

Class 4
Issues Part 2

Articles:

When Boys and Girls Play

Building an Encouraging Classroom with Boys in Mind

Discussion Questions:

Identify some of the ways in which boys and girls play differently?

How can teachers use this information to benefit all children?

Do you agree that boys may be more active than girls in preschool classrooms?

Identify some large motor activities which will benefit boys and girls.

Identify some sensory activities for all preschool children.

When Girls and Boys Play: What Research Tells Us

JEANETTA G. RILEY AND ROSE B. JONES

Research on play suggests that children of all ages benefit from engaging in play activities (Bergen, 2004). With the recent emphasis on standards and testing, however, many teachers have felt the increased pressure to spend time on structured learning events, leaving few moments of relaxation in a child's day (Chenfeld, 2006). Many elementary schools have even reduced or eliminated recess times in an effort to give children more time to work on academics (Clements, 2000). That is unfortunate, as findings from studies of play indicate that play helps children to develop social, language, and physical skills.

While beneficial for both, play often differs for girls and boys (see Gallas, 1998; Gurian & Stevens, 2005). This article reviews research related to the differences found between the genders as they play and the benefits that elementary children can gain from play. In addition, the authors include suggestions for educators regarding children's play at school.

Social Development ***Girls and Boys Sharing Social Interactions during Play***

Researchers have found differences in the way the genders socialize during play. In an early study examining gender and play, Lever (1978) found several differences in how 5th-grade girls and boys play. For example, boys played more competitive, rule-oriented, group games than did girls; girls interacted in smaller groups, had conversations, and walked and talked with friends more often than did boys. Lever concluded that the nature of boys' team games and their experiences with rule-dictated play: 1) allowed for the development of cooperation skills between peers with differing ideas, 2) afforded them opportunities to work independently to accomplish a common task, and 3) provided motivation to abide by established rules.

Other recent studies have found results similar to those of Lever (1978). A study of elementary students at recess conducted by Butcher (1999) indicated that boys more often

participated in competitive games, and girls chose activities that allowed them to have conversations. Likewise, Lewis and Phillipsen (1998) found that elementary-age boys at recess played physically active group games with rules more often than did girls. However, in contrast to Lever's (1978) findings on groupings during recess, Lewis and Phillipsen (1998) noted that while girls tended to play in small groups, boys tended to play in groups of various sizes, from dyads to more than five children.

Also consistent with Lever's (1978) findings, a study of 4th-graders by Goodwin (2001) indicated that boys tended to form social structures, wherein the boys who were more skilled at the activity took the lead and directed the players. Boys with less skill were allowed to play but were not allowed a leadership role. In contrast, girls' leadership roles during games of jump rope did not depend on their ability to carry out the physical tasks of the game. Instead of one girl taking the lead, several girls directed the games; however, Goodwin (2001) found that the girls were more likely to exclude others from their play than were the boys.

Even very young children tend to be socially influenced by playing with same-sex peers. For example, Martin and Fabes' (2001) investigation of preschool and kindergarten children at play indicated that playing with same-gender peers affects play behaviors. Their research findings added to the evidence (e.g., Boyatzis, Mallis, & Leon, 1999; Thorne, 1993) that children often choose to play with same-sex peers. Additionally, Martin and Fabes found gender-typical behaviors for children who more often played with same-sex peers. For instance, the girls who most often played with other girls were generally less active during play and chose to play in areas close to adults. Boys who played with other boys more often engaged in play that was more aggressive and farther from adult supervision. This stereotypical play was found less often in children who tended to play with the opposite sex.

Not all students have positive social experiences during play activities. Some students may have difficulty developing the appropriate skills necessary for positive peer interactions. Children with inadequate social skills may tend to behave

ANNUAL EDITIONS

inappropriately during times of free play, such as recess (Blatchford, 1998). Rather than limit free play due to inappropriate behavior, however, these times can provide opportunities for conflict resolution interventions. In one study by Butcher (1999), the researchers trained college students to use conflict resolution strategies when interacting with 1st- through 6th-graders during recess times. The volunteers provided positive feedback, modeled appropriate social skills, and implemented strategies to increase cooperation among the children. As a result, when the numbers were analyzed, combining all grade levels, the means for the number of incidents of inappropriate targeted behaviors (i.e., violent behavior, verbal abuse, and inappropriate equipment use) declined during interventions. However, it is important to note that when the results were analyzed according to gender, significant differences were found in the reduction of targeted behaviors for boys only. No significant differences were found for girls' behavior. The researchers suggested that this lack of difference for the girls was due to the limited number of negative behaviors the girls initially exhibited (Butcher, 1999).

Overall Play and the Social Development of Children

By the time children reach school age, play typically becomes a social activity (Jarrett & Maxwell, 2000). As children play with others, they begin to learn what behaviors are expected and acceptable in their society. Playing with peers permits children to adjust to the expected norms (Fromberg, 1998).

Opportunities for free play with limited adult intervention provide time for children to explore which behaviors are accepted among their peers (Wortham, 2002). As younger children associate in play situations, they begin to realize that play ends if they do not negotiate behaviors and cooperate; therefore, play helps children learn to regulate their behaviors in order to continue playing together (Heidemann & Hewitt, 1992; Poole, Miller, & Church, 2004).

For older children, recess can be a time for learning about and adjusting to peer expectations. Pellegrini and Blatchford's (2002) findings suggest that recess play provides children with time to enter into social relationships early in the school year, which, in turn, helps them in social situations throughout the year. Pellegrini, Blatchford, Kató, and Baines (2004) also found that recess allowed opportunities for children to increase positive social experiences. For the 7- and 8-year-old participants in their study, basic games played at the beginning of the school year permitted the children time to get acquainted with peers, leading to more advanced play once the children became more familiar with each other. Additionally, Jarrett et al. (1998) speculated that children who move from one school to another find recess times helpful in adjusting and making new friends.

Language Development Girls and Boys Expressing Language during Play

Research indicates that the types of games in which girls often engage may support language development differently than the types of games boys typically play. Blatchford, Baines, and

Pellegrini (2003) studied playground activities of children in England during the year the children turned 8 years old. The researchers found that girls held significantly more conversations and played significantly more verbal games than did boys. Goodwin (2002) also found that 4th- through 6th-grade girls spent most of their playtime talking with one another. Their games tended to require close proximity to one another, thus allowing for extended conversations. Conversely, some studies found that the games boys tended to choose often involved language usage that was more instruction-oriented, with boys verbally directing the play actions of one another (Boyle, Marshall, & Robeson, 2003; Goodwin, 2001).

Overall Play and Language Skill Development of Children

Play is a natural environment for children's language development (Perlmutter & Burrell, 1995). Children use language during their solitary play as well as in social play encounters (Piaget, 1962). Both expressive and receptive language skills are needed to plan, explain, and execute play activities. Language skills give children the ability to cooperate in creating and prolonging their play episodes (Van Hoorn, Monaghan-Nourot, Scales, & Alward, 2003).

Developing language skills facilitates peer relationships. Piaget (1962) theorized that the talk of preschool-age children is egocentric (i.e., talk that is not for the sake of communicating with others). Very young children verbalize without a need for others to enter into the conversation; however, as older children begin to interact more often with adults and peers, the need to communicate arises. Egocentric speech gradually subsides and social speech takes over as children practice using language (Ginsburg & Opper, 1979).

Language in the context of play provides children with the ability to develop strategies for cooperation, engage in varied and complex play themes, and share perspectives about their world.

Language is a major factor in social play scenarios, such as sociodramatic play in which children create pretend play episodes and take on the roles of others. Language in the context of play provides children with the ability to develop strategies for cooperation, engage in varied and complex play themes, and share perspectives about their world (Van Hoorn et al., 2003). Children's language guides their play and provides the communication needed for the continuation of the play (Guddemi, 2000; Heidemann & Hewitt, 1992).

Language usage during play allows children to develop and test their verbal skills. Children experiment with language by telling jokes and riddles, reciting chants and poems, and making up words. As children use language during play, they create meaning for themselves concerning the nature of language and communication (Frost, 1992). Additionally, playing with language develops children's phonological awareness by allowing

for experimentation with the sounds of words. Children learn that sounds can be manipulated as they rhyme words and create nonsense words (Johnson, Christie, & Wardle, 2005).

A more complicated form of play, games with rules, also requires children to expand their language skills. Once the egocentrism of earlier childhood diminishes, children can become more proficient at working together to negotiate the rules of games (Van Hoom et al., 2003). Games with rules provide practice in cooperation, as well as opportunities to build language skills, as children create new games or discuss rules of known games.

Physical Development Girls and Boys Engaging in Physical Activity during Play

Research indicates gender differences in physical activity during play. Studies have noted that boys, from infancy through adolescence, tend to participate in more physically active play than do girls (Campbell & Eaton, 1999; Frost, 1992; Lindsey & Colwell, 2003). For example, Lindsey and Colwell (2003) observed young children and found that boys playing with one other child engage in more physical play than girls playing with one other child. Additionally, a study by Sarkin, McKenzie, and Sallis (1997) compared gender differences in play levels of 5th-graders during physical education classes and recess. They found no significant differences between the boys' and the girls' activity levels during physical education classes. However, during recess times, boys more often played games requiring higher levels of physical activity than did girls. Girls played less strenuous games or held conversations as they walked around the playground. These results suggested that during times of unstructured activity, such as recess, boys tend to choose more active play than girls do.

Likewise, other researchers also concluded that the physical play of girls and boys often differs. Boys and girls tend to divide into gendered groups during outdoor play, and they often choose different types of activities (Thorne, 1993). Studies suggest that boys engage in play that involves more physical activity (Boyle, Marshall, & Robeson, 2003), more competition (Lever, 1978), and more space (Martin & Fabes, 2001) than do girls. Pellegrini and Smith (1993) suggested that boys tend to prefer playing outdoors, due to the need for open space to participate in their active games. One type of active play in which boys tend to engage in more frequently than girls is rough and tumble play (Martin & Fabes, 2001; Pellegrini, 1989; Thorne, 1993). Rough and tumble play involves such activities as grabbing and wrestling and may be a socially acceptable way for boys to physically demonstrate their feelings of friendship (Reed, 2000).

Overall Active Play and Physical Development in Children

The human body needs movement to stay healthy and well. Findings by the Centers for Disease Control and Prevention (2005) indicate that the incidence of childhood obesity is increasing. In today's world, many children spend most of their

time in sedentary activities that do not enhance physical fitness. Active play encourages movement, thereby helping children's fitness. According to Huettig, Sanborn, DiMarco, Popejoy, and Rich (2004), young children need at least "thirty to sixty minutes of physical activity a day" (p. 54). Physical advantages that children gain from active play are increased motor control and flexibility (Brewer, 2001). Furthermore, with the added body control that develops as they play, children often become more competent in their skills and gain the self-confidence to play games with peers (Wortham, 2002).

Physical movement is necessary for the growth and development of the mind as well as the body. The brain needs movement in order to function properly.

Physical movement is necessary for the growth and development of the mind as well as the body. The brain needs movement in order to function properly (Gurian, 2001). Although indoor play encourages creativity and socialization, it provides only a limited amount of space for the type of physical movement children need each day. Time in outdoor play encourages physical activity, which, in turn, increases children's physical fitness. Consequently, outdoor recess periods provide the time and space for children to engage in the physically vigorous active play that is limited indoors (Sutterby & Frost, 2002).

Further Research Needs

Understanding more about how play benefits the social, language, and physical development of children can help teachers as they create learning environments; however, more research is needed to gain a clearer picture of how play enhances children's learning. For example, studies examining the influence of recess on classroom behaviors, such as concentration and amount of work produced, have yielded conflicting results (Jarrett et al, 1998; Pellegrini & Davis, 1993). Therefore, more work is necessary to determine how unstructured play correlates with behavior as well as academic achievement. Additionally, more research needs to be conducted about social interventions during play. Children who have been targeted as requiring assistance in developing positive social behaviors may have more difficulty during times of unstructured activity (Blatchford, 1998). Research to determine how to best assist these children, particularly during recess periods, is needed.

Finally, some researchers have included such variables as race and gender within the framework of their study of play; however, less often has the researcher's main purpose been to examine the educational implications based on the different ways girls and boys play. This aspect of play needs further examination if educators are to gain a better understanding of how to best structure learning environments for both genders.

Implications for Educators

Knowing the research about how children play and what they learn as they play can help educators and parents make sound decisions about how to provide appropriate play opportunities. To create learning environments in which children can thrive, adults must observe children's needs and try to accommodate those needs. The following are some suggestions for educators and parents.

- **Importance of Observations of Play Experiences:** Teachers can use playtimes to observe and assess children's social, emotional, physical, and cognitive development. Observing children's play can provide teachers with information about how to create appropriate learning environments. In some settings, recess may be a prime time to do this.
- **Girls' Play:** Girls have been found to engage in more sedentary, language-oriented activities during recess play than boys. Although this type of activity is important, girls also need to be encouraged to be physically active. While many boys may participate in physical movement through rough and tumble play, educators may need to help girls create activities in which they become more active. Providing areas and equipment for active play is the first step; additionally, ensuring that girls have the opportunity to engage in this type of physical play is necessary.
- **Boys' Play:** Rough and tumble play may provide an outlet for boys' physical, social, emotional, and verbal expression. Schools where all physical contact during play has been banned may need to consider how to reduce aggressive behaviors while allowing for this type of physical contact between boys. Recess monitors may need to be trained to recognize differences between acts of aggression and rough and tumble play. Additionally, the exploration of language that girls enjoy during play may need to be encouraged for boys by creating play environments that support language development. For example, teachers can lead boys in discussing their play activities.
- **Accommodations for Differences:** Children have various interests and styles of play; therefore, schools can provide a variety of play materials and equipment to accommodate the differences. Additionally, an assortment of resources can encourage children to expand and extend their play. Children with special needs should be considered in this process.
- **Parental Awareness:** Parents may be concerned that their young children are "only playing" at school. During Open House, at PTA meetings, and through newsletters, educators can make parents aware of growth and development that takes place as children play, both in classrooms and at recess. It is necessary to make adults aware that natural outdoor play environments are important for girls and boys and that these areas do not always require equipment. Rustic, wooded settings can provide children with many opportunities for creative

movement, imaginative growth, and cognitive learning as they participate in such activities as nature walks with adult supervision.

- **Cooperative Activities:** Although research indicates that girls tend to enjoy cooperative activities while boys pursue competitive games, children need to learn about both cooperation and competition. Teachers can incorporate each type of activity into classroom lessons.

Conclusion

While some adults dismiss play as mere fun, much growth and development occurs during playtimes. As children play, they gain knowledge of the world and an understanding of their place in it. Although play may differ generally for girls and boys, it offers both genders opportunities to test and refine their developing social, language, and physical skills, which leads not only to academic achievement but also to a lifetime of success. Thus, play does benefit children.

References

- Bergen, D. (2004). *ACEI speaks: Play's role in brain development* [Brochure]. Olney, MD: Association for Childhood Education International.
- Blatchford, P. (1998). The state of play in schools. *Child Psychology and Psychiatry Review*, 3(2), 58-67.
- Blatchford, P., Baines, E., & Pellegrini, A. (2003). The social context of school playground games: Sex and ethnic differences, and changes over time after entry to junior high school. *British Journal of Developmental Psychology*, 21(4), 481-505.
- Boyatzis, C. J., Mallis, M., & Leon, I. (1999). Effects of game type on children's gender-based peer preferences: A naturalistic observational study. *Sex Roles: A Journal of Research*, 40(1-2), 93-105.
- Boyle, D. E., Marshall, N. L., & Robeson, W. W. (2003). Gender at play: Fourth-grade girls and boys on the playground. *American Behavioral Scientist*, 46(10), 1326-1345.
- Brewer, J. A. (2001). *Introduction to early childhood education: Preschool through primary grades* (4th ed.). Boston: Allyn and Bacon.
- Butcher, D. A. (1999). Enhancing social skills through school social work interventions during recess: Gender differences. *Social Work in Education*, 21(4), 249-262.
- Campbell, D. W., & Eaton, W. O. (1999). Sex differences in the activity level of infants. *Infant and Child Development*, 8(1), 1-17.
- Centers for Disease Control and Prevention. (2005). *Preventing chronic diseases through good nutrition and physical activity*. Retrieved July 18, 2006, from www.cdc.gov/nccdphp/publications/factsheets/Prevention/obesity.htm
- Chenfeld, M. B. (2006). Handcuff me, too! *Phi Delta Kappan*, 87(10), 745-747.
- Clements, R. L. (Ed.). (2000). *Elementary school recess: Selected readings, games, and activities for teachers and parents*. Boston: American Press.
- Fromberg, D. P. (1998). Play issues in early childhood education. In C. Seefeldt & A. Galper (Eds.), *Continuing issues in early*

Article 20. When Girls and Boys Play: What Research Tells Us

- childhood education* (2nd ed.) (pp. 190–212). Upper Saddle River, NJ: Merrill Prentice-Hall.
- Frost, J. L. (1992). *Play and playscapes*. Albany, NY: Delmar.
- Gallas, K. (1998). *Sometimes I can be anything: Power, gender, and identity in a primary classroom*. New York: Teachers College Press.
- Ginsburg, H., & Opper, S. (1979). *Piaget's theory of intellectual development* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Goodwin, M. H. (2001). Organizing participation in cross-sex jump rope: Situating gender differences within longitudinal studies of activities. *Research on Language & Social Interaction*, 34(1), 75–106.
- Goodwin, M. H. (2002). Exclusion in girls' peer groups: Ethnographic analysis of language practices on the playground. *Human Development*, 45(6), 392–415.
- Guddemi, M. P. (2000). Recess: A time to learn, a time to grow. In R. L. Clements (Ed.), *Elementary school recess: Selected readings, games, and activities for teachers and parents* (pp. 2–8). Boston: American Press.
- Gurian, M. (2001). *Boys and girls learn differently! A guide for teachers and parents*. San Francisco: Jossey-Bass.
- Gurian, M., & Stevens, K. (2005). *The minds of boys: Saving our sons from falling behind in school and life*. San Francisco: Jossey-Bass.
- Heidemann, S., & Hewitt, D. (1992). *Pathways to play: Developing play skills in young children*. St. Paul, MN: Redleaf Press.
- Huettig, C. I., Sanborn, C. R., DiMarco, N., Popejoy, A., & Rich, S. (2004). The O generation: Our youngest children are at risk for obesity. *Young Children*, 59(2), 50–55.
- Jarrett, O. S., & Maxwell, D. M. (2000). What research says about the need for recess. In R. L. Clements (Ed.), *Elementary school recess: Selected readings, games, and activities for teachers and parents* (pp. 12–20). Boston: American Press.
- Jarrett, O. S., Maxwell, D. M., Dickerson, C., Hoge, P., Davies, G., & Yetley, A. (1998). Impact of recess on classroom behavior: Group effects and individual differences. *The Journal of Educational Research*, 92(2), 121–126.
- Johnson, J. E., Christie, J. R., & Wardle, F. (2005). *Play, development, and early education*. Boston: Pearson Education.
- Lever, J. (1978). Sex differences in the complexity of children's play and games. *American Sociological Review*, 43(4), 471–483.
- Lewis, T. E., & Phillipsen, L. C. (1998). Interactions on an elementary school playground: Variations by age, gender, race, group size, and playground area. *Child Study Journal*, 28(4), 309–320.
- Lindsey, E. W., & Colwell, M. J. (2003). Preschoolers' emotional competence links to pretend and physical play. *Child Study Journal*, 33(1), 39–52.
- Martin, C. L., & Fabes, R. A. (2001). The stability and consequences of young children's same-sex peer interactions. *Developmental Psychology*, 37(3), 431–446.
- Pellegrini, A. D. (1989). Elementary school children's rough-and-tumble play. *Early Childhood Research Quarterly*, 4(2), 245–260.
- Pellegrini, A. D., & Blatchford, P. (2002). The developmental and educational significance of recess in schools. *Early Report*, 29(1). Retrieved March 16, 2004, from www.education.umn.edu/ceed/publications/earlyreport/spring02.htm.
- Pellegrini, A. D., Blatchford, P., Kato, K., & Baines, E. (2004). A short-term longitudinal study of children's playground games in primary school: Implications for adjustment to school and social adjustment in the USA and the UK. *Social Development*, 13(1), 107–123.
- Pellegrini, A. D., & Davis, P. (1993). Relations between children's playground and classroom behaviour. *British Journal of Educational Psychology*, 63(1), 88–95.
- Pellegrini, A. D., & Smith, P. K. (1993). School recess: Implications for education and development. *Review of Educational Research*, 63(1), 51–67.
- Perlmutter, J. C., & Burrell, L. (1995). Learning through 'play' as well as 'work' in the primary grades. *Young Children*, 50(5), 14–21.
- Piaget, J. (1962). *Play, dreams, and imitation in childhood* (G. Gattegno & F. M. Hodgson, Trans.). New York: W.W. Norton & Company.
- Poole, C., Miller, S., & Church, E. B. (2004). Working through that "It's Mine" feeling. *Early Childhood Today*, 18(5), 28–32.
- Reed, T. (2000). Rough and tumble play during recess: Pathways to successful social development. In R. L. Clements (Ed.), *Elementary school recess: Selected readings, games, and activities for teachers and parents* (pp. 45–48). Boston: American Press.
- Sarkin, J. S., McKenzie, T. L., & Sallis, J. F. (1997). Gender differences in physical activity during fifth-grade physical education and recess periods. *Journal of Teaching in Physical Education*, 17(1), 99–106.
- Sutterby, J. S., & Frost, J. L. (2002). Making playgrounds fit for children and children fit on playgrounds. *Young Children*, 57(3), 36–41.
- Thorne, B. (1993). *Gender play: Girls and boys in school*. New Brunswick, NJ: Rutgers University Press.
- Van Hoorn, J., Monighan-Nourot, P., Scales, B., & Alward, K. R. (2003). *Play at the center of the curriculum* (3rd ed.). Upper Saddle River, NJ: Merrill Prentice-Hall.
- Wortham, S. C. (2002). *Early childhood curriculum: Developmental bases for learning and teaching* (3rd ed.). Upper Saddle River, NJ: Merrill Prentice-Hall.

JEANETTA G. RILEY is Assistant Professor, Department of Early Childhood and Elementary Education, Murray State University. ROSE B. JONES is Assistant Professor of Early Childhood Education/Literacy, The University of Southern Mississippi.

Building an Encouraging Classroom with Boys in Mind

Margaret King with Dan Gartrell

For reasons of development and temperament, a lot of boys have difficulty fitting the traditional classroom expectations of many teachers. *Active, aggressive, challenging, and noncompliant* are words teachers often use to describe young boys. Even the most competent teachers are sometimes challenged by the behavior of some boys, and many find it difficult to distinguish problem behavior from typical "boy behavior." Educators frequently describe boys as socially immature or developmentally young. In a recent study (Pastor & Reuben 2002) researchers found that boys too frequently are labeled as having ADD (attention deficit disorder) or ADHD (attention deficit hyperactivity disorder).

In fact, many boys do need more physical activity and may be developmentally younger by 6 to 18 months than girls.

Teachers tend to view boys who are energetic and active as difficult to manage. In fact, many boys do need more physical activity and may be developmentally younger by 6 to 18 months than girls (Soderman et al. 1999). Active, energetic children, notably boys, seem to spend a lot of time engaged in off-task behavior, looking for and finding mischief. The following example describes such a situation.

In a well-organized preschool classroom with well-defined areas and activities based on children's developmental levels and interests, a group of boys are causing their teacher to question her skills. They dump containers of small Legos or Unifix cubes on the floor when she isn't looking. They wrestle with each other during group time—with horseplay sometimes escalating into serious conflicts. When asked the reasons for their behavior, they say, "It's fun!" and then giggle.

The adults are not amused, but the boys seem to enjoy their mischief. The overall pattern of behavior is persistent and disrupts the flow of the day's routines and activities. The teacher worries about the effects of the frequent conflicts on the boys themselves, the rest of the children, her assistant and herself. She wonders, "Is the problem the boys? Is it the way I teach them? How can I create a classroom that is more responsive to the children—especially the boys?"

Rethinking environments and activities

After observing the children's interactions in different parts of the environment and at different times of the day, the teacher reflected on what she had seen and heard. She realized that the boys were off task because they were not interested in many of the activities the teaching team provided. She decided to make changes in the learning environment to address the boys' development, interests, and activity levels.

Some of the ideas on these pages worked for this teacher, and they could help other teachers plan for and respond to young boys. Making an environment more encouraging for boys is likely to empower girls to become more active, independent, and creative as well.

Conclusion

You can expect that the changes you make will modify the classroom culture. Previously bored and uninvolved boys will become more engaged, significantly reducing program-influenced mistaken behavior. As a result, the other children, less upset by frequent conflicts, may seem more relaxed and comfortable. They too are likely to enjoy new areas, such as those for large muscle activities and woodworking. Addressing the needs of boys can make the program more developmentally responsive for all the children in the class.

Large Motor and Whole Body Experiences

Physical activity is necessary for all children, but it is especially important for young boys who enjoy running, jumping, and moving their bodies. There are many ways to foster opportunities for large muscle activity and whole body experiences in the indoor and outdoor classroom environments. Here are some suggestions:

Extend classroom learning to the outdoors.

At center time plan at least one adult-led, small group, outdoor activity. The outdoor activity might be as simple as taking a nature walk or conducting a scavenger hunt, or as complex as creating a water system using pipes and joints. When the weather allows, spend lots of time outside. Respect this period as an opportunity for children to learn what their bodies can do (to develop their "physical intelligence" [Gardner 1993]). Remember that children tend to get more lower body exercise than upper. Climbing, building with various materials, and gardening develop the arms, shoulders, and trunk muscles. Use teachable moments to make outdoor time educational.

Plan activities to occur during regular outdoor playtime. Have at least one outdoor teacher-planned and -led play activity each day. Present several options—let the children choose whether to build and then negotiate an obstacle course, wave huge bubble wands and chase the bubbles, or play a climbing game.

Physical activity is especially important for young boys who enjoy running, jumping, and moving their bodies.

Create an indoor large motor environment outside the classroom. For example, transform a large storage area into an indoors large-muscle activity room. Place safety floor mats, balls, and climbing equipment in the room, and use it for rough-and-tumble play, dancing and movement, and climbing. (See "The Inside Information about Safety Surfacing," *Young Children*, March 2003, pp. 108-11, for guidelines on safe indoor surfacing material.)

Create a large-motor/physical fitness center in the classroom. Besides the all-important climber and safety surfacing, include beanbags for throwing, carpet squares for jumping, boards for walking and balancing, and music for dancing. Construct a classroom physical fitness center featuring a homemade weight table (for weights, fill plastic bottles with sand and attach them to a sawed-off broom handle) and a floor mat for calisthenics. With a little creativity, you can devise a mini-exercise-bike. Make the fitness center as permanent a part of your room as the housekeeping area.

Integrate whole body movements into activities. Offer tools such as feather dusters or paintbrushes to use indoors with tempera or diluted finger paint on large pieces of Plexiglas or cardboard or outdoors with water on the walls. Include large hollow blocks or cardboard blocks in the block area. Lead daily music and movement activities.

Building and Construction

Boys tend to spend a significant amount of time playing with blocks, Legos, and other construction materials. Teachers need to help children plan their building and construction ideas as well as remind them how to use blocks appropriately. The ideas that follow can enhance the block area and offer new ways to build and construct.

Focus on the block area. Enlarge the block area to provide plenty of space for children to carry out their construction plans. Change block accessories to fit current themes and interests and include pads of paper and pencils so children can make plans and notes about their constructions. Some children prefer to draw before building; others plan by talking about what they will do. Use digital photographs and video recordings to document the building process. Share and discuss the documentation with children to help them reflect on what they did and plan new constructions.

Create a woodworking area. Many art activities are two-dimensional and of little interest to boys. Boys will, however, enjoy a woodworking area where they can use a variety of carpentry tools and materials to experiment, practice, and make three-dimensional constructions. Be sure to provide plenty of safety goggles. Invite parents and local carpenters to help plan and create developmentally appropriate woodworking projects.

Boys tend to spend a significant amount of time playing with construction materials.

Offer variety in art and writing. Add construction and building materials to the art area, thus allowing more choices for whole hand manipulation of materials as well as fine motor manipulation. Offer a variety of wide and narrow writing and drawing tools so children have a choice. Staple along the left edge of a stack of several sheets of paper to create blank booklets that children can turn into their own action picture books about their imaginary experiences.

Assess and update manipulatives. Although many boys like to build, some have difficulty using Legos. Large manipulatives such as Duplos are better for creative work, while Legos continue to be useful for fine motor skill development.

Offer variety and new experiences. Less dramatic changes to the environment can also be effective in engaging the attention of boys. From time to time reorganize and outfit the housekeeping area to become a dramatic play setting for camping, gardening, fishing, or restaurant play. Active and educational computer activities and games of strategy require boys—and girls—to work in cooperative groups. At group story times, teachers can vary the books read aloud by alternating information books on topics of interest to boys with favorite picture books.

Sensory Exploration and Experimentation

Boys frequently enjoy exploring and experimenting—for example, digging in sandboxes or taking block constructions apart (Grossman & Grossman 1993). Offer these activities to encourage children to engage in spontaneous scientific exploration:

Exploring and experimenting. Create daily opportunities for exploration and experimentation such as an activity that allows children to answer the question, "What happens if ...?" ("What happens if you mix water with sand or cornstarch?")

Sensory play. Include standard materials—sand and water, playdough, clay—and create new ones such as glurch (a mixture of powdered starch and water) and a homemade version of Silly Putty (using fabric softener and white

glue). Many boys are especially interested in combining and mixing substances as well as pouring and filling containers with solids and liquids. Invite children to help make the putty, playdough, and glurch.

Cooking. Cooking and food preparation create opportunities for children to experiment and explore, make predictions, and observe what happens. Plan a simple cooking activity weekly or more often, if possible. Fruit salads, raw vegetables, puddings, mashed potatoes, bread, and pancakes are just a few of the foods children can prepare. Have cooks—men and women—visit the class.

Boys frequently enjoy exploring and experimenting.

References

- Gardner, H. 1993. *Multiple intelligences: The theory in practice*. New York: Basic.
- Grossman, H., & S. Grossman. 1993. *Gender issues in education*. Boston: Allyn & Bacon.
- Pastor, P.N., & C.A. Reuben. 2002. Attention deficit disorder and learning disability: United States, 1997-98. National Center for Health Statistics, Vital Health Stat, Series 10, No. 206, May 2002.
- Soderman, A.K., S. Chikara, C. Hsiu-Ching, & E. Kuo. 1999. Gender differences that affect emerging literacy in first grade children: The U.S., India, and Taiwan. *International Journal of Early Childhood* 31 (2): 9-16.

Margaret King, Ed.D., is professor of early childhood teacher education in the School of Human and Consumer Sciences at Ohio University in Athens. Margaret has worked in the field of early childhood education for more than 30 years as a teacher, administrator, and teach-

er educator. Her current research focuses on boys. She is a former NAEYC Governing Board member and officer.

Dan Gartrell, Ed.D., is professor of early childhood and elementary education and director of the Child Development Training Program at Bemidji State University in Minnesota. A former Head Start and elementary teacher, Dan is the author of *A Guidance Approach for the Encouraging Classroom* (Delmar Learning) and *What the Kids Said Today: Using Classroom Conversations to Become a Better Teacher* (Redleaf).

This article is adapted, by permission of the publisher, from Margaret King with Dan Gartrell, "Guidance with Boys," in Dan Gartrell's *The Power of Guidance: Teaching Social-Emotional Skills in Early Childhood Classrooms* (Albany, NY: Thomson/Delmar Learning, in press). The book will be distributed as an NAEYC Comprehensive Membership benefit.