities Supporting the Algebraic Concept of Patterns in Grade 2

**Standard:** The child uses algebraic concepts and procedures in a variety of situations (Kansas State Department of Education 2003).

**Second grade knowledge indicator:** The child uses concrete objects, drawings, and other representations to work with types of patterns (for example, repeating, growing)

<table>
<thead>
<tr>
<th>Center</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td>Build a pattern using different kinds of rocks. This can be a pattern students create, or they can follow a model shown on a worksheet. Children then record the pattern in a journal, using pictures, words, or drawings.</td>
</tr>
<tr>
<td><strong>Art</strong></td>
<td>Create an abstract artwork with multiple patterns, using self-selected materials (pieces of tissue paper, crayons/markers, pencils, and so on).</td>
</tr>
<tr>
<td><strong>Literacy (writing, reading)</strong></td>
<td>Write a paragraph or two describing the abstract artwork to attach to the picture.</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td>Build patterns with Unifix cubes, small blocks, or other manipulatives. Next, reproduce the patterns on paper in a math journal. Children can represent the pattern using written numbers or letters (for example, ABB).</td>
</tr>
<tr>
<td><strong>Blocks (house building)</strong></td>
<td>Copy a picture of a building and show patterns of windows and doors using colored blocks. Children can create a neighborhood of houses and buildings that show a pattern.</td>
</tr>
<tr>
<td><strong>Dramatic play (store)</strong></td>
<td>Make a list of items needed to set up a store, using written words and symbols to represent the items (fruit, drink, food). The list will form a pattern: fruit, fruit drink, food.</td>
</tr>
</tbody>
</table>
Engaging environments

Offering engaging learning activities at centers can actually make teaching and learning more efficient and more engaging for children. Playful learning balanced by purposeful activities means more engaged learning and fewer behavior problems (Perlmutter & Burrell 1995). The NAEYC position statement on developmentally appropriate practice—remember, early childhood includes the years from birth through third grade!—says it well: Teachers need to “create an intellectually engaging, responsive environment to promote each child’s learning and development” (NAEYC 1997, 11). Children need “supportive environments that nurture their social, emotional, physical, ethical, civic, creative, and cognitive development” (ASCD 2007, 10).

Centers can be used to support the whole child so that enhanced growth, development, and meaningful learning can occur. In their book Building the Primary Classroom: A Complete Guide to Teaching and Learning, Bickart, Jablon, and Dodge (1999) describe how primary grade teachers can make informed decisions about the many aspects of teaching young children, including setting up a classroom environment that uses centers to encourage learning and allows teachers to assess that learning.

Offering children genuine choices that are intentionally developed by a knowledgeable teacher promotes competence and independence as well as the more academic learning in all children (Bickart, Jablon, & Dodge 1999). Centers help teachers put the child at the center of their decision making—where children should be!

References